



Science and Technology Committee Behaviour Change Written Evidence

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Memorandum by Action on Smoking and Health (ASH) (BC 82)

Introduction

1. This submission is from Action on Smoking and Health (ASH) a campaigning health charity set up in 1971 by the Royal College of Physicians to work towards eliminating the harm caused by tobacco. Funding for ASH is currently received from Cancer Research UK, the British Heart Foundation and the Department of Health. ASH works collaboratively with its funders and other health and welfare organisations towards the goal of improving public health by reducing tobacco consumption.

Summary and Conclusions

2. Mechanisms need to be put in place, at national and local government level, to provide advice and support during the design, piloting, implementation and evaluation of behaviour change interventions in order to ensure that they achieve intended policy goals. When it comes to public health the Public Health Service and NICE both have a key role to play and this needs to be part of the role prescribed for them in the Public Health White Paper due to be published shortly.
3. As the introduction of the call for evidence states, a range of behaviour change measures to reduce smoking prevalence have been effective and cost-effective, and have therefore been a good use of scarce public resources. Tobacco control measures provide a good example of how public policy including, but not limited to, legislation can successfully change behaviour, and successes in this area should be used to inform policy development in other areas of behaviour change.
4. In the decade following the introduction of a comprehensive tobacco control strategy in 1999, the number of smokers in England declined by over 2 million.¹ Over this time smoking rates in adults declined by one quarter¹ and by children by one half.² Compliance with the ban on smoking in public places, implemented in England in 2007, was nearly 100% from the start and public support for the ban has continued to grow since implementation, among smokers even faster than among non-smokers.³ Smoking in the home has also declined significantly, as shown by objective measures and not just self report.³
5. Successful behaviour change in relation to smoking has been due to Government implementation of a comprehensive strategy, using a range of change interventions from provision of information and education, for example through social marketing campaigns; through enabling and guiding choices, for example by the provision of Stop Smoking Services and by prohibiting advertising, promotion and sponsorship of tobacco products; up to and including restrictions in choice, for example by prohibiting smoking in public places and increasing the minimum age of sale to 18.

¹ Office for National Statistics (1998–2007). General Household Survey data series.

² Smoking, drinking and drug use among young people in England in 2009. The Information Centre for Health and Social Care, 2010

³ Passive smoking and children. A report by the Tobacco Advisory Group of the Royal College of Physicians. London, RCP, 2010

6. The most effective measures, for example smokefree legislation, have involved implementation of policies for which the rationale is known, understood and accepted by the public, following a process of public engagement by both Government and civil society.
7. A key foundation for the success of the Government's tobacco control strategy is an acceptance and understanding by the vast majority of the population that smoking is addictive and harmful, both to active and passive smokers.⁴ Furthermore the majority of smokers themselves want to quit.⁴
8. Intervention in such circumstances is in line with Mill's harm principle and with the Nuffield Council on Bioethics conclusion that, "Any state that seriously aims to promote and implement public health policies has to accept a stewardship role" and that "... 'doing nothing' is an active decision by the state that will have an impact on people's ability to lead a healthy life."⁵
9. Tobacco remains the major preventable cause of premature death and disability, killing more people each year than alcohol, obesity, road accidents and illegal drugs put together and at current rates of decline in smoking prevalence it will remain so for many years to come.⁶ It is also the major cause of health inequalities with over half the difference in life expectancy between the richest and poorest in society due to differential smoking rates.⁷ Furthermore, in the last couple of years smoking prevalence has stopped declining, indicating the need for an enhanced new strategy.⁸
10. Therefore reducing smoking prevalence remains the major priority for any public health strategy which aims to improve life expectancy and reduce health inequalities and Government should not rest on its laurels but continue to innovate and improve its tobacco control strategy, building on the behaviour change interventions that have proved so successful to date, both in the UK and elsewhere.

Research and Development

Q1 What is known about how behaviour can be influenced? What special considerations apply to addictive behaviour?

Q2 What are the policy implications of recent developments in research on behaviour change?

11. Professor Robert West and Professor Susan Michie from University College London have developed a Behaviour Change Wheel (see overleaf) which analyses very clearly the basic elements required for behaviour change to take place and the range of interventions and policies which can influence behaviour.⁹
12. They define the basic elements required for behaviour to take place as capability, motivation and opportunity. A wide range of interventions which can be used to influence behaviour from education and persuasion at one end to restriction and coercion at the other. In order to implement these interventions a wide range of policy

⁴ Lader, D. Smoking-related Behaviour and Attitudes, 2008/09. ONS, 2009

⁵ Public health: ethical issues. London, Nuffield Council on Bioethics, 2007 <http://www.nuffieldbioethics.org>

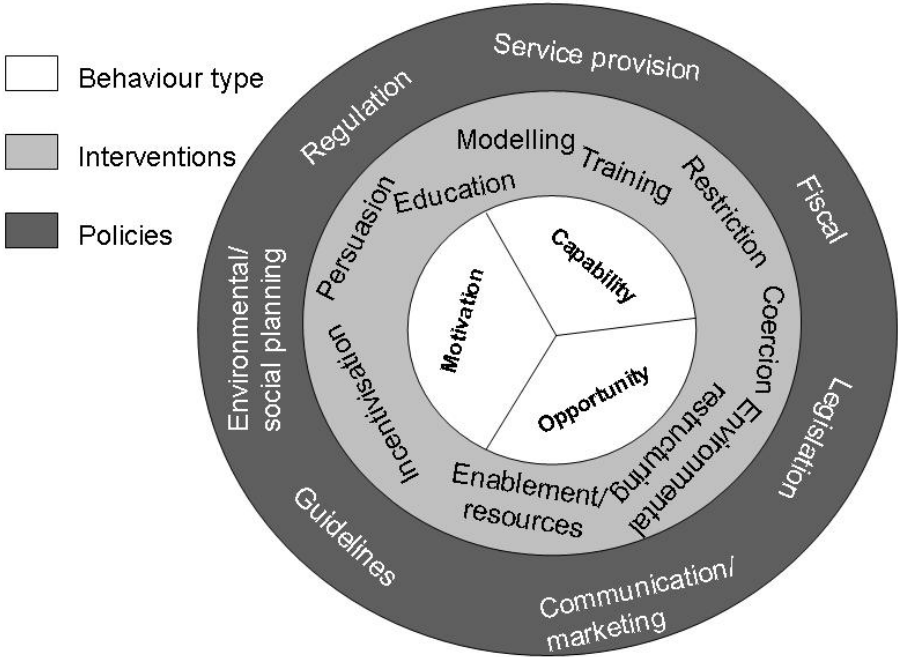
⁶ Beyond Smoking Kills: protecting children, reducing inequalities. ASH, London, 2008.

⁷ Jarvis, M. J. and Wardle, J. (2005) Social patterning of health behaviours: the case of cigarette smoking. In: Marmot, M. and Wilkinson, R. (eds) *Social Determinants of Health*. Oxford: Oxford University Press, 2nd edition.

⁸ Robins S and Bugler C. General Lifestyle Survey 2008: Smoking and Drinking among adults, 2008. ONS, 2010; Mid-2008 Population Estimates. Office for National Statistics.

tools are needed from communications and marketing to regulation and environmental and social planning.

Figure 1: The Behaviour Change Wheel: a multi-system behaviour change framework⁹



13. Special considerations apply to addictive behaviour, as choice is obviously undermined by addiction. For example, more than two thirds of smokers want to quit⁴ but only 3% succeed in quitting unaided.¹⁰ Furthermore smoking has very serious health impacts, with half of long-term smokers dying prematurely from their addiction.¹¹ For addictive behaviours with serious consequences, a high degree of intervention and restriction of choice is appropriate (see answer to Question 13).

14. There are lessons to be learnt from the Government’s successful tobacco control strategy which has been highly successful leading to a decline of over 2 million in the number of smokers in the last decade.¹ The strategy involved a wide range of interventions from provision of information, such as health warnings on tobacco packs and mass media campaigns, to restricting choice, for example the ban on smoking in public places.¹² Over this time smoking rates in adults declined by one quarter¹ and by children by one half² and the levels of exposure to secondhand smoke have also declined significantly.³

⁹ Michie S, van Stralen M, West R. The Behaviour Change Wheel: a multi-system behaviour change framework. *Psychology & Health* 2010; 25: Supplement 1.

¹⁰ Smoking cessation guidelines and their cost effectiveness. *Thorax* 1998; 53 Sup 5, part 2, S11-S16.

¹¹ Doll R, Peto R, Boreham J, Sutherland I. Mortality in relation to smoking: 50 years’ observation on male British Doctors. *British Medical Journal* 2004; 328:745

¹² A smokefree future: a comprehensive tobacco control strategy for England. HM Government, 2010.

Q3 Is there adequate research capability within the United Kingdom to support the current pace of developments in behaviour change policy interventions? Is there sufficient funding for the evaluation of behaviour change interventions?

15. The UK has an excellent research base in public health, for example in the area of tobacco control, there is the UK Centre for Tobacco Control Studies.¹³ ASH works closely with the Centre on its policy development work.
16. It is clear, therefore, that the research capability exists to evaluate behaviour change interventions. Such evaluation should be a required element of the policy implementation process and funding for this purpose should be provided. However, currently when behaviour change interventions are introduced, evaluation is rarely properly built into the implementation process. Such evaluations are a natural follow up to the Impact Assessments which are required in advance of the implementation of regulatory proposals, new legislation and policy implementation by Government, and would help determine whether the actual impact was that envisaged at the time of implementation.
17. This is not just a matter of funding, but also of timing, because if the funding is not provided in a timely manner then the research cannot be put in place sufficiently in advance of policy implementation to ensure that proper pre- and post-evaluation can be carried out.
18. It is essential to have a proper evaluation process in place in order to know whether a policy intervention has been effective, and cost-effective. In the area of tobacco control there are two good examples of best practice, the appraisal of the NHS Stop Smoking Services and the Scottish Government's evaluation of the impact of smokefree legislation.
19. Following their implementation there was a comprehensive appraisal of the NHS Stop Smoking Services at population level, which demonstrated their overall effectiveness, cost-effectiveness and success at reaching more disadvantaged smokers. This was in addition to research demonstrating the effectiveness of the pharmacological and counselling elements of the treatment provided by the Services.¹⁴ As a result we know that the Stop Smoking Services deliver treatment that is highly cost-effective and dramatically improves smokers chances of successfully quitting in comparison to attempting to stop unaided.
20. The Scottish Government's evaluation of smokefree legislation was also exemplary.¹⁵ A logic model was developed in advance of implementation of the legislation which analysed the potential short, medium and long-term outcomes. This model was used to decide what evaluation methods were needed and they were put in place in advance of implementation. The Department of Health adapted this model for its own evaluation of smokefree legislation in England.
21. In consequence we now know a great deal about the impact and effectiveness of smokefree legislation, including that there are high levels of compliance and it is popular,

¹³ UK Centre for Tobacco Control Studies <http://www.nottingham.ac.uk/ukctcs/index.aspx>

¹⁴ See various Cochrane reviews on tobacco addiction. <http://www2.cochrane.org/reviews/en/topics/94.html>

¹⁵ Haw, S et al. Legislation on smoking in enclosed public places in Scotland: how will we evaluate the impact? *Journal of Public Health* 2006; 28: (1).

that it has improved the respiratory health of bar workers and led to reductions in heart attacks in the general population.¹⁶

Translation

Q4 Are there adequate structures and expertise across government and the public services more generally to support the translation of research developments in behaviour change into policy interventions?

International comparisons

Q15 What lessons can be learnt from previous successful or unsuccessful behaviour change interventions in other countries? Which countries provide the most helpful examples of best practice? Are behavioural change interventions generally transferable between different societies?

22. The expertise of ASH is in public health and in particular tobacco control, and this answer relates only to that area. At the present time the structures do not exist across government and the public services to support the translation of research developments in behaviour change into policy interventions to improve public health. However, the public health white paper, currently in development, and in particular the setting up of a Public Health Service under the leadership of the Secretary of State for Health provides a major opportunity for such structures to be put in place.
23. The National Institute of Health and Clinical Excellence has the expertise to support the translation of research developments in behaviour change in public health to date. NICE has already produced guidance on behaviour change, as well as specific guidance on issues such as smoking cessation taking into account the national and international evidence base.^{17 18} NICE should continue to play this role in support of the new Public Health Service, and the Public Health Service should be required to take its advice into account in policy development.
24. There is an extensive international evidence base for effective tobacco control behaviour change interventions. This has been recognised and incorporated in policy obligations in the WHO Framework Convention on Tobacco Control (FCTC), the world's first health treaty.¹⁹ The treaty now has 171 Parties, including the UK, and its effective implementation is being supported by the development of guidelines and protocols to the Convention based on the most up to date evidence available.
25. The interventions set out in the WHO FCTC have shown themselves transferable between different societies. The same range of interventions have proven effective in reducing tobacco use not just in high income countries such as the UK, Canada and Australia²⁰, but also middle income countries such as Thailand.²¹
26. The lessons learnt from tobacco control can and should be used to inform the development of behaviour change interventions in other areas not just public health.

¹⁶ For a full list of publications relating to the evaluation go to <http://www.healthscotland.com/scotlands-health/evidence/smokefreelegislation/publications.aspx>

¹⁷ NICE Public Health Guidance 6. Behaviour Change at Population, community and individual levels. October 2007.

¹⁸ <http://guidance.nice.org.uk/Topic/PublicHealth>

¹⁹ WHO Framework Convention on Tobacco Control. <http://www.who.int/fctc/en/>

²⁰ Beyond Smoking Kills: protecting children, reducing inequalities. London, ASH, 2008

²¹ Levy et al. The role of tobacco control policies in reducing smoking and deaths in a middle income nation: results from the Thailand SimSmoke simulation model. *Tobacco Control* 2008;17:53-59 doi:10.1136/tc.2007.022319

These lessons are particularly relevant to other addictive behaviours such as alcohol abuse.

27. One of the guiding principles of the Treaty is that, *“The participation of civil society is essential in achieving the objective of the Convention and its protocols.”* In the UK that includes medical bodies such as the RCP and the BMA, charities such as ASH, the British Heart Foundation and Cancer Research UK and the scientific and academic community.
28. Civil society has played a leading role in the development of the evidence-base in tobacco control. Civil society should continue to be involved in the translation of research developments in behaviour change into policy interventions in tobacco control, in line with the UK’s obligations under the WHO FCTC.

Policy design and evaluation

General

Q5 What should be classified as a behaviour change intervention?

Q6 How should different levels of intervention (individual, organisational, community and national) and different types of intervention (legislative, fiscal, educative) interact in order to achieve policy goals more effectively?

Q7 Should behaviour change interventions be used in isolation or in combination with other policy interventions?

29. Any coordinated set of actions that have the potential to change behaviour should be classified as a behaviour change intervention. Figure 1 above sets out a comprehensive range of such behaviour change interventions and distinguishes between the type of intervention and the policy needed to put it into effect.
30. How the different levels of intervention and different types of intervention should interact more effectively to achieve policy goals needs to be determined on a case by case basis. However, the lessons from the success of tobacco control are that a wide range of different types of intervention and different levels of intervention sustained and maintained over a long period of time are necessary to achieve policy goals.
31. As Michie and West’s analysis⁹ makes explicit, policies enact and support behaviour change interventions and must not be confused with them. This has been a failing of previous attempts at classification. For example, increasing the financial cost of smoking involves more than just 'fiscal' policy measures to be effective; it also requires 'service provision' in the form of improved controls over smuggling and would quite possibly benefit from 'guidelines' in HMRC to foster appropriate behaviour with regard to implementing the fiscal policy. Consideration also needs to be given to accompanying this with 'communication/marketing' policies aimed at 'educating' and 'persuading' smokers of the benefits of the fiscal measures to maintain and increase public support.

Practical application

Q8 Have publicly funded behaviour change interventions been both evidence-based and subject to effective evaluation? How successful have such interventions been?

Q9 Within government, how are the lessons learnt from the success or lack of success of behaviour change interventions fed back into the design of future interventions? Are lessons learned from industry and voluntary sector behaviour change activities also taken into account?

Q10 What mechanisms exist, at national and local government level, to provide advice and support during the design, piloting, implementation and evaluation of behaviour change interventions in order to ensure that they achieve intended policy goals and also cultural changes within government and public services more generally?

32. There is a significant evidence base for publicly funded tobacco control interventions^{22 23} more than for some other areas of public health, such as obesity or exercise. In some cases, but not all, interventions have been effectively evaluated (see above). However, even in tobacco control there has been insufficient evaluation of the overall strategy to be able to determine the relative impact of each individual element of it.
33. However, a comprehensive strategy to reduce smoking prevalence, by encouraging quitting, reducing uptake and reducing exposure to secondhand smoke can be seen to have been effective in the UK. Subsequent to the introduction of the *Smoking Kills* strategy in 1999 which was in line with World Bank recommendations and the international evidence base, smoking prevalence began to decline after years when it had flatlined. However, since the recession smoking prevalence has plateaued again, demonstrating the need for continued action at all levels on all fronts if smoking prevalence is to continue to be driven downwards.¹
34. Publicly funded behaviour change interventions at population level are difficult to evaluate and have often not been evidence-based or subject to effective evaluation. To quote NICE, “It is not always appropriate – or even possible – to carry out controlled trials or gather experimental evidence for public health interventions, including those covering legislation or policy”.¹⁷ It is crucial to gather evidence not only on the evidence that an intervention is effective, but also where it has been found not to be effective.
35. However, because of the difficulty in evaluating public health interventions, it is even more important that mechanisms are put in place, at national and local government level, to provide advice and support during the design, piloting, implementation and evaluation of behaviour change interventions in order to ensure that they achieve intended policy goals. When it comes to public health the Public Health Service and NICE both have a key role to play and this needs to be part of the role prescribed for them in the Public Health White Paper due to be published shortly.
36. In tobacco control the Government also has obligations as a party to the WHO Framework Convention on Tobacco Control, the world’s first health Treaty. The protocols and guidelines to the FCTC provide guidance on the implementation of evidence-based behaviour change interventions to reduce smoking prevalence and uptake.
37. With respect to voluntary action by industry it should be noted that the reason for legislation to ban smoking in public places was because industry behaviour change activity, particularly in the hospitality sector, was ineffective, (see below points 43 to 46).

Cross-government coordination

²² Centers for Disease Control and Prevention. *Best Practices for Comprehensive Tobacco Control Programs—2007*. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; October 2007. *Reprinted with corrections.*

²³ See also the suite of NICE guidance in this area.

Q11 What mechanisms exist within government to coordinate and implement cross-departmental behaviour change policy interventions?

Q12 What mechanisms exist within government to cascade learning and best practice on behaviour change policy interventions?

38. It is not clear that there are such mechanisms within government, and if there are not, they need to be put in place. The Cabinet sub-committee on public health and its mirror at civil servant level is one possible mechanism that could be used.

Ethical considerations

Q13 When is it appropriate for the state to intervene to influence the behaviour of members of the public and how does this differ from when it is appropriate for the commercial or voluntary sector to intervene? In particular, when should this be done by outright prohibition and when by measures to encourage behaviour change? Are some methods of producing behaviour change unacceptable? Which and why?

39. Government policies are, by definition, designed to influence public behaviour, the key issue is what policy interventions are appropriate in a given circumstance. The major debate is over interventions which restrict or prohibit choice.

40. It has been reported that the Government has set up a “nudge unit” in the Cabinet Office to decide how “choice architecture” can be used to “nudge” our behaviour in beneficial directions and has recruited Richard Thaler, the academic responsible for the eponymous book *Nudge* as an advisor.²⁴ Thaler believes that “it is legitimate for choice architects to try to influence people’s behaviour in order to make their lives longer, healthier and better.”²⁵

41. Thaler is a supporter of what he calls, “Libertarian paternalism”. He goes on to say that “In our understanding a policy is “paternalistic” if it tries to influence choices in a way that will make choosers better off, **as judged by themselves.**” [His emphasis]. And finally that “Libertarian paternalism is a relatively weak, soft and nonintrusive type of paternalism because choices are not blocked, fenced off, or significantly burdened. If people want to smoke cigarettes, to eat a lot of candy, to choose an unsuitable health care plan, or to fail to save for retirement, libertarian paternalists will not force them to do otherwise – or even make things difficult for them.”

42. However, Thaler appears to have a very restricted view of how such choice architecture can be implemented, if an article by John McTernan in the Daily Telegraph is to be believed. McTernan says that Thaler has an iron rule that there should be “no bans, no mandates [government compulsion].”²⁶ He goes on to say that when he pressed Thaler on this he said that “he would have opposed a smoking ban and would have opposed the Clean Air Act.”

43. Without Government mandating behaviour change in many cases it will not happen. The Clean Air Act is a good example, as is the smoking ban. In the white paper *Smoking Kills*, published in 1998, the Government announced that it was entering into a voluntary, self regulatory agreement with the hospitality trade to reduce smoking in pubs. By early 2003

²⁴ Wintour, P. David Cameron’s ‘nudge unit’ aims to improve economic behaviour. The Guardian, Thursday 9th September 2010.

²⁵ Thaler, R. Sunstein, C. *Nudge*. Improving Decisions About Health, Wealth and Happiness. Yale University Press, 2008.

²⁶ McTernan, J. Andrew Lansley’s ‘nudge’ won’t solve childhood obesity in Britain. Daily Telegraph, July 8th 2010.

an independent survey found that one in three pubs were completely non-compliant with the charter and that nearly half of 'compliant' pubs still allowed unrestricted smoking throughout. Four years of self-regulation had achieved no change in smoking policy in two thirds of pubs and only seven pubs in Britain where no smoking was allowed.²⁷

44. Although there was significant public support there was no clear market incentive for pubs to prohibit smoking and so, frightened of change all but a handful of pubs were unwilling to take the risk of going smokefree. The legislation was necessary for change to happen and was implemented in such a way that a level playing field was introduced with all pubs and clubs required to be smokefree.
45. The Government's Better Regulation Unit cites the smokefree laws prohibiting smoking in public places as a case study of effective regulation.²⁸ The regulations were popular from the start and their popularity has continued to grow since they were implemented, even more so amongst smokers than amongst non-smokers. Overall support for the laws now stands at 79%²⁹ and compliance rates have been near 100% from the day the laws came into force.²⁸
46. The regulations have led to significant improvements in public health, not just of bar workers but also of the general public. Evidence recently published in the BMJ³⁰ shows that in England alone in the first year after the implementation of smokefree legislation there was a statistically significant drop in the number of emergency admissions for heart attacks, resulting in 10,000 fewer bed days for emergency admissions which saved the NHS £8.4 million.³¹ Worries that banning smoking in public places would lead to increased smoking in the home have proved unfounded. In fact there is good evidence that the publicity over the harm caused by secondhand smoke during the time of the campaign led to a decline in smoking in the home, rather than an increase.³²
47. John Stuart Mill's harm principle is still the standard accepted approach in defining when government intervention is needed³³ "*Acts of whatever kind, which, without justifiable cause, do harm to others, may be, and in the more important cases absolutely require to be, controlled by the unfavourable sentiments, and, when needful, by the active interference of mankind. The liberty of the individual must be thus far limited; he must not make himself a nuisance to other people.*"
48. The debate continues about what comes into the category of causing "harm to others" and what level of intervention is justified. This was the core of the debate about whether or not banning smoking in public places was justified. The legislation to prohibit smoking in all enclosed public places was passed on the basis that there was good evidence that secondhand smoke was harmful and because the public strongly supported legislation, in

²⁷ Tobacco Smoke Pollution. The Hard Facts. London, Royal College of Physicians, 2003.

²⁸ Department for Business Innovation & Skills. Better regulation, Better Benefits: Getting the Balance Right. case studies. October 2009

²⁹ Passive smoking and children: A report of the Tobacco Advisory Group of the Royal College of Physicians. London, RCP, March 2010.

³⁰ Sims M. et al. Short term impact of smoke-free legislation in England: retrospective analysis of hospital admissions for myocardial infarction. BMJ 2010; 340: c2161

³¹ Feleke et al (2010). Heartsavers: Cost savings from a reduction of emergency admissions for myocardial infarction following smoke-free legislation in England. London Public Health Observatory

³² Passive smoking and children: A report of the Tobacco Advisory Group of the Royal College of Physicians. London, RCP, March 2010.

³³ John Stuart Mill, On Liberty, 1859

particular to protect workers from harm because they had little or no choice about whether they were exposed or not.

49. The Nuffield Council on Bioethics in its influential report, *Public Health: ethical issues* concluded that *“Any state that seriously aims to promote and implement public health policies has to accept a stewardship role”* and went on to say that *“We also note that ‘doing nothing’ is an active decision by the state that will have an impact on people’s ability to lead a healthy life.”*⁵
50. The report included a hierarchy of the types of public health interventions which Government should engage in, according to the degree of intervention and choice restriction (see figure 2 below). The conclusion reached was that the more serious the health consequences the higher the rung on the ladder it was appropriate to intervene.
51. Two key factors need to be taken into account in determining the appropriate level of behaviour change intervention. These are:
 - The degree of harm caused by the behaviour, both to the person engaging in the activity and to others – for example smoking is deadly, the major cause of preventable premature death and harms not just the smoker but those around them;
 - The degree of choice the individual has – for example, tobacco is addictive and so difficult to give up. Furthermore it is an addiction largely of childhood and adolescence, at an age when the competence to make decisions is not fully developed.
52. It is often said that if smoking were invented today because it is so harmful it would be made illegal; the only reason it is legal is that it is an activity engaged in by a significant minority of the population and banning it would simply drive it underground. However, because it is so harmful it is widely accepted that a high degree of intervention and choice restriction is both acceptable and necessary.
53. The Government’s successful strategy to drive down smoking prevalence and prevent young people getting hooked, has involved interventions from simple provision of information to restricting choice. Some interventions are obligatory on manufacturers while acting as “nudges” to the general public, for example health warnings on tobacco products. Some are obligatory on business and on consumers, for example a ban on smoking in public places, although it should be noted that this is a restriction and does not eliminate choice for the consumer.

Figure 2: Nuffield Ladder of Public Health Interventions⁵

Eliminate choice. Introduce laws that entirely eliminate choice, for example compulsory isolation of people with infectious diseases.

Restrict choice. Introduce laws that restrict the options available to people, for example, removing unhealthy ingredients from foods, or unhealthy foods from shops or restaurants.

Guide choice through disincentives. Introduce financial or other disincentives to influence people's behaviour, for example, increasing taxes on cigarettes, or bringing in charging schemes to discourage car use in inner cities.

Guide choices through incentives. Introduce financial or other incentives to influence people's behaviours, for example, offering tax-breaks on buying bicycles for travelling to work.

Guide choices through changing the default policy. For example, changing the standard side dish restaurant from chips to a healthier alternative, with chips remaining as an option available.

Enable choice. Help individuals to change their behaviours, for example, providing free 'stop smoking' programmes, building cycle lanes or providing free fruit in schools.

Provide information. Inform and educate the public, for example, campaigns to encourage people to walk more or eat five portions of fruit and vegetables a day.

Do nothing or simply monitor the current situation.

54. The legislation to prohibit the display of tobacco in shops and the sale of tobacco from vending machines sits comfortably within this hierarchy and should be implemented. The display regulations place obligations on retailers while acting as a "nudge" to the public, as tobacco remains an option for those who wish to smoke, but is no longer openly promoted as a positive choice. This is an appropriate intervention given the addictiveness and seriousness of the consequences of taking up smoking, and is simply an extension of the existing ban on tobacco advertising, promotion and sponsorship.
55. Prohibiting the sale of tobacco from vending machines, on the other hand, comes in the category of restricting choice. Cigarettes can still be bought but not from vending machines which are a major source of supply for underage smokers.
56. One of the first examples Thaler cites in his book is where food is put in a cafeteria and putting the healthy choices first. Putting tobacco (which is not just unhealthy but deadly and illegal to sell to children) out of sight is merely an extension of this idea. But given the tobacco industry pays retailers to put tobacco right behind the sweets at the counter, it is only by government regulation that the healthy choice will prevail.

Q14 Should the public be involved in the design and implementation of behaviour change policy interventions and, if so, how? Should proposed measures for securing behaviour change be subject to public engagement exercises or consultation? Should they be piloted? Do considerations differ in the case of interventions aimed at changing addictive behaviour?

57. Public involvement in the design and implementation of behaviour change policy interventions is vital as these are measures which require public support to be effective and cost-effective to implement. This is a point made not just in the NICE behaviour change guidance but repeatedly across suites of NICE public health guidance. Again the ban on smoking in public places is a good example, and shows how civil society can play a key role in engaging the public effectively.
58. ASH set up the Smokefree Action Coalition in 2003 to build support for a legislative approach to the problem of secondhand smoke in public places. By the time the legislation was passed the Coalition consisted of more than 60 organisations and key opinion formers including health charities, medical organisations, trade unions, local authorities, public and environmental health authorities and many individuals and groups at local, regional and national levels.
59. This Coalition was able to show to government that a legislative approach was popular and evidence-based. Opinion polls showed high levels of support for legislation requiring workplaces to be smokefree from the beginning of the campaign, with support for smokefree pubs and bars rising from half to two thirds of the public from Spring 2004 to Autumn 2005.³⁴ This helped ensure that once the legislation was passed it was not only popular but had very high levels of compliance.²⁸
60. Public engagement is crucial, whether the behaviour is addictive or not. The high level of compliance for smokefree legislation is due to high levels of support which makes the legislation self enforcing. It compares very favourably, for example, with compliance with the 30 mph speed limit. Compliance with this was still only around 50% in 2007, over seventy years after its introduction and despite the use of speed cameras, legal penalties and hardhitting road safety campaigns in recent years to encourage compliance.³⁵
61. Piloting is to be encouraged if there is insufficient evidence about the effectiveness of the intervention. For innovative new proposals piloting can be used to ensure that the impact is that intended and that there are no unintended consequences, before an intervention is rolled out more widely. A proper search should be carried out in advance of piloting to gather the evidence and learn the lessons from any previous attempts at using the same or similar types of intervention.
62. In some cases piloting may not be feasible or necessary, for example the ban on smoking in enclosed public places which required population level implementation to be effective. In this case the Impact Assessment had demonstrated the value of the intervention both economically and to public health.³⁶ Furthermore, there was good evidence from Ireland,

³⁴ Arnott, D et al. Comprehensive smoke-free legislation in England: how advocacy won the day *Tobacco Control* 2007; 16: 423-428 doi:10.1136/tc.2007.020255

³⁵ <http://www.pacts.org.uk/docs/pdf-bank/roadsafetyconsultation.pdf>

³⁶ Department of Health. Partial Regulatory Impact Assessment - Smokefree Aspects of the Health Bill. October 2005. http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4121931.pdf

Memorandum by Action on Smoking and Health (ASH) (BC 82)

a culturally similar environment, that such legislation was easy to implement and had high levels of compliance.

8 October, 2010

Memorandum by Advertising Association (BC 102)

Introduction.

1. This paper will address the advertising industry's engagement with the issue of behaviour change and set out some of our thinking and our current work in this area.
2. Much of the output of our £14.5 billion³⁷ industry is concerned with behaviour change. If we don't understand how consumers behave, we are unlikely to be able to communicate with them effectively and efficiently. So, understanding how people make behavioural decisions - about the food they consume, the clothes they wear, the politicians they elect and the brands they value – is central to the success of the advertising industry.
3. The Advertising Association (AA) and its members are actively engaged in this issue:
 - The Institute of Practitioners in Advertising has published a series of important pamphlets on behavioural economics, which can be found at <http://www.ipa.co.uk/Content/Behavioural-Economics-Site-IPA-Publications> - more information on the IPA's specialist Behavioural Economics Think Tank (BETT) can be found in the footnotes³⁸.
 - The Advertising Association has established the seminal business4life coalition, comprised of around 40 companies within the food and drink, fitness, advertising, retail and media sectors, which is partnering with the Department of Health's Change4Life movement in order to affect behaviour change as it relates to diet and exercise.
 - The AA's exploration of "peer acceptance" and its behaviour change implications for obesity and alcohol abuse are an area of increasing importance for the Advertising Association and its members.

Part One: Peer Acceptance and a new understanding of obesity.

4. The Committee requests information on ***“the latest developments in the evidence-base in relation to changing eating and physical activity behaviour.”***
5. Our work in the area of diet and physical activity has been a significant part of the Advertising Association's operations since the establishment of the Food Advertising Unit in 1993. The most recent developments in our research, serendipitously, are in the areas of social networking and peer acceptance, both of which are directly relevant to the committee's request:

What is Peer Acceptance?

6. *“Peer acceptance is about people continuing to follow modes of behaviour because other people within their social group are behaving in the same way. People feel less pressure to*

³⁷ WARC/AA figures for 2009 show advertising spend was £14,506 million.

³⁸Behaviour Economics Think Tank (BETT) <http://www.ipa.co.uk/Content/IPA-Behavioural-Economics-Think-Tank-member-biographies>

change their actions and habits if their friends are not also doing so.”

Earl Howe refers to the work of the AA and Volterra, House of Lords, January 2010.

7. Peer acceptance is a sociological term relating to the psychology of peer group attitudes. In other words, people feel less pressure to change their behaviour when other people within their community exhibit the same behaviour to them. It is not connected with the intrinsic merits or ‘demerits’ of any particular behaviour. In the context of this paper, it refers purely to the phenomenon of people continuing in modes of behaviour because the fact that other people do so makes it more acceptable.

Background

8. In July of 2007, a significant U.S. study, which used a detailed database on individuals compiled over a period of 30 years, was published in the authoritative New England Journal of Medicine. This study found some significant new “social networking” factors in the causes of obesity. Key findings and conclusions were:
 - A person's chances of becoming obese increased by 57% if he or she had a friend who became obese in a given interval.
 - Network phenomena appear to be relevant to the biologic and behavioral trait of obesity, and obesity appears to spread through social ties. These findings have implications for clinical and public health interventions.
9. In the latter half of 2009, these remarkable insights prompted the AA’s Food Advertising Unit³⁹ to commission a small-scale study that might establish whether similar trends were also apparent in the U.K. In the UK the issue of childhood obesity had been similarly high-profile and the existing evidence base (the *Foresight* report⁴⁰ and NHS surveys, largely) had covered some 108 factors without fully identifying or quantifying the contribution of “social factors” to the problem of obesity.
10. Our report, *Understanding and Predicting Childhood Obesity* can be found here: <http://www.adassoc.org.uk/aa/index.cfm/fau/obesity-study1/>

Our work with Volterra

- Built and expanded upon the findings of the *Foresight* report in determining the causes of obesity and their relative importance.
- Established initial credibility for “peer acceptance” as an important factor behind the rise in child obesity in the UK.

Current Work

³⁹ The Food Advertising Unit – a centre for information, communication and research on the issue of food and soft drink advertising to children. More information on the FAU can be found at <http://www.adassoc.org.uk/aa/index.cfm/fau/>

⁴⁰ A copy of *Tackling Obesities: The Foresight Report* can be found here: <http://www.idea.gov.uk/idk/core/page.do?pagelid=8267926>

11. Our initial work on peer acceptance helped establish the concept as an area of real interest for those looking to understand the driving factors being obesity. To build on this evidence base, the
12. FAU and Volterra began work on a substantial report exploring how childhood obesity and peer acceptance interact, and how knowledge of these interactions can help government and our industry generate more productive behaviour.

13. In a recent *Financial Times* article, Volterra Chief Executive and leading economist Paul Ormerod described our work and its potential to improve policy making:

“...a series of experiments of small nudges, harnessed to the power of networks genuinely to change behaviour, offers a potentially much more effective way of tackling seemingly intractable problems.”⁴¹

14. To best understand which actions will most successfully alter behaviour, our forthcoming report will contain:
 - Detailed qualitative information gleaned from 10 small scale focus groups (comprised of children aged between 11 and 15 and carried out by Dr. Barbie Clarke⁴²).
 - Using the results of a questionnaire sent to 1000 families (accessed via mothers but interviewing 11 to 15 year olds) Volterra will apply a form of agent-based modelling to establish the relationship between different elements of peer group behaviour. For example, we hope to be able to quantify if having an obese mother has a greater or lesser impact on childhood obesity than having peers who do not play sport.
15. This work will be double-blind peer reviewed, and should represent the most significant contribution to the debate on peer acceptance and obesity to date. We believe that by combining our industry’s understanding of the principles which underpin behavioural economics with our emerging grasp of the importance of peer networks we will be able to propose innovative new ways of changing behaviour for the better.
16. We will be presenting this work to government, NGOs and other stakeholders – and will contact the Lords Science and Technology Committee once our report is complete on 18th November 2010.
17. The second development in the evidence base occurs in the establishment of business4life, a coalition of 36 companies in the food and drink, media, retail and fitness industries. business4life was established by the Advertising Association to work in partnership with the Department of Health (DH) in support of its Change4Life campaign. Change4Life, a public health programme launched in January 2009, aims to reduce obesity by encouraging people to “eat well, move more and live longer”.

⁴¹ *Financial Times* 15th September 2010. Full text available here:

<http://www.paulormerod.com/pdf/A%20network%20is%20as%20good%20as%20a%20nudge%20for%20a%20Big%20Society.pdf>

⁴² Dr Clark is the director of research body Family, Kids and Youth, which studies on children’s use of technology, media, communication, diet and activities. More information on Family, Kids and Youth can found here:

<http://www.kidsandyouth.com/aboutus.php>

18. The evidence base itself will be best informed by DH's and the COI's significant and robust measurement work in this area. A team from the Advertising Association, headed by our Director of Research Karen Fraser, have very recently met with DH/COI research teams in order to develop further the valuation and evaluation of the Change4Life campaign and the associated (and unassociated) "healthy activity" work that is being undertaken.
19. As Government expenditure cuts are felt, and as business4life efforts gather pace, it is anticipated that, working with our major coalition members, we will be able to complement the evidence base and develop already-encouraging trends that the Change4Life campaign has generated. The role of business4life is better explored, of course, in Part Two of this paper.

Part Two: The agents of behaviour change.

20. The Committee asks ***'who are the most effective agents for the delivery of behaviour interventions to tackle obesity?'***
21. The Committee will be well aware that this is a complex and sensitive arena in which to work: at this point in the life of our partnership with DH, we believe we can provide some answers to the question above, though we are not yet ready to quantify the impact of individual elements – for example "mothers" on the one hand and GPs on the other. We can provide, however, some general statements from our experience that may aid the committee's deliberations.
22. i) Advertising, in its broadest sense, has a key role to play. As the IPA points out in its submission to the committee the "public" and broadscale nature of its impact can and does bring not just attention to the issue at hand, but – proven in countless case histories – attitude and behaviour change. In the case of social issues in particular, advertising's role has been of considerable value in driving behaviour change because of its ability publicly to change the values of a type of behaviour, be that excessive alcohol consumption, drink-driving, or, in time, obesity. The COI's publication *How Public Service Advertising Works* is instructive on this issue.
23. ii) Connected to i, "society" is therefore an effective "agent for the delivery of behaviour intervention." The DH Change4Life campaign can demonstrate considerable successes. That work, however, can be enhanced by its target audience understanding that it is not just Government that wants them to shed weight, which might be expected, but broader society, their friends, and their social network. Messages that are confined to dietary and exercise advice will play their role, but those that understand the power of societal influence, carefully delivered, can enhance impact and behaviour change dramatically.
24. iii) Brands. People trust brands because brands have earned their trust, and brands are part of their everyday lives and social exchanges. The Advertising Association's business4life coalition, comprising hundreds of brands, is delivering programmes aimed at behaviour change which will help reduce obesity levels in the UK.

25. By partnering the private sector with the public, b4l is becoming an effective agent for the delivery of messages and programmes which facilitate improved lifestyle choices. This is business in the Big Society.

Business4Life Activities

26. As a formal partner to the Department of Health's Change4Life campaign, b4L members have delivered a range of activities which focus on promoting behaviour change by engaging with consumers directly. Examples of some of this activity, not always C4L related, but always health related, are below:
- The Fitness Industry Association (FIA) delivered free dance classes across England as part of the Let's Dance/Change4Life campaign. Fellow Change4Life partner ITV promoted coverage of the campaign via its regional network.
 - Mars and Unilever have supported Change4Life through its workplace health programme, aimed at helping employees become fitter and healthier.
 - ITV has produced and aired three primetime Saturday night shows called 'The Feelgood Factor' to help families live more healthily. ITV were also the driver of and a key partner in Walk4life - part of the Change4Life movement that has been set up to encourage families and adults to eat well, move more and live longer.
 - Sky launched its campaign Skyride in June 2009 to get one million more people cycling regularly by 2013. Throughout the summers of 2009 and 2010 they held Skyride City Events to get people back on the saddle and created hundreds of weekly Skyride Local guided rides to keep people on their bikes.
27. There is an important synergy to this partnership. DH has provided the resource and skills that developed the very successful Change4Life campaign. b4l supports this campaign, and will extend it through the ability to bring these messages home to real life and real brand choices, and through its understanding of the power of social influence, as outlined earlier in this paper. The whole must be or become greater than the sum of the government and business parts.
28. As stated in the Change4Life *One Year On* report⁴³, the contribution of business has had a significant impact in ensuring the campaign's key messages are communicated successfully to consumers.

Conclusion

29. Advertising has for many years been engaged in the understanding of behaviour change and communicating accordingly. For various reasons – the IPA's work, the AA's own practical engagement with the Change4Life campaign, and our qualitative and quantitative explorations of social networking, this topic is high on our agenda.

⁴³ Change4Life: One Year On can be found here:

http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_112529

30. Our exploration of how the factor of peer acceptance interacts with other drivers of obesity will shed new light on why some people are or remain overweight, with important implications for public health policy.
31. business4life represents a new way of tackling obesity and improving health. By utilising the power of brands, and the expertise of the food and drink, retail, media, advertising and fitness sectors, we significantly amplify and extend the Change4Life message. Partnering with business in this way will increase the efficacy of the Change4Life campaign.
32. As the Government explores the most effective ways of instigating behavioural change among citizens, we trust that the input of the advertising industry, represented by the AA, can continue to play a key part in the development of effective Government policies.

October 2010

Memorandum by Ajinomoto (BC 99)

Executive summary

- Levels of obesity continue to rise at an alarming rate. The health challenge posed by obesity to UK society and the NHS is enormous, not least in financial terms
- The availability, and effective marketing, of products which taste as if they are sweetened with sugar, but have fewer calories than their sugar-sweetened counterparts, is an effective means of changing people's behaviour
- Consistent messaging across Government policy is a prerequisite for successful promotion of these products/brands and population-wide behaviour change
- As a result of the development of palatable low-calorie alternatives to caloric beverages and other foods, and their well executed promotion, consumer preference for low and no added sugar beverages is high and increasing
- The single, most effective action that Government could take to improve public health, at no cost to the Exchequer and with no need for regulation, is to issue clear and consistent messages that people who want to consume a sweetened beverage, should consider a low-calorie option
- Government should embrace the existing and developing food and beverage technologies (including the use of safe and effective ingredients such as low calorie sweeteners) as a route to changing consumer behaviour by providing food and beverages which consumers enjoy and will consume on a regular basis as part of a healthier, less calorie-dense diet
- Encouraging consumers to choose low-calorie options will deliver significant benefits in terms of individuals' health and improvements in overall public health

Introduction

1. Ajinomoto is the global leader in the science, manufacture and marketing of amino acids, nucleotides, and amino acid based ingredients, including the low-calorie sweetener AminoSweet aspartame. Our ingredients are used widely by the food and beverage industry throughout the world, to produce healthy products which are popular with consumers.

2. AminoSweet is the brand name for aspartame produced by Ajinomoto. The name was chosen to underline the fact that this low-calorie sweetener is made from two amino acids, which together result in a sweetener which tastes like sugar but is two hundred times sweeter. Being made from amino acids, the building blocks of protein which are found in many foods including meat, fish, eggs and milk, Aspartame brings nothing new to the diet and is treated by the body in exactly the same way as other foods which form part of a normal diet.

3. Ajinomoto would like to thank the House of Lords' Science and Technology Select Committee for the opportunity to feed into the inquiry of Behaviour Change. Ajinomoto's contribution will focus on *Case study 1: tackling obesity* and the development of low and no added sugar products by the food and drinks industry to bring about a shift in consumers' preference from sugar-sweetened beverages to reduced calorie variants.

Obesity and sugar intake

4. Obesity levels continue to rise in England; in 2008, 66 per cent of men and 57 per cent of women were either overweight or obese, with 24 per cent of all adults obese. Obesity is a

risk factor associated with serious health conditions, including cardiovascular disease, diabetes and cancer. Foresight has noted that the financial cost of obesity to society and business is predicted to rise to £45.5 billion per year by 2050, in addition to a sevenfold increase in NHS costs to £6.5 billion each year.

5. There are a number of causes of obesity but it is now widely accepted that the diet of the average British adult contains too much added sugar, and that the largest single source of added sugar in the average child's diet, especially amongst children from a lower income background, is soft drinks.

Food and drink industry response to growing obesity rates

6. The most effective means of reducing sugar consumption from beverages is to encourage the substitution of full-sugar variants by their sugar-free counterparts as part of a balanced diet. The food and drink industry has therefore taken the responsibility to develop low and no added sugar varieties, making a significant difference to calorie intake, in the case of some brands reducing the added sugar to zero and the calorie content from more than 100Cal/250 ml to less than 1 Cal/250ml.

Sugar substitution and effectiveness of helping in weight control

7. Sweet taste is innate and universal. Even a small level of sweetness reduction is discernable by most people and can result in reduced preference and consumption levels.

8. It is precisely because low-calorie alternatives taste as good as sugar sweetened beverages that these products have increased in sale. In addition, the success of foods and drinks sweetened with aspartame is explained by the fact that this particular low-calorie sweetener tastes most like sugar. Foods and drinks in which the sugar has been substituted with aspartame, including tea and coffee, are therefore able to deliver products which taste just as good as their sugar-sweetened alternative, but with fewer calories.

9. Meta-analyses shows that if individuals make this swap, and replace sugar-sweetened foods and drinks by their low-calorie alternative using aspartame, they can reduce their weight without any loss of palatability.⁴⁴ Given the ease of which such sugar substitution can take place in a wide variety of food and particularly drinks, the potential impact for weight management is significant. A list of popular drinks with their calorific value and with 'sugar swap' savings can be found in Appendix I.

Influencing consumer behaviour

10. As a result of the promotional support invested in low-calorie variants and the widespread availability of well-formulated low-sugar and no-sugar brands, consumer preference for these products is high and increasing.

11. This increasing preference for low-calorie options is demonstrated by the year-on-year growth in sales of sugar-free and reduced-sugar drinks. For example, low-calorie/diet colas now account for 50% of all cola consumed in the UK. More than two-thirds of the squash/dilutable beverage volume is 'low-calorie' or no-added sugar. Well conducted consumer research⁴⁵, for a wide range of organisations, shows that consumers are more

⁴⁴ A. De la Hunty, S. Gibson and M. Ashwell, A review of the effectiveness of aspartame in helping with weight control, British Nutrition Foundation *Nutrition Bulletin*, 2006, 31, 115-128.

⁴⁵ This research was undertaken by ICM Research Limited, among nationally representative samples of adults in the UK, during August 2008.

concerned about ingredients that make them fat and unhealthy, like fat, sugar and salt, than they are about “artificial” ingredients. There is no significant consumer concern about low-calorie sweeteners, or aspartame.

12. Encouraging consumers to opt for a healthier choice has proven to be simpler and more effective than engineering a nation-wide change in consumer tastes and limiting consumer choice.

Need for consistent messaging

13. However, high profile initiatives such as banning low and no-sugar beverages other than water from schools and other locations, are counter-productive, send out confusing messages and undermine consumer confidence in the low-calorie choices available.

14. Similarly, the UK Food Standards Agency's continued reluctance, for no good scientific reason, to endorse the benefits of low calorie sweeteners, including aspartame, for calorie reduction in food and beverage development presents a significant barrier to clear and consistent communication with consumers.

15. To reinforce the behaviour change initiated through the product development, marketing and communication strategies of the food and drinks industry, Government should recognise and endorse the role and benefit of using low-calorie sweeteners in drinks when developing policy and providing nutrition and diet advice.

Responses to specific questions

Q9. Are lessons learned from industry and voluntary sector behaviour change activities also taken into account?

16. Industry experience is currently not sufficiently taken into account. A greater dialogue with industry should take place when Government is developing a strategy to tackle obesity or to change peoples' lifestyle. Any such dialogue should not be limited to one-off consultations but should be of a more ongoing and inclusive nature.

Tackling obesity

Q16.b. who are the most effective agents for the delivery of behaviour interventions to tackle obesity;

17. Industry is a very effective and innovative agent for the delivery of behavior interventions including in product formulation, new product development and brand communication. Government should be encouraged to take advantage of the rich experience that is widely available. Responsible businesses would not hesitate to respond to a call from Government for cooperation and the development of important messages to help tackle obesity.

Q16.c. how current behaviour change interventions tackle obesity and what use is made of available scientific evidence;

18. The food and drink industry has been using new product development and marketing strategies successfully to change consumer preference for low-calorie beverages. Such change in consumer preference has already delivered and will continue to deliver a significant

reduction in individuals' sugar intake levels, which in turn will positively affect their health and will bring huge improvements to public health in general.

19. As already outlined above, overweight and obesity are significant contributors to disease, which in turn leads to a significant cost to society, the NHS and business. Scientific evidence is available that demonstrates that using foods and drinks sweetened with low calorie sweeteners, and specifically aspartame, instead of sugar results in a significant reduction in both energy intakes and bodyweight. Such substitution is also an effective way to maintain and lose weight without losing the palatability of the diet.⁴⁶

20. The combined impact of marketing initiatives and food technology to provide palatable low-calorie foods and drinks on changing consumer behaviour is demonstrated by the sales figures of the different type of products; specifically the increased sales for low-calorie options.

Conclusion and recommendation

21. To improve people's health, especially that of children, and tackle the rising levels of obesity of the whole of the UK population, the sugar content of the average consumer's diet should be reduced.

22. The food and drink industry has already brought about a change in consumer trends through the development of palatable low-calorie alternatives and the effective deployment of marketing and communication campaigns which promote these brands. Twenty years ago, low and no added sugar drinks accounted for just 29% of soft drinks volumes. In 2007, low and no added sugar beverages accounted for 61% of the drinks consumed.

23. Government should reinforce the efforts made by industry by helping to educate consumers about the benefits and calorie savings that can be achieved by choosing low- and no-sugar beverages, and encourage people to opt for low-calorie or sugar-free options, whenever available, including for their children. This would be a simple, clear message that is easy to understand and that would support the Government in achieving its objectives in terms of reversing the growing number of obese and overweight people in the UK, at no cost to the Exchequer and with no need for regulation.

24. To bring about behaviour change that will impact positively on public health, Government should encourage policy makers, including departments and agencies mandated with encouraging a more healthy lifestyle through healthy food and beverage choices, to endorse the role of safe and beneficial ingredients, including low calorie sweeteners, in the development of food and beverage options which people can incorporate in their daily diet.

The single, most effective action that Government could take to improve public health, at no cost to the Exchequer and with no need for regulation, is to issue clear and consistent messages that people who want to consume a sweetened beverage, should consider a low-calorie option.

⁴⁶ Ibid.

October 2010

Appendix I- Caloric Values of popular drinks

Coca-Cola (330ml can)	139
Coca-Cola Zero (330ml can)	1
Diet Coke (330ml can)	1
Ribena Blackcurrant (330ml bottle)	142
Really Light Ribena (330ml bottle)	13
Ribena 100% Pure Juices Blackcurrant Blend (250ml bottle)	133
Red Bull (250ml can)	113
Red Bull Sugar-Free (250ml can)	8

Memorandum by Professor Kevin Anderson, Mr Dan Calverley and Dr Alice Bows, University of Manchester⁴⁷ (BC 140)

Evidence submitted on an individual basis.

The evidence presented relates to questions 'b' (what is the role of infrastructure in encouraging and facilitating changes in travel-mode choice?) and 'h' (are policy interventions appropriately designed and evaluated?). For coherency, question 'h' is taken first.

Question a, c – g and i – j: no comment

Question 'h' – Are policy interventions appropriately designed and evaluated?

1. *A step change in behaviour change? Defining the scale of the task*

Central to the Copenhagen Accord, the importance of 'hold[ing] to . . . below 2 degrees Celsius' reflects the clear and long-established stances of both the European Union (EU) Commission and the UK government. The EU maintains it 'must adopt the necessary domestic measures . . . to ensure that global average temperature increases *do not* exceed preindustrial levels by more than 2°C' [1] (emphasis added). In the UK, the language of many official statements suggests, if not a zero probability of exceeding 2°C, at least a very low one [2]. For instance, in July 2009, the UK government published its *Low Carbon Transition Plan*, in which it stated explicitly that 'to avoid the most dangerous impacts of climate change, average global temperatures *must* rise no more than 2°C' [3, p.5] (emphasis added). The former secretary of state for energy and climate change, Ed Miliband, reiterated this commitment, stating 'we should limit climate change to a *maximum* of two degrees' [4] (emphasis added).

2. Although this language is qualitatively clear, the Accord, EU and the UK do not make explicit what quantitative 'risk' of exceeding 2°C is considered 'acceptable'. Without such quantification it is not possible to derive the accompanying range of twenty-first century cumulative emissions budgets from which emission pathways can be derived. In the absence of such quantification, probabilities may be inferred based on the approach developed for the Intergovernmental Panel on Climate Change's (IPCC's) reports, whereby a correlation is made between the language of likelihood and quantified probabilities [5, p. 23]. Following this approach, the Accord, EU and UK government's statements all clearly imply very low probabilities of exceeding 2°C, and even a highly conservative judgement would suggest the statements represent no more than a 5–33% chance of exceeding 2°C.

⁴⁷ Professor Kevin Anderson (chair of energy and climate change, Tyndall Centre)^{i, ii}

Dan Calverley (researcher)ⁱⁱ

Dr Alice Bows (lecturer in energy and climate change, Sustainable Consumption Institute)^{i, iii, iv}

ⁱ Tyndall Centre for Climate Change Research, Pariser Building, University of Manchester

ⁱⁱ University of Manchester, School of Mechanical, Aerospace and Civil Engineering

ⁱⁱⁱ University of Manchester, School of Earth, Atmospheric and Environmental Sciences

^{iv} Sustainable Consumption Institute

3. If government responses to climate change are to be evidence-based or at least informed significantly by science, the argument for low probabilities is reinforced still further. The characterisation of 2°C as the appropriate threshold between acceptable and ‘dangerous’ climate change is based on an earlier assessment of the scope and scale of the accompanying impacts. However, these have since been re-evaluated with the latest assessments suggesting a significant increase in the severity of some impacts for a 2°C temperature rise (e.g. [6-7]). Consequently, it is fair to assume, *ceteris paribus*, that 2°C now represents a threshold, not between acceptable and dangerous climate change, but between dangerous and ‘extremely dangerous’ climate change; in which case the importance of low probabilities of exceeding 2°C increases substantially [8].
4. The UK carbon budgets, challenging as they may seem, derive from a global carbon budget associated with a 63% chance of average global temperatures exceeding 2°C [9]. While premised on the national carbon budgets, current emission targets for motorised private transport appear insufficient to offer a ‘good’ chance of not breaching 2°C. Recent and ongoing work at Tyndall Manchester suggests that for the UK⁴⁸ to pursue an emissions pathway consistent with an approximately 50:50 chance of exceeding 2°C [8], the motorised private transport sector should not exceed a cumulative budget for 2008–22 of 880MtCO₂ [10]. This means progressively diminishing this sector’s emissions to deliver a 54% reduction by 2022 (cf. 2008), compared to the currently proposed 15% reduction. For a greater probability of staying within the 2°C threshold (37% chance of exceeding 2°C [8]), the current Tyndall transport work indicates a motorised private transport emissions budget 2008–22 of 780MtCO₂ (a 67% reduction on 2008 emissions by 2022). Continued reductions beyond the third carbon budget period will be essential, but without an immediate ramping up of abatement effort, even a low probability of keeping to a sub 2°C pathway is sacrificed, or ‘locked out’, from the outset.
5. Current firm and funded UK motorised private transport policies are expected to yield savings over the period 2008–22 of around 182MtCO₂ [11], giving cumulative emissions of 1093MtCO₂ for motorised private transport during the fifteen year period of the first three UK carbon budgets⁴⁹. The proposed measures in the *Low Carbon Transport* white paper (2009) are expected to deliver additional savings⁵⁰ of 77MtCO₂ [11], further reducing cumulative emissions for 2008–22 to approximately 1016MtCO₂. Clearly, much more ambitious emissions reduction policies are required if the sector is to come anywhere close to respecting a budget of 780–880MtCO₂ and a chance of remaining within the 2°C threshold.
6. To better understand and quantify the task that falls to travel demand *management* (or more pointedly, motorised private transport demand *reduction*), current work at Tyndall Manchester examines the potential for large scale emissions savings from improved

⁴⁸ As a ‘typical’ Annex I, or industrialised, country

⁴⁹ Against a baseline of increasing demand – according to the 2008/9 forecasts from the DfT National Transport Model [12-13]

⁵⁰ Figure is for motorised private transport only – emissions savings applied to freight have been subtracted.

vehicle and fuel technology [14]. With the emphasis strongly on the need to make deep cuts in emissions in the *short term*, few technological options are capable of coming on-stream in time to make an appreciable impact on emissions. Thus the savings achievable from the electrification of vehicles (running on renewably-generated electricity) in the next decade are predicted to be relatively minor [15], certainly in relation to the overall reduction required of the sector. Similarly, other more 'exotic' forms of vehicle and fuel technology such as fuel cells and hydrogen fuel are not considered commercially viable within the period of the first three UK carbon budgets (e.g. [16]). Increasing the use of biofuels to reduce transport emissions is problematic for reasons of food and water security rather than commercial viability [17]. At present, to promote growth in biofuels is to set aside unresolved serious issues about the sustainability of biofuel feedstock generation, most importantly with respect to competition for scarce agricultural land and water resources in already stressed regions.

7. These points notwithstanding, current Tyndall work has nonetheless identified scope for supply side technology to yield significant emissions savings in the private transport sector in the short term – namely through the rapid improvement of conventional (and already commercially available) internal combustion-engined vehicle efficiency, achieved by more stringent regulation of vehicle manufacturers. For example, regulation that sets the maximum new car fleet average at 110gCO₂/km⁽⁵¹⁾ and thenceforth applied an efficiency improvement ratchet of 3% per annum, could bring 2022 emissions down by 36% (cf. 2008)⁵² [14].
8. The shortfall in emissions abatement between the pathway that would be entrained by even such bold regulation and an emissions pathway consistent with averting 'dangerous' climate change is nevertheless considerable. If the sector, and by extension the UK as a whole, is not to be locked out of following an emissions pathway that effectively mitigates 2°C+ warming, then this shortfall has major implications for the design of interventions intended to influence travel behaviour. Most significantly, it is clear from the current transport work at Tyndall Manchester that interventions must produce a *step change* in emissions, even once supply side improvements have been made – that is, going much further than incremental changes of the order of single figure percentage points.
9. *Urban versus extra-urban driving*

In order to ensure that interventions are targeted where they can achieve their maximum potential, it is important to consider how emissions from motorised private transport break down by trip length. The call for evidence includes a rationale of CO₂ reduction, but specifically relates to town and city driving. As shown in table I below,

⁵¹ The target for 2015 is 130gCO₂/km. However there are more than twenty models of car currently available in the UK – including performance cars such as the BMW 320d – that produce less than 110gCO₂/km.

⁵² Assuming current rates of replacement / penetration and allowing for the projected growth in demand. Holding demand constant, a reduction of 42% on 2008 emissions would be achievable under this policy.

trips of less than ten miles contribute 36% of CO₂ emissions from cars, while trips of more than ten miles account for 64% of emissions.

Trip length	% of CO ₂ emissions	cumulative*	'reverse cumulative'†
<1 mile	1%	1%	100%
1-2 miles	4%	4%	99%
2-5 miles	14%	19%	96%
5-10 miles	18%	36%	81%
10-25 miles	26%	62%	64%
25-50 miles	15%	77%	38%
50-100 miles	11%	88%	23%
>100 miles	12%	100%	12%

Table 1: CO₂ emissions from cars by trip length

* Accumulated percentages of this and all shorter trip length categories

† Accumulated percentages of this and all longer trip length categories

Source: based on the first report of the Committee on Climate Change [9], figure 7.27 (approximate values)

10. Although driving distances within the Greater London conurbation might potentially amount to 35 miles or more (between diametrically opposite points on the M25), the majority of UK towns and cities are much more compact and typical *urban* driving distances commensurately shorter. Equivalent 'inter-periphery' trips across Greater Manchester and Birmingham might amount to (at most) as much as 11 miles and 15 miles respectively, but nationally the average car trip length is 8.4 miles [18]. While this mean value reflects the fact that many more short trips are made in comparison to longer trips, it hides the significantly greater emissions burden carried by trips of ten or more miles. Therefore from a climate change mitigation point of view, it is important to identify ways to reduce emissions from trips which are longer than the national average, since these trips are disproportionately responsible for emissions from private transport.

Question 'b' – What is the role of infrastructure in encouraging and facilitating changes in travel-mode choice?

11. The conventional approach to intervening in travel behaviour has been to focus on the individual motorist or traveller as the relevant agent of choice, and treat them as having a high 'locus of control'. Thus the promotion of non-motorised forms of transport for short trips, information-based campaigns (such as ACT ON CO₂) and personalised transport plans each aim to reduce emissions by seeking to directly alter the behaviour of individual travellers. This strategy has seen modest success in reducing the use of motorised private transport, in particular where information campaigns have been rolled out in conjunction with improvements to sustainable travel infrastructure (such as in the sustainable travel demonstration towns).

12. Militating against the ‘educating’ of travellers away from using their cars is half a century of public sector investment in expanding and upgrading the road network; contraction of public transport networks and withdrawal of subsidies; growth of suburbs and out-/edge-of-town amenities; cheap road fuel (compared to earnings); a decline in stable local employment hubs in manufacturing, and so on. As a result of these and many other inter-related factors, motorised private transport is often the only practical option for people living in rural Britain, or in places where public transport offers poor access to employment or amenities. From this perspective, the information-based behavioural intervention seems ill-equipped to push against this tide of societal influences and infrastructural constraints.
13. In this context, the overriding expectation is of continuing growth in motorised private transport mileage year on year (the recession apart), and the sense that this growth is intractable, as evidenced by forecasts from the Department for Transport’s National Transport Model annually [13]. In parallel with this historical growth in vehicle mileage has been a steady decline in vehicle occupancy rates (load factors), from a national mean (for all trips) of around 2 in the 1960s to around 1.6 today [19]; for commuting and business trips the mean occupancy rate is 1.2 persons per vehicle. Low and decreasing occupancy, especially for commuting and business trips which disproportionately generate around 38% of emissions from 29% of all mileage [9, p. 292, fig. 7.27]— is a key contributor to rising overall demand for motorised private transport miles. The creation of ‘minimum occupancy vehicle lanes’ (also referred to as ‘high occupancy’ vehicle lanes, or ‘car pool’ lanes) on UK trunk roads and motorways is an intervention that could begin the reversal of the trend to lower occupancy. Infrastructure requirements to implement such a scheme need not be onerous, in comparison with the provision of new roads or public transport infrastructure.
14. Alluded to in §12 above, intelligent land use planning can contribute to reducing dependence on motorised private transport by ensuring that housing, services and amenity infrastructure developments (especially retail and employment centres) are sited to facilitate easy access by non-motorised modes (primarily), and by public modes (secondly). The enormous bearing that siting of new infrastructure has on future emissions from car use in towns and cities is hard to overstate, as today’s decisions lock-in patterns of travel behaviour for generations to come.

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21 January 2011

Memorandum by the Association for the Study of Obesity (ASO) (BC 58)

The Association for the Study of Obesity (ASO) welcomes the opportunity to comment on the House of Lords inquiry on behaviour change.

The ASO is the UK's foremost organisation dedicated to the understanding and treatment of obesity. The Association has three key objectives:

- To promote professional awareness of obesity and its impact on health.
- To educate and disseminate recent research on the causes, consequences, treatment, and prevention of obesity
- To prioritise obesity and provide opinion leadership in the UK.

The ASO response focuses on the specific questions on obesity. In addition to this submission, the ASO is happy to provide any further written or oral information that the committee may require. Members of the ASO are able to provide expertise in behaviour change issues for the prevention or management of obesity in children or adults including issues related to nutritional interventions, prescribed exercise, changes in life style, pharmacotherapy and bariatric surgery.

General comments

There are significant gaps in the evidence base on behaviour change strategies to prevent and manage obesity. The evidence base on what works in general terms is clear, and this is largely reflected in existing NICE guidance (particularly guidance on obesity (2006) and behavior change (2007)). However, there are few UK based studies in every day settings and so the specifics of what works – such as who should deliver an intervention – remains unclear.

Prevention and wider public health approaches

Since the publication of the 2006 NICE guidance there have been some new, promising areas of research. This includes:

- evidence that community based, participatory interventions can drive change, such as Boyd Swinburn's work in New Zealand. Factors associated with (slow, modest) success appear to be: local champions, community collaboration and partnerships, good planning and co-ordination and sustained effort for several years.
- a growing body of research in relation to the impact of food marketing, especially to children. Economic modelling suggests that tackling food advertising is a particularly cost effective intervention because of the low cost and wide scale population reach.
- increased interest on the issue of financial incentives/disincentives to change behaviour. This issue is also being considered by the NICE citizen's council. In relation to obesity, an interesting example is the work of Ni Mhurchu et al (<http://www.ajcn.org/cgi/rapidpdf/ajcn.2009.28742v2.pdf>) who have shown that price discounts may be more effective in changing purchasing behaviour than intensive

personalised education. While the effects are modest, it provides a useful example of how an upstream intervention may be more effective than those based on education alone. There is also emerging evidence from the USA on how taxes on sugar sweetened drinks may impact on consumption.

In some areas the evidence is much weaker or more mixed than might be expected. This includes

- evidence on the impact of portion size; although there has been a lot of interest in portion sizes and energy density, research to date has focused on increased consumption with larger portions rather than whether decreasing portion size helps people eat less.
- evidence on the impact of nutrition labelling; despite regularly being hailed as a particularly important “upstream” intervention, the evidence on its impact is inconclusive.

If obesity is to be rigorously tackled in the UK, it is not just lone individuals who need to change their behavior, but a wide range of sectors, including health professionals, industry, government and the media. The Foresight report on obesity (2007) was particularly important in highlighting the vital role of the obesogenic environment in influencing whether individuals or population groups were able to adhere to behaviours beneficial to their weight and health. Furthermore, due to the scale of the problem, interventions which support behaviour change at the population level, addressing, for example, factors influencing eating habits, food choice or physical activity levels – are a more realistic means of tackling obesity than interventions which aim to address the behaviours of small groups of individuals. While both approaches are important and valid, the latter is unlikely to reach all those who require support. Population based approaches require the co-operation of industry. This has been achieved in recent years; the Food Standards Agency salt reduction campaign combined a strong focus on the reformulation of foods accompanied by consumer awareness raising activities. The campaign led to measurable decreases in salt intake. However, an important distinction must be made between action which requires the co-operation of industry and one which is merely funded and promoted by industry.

It is vital that a solid, evidence based approach is taken on behaviour change strategies to tackle obesity. Where the evidence base remains unclear or lacking, there is always the potential for unintentional or unexpected compensatory responses to large scale population based approaches. Since the publication of the Foresight report, there has been a concerted effort on the part of Government to take an evidence based approach to the Healthy Weight, Healthy Lives strategy and embed evaluation into policy interventions. The ASO very much welcomed this approach and indeed the Chair of the ASO, Dr Susan Jebb, Chaired the cross government Expert Advisory Group on Obesity. It is vital that scientific investment in this area is maintained if effective, evidence based policy options are to be developed into the future.

Management

There is some promising research on the elements that may contribute to the success of intervention to manage weight – such as peer support, regular weighing, goal setting and accountability – but which of these (and other possible) elements are crucial for success remains unclear.

October 2010

Memorandum by the Astarte Programme (BC 92)

1. The Astarte Programme for Private Citizens and Public Services is a new non-aligned initiative by the Public Management and Policy Association and The University of Nottingham to ensure that the current argument, that the provision of public services will need to be reduced in light of public finance constraints, addresses fundamental structural and philosophical challenges of expectation and provision. It thus seeks to:
 - (1) examine the changing relationship between the citizen and the state during economic, political and social change, and
 - (2) explore and develop service initiatives that re-calibrate public expectation and service provision in the light of these changes.Behavioural change - by both provider and users of services – will be a key focus.
2. The programme has thus identified a number of issues which relate to the Committee's inquiry into behaviour change, the key to which turns on the question of 'Who's problem is it anyway' and the importance of:
 - (a) motivations that define how people see their own obligations as co-producers;
 - (b) prioritisation of programmes by local communities themselves; and
 - (c) the responsibility that public agencies have to facilitate and support (1) and (2) as well as provide for delivery and accountability for service.
3. The following paragraphs are based on how our initial work informs the areas of the Committee's Inquiry.
4. **The policy implications of recent developments in research on behaviour change;**
and
Whether current government behaviour change interventions are evidence-based, whether such interventions are appropriately evaluated, and if lessons have been learnt from the process and then applied to further interventions;
5. There has been increasing use in recent years of policy drives to change behaviour and attitudes. Techniques such as social marketing campaigns (anti-smoking, healthy eating/5-a-day, alcohol misuse) have attempted to modify public attitudes and behaviour with varied success (anti-smoking campaign relatively successful, alcohol campaigns less so). But the emphasis on top down government communications might frequently fail to inform public debate and enlist individual motivation in behavioural change.
6. There needs to be a fundamental shift in thinking about how 'public' services are construed and delivered, affecting us as individuals and as local communities. The starting point is characterised largely by cynicism towards the artificiality of producer led consultations with consequent resistant service user behaviour (e.g. the reluctance of people to respond to energy savings measures which are perceived to be driven by commercial interest).
7. The extent (importance) and the means (how) people wish to engage with the delivery of services depends on the service. For example, while they expect education to be delivered to a regulated standard by others, they are prepared to be more personally engaged with environmental services. This suggests scope for more co-producing

behaviour in public services to ensure that service users are more involved in delivering successful outcomes (e.g. healthy living contributing to health service outcomes, good behaviour in schools contributing to education outcomes).

8. Lying at the heart of this issue is the need for a reappraisal of the way attitudes towards the state, and therefore responsibilities of citizens as the co-producers whose behaviour that state led programmes seek to change, have themselves evolved over the last 70 years. This evolution is evident, for example, in attitudes to:
 - (a) The **welfare state** of cradle to grave near universal access to personal services;
 - (b) The acquisition of **personal wealth** linked in part to economic policies for full employment and increased mobility.
 - (c) The relative decline of traditional models of **community** initiatives led by local state organs, uniformed societies and faith institutions.
 - (d) The development of the mixed economy of public goods and services in which **private and public capital** are increasingly interdependent as the former is used to fund public purposes and the latter is deployed to support private enterprise.

Figure I shows how motivation towards the state and therefore co-production has transformed through this period. Each age represents a regime of public service provision and a set of predispositions represented by and towards it. The changes over time provide insights not only into the journey that service provision has made but also the potential for changing dispositions and provision itself.

9. Four fields provide illustration:
 - Home ownership:** the initial emphasis on public housing as an instrument of reconstruction (and political virility by politicians) gave way to home ownership through access to mortgages and policies such as the Right to Buy (council homes) in the 1980s. This shift brought a sense of independent asset holding to those generations.
10. **Mobility and transport:** car ownership, a status strongly associated throughout the world with private wealth, has increased both in order of magnitude, and through investment in roads to change expectation in mobility in this period. It has provided a universal right of independent mobility.
11. **Savings & pensions:** Britain has moved from a 'savings' society motivated by the need to put money aside against a rainy day, to one in which investment in its housing is primarily collateral to be used against credit for current consumption and an asset to be passed on to succeeding generations for the same purpose.
12. **Telecommunications:** the huge and accelerating telecommunication provision (a product of public and private sectors) has brought a transformation to the way people interact, relate and gain information, goods and services. This has changed individuals' expectations of service as immediately accessible.

Figure I Ages of public service development

	Welfare State	Personal Wealth	Community	Private and Public Capital
<p>Pre World War II</p> <p>Age of Austerity: <i>Economic depression and threat of war</i></p> <p>Formative period for current pensioners</p>	<ul style="list-style-type: none"> ➤ Residual state ➤ Means tested (stigma) 	<ul style="list-style-type: none"> ➤ Cash generation – saving to spend. ➤ Employment uncertainty 	<ul style="list-style-type: none"> ➤ Local networks ➤ Friendly societies, church groups, & ‘leagues’ of mutual support ➤ Municipalisation 	<ul style="list-style-type: none"> ➤ Private capital for building and safeguarding savings (against a rainy day) ➤ Separation of private and public capital
<p>1945-75</p> <p>Age of Rights: <i>to employment, to gender and racial equality, to immigration, to self determination (end of empire), to private capital</i></p> <p>Formative period for current older workforce (35-65)</p>	<ul style="list-style-type: none"> ➤ All purpose state rebuilding Britain initially through public housing, new towns, NHS, secondary education (taxation funded) ➤ 1960s social care, economic planning and public corporations in telecoms, energy, and tertiary education (“White heat of technology”) 	<ul style="list-style-type: none"> ➤ Full employment (“I’m all right, Jack”) ➤ Private housing and credit society (mortgages, hire purchase & credit cards) ➤ Universal pensions ➤ Growth of private car ownership ➤ Self fulfilment (“You’ve never had it so good”) 	<ul style="list-style-type: none"> ➤ Centralism rather than localism ➤ Decline of faith ➤ Personal mobility 	<ul style="list-style-type: none"> ➤ Private capital maintains old industries ➤ State uses public capital to take over private industry first for reconstruction then to shore up ailing industries (e.g. motor and shipbuilding) ➤ Rise of home ownership as personal capital investment
<p>1975-2008</p> <p>The Age of Consumption: <i>Individualism, personal capital, globalisation, devolution, further expansion of civil rights, universal communications</i></p> <p>Formative</p>	<ul style="list-style-type: none"> ➤ Public expenditure crises ➤ Rights based, centrally funded & regulated service ➤ Expansion of means-testing and selectivity / targeting ➤ Care in the community ➤ Choice of 	<ul style="list-style-type: none"> ➤ Universal access to home ownership (“right to buy”) ➤ Credit funded consumerism ➤ Social and economic inequalities persist 	<ul style="list-style-type: none"> ➤ No such thing as society ➤ Degradation of local govt. ➤ Social justice campaigns and causes turn virtual ➤ Decline of political party membership ➤ Fragmented, individualised personal 	<ul style="list-style-type: none"> ➤ Extension of private share owning ➤ Privatisation of state corporations ➤ State solicits private capital to invest in public service

<p>period for the young workforce (up to 35 years old)</p>	<p>provision / personalisation of services ➤ The rights and responsibilities discourse</p>		<p>interactions</p>	
<p>2009-10 The Age of Collapsed Assumptions? <i>Heightened public distrust of politics</i></p>	<p>➤ Rights and provision under threat Role of family in welfare provision may have to increase</p>	<p>➤ Devaluation of pensions, savings and full employment ➤ Widening inequality</p>	<p>➤ Stratification of community</p>	<p>➤ To big to fail private sector financial institutions rescued by state capital</p>

13. Whether there is sufficient expertise within public services (for example, local authorities and the NHS) to ensure that interventions are evidence-based, and implemented and evaluated effectively;

We believe that the key questions are less about where expertise sits than the degree to which it is accessible, perceived to be trusted, and open to be driven by community expression of need (which might for example want to link up a housing management issue with addressing debilitating anti-social behaviour because of the stress in local communities).

14. The extent to which behaviour change interventions require a mixture of different tools to succeed;

We note that there could be a presumption in both this and the preceding question that the best place for both expertise, and indeed the preferred delivery model, lies with the public sector operating in a conventional mode. We suggest that the answers to both questions depend upon understanding the degree to which, as appropriate in each case, users (as co-producers) and the community to which programmes should be openly accountable, are actively enlisted in the process. Participants at an Astarte Seminar on 16th September noted that the introduction of personal budgets for mental health services had shown that choices took on a very different shape when the decision was really given to individuals.

15. how behaviour change interventions and activities are coordinated across government and beyond;

We believe that this is a critical area of development. Behaviour is essentially a personal, individual matter, and therefore manifested locally. Government departments need to demonstrate that they understand how to tune expenditure priorities, centrally and locally, to facilitate this process.

16. the extent to which, and ways in which, government should be accountable to, or engage with, the wider public about the use of behaviour change policy interventions;

We believe that this is fundamental.

**17. The role of industry and the voluntary sector in shaping behaviour patterns;
&
The relationship between government, industry and the voluntary sector in
promoting behaviour change to achieve policy goals;**

Our seminar on 16th September noted that there is a great deal of confusion as to where the role of the state should lie in terms of service provision, including the respective responsibility of central and local governments, and what is the responsibility of service users themselves. It was noted that people's expectations of the state is higher than its capacity to provide (particularly in a situation where the focus is on making savings).

18. It was noted in particular that local government is often too focussed on micro-management than being proactive. Local government is largely seen to be concerned with professional 'supplier - producer' interest, than representing local communities. Thus councils might need to adopt pro-active generation of community led choice based on a candid and integrated view of community's needs. This requires a new approach to balance of local service and political leadership, and a renewing of the sense that primary duty of officers is to the community.
19. When are political leaders trustees and when are they service deliverers? Perhaps politicians need to take a new role articulating choices and focusing on mobilising community involvement rather than managing services. The recalibration of expectation and provision implies a need to reinvigorate local debate about the various options. This might include engaging with the 'Big Society' agenda to forge partnerships of local groups (often with differing priorities) to deliver services and local projects.
20. Some services are difficult to difficult to deliver without the involvement of the voluntary sector – it would be a good idea to identify them with further research. The voluntary sector has a good track record of setting things up when a need becomes apparent. The principles the sector adopts in providing services need to be actively engineered in the design and delivery of services on a broader scale, and consideration should be given to how this is accomplished.
21. It is important to strike a balance between providing assurance in provision and taking risks (operational, litigious and reputational) to improve service. The issue of liability needs to be addressed in considering new delivery models. Data sharing can also be problematic. However, there are barriers to the provision of services by small-scale local groups including:
- (a) the cost of insurance;
 - (b) inefficiencies of scale, meaning smaller groups are often unable to provide the same services at the same cost as larger organisations;
 - (c) procurement and legal procedures.
22. Different consumer relations with public, private and third sector providers in same supply chain can also lead to a system which is unclear both to the public as well as to service providers themselves.

23. Perhaps the success of any model requires a test of trust (and therefore of open accountability) to establish sustained control of the:
- Choice and composition and development of the delivery model in any given instance;
 - Returns desired on whose investment;
 - Transparency of both capital and revenue costs funded; and
 - Models (personal budgets; local tax; precept; state grant; service charge –either direct or insured; voluntary funding; affiliation funding and subsidy, etc.

24. **The social and ethical issues surrounding the use of behaviour change interventions by government.**

We note the fundamental differences here between personal human services (in which reference to balances between core undertakings on co-production and regulated national standards are appropriate) and collective community services.

25. We believe that there are fundamental questions that need to be addressed where the state acts to preserve;

A core general community safety issue as with isolation or pre-emptive action to prevent spread of disease;

A duty of care to protect or assist someone, e.g. a child within a family context

A duty to inform where exercise of choice of behaviour might determine someone's life choices or life prospects but in which the choice is essentially individual.

26. The Astarte Programme for the next two years includes research and a variety of events for senior policy makers, service managers, service users and academics from across the public, private and community sectors to examine these and other issues that are emerging from the changing relationship between the individual and the state. We would be pleased to discuss these and other developments with the Committee.

9 October 2010

Memorandum by Professor Thomas Baldwin, University of York (BC 66)

Before addressing some of the questions posed by the committee, it seems to me important to articulate a way of thinking about the issue which the committee seeks to investigate which is not manifest in the way in which the committee's call for evidence is phrased although I am confident that the committee would broadly endorse this way of thinking. The introduction to the committee's call alludes several times to 'behaviour change interventions' and seeks to gather evidence from a variety of 'research disciplines', which turn out to be natural and social sciences, concerning interventions which 'rely on measures other than prohibition or the elimination of choice'. Now what is striking in this introduction, and throughout the paper, is the lack of any reference to the ordinary ways in which we seek to influence each other by giving each other reasons for action or restraint; for this is certainly a type of 'intervention' which relies on 'measures other than prohibition or the elimination of choice'. This approach is one which draws on our capacity for agency, whereby our courses of action are determined by our own more or less rational deliberations. Of course the committee do not need to be reminded of the existence of this capacity! Nonetheless the reason I draw attention to it is that it seems to me that all discussion of other 'behaviour change interventions' needs to take place in a context in which it acknowledged that the exercise of our ordinary capacity for rational agency constitutes the fundamental way in which we lead worthwhile lives of our own as responsible persons. This capacity is both explanatory and normative, though it remains a deep philosophical question quite how this incarnate combination of fact and value is possible.⁵³ But however it is best comprehended, rational agency is a fundamental value for any liberal society: a liberal society such as ours is committed to taking it as a fundamental presumption that its citizens are rational agents. Hence any 'behaviour change interventions' that are implemented in the course of public policy need to respect this commitment to treating citizens as presumptive rational agents.

In emphasizing this capacity and its value, I do not of course suggest that citizens are always perfectly rational agents; on the contrary we all know that we are prone to unwelcome motivations and bad habits which we need to restrain, and the kinds of 'behaviour change interventions' which this call for evidence asks about are sometimes conceived as ways of addressing motivational challenges that are difficult to manage in the ordinary course of life. But there is often a complex mixture of limited rationality, ignorance and changed circumstances in the situations which give rise to a call for intervention. Take the rise in obesity in the years following 1980: the explanation for this phenomenon is plainly not to be found in a collapse of personal responsibility over this period. Instead the explanation revolves around a toxic combination of readily available cheap high energy food and drink, fewer opportunities for manual labour, an increase in car ownership, changing social norms concerning cooking and eating, and other features of the 'obesogenic' environment prevalent then (and now).⁵⁴ Hence a strategy to address this issue needs to look beyond interventions intended to change the behaviour of individuals to ways of correcting the physical, social and commercial environment within which reasonable people found it all too easy to eat too much and exercise too little. At the same time, however, the individuals affected do need special help; for once one's body has adjusted to a condition of obesity, it is exceptionally

⁵³ I have discussed this in the context of behavioural genetics in chapter 12 of *Genetics and Human Behaviour* (Nuffield Council on Bioethics, 2002). This report is available as a pdf from <http://www.nuffieldbioethics.org/publications>.

⁵⁴ See the section 3 of the 2007 Foresight Report *Tackling Obesity: Future Choices – Project Report* (Government Office for Science).

difficult to return to a more healthy weight, for physiological as well as psychological reasons. Nonetheless, and here I come back to the central theme of these initial remarks, the test for the success of a behaviour change intervention is that it should enable an individual to take responsibility for their own habits of eating and exercise, so that it is as rational agents that they are able once again to maintain a healthy weight and healthy life.

Responses to selected questions

Question 1 'What is known about how behaviour can be influenced? What special considerations apply to addictive behaviour?'

As discussed above, when things are going well for a person, their behaviour is an exercise of the capacity for rational agency, and their behaviour is primarily influenced by the considerations which provide them with reasons for acting one way or another. It is well known that in the exercise of this capacity people often behave in ways which violate abstract canons of rationality, for example, by violating the transitivity of preferences, whereby option C is preferred to option A even though A is preferred to B and B is preferred to C. Cases of this kind show that abstract canons of rationality, such as transitivity, fail to take account of the context-sensitivity of rational preferences; but of course there are other cases where people do make mistakes of rationality – e.g. when they fail to recognise the proper conclusion of their reasoning.

But the second part of this question indicates that the main point here concerns situations in which things are not going so well and someone's behaviour appears to be motivated by desires which are largely impervious to rational considerations. I am conscious that a great deal of work has recently been undertaken in this area, much of it summarised in the 2005 Foresight report *Drugs Futures 2025*, and there are important findings which suggest that the practice of taking certain psychoactive substances leads to a situation in which the neurotransmitters in the brain which are sensitive to these substances are re-organised in such a way that the neural systems which subserve the ordinary exercise of rational control become attenuated. I cannot comment on this – though the plausible model that it suggests to me is that of a computer virus which takes over a bit of the computer's operating system. Nonetheless there is one line of thought here which is worth mentioning since it is not yet, I think, common knowledge. The American philosopher Harry Frankfurt proposed some years ago⁵⁵ that the mark of addictive behaviour is the inefficacy of someone's 'second-order desires', that is, their desires concerning their first-order desires, such as, say, the desire for a cigarette. For what Frankfurt's hypothesis implies is, first, that rational agency involves this second-order power both to evaluate the content of one's first-order motivations and to direct one's life in accordance with these evaluations; and, second, that the mark of addictive behaviour is an attenuation of this second-order power. If that is right, then what needs to be better understood here is the way in which this second-order power, the 'rational will' as Kantians might call it, can be nurtured, damaged, and repaired. These are not questions for armchair psychology, but my own guess is that the emphasis on self-esteem to be found in Kohlberg's theory of child development is an important part of the story.⁵⁶

⁵⁵ H. Frankfurt 'Freedom of the Will and the Concept of a Person' *Journal of Philosophy* 68 (1971) 5-20 (those with access to JSTOR will be able to find Frankfurt's paper there).

⁵⁶ See L. Kohlberg and C. Gilligan 'The Adolescent as a Philosopher: the Discovery of the Self in a Postconventional World' *Daedalus* 100 (1971) 1051-86.

Question 6 How should different levels of intervention (individual, organisational, community and national) and different types of intervention (legislative, fiscal, educative) interact in order to achieve policy goals more effectively?

To some extent this question was addressed in chapter 3 of the NCOB report *Public health: ethical issues* which I helped to write.⁵⁷ The main proposal advanced was that potential interventions should be thought of as arranged in a sequence comparable to the rungs of a ladder, with those that seek to inform and educate citizens at the bottom, and those that intervene more intrusively into the lives of citizens further up, all the way to outright prohibition at the top. Then the implication of this model, the ‘intervention ladder’, was that public policy should aim to stay as low as possible on the ladder as is consistent with achieving the intended outcomes of the policy. This way of thinking about different ‘levels’ and ‘types’ of intervention draws on the liberal presumption of the value of individual agency that I presented in my introductory remarks. But your question rises more issues than are answered in this way, particularly in respect of the different ‘levels’ of intervention. My experience of addressing these issues comes from my time as a member of the Expert Advisory Committee on obesity, where the committee helped to design the policy (‘Healthy Weight, Healthy Lives’) which sought right from the start to integrate these different levels of intervention. It would not be sensible to describe this policy in detail here, but it does at least indicate that the issue raised in your question is one which was prominent in the design of policy right from the start.⁵⁸ I suspect, however, the way in which the ‘levels’ and ‘types’ of intervention have been integrated in this case may well not be appropriate in other areas – e.g. with respect to drug misuse or STI’s. So although public policy does need to be integrated in the way your question suggests, one should not expect to find one model that can be applied across the board. Indeed this was one of the conclusions of the NCOB report on *Public Health; ethical issues*: although the basic intervention ladder model is very broadly applicable, once one thinks about its detailed application in different spheres of public health, different issues need to be addressed.

Question 13 Ethical considerations

This question was addressed, in the context of public health at least, in chapter 2 of the NCOB report *Public health: ethical issues* which I helped to write. Our starting point there was my starting point here, the commitment of a liberal society to treating its citizens as responsible agents. We then considered following J.S. Mill’s line of thought in his famous essay *On Liberty* by interpreting this liberal starting point as implying that the state’s role with respect to public health should be governed by his ‘public harm’ principle, so that the state’s primary business was to protect its citizens from ill-health imposed on them by others, but not to ensure that each citizen lives a healthy life. Even when this is understood along the lines Mill proposed, so that it includes the provision of essential public goods such as clean drinking water and a special duty of care for children, it seemed to us to be too limited in its scope. For example, it did not provide an easy way of legitimating a public response to the health inequalities identified in Sir Douglas Black’s famous report. Furthermore your own issue of obesity is a good case to think about: obesity is not a transmissible disease, so it is not obvious that one person’s obesity poses a direct risk to the health of others. Thus apart from the duty of care to children, which clearly does require interventions aimed to minimize childhood obesity, an approach to public health which restricts itself to the ‘public

⁵⁷ This report is available as a pdf. from <http://www.nuffieldbioethics.org/publications>.

⁵⁸ The original strategy document and the follow-up reports are available from <http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/index.htm>

harm' test does not provide any obvious way of legitimating public interventions intended to address the issues raised by increasing levels of obesity in the adult population. One can then argue that it is the predictable costs of dealing with the health implications of rising levels of adult obesity which makes it imperative for the state to intervene; but that purely economic consideration struck us as unsatisfactory by itself as a rationale for state intervention in this and similar areas of public health. And in thinking further about this we took it that it was consistent with our basic liberal presumption that the state should take on the rather more ambitious role of providing the conditions under which it would not be difficult for rational citizens to avoid obesity by acting responsibly with respect to diet and exercise. One has only to think about our current obesogenic environment to see what happens where this responsibility is not discharged. As a way of labelling this rather more ambitious role for the state in the area of public health we took over the term 'stewardship model' from discussions by the WHO and the King's Fund; the thought was that the state has a duty to act as 'steward' of the environment in which its citizens live and work such that it is not difficult for them, by and large, to live healthy lives.

I have come to appreciate from subsequent discussion that the term 'stewardship' was ill-chosen: for it can easily be understood to suggest that the state is to act as 'steward' of the health of its citizens, and thus should intervene to prevent people from living unhealthy lives. Legitimation of this kind of illiberal paternalism was not intended to be part of the stewardship model (in fact it is explicitly rejected), but it is nonetheless easy to see how the phrase 'stewardship model' can be interpreted in this way. For this reason I myself now prefer the term 'partnership model' as a way of characterising the intended relationship between state and citizen in respect of public health. The thought is that it is appropriate for the state to act as a *partner* with its citizens to help them lead healthy lives, primarily by ensuring that citizens have reasonable access to the conditions which make this possible. At least with respect to adult obesity, this conception of the state's proper role is, I think, exemplified in the 'Healthy Weight, Healthy Lives' programme.

One final point: your question asks whether the principles governing state intervention differ when the intervention is aimed at commercial organisations as compared with individual citizens. In principle there is all the difference in the world: it is individual persons whose status as rational agents is a fundamental value of liberal society; but commercial organisations are not rational agents of this kind. They are organisations which aim to provide goods or services in exchange for payment in order to secure a profit for their owners. So they do not merit the kind of liberal freedom from interference which applies to individual persons, and there is, therefore, no principled objection to regulating them in restrictive ways. What they can nonetheless demand is that they be regulated only in ways which are effective, well-motivated, and fair; and they can argue that if the ends sought by regulation can be achieved by voluntary codes, then this approach should be tried first. So here too there is an intervention ladder which starts from voluntary codes and ends up with restrictive formal regulations. But in this case the relevant considerations are primarily pragmatic rather than principled.

Question 16 *Tackling Obesity*

In my previous answers I have said a good deal about obesity, and I will not repeat it here. Most of the issues raised by your questions (a)-(e) can be handled by other experts from the

Expert Advisory Committee (Dr. Susan Jebb⁵⁹, Dr. Harry Rutter⁶⁰ and Prof. Klim McPherson⁶¹) and there is no point in my attempting to do so myself. But there are two brief points which I would like to make.

(i) In order to enable people to make responsible decisions about what, and how much, they eat, it is essential that they be provided with accurate information about the calorie content of the food available to them. Hence accurate labelling of food products is a key requirement of public policy in this area. There has been some significant progress in this area recently – e.g. confectionary is now clearly labelled in this respect (and it would be worthwhile finding out from manufacturers how far the labelling of calorie content has affected sales). But it is very frustrating to me that despite promises over the past two years that calorie information would be provided at fast food outlets and similar restaurant chains, nothing significant has been done. The situation in other parts of the world is very different, and this strikes me as an area where regulation may be needed since voluntary agreement has achieved nothing.

(ii) An important issue in this area which is not often discussed arises from the relationship between public policy on obesity and the common anxiety about personal appearance which leads people to attempt diets. Of course the state's concern about obesity is based on risks to health and not on judgments about appearance. Nonetheless personal appearance is a matter of very great sensitivity to most people, and unless great care is taken when talking to someone who is overweight or obese, such talk is liable to be heard as offensive criticism of their personal appearance. Yet if we want to shift behaviour in this area we need to find ways of approaching people which are not offensive and which do not threaten their self-esteem. I suggested earlier that self-esteem is an important condition of Frankfurt's second-order capacity of self-control, so an approach to public policy in this area which threatens self-esteem is liable to be self-defeating. Furthermore self-esteem is an important personal value, and just as it is essential that a public obesity strategy should not invade significant personal freedoms, it is equally important that it should not damage the self-esteem of those who are targeted by the strategy. 'Fatism', as prejudice against those who are perceived to be overweight is sometime called, is an offensive practice which should not be tolerated in a decent society.

October 2010

⁵⁹ Dr Susan Jebb is Head of Nutrition and Health at MRC Human Nutrition Research Centre at Cambridge – see <http://www.mrc-hnr.cam.ac.uk/about/People/senior-staff.html>

⁶⁰ Dr Harry Rutter is the director of the National Obesity Observatory (NOO); see www.noo.org.uk/about/NOO_team. The NOO website is an excellent resource from information about current levels of obesity in the UK – see www.noo.org.uk

⁶¹ Professor Klim McPherson is an epidemiologist at New College Oxford. He was responsible for the statistical projections in the Foresight report and continues in this role for the Expert Advisory committee; see http://www.new.ox.ac.uk/Teaching_and_Research/Staff_Profile_Page.php?staffid=162

Letter from Professor Erik Bichard, the University of Salford (BC 23)

The role of reward-based strategies that motivate householders to take action in response to climate change

I write in response to the call for evidence by your Sub-Committee on 'the use of behaviour change interventions to achieve policy goals'. I have prepared a brief summary of the work I have done to date, and I would be happy to elaborate on this if called to give an oral submission. By the time the Sub-Committee holds public meetings in November I would expect that my trial will have yielded definitive results.

My team at Salford University has designed a series of research inquiries in association with the Environment Agency, Salford City Council and Trafford Borough Council. The work assumes that people can be encouraged to overcome their natural reticence towards government messages about climate change. In a reverse of the tactics employed to change behaviour to date, this research tests whether it is possible to appeal to self interest while simultaneously engaging individuals in community discussions about the future of the neighbourhood. The aim is to generate a positive emotional response to the invitation to change behaviour. This is mainly because the offer appears to place the householder in an advantageous situation, regardless of their starting point on the issue. This positive reinforcement grows with the understanding that others have acted in the same way. The incentives are directed to encourage people to choose to do something initially for themselves and their families, with the benefits of community participation coming later. The work by the Salford University team concerns the application of incentives to encourage a response to climate change by using less energy and protecting against flooding, but the approach is transferable to most situations where behaviour change is being sought.

The social psychology literature is filled with examples of various approaches to changing people's behaviour. This work shows that fact-based information campaigns are unlikely to be effective as a sole strategy. They are effective for a real and present danger like death by car crash (seat belts) or AIDS (the practice of safe sex) but most behaviour is not influenced by merely knowing more. Another tactic that governments like to use is financial disincentives. These can be useful to promote sustainable behaviour, but they are not effective once the disincentive is removed. Also, their use is problematic where equity is an issue, and particularly in low income communities. For example, in the UK, introduction of energy taxes would significantly increase the problem of fuel poverty.

Providing grants for community groups or for the purchase of sustainable goods can be an effective way of changing people's behaviour. For example, subsidising "A"-rated energy-saving appliances resulted in their lower prices and increased attractiveness to buyers. Grants to subsidise energy-saving improvements (e.g. loft and wall insulation) are offered by the UK Government, local authorities and energy suppliers. However, grants are costly to resource and administer and for this reason are often limited to small sections of society including the elderly and those in receipt of certain benefits thus excluding large numbers of people who are not able or not willing to spend their money on these improvements. In any case, maintaining extensive grant regimes in challenging economic conditions means that, at best this is not a reliable or long-term measure to encourage wide-spread behaviour change.

Non-financial incentives can be more effective in influencing sustainable behaviour because they also have a number of additional benefits in comparison to direct financial incentives. If employed through the channels of existing public policy initiatives they can boost local economies, help in community development and cohesion and contribute to meeting a variety of the Government's objectives. In field trials the Salford University team is asking people to invest (where appropriate) in better boilers, home insulation and flood protection in return for fruit and vegetables (healthy eating), garden makeovers (plant take-up of carbon, drives altered to allow flood waters to soak into the ground), public transport (fewer emissions, accidents and congestion), tickets to events (increased social interaction, increased spending in the local economy) and many other rewards. At the same time, a 'green community' effort is helping residents in the neighbourhood to get together to discuss environmental issues that concern them. This second strand promotes the exchange of ideas which can become ingrained in a street or a neighbourhood. The visual cues that result from collective action are important here. The Salford trial engages residents on topics including cheaper energy through heat co-operatives, the threat of flooding and what to do about it and other issues of their choice.

The results of the Salford university trial will be out in a few months, but the initial signs are promising, and there has been a lot of interest from transport companies, FE colleges, and retailers in furthering their interests to engage with their communities through this type of scheme. The community that Salford University is currently working with is in Timperley (West Manchester). The study area comprises about 200 houses in a flood-threatened urban area. The residents are demographically diverse a range within lower to middle income brackets. They live in a mixture of housing types and tenures. Attitudinal work showed that same reluctance to invest in property-level protection as the larger survey completed by the researchers in England and Wales in 2009.

In Phase I of this work the researchers contacted 1,043 people living in flood risk areas in England and Wales (telephone survey) and 101 residents in living in the Lower Irwell Valley in East Salford, Greater Manchester (door-to-door survey). The respondents were asked whether they would consider installing any of the following flood protection measures: air brick covers, door guards, raised electric fixtures, tiled flooring, concrete bottom of staircase and a range of insulation and efficient heating products. The results showed that raising electric fixtures and installing air brick covers and door guards were seen as the most appealing, while tiled flooring was the least popular option. Less than 50% of the residents had loft insulation, wall insulation, double glazing, efficient boiler or energy-saving appliances. Energy-saving appliances and energy-efficient boilers were top of the list of things that the householders would consider buying in the future. Just under half of the respondents said they would not be willing to invest anything towards flood-protection and energy-saving improvements. However, nearly a quarter of the respondents would invest over £500.

The most popular non-cash rewards for investing in flood protection or energy-saving were vouchers for fruit and vegetables (51.7% of positive answers), followed by free meals at restaurants (44.2%), tickets for entertainment (33%) and vouchers for leisure and health centres (27%). The least popular reward was free bus travel although the high proportion of over 60s that already have access to these services could explain this. Around a quarter of the respondents would not be persuaded to accept any value of rewards, and over half wanted 100% to 200% of rewards for the investment they would make. Nearly half of the respondents said they would participate in a reward scheme should it be offered in their area

The most important recommendations from this first Phase of the research were:

- There is a need for a climate change strategy which is aimed at householders and promotes prompt action to make physical changes to the fabric of their premises;
- The social psychology literature and attitudinal surveys carried out for this study supports the proposition that reward-based incentive schemes will motivate many householders to purchase energy-saving and flood protection measures for their homes. A variety of pilots should be commissioned to test this contention.
- Carefully selected non-cash incentives that can boost local economies help develop communities and aid delivery of current Governmental campaigns.
- People with little disposable income should be eligible to receive flood protection grants.
- Innovative awareness-raising and education programmes should not be perused to the exclusion of community-level discussions and debates using local leaders and motivators. More work is needed by government to help these existing and emerging leaders to effectively engage with those around them to help them accept the threat of dangerous climate change, and take prompt action to reduce potential harm to their areas.

The study has now entered Phase 2 after the Environment Agency was sufficiently convinced of the merits of the approach. It is also considering ways to amend a future Flood and Water Management Act to allow funds to be used for incentive schemes. The Environment Agency has also requested that a small scale trial be mounted to show how a reward scheme would work in practice. Householders will be offered a 100% return on investment in the form of non-cash rewards. The reward list will include:

- free tickets for the train (TransPennine Express)
- bus and tram travel (including First Bus)
- free garden and furniture makeovers (making use of schemes that offer offenders and ex-offenders the change to work and gain skills)
- free fruit and vegetables (through the Co-operative Group)
- complementary access to further education courses (through Salford College), free restaurant meals and hairdresser session (delivered by FE students at Salford College)
- season tickets to rugby league (Salford City Reds) and football games (Altrincham FC).

The trial in Timperley started with a survey similar to Phase 1. A green community group has been engaged to help inform the residents about the wider issues of climate change and be the primary point of contact with the residents. Residents who volunteer are then offered a free energy and flood risk survey and will be asked to act on the recommendations. Those who purchase some or all of the recommended measures will choose from the list of rewards equal to the amount that they spent on their house. The trial is running from May and December 2010.

October 2010

Memorandum by Dr Alison Bish and Professor Susan Michie, University College London (BC 29)

1. Summary

This submission summarises some key behavioural issues arising in the UK from the outbreak of pandemic influenza in May 2009. During this pandemic behavioural and social science evidence was used insufficiently to inform the Government's behavioural and communication strategy, and little resource has been invested in building or translating the evidence in this area. The Behaviour and Communications sub-group of the cross-Government Scientific Pandemic Influenza Advisory Group advised on the behavioural implications of a variety of policy issues arising during the course of the pandemic. Drawing on these briefings and research findings we provide evidence below for questions in the Call regarding research and development; translation; policy design and evaluation; and ethical considerations. The evidence highlights the importance of behavioural science in planning for and responding to a pandemic.

2. Introduction

2.1 This submission summarises some key behavioural issues arising in the UK from the outbreak of a new strain of H1N1 influenza, also known as swine flu, which was confirmed in the UK in May 2009 and spread to over 100 countries around the world causing the World Health Organization to declare a global flu pandemic. A pandemic situation is full of uncertainties: how severe the disease will be, how fast it will spread, which groups will be most affected, and what the best preventive measures and treatments for the particular virus will be. In these situations, it is vital to have up to date scientific evidence about how particular groups in the population are likely to respond to the range of possible scenarios and likely public health interventions required; particularly what behavioural and communication strategies are most likely to be effective in minimising mortality and morbidity. The 2009 pandemic was unexpectedly and mercifully mild. Its occurrence does not lessen the chance of a pandemic in the near future; indeed, it is seen as one of the most significant risks facing humanity (Cabinet Office, National Risk Register of Civil Emergencies, 2010). The general consensus is that the next pandemic is likely to be much more severe, therefore the stakes are high. During the 2009 pandemic, behavioural and social science evidence was used insufficiently to inform the Government's behavioural and communication strategy (Independent Report from Dame Deirdre Hine, 2010); on this occasion, the mildness of the disease meant the costs were not enormous. Next time, however, it could cost thousands of UK lives.

2.2 Behavioural science is key to the planning and management of flu outbreaks as, after vaccines, changing behaviour is the most important factor in preventing, and reducing the harm caused by, seasonal and pandemic flu (Council of the European Union, 2010, WHO Public Health Research Agenda for Influenza 2009, Bish & Michie 2010, Rubin *et al* 2010). However, little use was made of relevant evidence from the behavioural and social sciences in the planning for and management of the 2009 pandemic and little resource has been invested in building or translating the evidence in this area (Independent Report from Dame Deirdre Hine, 2010).

2.3 During the 2009 outbreak of swine flu the Behaviour and Communications sub-group of the cross-Government Scientific Pandemic Influenza Advisory Group responded to requests from the Scientific Advisory Group in Emergencies (SAGE) to advise on the

behavioural implications of a variety of policy issues that arose during its course. These included the impact and implications for communication of offering vaccination and antiviral treatment to targeted groups; the impact on public responses of the terms used to describe targeted groups; the likely scale of fraudulent use of the 14 day self-certification of sickness absence and measures to reduce the problem; the school closure policy during the pandemic; communication implications of attitudes to being vaccinated against H1N1 (swine flu) and how to communicate the government planning assumptions. These briefings are collated in Appendix I, and their content informs this submission. The relevant questions in the Call for which we can provide evidence are addressed below.

3. Background

3.1 During an outbreak of pandemic influenza it is vital to communicate effectively to change behaviour in order to prevent disease spread, ameliorate disease severity and deliver services more effectively (WHO Public Health Research Agenda for Influenza 2009). Behavioural science, both its evidence and theories, can inform communication strategies and other interventions to improve the likelihood of their effectiveness.

3.2 Disease prevention includes getting vaccinated and reducing transmission by carrying out hygiene behaviours such as: hand-washing with soap, respiratory hygiene, interpersonal behaviour such as social distancing and minimising physical contact and increased cleaning of surfaces.

3.3 Management of disease involves detecting symptoms accurately and acting on symptoms appropriately by seeking medical help, using dedicated telephone Flu Lines rather than visiting the GP, following medical advice and taking antiviral medication appropriately.

3.4 Delivery of health care involves implementing health care guidance e.g. recommending vaccination, prescribing antivirals, giving behavioural advice and implementing guidance for health professionals' own health care, e.g. uptake of vaccinations. Other behaviours key to delivery of health care are economically and socially harmful activities such as avoiding going to work if not ill, shunning contact with particular groups and unnecessarily seeking health care (Rubin *et al* 2010).

4. Research and Development: Question 2. What is known about how behaviour can be influenced?

4.1 In order to identify what to target with communications (e.g. attitudes, knowledge, emotion) and how to tailor communications to specific groups we need to establish the psychological and demographic determinants of behaviour. A recent review (Bish & Michie 2010) was carried out in order to identify the key determinants of protective behaviour during a pandemic and to describe conceptual frameworks in which to better understand these behaviours and to inform future communications and interventions. The study found associations between demographic factors and behaviour, with women, older people and the more educated being more likely to carry out the recommended behaviours. There was also evidence from the review that perceiving oneself to be more susceptible to SARS, avian flu, swine flu, or pandemic influenza and believing that these diseases are more severe is associated with undertaking behaviours to protect oneself. Both these findings can be explained by reference to the proposed relationship between attitudes and behaviour as described by the Health Belief Model (HBM) and Protection Motivation Theory (PMT) which highlight the importance of perceptions of threat in determining behaviour. The review also found that having more confidence in the efficacy of the recommended behaviour is

associated with a greater likelihood of taking action. The HBM, PMT, and Theory of Planned Behaviour (TPB) all highlight the influence of attitudes towards the behaviour in determining whether individuals will carry that behaviour out and thus provide a framework for understanding this finding. However, other work has shown that beliefs and attitudes are only part of the story; emotion plays an important role in influencing protective behaviours in relation to pandemic flu.

4.2 A recent longitudinal population study (Rubin *et al* 2010) assessed the effect of Government and media communication on beliefs, emotions and self-reported behaviours during the 2009 swine flu outbreak using an analysis of telephone surveys of 1000 people across the UK, weekly since the outbreak began. The study found that uptake of the recommended protective behaviours was low. Results showed that levels of worry were important in influencing behaviour as those who were more concerned about swine flu were more likely to be compliant with government recommendations.

4.3 The findings that perceiving oneself to be more susceptible to the illness and worry are associated with engaging in protective behaviours highlights the need to focus on perceptions of risk and raising worry in communications. A certain level of perceived susceptibility to the illness is required to get people to take action. Since such communication-based interventions have the potential to also increase uptake of non-recommended behaviour, messages designed to highlight perceptions of risk should also be combined with advice emphasizing that risk can be reduced by carrying out the recommended protective actions and providing information about the efficacy of such measures in reducing risk (WHO, 2009).

4.4 Evidence suggests that interventions designed to increase protective behaviour during a pandemic should be adapted for specific groups of individuals (European Union, 2010). For example, a recent intervention study designed to increase hand washing found gender differences: men tended to be motivated by messages highlighting the disgust of not washing ones hands, whereas women were more influenced by 'knowledge activation' – which involved being reminded of what they knew already about the advantages of hand washing (Judah *et al.*, 2009).

5. Research and Development: Question 3 'Is there adequate research capability within the United Kingdom to support the current pace of developments in behaviour change policy interventions? Is there sufficient funding for the evaluation of behaviour change interventions?'

5.1 There is a need to invest in behavioural research in the UK. Few resources were provided for behavioural research during the 2009 pandemic, with only a tiny fraction of the NIHR Flu Commissioning Board budget for rapid research during the pandemic awarded to the behavioural or social sciences. Notably, there was no behavioural or social scientist on the commissioning board. A number of research priorities were identified by SPI B&C (see Appendix 2) but none of these were funded. Although there has been a recent EU call for the development of evidence based behavioural and communications strategies to respond to major epidemic outbreaks, this is not on the agenda of UK funding bodies such as ESRC, MRC and the Wellcome Trust. The SPI B&C group recommended that procedures should be put in place to allocate funding and / or approval to research projects quickly following a major incident. While funding bodies may theoretically be better placed to organise such activities, experience during the 2009 pandemic suggests that SAGE or SPI may be best

placed to direct and co-ordinate the spontaneous research efforts that will inevitably spring up following a pandemic outbreak.

5.2 The importance of behavioural science to planning for, and responding to, a pandemic has been highlighted by both the Council of the European Union and the World Health Organisation (Council of the European Union, 2010, WHO Public Health Research Agenda for Influenza 2009).

6. Translation: Question 4. Are there adequate structures and expertise across government and the public services more generally to support the translation of research developments in behaviour change into policy interventions?

6.1 In her independent review of the UK response to the 2009 influenza pandemic, Dame Deirdre Hine drew attention to the fact that behavioural scientists were not used as effectively as they might have been and recommended that there should be a concerted effort to build relationships between SPI-B&C and DH policy and communications teams so that SPI-B&C's expertise can be used in planning for vaccine uptake and other policy issues where a behavioural approach can pay dividends.

6.2 During a more severe pandemic, people are likely to be more willing to adopt behaviours that are endorsed by the government, such as self-quarantine, hand and respiratory hygiene, taking anti-virals and vaccination etc. However, it might be even more challenging to counter negative behavioural responses, rumour and conjecture. The role of evidence-based communications and behavioural interventions would be even more important in this situation.

7. Policy design and evaluation: Practical application: Question 9. Within government, how are the lessons learnt from the success or lack of success of behaviour change interventions fed back into the design of future interventions?

7.1 One of the main lessons from the 2009 pandemic was that investment in the vaccine policy will be wasted if the issue of low uptake is not resolved. Protecting the public's health means maximising uptake of a pandemic vaccination amongst health professionals and the public. There is scant reference to the role of psychological or behavioural factors in uptake of vaccination in the Department of Health's document about the lessons learnt from the vaccination programme during the swine flu outbreak (Department of Health, 2010). During the 2009 pandemic, the SPI B&C group prepared a detailed report providing evidence-based recommendations for communication regarding vaccination. In her Independent report, Dame Hine recommends that behavioural scientists from SPI-B&C could have advised on likely vaccine uptake rates; however, policy officials did not request this advice from them. She recommends that in future pandemics, behavioural scientists should be closely involved with the lead government department communications team, and have clear channels to pass advice to the devolved administrations. Communication strategies for different populations are discussed below.

7.2 General Population

Giving information on its own is unlikely to reassure, given concerns about the safety of the vaccine and also about whether swine flu is severe enough to warrant a vaccine. Blanket reassurance has the potential to increase anxiety about having the vaccine, and therefore reduce uptake, so communications have the capacity to achieve counter-intuitive effects.

To be effective, information must be specific and directly relevant to the concerns of targeted groups. For example, individuals need to know how ill they would be if they developed the disease and how this compares to the severity of any side effects of the vaccine before deciding about vaccination (Henrich and Holmes 2009). In order to undergo vaccination people need to be convinced that it is necessary in order to avoid a real and severe risk, as well as being persuaded of the effectiveness and safety of getting vaccinated.

Meta-analyses have shown that perceptions of risk can be an important predictor of uptake of vaccination (Brewer *et al* 2007). Increasing levels of perceived susceptibility to disease amongst the public may be effective in increasing vaccination (Quinn *et al*, 2009). However, if vaccination is introduced before a sharp rise in cases it may be necessary to focus on worst case scenarios in order to achieve this increase in the public's perception of risk, and thus their willingness to be vaccinated.

Perceived risk phrased in terms of feelings rather than as a purely cognitive probability judgment, and anticipated regret at not being vaccinated, have been found to predict seasonal influenza vaccination uptake (Weinstein *et al*, 2007). Providing communications nuanced towards highlighting such feelings are therefore likely to be effective in encouraging uptake.

In a severe pandemic, it will be vital for public health to maximise vaccination uptake amongst not just the groups most at risk but the whole population. Individuals may be motivated to be vaccinated by a desire to protect themselves, or in a bid to minimise their own anxiety and worry, rather than by the public good. Research investigating public responses to vaccination has found that people tend to act in one of three ways with regards to vaccination uptake (Hershey *et al* 1994; Meszaros *et al* 1996):

- free riding – relying on the fact that if others are vaccinated then the chances of contagion are reduced and therefore one does not need to be vaccinated oneself
- altruistically – being vaccinated oneself for the protection of others
- bandwagoning – following the majority response to vaccination

Since communication that emphasises free riding tends to increase free riding, communication that implies the potential for free riding should be avoided (Hershey *et al* 1994). Campaigns should emphasise the need for high vaccination rates in order to encourage altruism where individuals will think that being vaccinated is important not just for them but also for others (Hershey *et al* 1994).

7.3 Health Professionals

An Expert Workshop held by the European Centre for Disease Control (Brussels September 8th, 2009) identified low vaccination rates among health professionals as a significant problem across Europe. There was agreement that a communication strategy likely to be effective for this group is to appeal to their sense of professional identity and responsibility, stressing the importance of vaccination for protecting their own health and also for the health of their patients.

A lack of perceived efficacy of the vaccine can be a barrier to uptake (Hollmeyer *et al* 2009). However, in the context of smoking cessation relatively simple information to GPs about the effectiveness of smoking cessation services has been found to change perceptions of effectiveness and led to increased referral rates of smokers to the services (Vogt *et al*, 2009). It may therefore be possible to increase the chances of health professionals recommending

the swine flu vaccine by increasing their perceptions of its efficacy. It is important that any estimates of effectiveness are presented with the use of natural frequencies to make transparent the absolute risk of a problem and the relative risk reduction of an intervention. An example would be the number out of 100 people of the target group expected to develop swine flu with and without the vaccination.

7.4 *Parents and children*

The wider literature about reasoning processes in the light of health threats points to potentially effective strategies to increase uptake amongst children. For example, research into uptake of immunisation for measles, mumps and rubella (MMR) suggests that one reason for non-uptake of vaccination for children is the influence of the 'omission bias'. This is the belief that causing harm through action is less acceptable than causing harm through inaction (Spranca *et al* 1991). Wroe *et al* (2005) examined the decision of parents to vaccinate or not vaccinate their children against MMR. They found that there was an omission bias present: 'even when parents believe the risks of immunising to be lower than the risks of not immunising, they tend to decide against MMR because their decision is so strongly influenced by the idea that harm resulting from giving the immunisations is less acceptable than harm resulting from not giving the immunisation' (i.e. the omission bias).

There has been some research aimed at minimising this omission bias. For example, Baron (1992) asked people to read an argument before making their decision which asked them to put themselves in the place of a child and ask whether the child would prefer a greater or lesser chance of harm and whether it mattered to the child whether these chances came from someone's act or omission. Baron (1992) found that after reading this 'debiasing' argument individuals tended to change their minds about their decision as to whether to immunise or not. It should be noted that since the participants in these studies were undergraduate students most were not parents, and they were therefore responding to a hypothetical set of circumstances. Using a debiasing argument of this kind with parents contemplating vaccination of their children against swine flu would only work if the risks in both cases (vaccination and non-vaccination) are known.

Research has also shown that normative beliefs (what you believe you ought to do) can affect decisions. Therefore the omission bias can be reduced by getting people to focus on immunisation as a norm in order to encourage them to think about not immunising as an 'active' decision to deviate from this norm. This would have the result that the decision not to immunise becomes more of an act than the decision to immunise (Wroe *et al* 2005). Thus, providing information in a nuanced way (e.g. acknowledging the uncertainty and defusing the omission bias in the ways suggested above) is likely to be more effective than persuasive arguments to undergo vaccination. We present this as an example of relevant scientific evidence that needs to be drawn on in developing behavioural and communication strategies. If this is not done, strategies that appear "common sense" may be counterproductive.

Recent NICE guidelines (NICE, 2009) for reducing differences in uptake of childhood immunisations highlight the importance of health professional training to promote effective communication of the risks and benefits of immunisations. Such training should be informed by behavioural science.

8. Ethical considerations: Question 13. When is it appropriate for the state to intervene to influence the behaviour of members of the public and how does this

differ from when it is appropriate for the commercial or voluntary sector to intervene? In particular when should this be done by outright prohibition and when by measures to encourage behaviour change?

8.1 In order to control pandemic influenza it will be essential to build and reinforce hygiene habits in the public between pandemics, especially hand hygiene as current evidence suggests that physical contact is the most important transmission route for pandemic flu. We can draw on behavioural science to suggest ways of encouraging such behaviour. Research shows that individuals behave in a more socially acceptable way when they believe that they are being observed. A large literature on “cheating” and how to diminish this by priming social norms of honesty shows that prosocial behaviour can be increased by use of cues that imply that people are being observed. Examples are the use of “pictures of eyes” above cash boxes, which encourage payment for papers, and by communal sinks, to encourage washing up.

8.2 A study of hygiene behaviours carried out in the toilet facilities of a UK motorway service station (Judah *et al*, 2009) found that the message that worked best to get people to wash their hands was: 'Is the person next to you washing hands with soap?' This was thought to be due to people believing that they were being observed and therefore being more likely to comply with the recommended behaviour. These are simple strategies that should be implemented now so that habits can be built up and social norms changed over the intervening years: waiting until a pandemic outbreak occurs will be too late. Habit formation is the process by which a particular behaviour becomes habitual, once behaviours are consistently repeated in the same context a link is formed between the context and the behaviour, leading to the behaviour becoming automatic (Wood and Neal, 2007).

8.3 In the US, Goldstein *et al* (2008) studied the use of descriptive norms to motivate towel recycling in hotels. Descriptive norms are perceptions of how other people are behaving. Goldstein *et al*'s premise was that the behaviour of others in a social situation shapes peoples interpretation of, and responses to, the situation especially if the situation is novel or ambiguous. They found that informing people that most people who used that particular hotel room recycled their towels, increased towel recycling. Extrapolating this finding to behaviours that reduce pandemic flu transmission would suggest that people should be informed that most people carry out these types of behaviour.

9. Ethical Considerations: Question 14. Should the public be involved in the design and implementation of behaviour change policy interventions and, if so, how? Should proposed measures for securing behaviour change be subject to public engagement exercises or consultation?

9.1 Some research suggests that the public are more likely to take appropriate action and accept the recommended treatment plan if they have been involved in the decision-making process (e.g. focus groups, patient forums; Holmes, 2008; Tam, Sciberras, Mullington, & King, 2005). Such involvement can influence the level of trust that the public has in government and institutions (Holmes, 2008; Tam *et al.*, 2005). Research has shown that trust is a key emotion relevant to risk-related behaviour (Slovic, 1999). Levels of trust and satisfaction with communication are particularly important in a pandemic situation in that the Government and its Department of Health are responsible for providing information about the course of the outbreak and also for developing treatments and vaccinations. Lack of trust can therefore have very detrimental effects on the interventions designed to control the disease. Trust is important because it affects how likely it is that risk assessments from authorities are deemed to be credible and this belief in turn influences behaviour. A lack of

trust in authorities is likely to affect how people process and interpret health messages and risk communication advice in a way that increases concerns and interferes with the intended ways that the risk messages are interpreted and acted on (Petts, Horlick-Jones, & Murdock, 2001; Vaughan & Tinker, 2009). Issues of trust can be especially important in situations which are uncertain, such as how the course of a pandemic will develop. The review carried out by Bish & Michie (2010) found that having a high level of trust in authorities and satisfaction with the communications received about the disease is associated with compliance with preventive, avoidant, and management of disease behaviours.

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Professor Susan Michie is chair of SPI B&C. Dr Alison Bish is a researcher for SPI B&C.

October 2010

Memorandum by Mr Donald Bowler (BC 120)

What are the most influential drivers of behaviour affecting an individual's choice of travel?

There are a range of factors, including location of start and ends of journey, timing of journey, need to carry things to the destination, concerns about personal safety, time of journey from door to door, disabilities, and cost of travel.

There are many people who live in one location and work in another, for whom there is no practical alternative to travel by car. This may be because they live in the countryside and are not near a bus route, or the bus route may not go near to their destination. It may be that there are suitable bus routes, but that people need to get to their destination at a time when the buses aren't running.

There are many occasions when a car user sometimes has to travel by car and on other occasions could use public transport. A significant factor that dissuades people from not using their car in such circumstances is the fact that the fixed costs of motoring are so high. Taking into account insurance, servicing, depreciation, lost opportunity cost, these all make the fixed costs of motoring high. Added to this is Vehicle Excise Duty (VED). Successive Governments have made a mess of VED by having such a complicated system. VED for new cars now relates to their CO₂ emissions, to supposedly penalise drivers who have less fuel efficient cars. They are though of course paying highly for having higher CO₂ emitters because they buy more fuel. Although in fact the VED element is a small proportion of both the fixed and total costs of using a car, they do tend to make people think that as they have the car, they will use it.

The Government should get rid of VED, as it is an inefficient way of collecting revenue, and it is possible to avoid it. The annual amount collected from VED should be collected by increasing the cost of petrol and Diesel. This would have the benefit of reducing costs to car users who do fewer miles and making those who do more mileage, pay more. (It would also help the UK trucking industry that has to compete with foreign registered lorries that generally pay lower vehicle registration taxes). In place of VED there should be a requirement for all vehicles to display a small windscreen sticker provided by the Insurer to prove to anyone observing the vehicle that it is insured (and, as an additional safety related measure, all vehicles needing an annual test should have a small windscreen sticker to show they have been tested).

Whilst petrol & Diesel are currently too dear, at least this would be taxation proportional to usage and emissions. If they travel just a relatively few miles a year, those who need a car, including those with lowered mobility, those living in the countryside and those needing to get to work when public transport is not running, then they would benefit. Looking at cars on a Motorway (except sections between junctions within a city, such as Birmingham) it is clear that most vehicles are newer ones which are travelling greater distances and will tend to be owned by the better off in society. It is generally the poorer in society who do relatively few miles in their cars but for whom there is no alternative to a car for accessing work, health or shops.

Whilst compiling this response just before Christmas, it was apparent that another factor that affects how people travel is the weather. Many areas in the southern half of the UK had only a few inches of snow, but the effect was to bring disruption to rail services. Cycling became almost impossible, and walking in some places was difficult, as the footways were icy, compared to many main carriageways which were passable by car. The result was that many who would use transport options other than a car could not do so, and they therefore get used to their car, aware of the benefits of car travel, and they are then less likely to return to previous modes. Buses tend to be uncomfortable in either hot or cold weather, which dissuades people from using them.

I travel to work by Car. I live in a village; my home is about 3 minutes from a bus route. I work in the centre of a town; my work place is about 10 minutes from the railway station and bus stops. It takes me between 30 minutes (usually) and 45 minutes, to travel between home and work and *vice versa* by car. To travel by public transport, according to the Transport Direct web site, using a combination of walking, bus and bus, or walking, bus and train, would take between 1hr 25m and 1hr 45 min, and that assumes I don't have to wait at the bus stop and that all connections are not late. Fuel cost for my car, using about 1 gallon, are about £5.50 for a return trip. If part of journey were to be by train (the rest would have to be by bus), then the train element would cost £14.00 per day. The web site doesn't give the bus ticket prices, and neither does the bus operator's web site give ticket prices, thus dissuading one from even trying to travel by bus.

Trying an actual journey that my wife and I were making before and after Christmas, from Bedfordshire to Kendal in the Lake District, a journey of 233 miles by car each way, looking how to do the journey by bus, coach & train, the cheapest return rail fair return was £176.80 for the two of us, (to which must be added bus fares at either end of the journey) compare this to the car which averaged 35 mpg, used 13.3 gallons, costing £74 in fuel, plus we travelled in comfort, didn't have to wait at draughty bus stops and train stations, didn't have to carry our cases and other items from bus to train to bus and we had a means of transport to use when we arrived at our destination.

It is impossible to make any logical case for travelling by public transport if one has a car available, public transport loses in terms of financial cost, time, comfort, the only place it may gain is in reduced CO₂ emissions, but that depends on the actual load factor.

Quite apart from the difference in financial cost, where the public transport option is dearer, there is the fact that public transport takes between 2 and 3½ times as long, and it is much less comfortable, especially in adverse weather conditions.

What role does infrastructure play in encouraging and facilitating changes in travel-mode choice?

There are different types of Infrastructure that may play a part in encouraging and facilitating changes in travel-mode choice. One is Park & ride. Park & Ride can be a useful way of diverting drivers who used to drive all the way into a town into driving to the Park & Ride and then getting a bus into the Town Centre. An unintended consequence though of Park & Ride is that people, who had previously travelled for their entire journey by bus, will, when the Park & Ride becomes operational, drive to the Park & Ride and then complete the last part of their journey by the Park & Ride bus, thus increasing total mileage by private car, and reducing the financial viability of the bus service they previously used.

Guided Busways may encourage some people to travel by bus, but there have to be suitable ways of accessing a bus at either end of their journey. It is though very doubtful if the investment in Guided Busways can be justified, as there are other ways that public transport and traffic flow could be improved at less investment.

There are some areas where large amounts of money are invested in building off highway cycle paths, often combined with footways. These dedicated cycle paths go largely unused by cyclists because they tend to become covered in detritus, such as stones, which can cause problems, so the cyclists stay on the carriageway, frequently holding up other traffic.

What are the most appropriate type and level of delivery of behaviour change interventions to change travel-mode choice?

What is important is that it should be made easier to use less environmentally damaging travel modes rather than harder to use the more environmentally damaging travel modes - The Carrot rather than Stick approach.

Are current policy interventions addressing both psychological and environmental barriers to change?

No. As explained above, the high fixed cost of owning a car discourages people from reducing car use. An environmental barrier is the fact that many people see the many older buses that are on the highway as inefficient.

Are policy interventions appropriately designed and evaluated? What lessons have been learnt as a result of these evaluations?

One policy intervention that frequently does not work is installation of bus lanes. The bus lane reduces road capacity for other vehicles, which then flow less quickly, frequently queuing back to and beyond the start of the bus lane, meaning that the bus is stuck with the other traffic because it cannot reach the start of the bus lane.

If there are to be bus lanes, then Taxis/ Private Hire Vehicles should not be allowed to use them. Taxis/ Private Hire Vehicles are no more environmentally virtuous than private cars, in fact they are worse, because they spend so much time driving around with only the driver on board, not doing any useful work.

High Occupancy Vehicle Lanes (HOVLs) can cause drivers of single occupancy cars to pick up a passenger at a bus stop, or to arrange to take, as a passenger, a friend or colleague who would have previously travelled by bus, thus reducing the viability of bus services by reducing patronage.

What lessons can be learnt from interventions in other countries?

Whilst not directly related to policies designed to reduce car usage in towns and cities, there are measures that are taken in other countries that reduce the impact of some aspects of car usage.

One is the fact that in other countries vehicles are able to turn right at traffic lights when they are red – which in the UK, would be the equivalent of turning Left on a red, this reduces traffic hold up, reduces CO2 emissions and is a more efficient way of operating.

I have seen in Spain, where there may be a long stretch of unrestricted highway, with a village in the middle of it, where there are locally posted speed limits, that, instead of using speed cameras, they use traffic lights that go to red, for traffic from BOTH directions, if the posted speed is exceeded. The advantage of this is that people don't want to have to come to a halt, and so they reduce their speed, and if they have exceeded the limit and have to stop, then traffic coming the other way will have to stop, causing real embarrassment to the person speeding. It is very rare for these red lights to be ignored, in the way that speed cameras are, as it is blatantly obvious to all if someone is driving through lights at red.

I have worked since 1975 in Local Government on Environmental Protection and latterly in Climate Change. I have been involved in advising those carrying out changes to highways and building new highways, and a Guided Busway, on Environmental matters (noise, air pollution, carbon emissions) and I have unfortunately witnessed many schemes which have not had their desired effect and which have made noise, air pollution and carbon emissions worse.

I make these comments on an individual basis.

17 January 2011

Memorandum by the Brighton and Hove Food Partnership (BC 59)

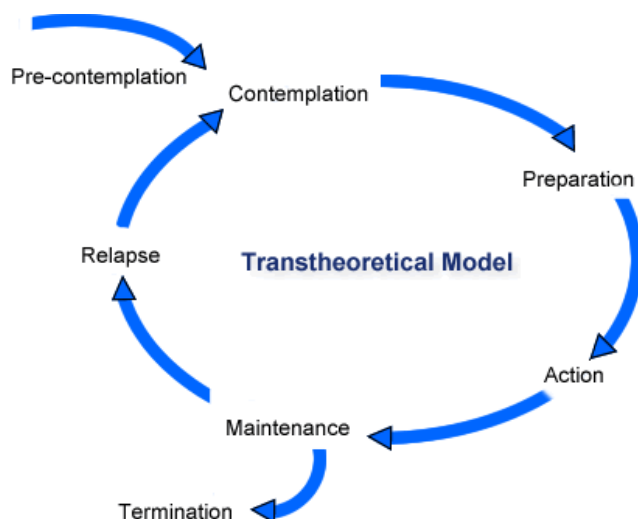
On behalf of the Brighton & Hove Food Partnership I am submitting information about our behaviour change intervention to tackle obesity and in particular how this intervention has been designed, evaluated and lessons learnt. We have not submitted evidence to an inquiry before so if there is anything that is not clear or needs to be presented in a different way please get in touch. I hope that the following information lays out our approach. We have had found this approach results in success for individuals against a range of identified outcome measures and further data / information can be provided.

1. About the Brighton & Hove Food Partnership

1.1 The Brighton & Hove Food Partnership is a not for profit social enterprise that believes that healthy people make a healthy city and that all residents should be able to enjoy food that is nutritious and produced in ways that respect the environment, animals and people. We deliver a range of community based programmes that offer residents support in achieving a healthier lifestyle including healthy eating, weight management, cookery skills and training and support in growing your own food.

1.2 We have been delivering community based weight management programmes for adults and children since 2008. This submission is about our behaviour change based healthy weight programme and its role in tackling obesity in adults in Brighton & Hove. We have been delivering this programme since January 2009 and it was developed in response to guidance from Healthy Weight: Healthy Lives on local interventions. In particular addressing how to deliver personalised support for overweight and obese individuals.

1.3 We deliver a holistic service including referral, programme delivery in one to one and group settings and follow up work. We use a personalised approach using the stages of change model.



1.4 Our funding for this work comes via NHS Brighton & Hove & Brighton & Hove City Council as part of a commissioned public health service.

2. Healthy Weight Referral Service

2.1 The Healthy Weight Referral Service (HWRS) was launched in January 2009 to provide a 'One-Stop-Shop' designed to offer easy-access system for GP's and other health professionals to refer to weight management services in Brighton and Hove.

The objectives of this service:

- Raise awareness of the weight management services available in Brighton & Hove for adults and children
- Simplify and coordinate referrals to the weight management services in the city
- Link the weight management services in clinical and community settings to offer patients a seamless pathway of care
- Ensure patients are on the most appropriate pathway of care
- Increase chances of success by ensuring that patients are ready to change before starting on programmes

2.2 Background

Local research showed that GPs and other health professionals were not always aware of the range of weight management services available and that the process for referring people for weight management could be simplified and streamlined. This meant that people who were ready to access healthy weight services were not doing so. Therefore a referral scheme was proposed to simplify and coordinate referrals to the weight management services in the city. The Brighton & Hove Primary Care Trust commissioned the Food Partnership to deliver this scheme which was launched in January 2009.

2.3 Development

The scheme links to the weight management services in clinical and community settings to offer patients a seamless pathway of care. An adult and a child weight management referral pathway were developed to facilitate this. Development of the scheme involved partnership working with Brighton and Hove NHS, Brighton and Sussex University Hospitals Trust Dietitians and Community Pediatricians, Community Health Trainers (CHTs), Healthy Living Centre (HLC) and ZEST exercise referral scheme. A joint referral form was developed (Referral to Health), to raise awareness and increase understanding of the links between the community services (HWRS, HLC, ZEST, CHTs) and enable health and other professionals refer to all these services using one form.

2.4 How it works

2.4.1 The HWRS referral criteria for adults are based on BMI for adults (BMI of 26-40) and readiness to change and BMI for age centile assessment for children. The scheme will also accept self-referrals to community programmes. After referral, the Food Partnership Referral Coordinators contact patients to discuss options and find a pathway of care most suitable for their lifestyle and particular needs. The Referral Coordinators are also trained to discuss readiness to change behaviour towards a healthier lifestyle.

2.4.2 Contact with patients is maintained during their attendance in the programme, and as they progress into the maintenance phase, there is on-going support, with the aim to keep patients motivated and focused for long term behaviour change. The referral coordinators inform the referrer of their patients progress at regular intervals and work closely with the Community Health Trainers, ZEST exercise referral scheme and Healthy Living Centre to offer patients long-term lifestyle maintenance support.

2.5 What we have learnt

2.5.1 From April 2009 to September 2010 (18 months) we received 1469 adult referrals and we now get regular referrals from 2/3rds of the GP Practices in the City. The HWRS is successful because it quickly provides people who have reached the contemplation stage regarding their weight / health with options. These options are supported by trained friendly staff.

2.5.2 The majority of people are referred on to one of the Food Partnership delivered weight management programmes which are delivered across the city with particular services focused in health deprived areas. The referrer gets information about what has happened to the client.

2.5.3 We do get inappropriate referrals (often due to people's uncontrolled co-morbidities in which case we refer them to the Dietetics department at the hospital) and people who are not ready to make lifestyle changes. We feed back to the referrer in these situations and are working with NHS Brighton & Hove to do a more detailed analysis of referrals from individual GP Practices to give and gain feedback on the HWRS.

2.5.4 This scheme is popular with referring health care professionals and delivers a better service to patients. It can also be integrated into other behaviour change programmes, for example some practices use the Change 4 Life materials to promote the scheme. It is a cost effective way of managing referrals and supporting patients, reducing demand on GP and Practice Nurse time.

2.5.5 The HWRS model can be followed and replicated in other areas. Setting up requires partnership working and a weight management, or other referral pathway, detailing the services available in the area, the links between these services, and possible referral and exit options. The development of a pathway can aid this process and identify any gaps in the service provision. The Food Partnership employs 2 part-time Referral Coordinators to advertise the scheme and service provision, answer queries from health and other professionals and the general public, log all referrals and contact patient to discuss their options. The majority of the coordinators time is spent logging referrals, speaking to patients and entering programme data onto the system. These Referral Co-ordinators are trained / experienced in behaviour change approaches.

3. The Food Partnership also delivers Community Based Programmes (Shape Up (group work) and one to one clinics)

3.1 How it works

3.1.1 Shape Up Groups provide evidence based nutrition, physical activity and behaviour change advice and support for adults with a BMI of 26-40. Delivered over 9 weeks these sessions provide 45 mins of nutritional advice and 45 minutes of exercise for groups of up to 20. We deliver up to 5 groups at any one time. The groups provide individuals with the tools to achieve successful weight loss in a natural way.

3.1.2 One to one sessions with a health promotion dietician offer individual help and guidance combining nutrition, physical activity and behaviour change along with goal setting to promote a healthier lifestyle. Clients have up to six sessions over six months to one year. Clinics are delivered in 5 locations across the city.

3.1.3 These sessions are provided free of charge to the client, delivered in community based venues with a focus on delivering in deprived areas of the city. All programmes are delivered by qualified Dietitians who are state registered and registered with the Health Professionals Council.

3.2 Aims of weight management programmes:

- Educate clients providing practical tailored advice about healthy eating for weight maintenance and weight loss
- Inform and provide practical tailored advice to help clients understand the role of physical activity in weight maintenance and weight loss
- Inform clients and provide practical tailored advice about behaviour change techniques to prevent relapse and maintain long term lifestyle changes

Objectives

- Provide clients with the tools to achieve gradual weight loss to achieve long term change
- Increase clients levels of physical activity levels

We gather evidence to measure the following primary and secondary outcomes:

Primary outcomes

- Percentage reduction in weight loss (looking for to achieve NICE recommendation of 5-10% over 6 months)
- Reduction in waist circumference
- Achievement of one or more nutrition goals (clinics only)
- Achievement of one or more physical activity goals (clinics only)
- Increase in physical activity levels
- Measures of dietary behaviour
 - Increased frequency of breakfast intake
 - Increased consumption of fruit and vegetables
 - Reduced consumption of high fat and/or high sugar products

Secondary outcomes

- Self reported improvement in one or more medical condition
- Self reported reduction in one or more medication
- Reduced alcohol consumption
- Increased knowledge about diet and lifestyle as a result of the intervention
- Improvement in confidence level to increase physical activity levels as a result of the intervention

4. Description of evaluation methods used

4.1 All clients complete pre and post programme questionnaires, individual goals are logged, and BMI and waist measurements taken. Qualitative and quantitative data for all participants as detailed in the primary and secondary outcomes is collected. Demographic data is collected. For those clients that attend regular Shape Up follow up sessions weight and measurements are taken at 3 and 6 months after the client has finished the programme (giving us three

follow up measurements). We also send surveys to all clients that have completed programmes to assess the longer term impact of our interventions. We have recently invested in a database to manage the complexities of this information and the reporting requirements.

4.2 Since September 2010 we have been using an evaluation process designed around the National Obesity Observatory's Standard Evaluation Framework (NOO SEF). Prior to this we were collecting much of the data included in this based on our own locally developed systems. We adapted to the NOO SEF in order to contribute to nationally comparable data collection.

4.3 In August 2010 we undertook some research to understand why patients Did Not Attend (DNA) previously booked one to one clinics or groups even after contact and support. Again this was to attempt to use an evidence base on which to make changes to service delivery methods. Key reasons that were identified have led to some changes including developing a rolling programme of Shape Up to reduce waiting times and to encourage people to return to programmes if they lapse. A patient focused approach to booking which was already part adopted has been extended (e.g. reminders about appointments). Further checks on health / preparedness and more detailed information about what to expect have also been developed.

October 2010

Memorandum by the British Academy (BC 78)

Introduction and Summary

1. The British Academy, the UK's national academy for the humanities and social sciences, is pleased to respond to the House of Lords Science and Technology Select Committee Call for Evidence on Behaviour Change.
2. The Academy's response focuses on three areas: psychological research on ways of intervening to change behaviour; how to classify the debate on behavioural change; and ethical questions related to the debate. We have not submitted evidence on the case studies as there is already a wealth of information on these areas⁶².

Research and Development (1&2)

3. From a psychological perspective, there are at least four ways to foster behavioural change:
 - a. offering immediate *incentives* for dropping the behaviour
 - b. *encourage and train* alternative behaviour
 - c. introduce *aversive consequences* for behaviour
 - d. increasing *motivation by psychological intervention*

Incentives:

4. Psychological research shows that small rewards that follow a particular behaviour immediately have greater effect than knowledge about more long-term consequences or implications. Just informing people of negative long-term effects of their behaviour is therefore unlikely to induce substantial changes. It also follows that any intervention needs to be evaluated for its long-term effects. It is not sufficient to show short-term effects.
5. Financial incentives have been used in smoking cessation and weight loss programmes. Marteau et al. reviewed this literature and found that the evidence supported *short-term* effects of these interventions⁶³. *Long-term* effects are much less clear. There is some evidence that incentives have a small effect on long-term weight loss if they comprise more than 1.2% of the individual's income.
6. A danger in offering financial incentives is that they may undermine an individual's intrinsic motivation to maintain the behavioural change once the incentive is no longer given. This would enhance the chances of relapse (a pattern commonly observed in addictions). Marteau et al. also discuss potential ethical problems⁶⁴. The Wellcome Trust have recently awarded a Strategic Award to fund the *Centre for the Study of Incentives in Health* at King's College directed by Professor Marteau and the results of the work will be of interest to the proposed initiative.

⁶² For example, studies published in the King's Fund project *Kicking Bad Habits* (2008) and in journals such as *Obesity Reviews* (published by the International Association for the Study of Obesity).

⁶³ T. Marteau, R. Ashcroft, & A. Oliver, 'Using financial incentives to achieve healthy behaviour' *British Medical Journal* 338, 2009, pp. 983- 985.

⁶⁴ *Ibid.*

Encouraging and supporting alternative behaviour

7. *Clinically significant problems:* Cognitive-behavioural treatments (CBT) are effective in a range of disorders including eating disorders (see, for example, NICE guidelines on Bulimia and Obesity).
8. *Prevention programmes:* Some of the principles of CBT are also used in community interventions such as interventions to promote healthy eating and increasing physical activity in schools. Three recent meta-analyses⁶⁵ suggested that (a) programmes targeting healthy eating had some effects in the short-term, (b) longer programmes (1 year or longer) were more effective in reducing obesity rates than shorter programmes, (c) physical activity programmes alone were not effective in reducing body mass index.
9. *Screen-and-treat.* In posttraumatic stress disorder there is a similar pattern – in that CBT for clinically significant posttraumatic stress is very effective whereas less time-intensive interventions delivered to all people who are traumatized are not. A screen and treat approach whereby only those who are at risk of a clinically significant problem receive treatment was successfully implemented after the London bombings⁶⁶. It remains unclear whether such an approach would yield a higher overall effect size than interventions targeting whole communities or schools.

Aversive consequences of behaviour

10. Early behavioural treatment programmes for smoking cessation and obesity experimented with techniques designed to make the target behaviour aversive. These techniques were not very effective and had ethical problems.

Increasing Motivation in Talking Therapies

11. An initial focus on motivating individuals to participate in the programme is an important part of treatments designed to bring about behavioural change in clinical populations such as CBT or motivational interviewing⁶⁷. This includes careful attention to the individual's understanding of the problem.
12. Therefore, the Academy has several recommendations:
 - Health psychologists should have input into the design of interventions
 - Any intervention should be evaluated. This should include a long-term follow-up as the stability of behavioural changes is a crucial outcome.
 - Overall, effect sizes for educational community or group interventions reported in the literature are small. Effect sizes for individual cognitive behaviour therapy (CBT) for disorders such as obesity are larger (see NICE guidelines). This raises the

⁶⁵ C. Gonzalez-Suarez, A. Worley, K. Grimmer-Somers, V. Dones, 'School-based interventions on childhood obesity: A meta-analysis' *American Journal of Preventive Medicine* 37(5), Nov 2009, pp. 418-427; A. Kanekar, M. Sharma, 'Meta-analysis of school-based childhood obesity interventions in the U.K. and U.S.' *Quarterly of Community Health Education* 29(3), 2009, pp. 241-256; K. C. Harris, L. K. Kuramoto, M. Schulzer, J. E. Retallack, 'Effect of school-based physical activity interventions on body mass index in children: A meta-analysis' *Canadian Medical Association Journal* 180(7) (Mar 2009) pp. 719-726.

⁶⁶ C. R. Brewin, N. Fuchkan, Z. Huntley, M. Robertson, P. Scragg, M. Thompson, P. d'Ardenne, & A. Ehlers, 'Effectiveness of a screen and treat program in improving mental health following the 2005 London bombings' *Psychological Medicine*, doi:10.1017/S0033291710000206. Published online by Cambridge University Press, 9 March 2010.

⁶⁷ G. T. Wilson, T. R. Schlam, 'The transtheoretical model and motivational interviewing in the treatment of eating and weight disorders' *Clinical Psychology Review*, 24, 2004, pp. 361-378.

question of whether interventions for all are the most effective and most efficient approach to targeting problems such as obesity. Therefore, it may be worthwhile to consider a 'screen and treat' approach and deliver the intervention only to those at risk for developing obesity. This strategy has been successfully used in other areas posttraumatic stress disorder⁶⁸. This would involve selecting high risk groups and delivering an adapted version of CBT to the high risk group only.

Policy design and evaluation (5)

13. This section discusses what should be classified as a behaviour change intervention, and identifies different types of intervention within this definition.
14. There is an important distinction between *behavioural solutions* and *structural solutions*. The first tries to solve problems by changing people's behaviour; the latter by structuring out the problem. For example, there is a difference between constantly shouting at children not to open cupboard doors containing dangerous objects, and putting child locks on the doors. Behavioural change is hard; structuring out the problem is often a lot easier. And a lot of the things discussed as ways to change people's behaviour would count more as 'structural solutions': bans on where you can smoke, when you can drink, where you can purchase alcohol, etc.
15. One of the most talked-about proposals in the US, which the Call has omitted from its introduction, is from Richard Thaler and Cass Sunstein⁶⁹. The idea is to use 'framing', well-established in the psychology literature, to advantage for public policy ends. An example is how to order foods in the school cafeteria line: put the healthy foods at the front, and people will buy more of them and less junk food. Or if, in setting up a system of private contributions to superannuation, its creator makes it an opt-out rather than opt-in policy, the systems gets significantly more people participating.
16. Psychological literature specifies how certain framings will favour certain behavioural choices; public policy has to set things up in such a way as to evoke those framings, to coax people to do what it wants, or what it thinks they should do. (Thaler/Sunstein call this 'libertarian paternalism', on the grounds that although you are paternalistically nudging people toward courses of action that you think are good for them, you are at the same time leaving them an open choice to reject the coaxing and do something else.) In terms of the distinction between behavioural/structural solutions, this is more on the structural side: it is shaping people's choices in such a way that they do what is best without any deep reflection.
17. Another school of thought from a number of social scientists has a broader target than the creation of structural solutions for individual problems. It argues that interventions to change the social context of people's lives – for example, those reducing poverty and improving education – can aid long-term behaviour change. For instance, prevalence of poor health and obesity has been suggested to have a strong link with poverty and inequality in a society; these underlying social conditions are argued to prevent successful long-term behavioural solutions for those who are afflicted by the worst

⁶⁸ Brewin et al. 'Effectiveness of a screen and treat program in improving mental health following the 2005 London bombings' (2010).

⁶⁹ C. Sunstein & R. Thaler, *Nudge: Improving Decisions about Health, Wealth, and Happiness* (New Haven: Yale University Press, 2008).

inequalities⁷⁰. Of course, a wide range of reforms is required to achieve such goals and would benefit from cross-departmental collaboration.

18. Government should be aware of the difference between structural changes and behavioural ones. The latter, in particular, raise important ethical questions around individuals' liberty and the limits to it.

Ethical considerations (13-14)

19. A widely accepted principle of legislation in a broadly liberal and pluralist society is Mill's harm principle, according to which the only reason for interfering with the behaviour of an adult of sound mind is to prevent harm to others⁷¹. Although this principle is often appealed to in public debate, commentators have noted problems with the principle ever since Mill wrote, and Mill himself recognises that it is not the 'one simple principle' that he claimed when first introducing it. In particular, Mill himself recognises that where individuals cannot adequately foresee the consequences of their own actions, then intervention may be justified. Indeed, at one point he even seems to presuppose that offences to standards of decency are a legitimate ground of legislation or social control⁷². Moreover, Mill lived in a society in which the understanding of risk derived from epidemiology and other sciences was only in its rudimentary stage and therefore the difficulties of appreciating the long-term significance of behaviour, noted in earlier sections, was not an issue.
20. For these reasons and others, contemporary policy discussions of behavioural issues, whilst acknowledging the central importance of Mill's insight into the need to retain 'experiments in living', have questioned whether Mill's principle can be applied in a straightforward way. Thus, the Nuffield Council on Bioethics, in its report on *Public Health*, argued for a stewardship approach, describing a 'ladder of intervention' by which interference was justified on more demanding grounds⁷³. Similarly, 'libertarian paternalism' referred to earlier departs from a strict application of the harm principle in the interests of individuals whose behaviour is in question.
21. Even when contrasting value systems reach agreement, and interference appears to be justified, there may still remain contention as to what an intervention should involve. For instance there is agreement that the prevalence of unwanted and unplanned teenage pregnancies is a harmful thing, but people differ on whether the solution should lie in chastity before marriage, sex education or contraception. This illustrates that while science has much to contribute towards the design and effectiveness of policy interventions, it cannot alone account for underlying values⁷⁴.
22. One point that needs to be borne in mind is that any intervention runs the risk of creating problem displacement – solving one problem but leading to another. For example, if driving is made safer, then risks to pedestrians and cyclists may increase as

⁷⁰ For more literature on this subject see M. Marmot, *Fair Society, Healthy Lives. The Marmot Review* (2010); R. Wilkinson & K. Pickett, *The Spirit Level: Why Equality is Better for Everyone* (Penguin, 2010); A. Offer et al., 'Obesity under affluence varies by welfare regimes: The effect of fast food, insecurity and inequality' *Economics and Human Biology* (2010), doi:10.1016/j.ehb.2010.07.002.

⁷¹ J. S. Mill, *On Liberty* (1859) edited with an Introduction by John Gray (Oxford: Oxford University Press, 1991) pp. 13-14.

⁷² *Ibid.* p. 15.

⁷³ Nuffield Council on Bioethics, *Public health: Ethical issues* (2007).

⁷⁴ British Academy Policy Centre, *Social Science and Family Policies* (2009) pp. 16-17.

more people drive. Thus, the significance of the structural solutions (e.g., better road design that protects cyclists and pedestrians) referred to earlier becomes important.

Conclusions

23. Psychological evidence points towards individual, targeted interventions as most effective in bringing about behaviour change. But these also need to be related to structural questions concerning the redesign of the environment and the social facilitation of healthy and prudent behaviour. Moreover, the extent to which there is an ethical imperative to modify or refine the harm principle will vary from issue to issue. Thus, in the case of individual issue (tobacco, alcohol, savings behaviour, driving, obesity, energy consumption, teenage pregnancy and so on), there is a need to identify the precise way in which empirical evidence about behaviour is related to an understanding of the effects of different policy instruments. There is no 'one size fits all' approach.

8 October 2010

Supplementary memorandum by the British Academy (BC 134)

Introduction

1. The British Academy, the UK's national academy for the humanities and social sciences, is pleased to contribute to the second call for evidence on behaviour change from this sub-Committee of the House of Lords Science and Technology Select Committee.
2. The Academy's submission to the first call for evidence in October 2010 focused on psychological research about methods of intervening to change behaviour; some clarification on key terms in the debate on behavioural change; and ethical questions related to that debate. This submission concentrates on travel-mode choice interventions only and the Academy is especially grateful to Professor Michael Batty FBA who provided the content for this response.

Travel-mode choice interventions to reduce car use in towns and cities

What are the most influential drivers of behaviour affecting an individual's choice of mode of travel?

3. The key issue is income. In real terms, transport cost rises with income; that is, as we earn more by household we spend more than is proportionate on transport. For most households, this form of transport it is likely to be car travel, as the car is still an ideal form of personalised transport. The demand for using a car is not very elastic in that it would take a large rise in fuel costs for substantial numbers of people to begin to shift away from their cars towards more sustainable forms of public transport with a lower carbon footprint. This was beginning to happen when gasoline reached \$145 per barrel in 2008 but it soon reversed as gasoline prices fell. However, a range of inducements may encourage people to buy more energy-efficient cars, use existing cars less, or drive them in a more energy-efficient way: these are largely choices *within* a travel mode. The advantages of a car in terms of ease of use and privacy cannot be underestimated. Finally, the structure of our cities reflects widespread car use and there would need to be some big shifts in density and structure and in the location of facilities for there to be major change.

What is the role of infrastructure in encouraging and facilitating changes in travel-mode choice?

4. Infrastructure is crucial in providing the possibility of switching from car to public transport but it is hard to generate the required infrastructure in low density environments, in the suburbs. Good public transport is hard to provide to high standards and has to be subsidised heavily. There is little doubt that severe restrictions on infrastructure, such as road pricing, do make a difference.

What are the latest developments in the evidence-base in relation to changing travel-mode choice and the implications of those developments for policy?

5. The evidence base is mixed. We tend not to have good data on how people make mode choices and we need much better surveys, but these are expensive. The evidence we have is also somewhat contradictory: often because instruments designed to take people out of cars and onto public transport, for instance, contradict other features of cities.

For example, if we provide very good public transport in dense urban areas, this tends to be expensive and a high price limits use.

What are the most appropriate type and level of interventions to change travel-mode choice?

6. The obvious issues involve taxes – firstly, gasoline taxes which probably do little at the margin. Secondly, there is the issue of road pricing: the congestion charge is a good example. However a lot of this road pricing will tend to get factored into other prices anyway and thus the impact is mixed and often does not reduce emissions.
7. Changing the layout of our cities is another important option, but making cities more compact tends to raise the prices of houses due to increased demand in particular areas. Increased densities might generate as much pollution as the reduction in private transport actually engenders.
8. The policies that were introduced after the Urban Task Force report in the late 1990s were to force urban development onto 60 percent brownfield land, but have barely worked. Although there is little proper evaluation of these, anecdotal evidence suggests that cities have not really compacted much since then (which was the policy to get people travelling less) and in fact quite the opposite has happened. As in all cases the complexity of these developments often makes it difficult to unravel the impacts of these policies.

Who are the most effective agents for the delivery of behaviour interventions to change travel-mode choice?

9. Local government is crucial but so too is central government which has the power to engender key national infrastructures and taxation policies. The other key actor is the motor industry which is crucial to introducing much more sustainable and low carbon transport through new technologies. There is more work going on in this area than in changing population behaviours. This work is reflected in new diesel engines, new electric cars, etc. It is likely that with massive advantages in battery capacity and efficiency, and providing car ownership in the UK remains constant and that people do not travel any further in total than they do now, carbon emissions could be reduced significantly in the next 20-30 years.

How do current behaviour change interventions seek to change travel-mode choice and what use is made of available scientific evidence?

10. Current interventions are minimal and largely focused on road pricing, through such mechanisms as congestion charging and private toll roads. There are hardly any direct policies. An increase in fuel tax which could change things at the margin – i.e. larger fuel taxes designed to reduce usage – has stalled due to the economic crisis. There is lukewarm support to increase support for public transport, except from in London, and there is little control over increasing prices for public transport such as rail travel. In fact, the evidence for reductions of road usage due to official measures is mixed – see work on the congestion charge – and existing evidence suggests that direct policies by government are either unworkable or have little effect: that is, physical policies such as building more compact cities on brownfield sites have marginal influence on travel.

Are current policy interventions addressing both psychological and environmental barriers to change?

11. While psychological research on changing behaviours does exist, policymakers have not yet adapted this effectively to travel-mode behaviours and it is difficult to identify how they might do so. Witness the increasing use of bikes in London and elsewhere as example of quite unpredictable issues – in that we do not know if this is due to a green lobby effect, the cost of other routes, ease of access or other reasons.
12. Environmental barriers are important in that it is extremely difficult to develop safe and secure alternative models of public transport such as biking and walking in cities that were not designed to channel such movements. For example, the accident rate of bikes with other motorised traffic in London is extremely high, while the rate of accidents for bikes and pedestrians is barely known, but is high where it has been recorded.

Are policy interventions appropriately designed and evaluated?

13. Policy interventions are not systematic unless one counts fuel taxes. Certainly road pricing is tiny in comparison to the areas over which people are able to drive freely. The greatest direct costs related to road pricing are bridge crossings, apart from the central London congestion charge. Bridge crossings are an historical anomaly in comparison with any other road infrastructure. There is some road design at the local level which is designed to calm traffic, and there are some successful examples, but there is no nationally coordinated action on this.
14. For many people, at least for certain types of journey, cycling is a valid alternative to car use. It has increased in recent years, due to a variety of causes including low cost, speed and convenience, perceived health benefits, and environmental considerations. Policies designed to encourage cycling have developed significantly, as with the new cycle hire scheme introduced in London in 2010. However, overall, policy on cycling remains weak and inconsistent, and there needs to be more focus on safety. A main cause of fatal accidents is cyclists getting caught in the ‘blind spot’ of large vehicles turning left: action needs to be taken on several levels to reduce this danger⁷⁵.
15. In terms of bicycle lanes, there is barely any coordinated action and in some cases bicycle lane schemes are very badly designed and may even increase the danger to all road users and pedestrians. There have been some bizarre schemes developed in recent years where bicycle lanes are too narrow (especially when situated between traffic lanes), or cross main streams of traffic. Accident rates for such policies should be studied in depth: pedestrians as well as cyclists may be at risk from many of these schemes. In addition, to complement this, there should be a national campaign to raise awareness of proper cycling behaviour and road discipline, and there should be more implementation of sanctions against cycling at night without lights and other examples of dangerous cycling conduct. Arrangements for bicycle parking vary greatly, and for example in the Whitehall and parliament area they are notably insufficient: this sends a wrong signal from government.

What lessons have been learnt and applied as a result of the evaluation of policy?

⁷⁵ The levels include education of cyclists and drivers; fitting of lorries with Fresno lenses; or even prohibiting HGVs with high cabs and blind spots from entering city centres.

16. There is no general systematic collation of experiences concerning the diverse portfolio of road pricing and fuel cost initiatives and policies. There are not enough longitudinal surveys to really assess how people are adapting to existing schemes. However, it is worth noting that it is quite difficult to assess adaptation of travel behaviour and road use, as behavioural responses are often counter intuitive and are affected by many local factors. There is need for sustained and coordinated research into ways that we might evaluate such policies.

What lessons can be learnt from interventions employed in other countries?

17. There are many valuable examples from western Europe that might be drawn upon, in particular from the Low Countries and Scandinavia, with respect to use of bicycles, walking and traffic calming design schemes. In terms of congestion pricing, then other cordon schemes like Singapore's have been quite widely studied. What have not been much studied are the questions around modal traffic shifts that occur as physical schemes, and the cost of travel change. It would be useful to raise awareness about what overall evaluations have already been carried out.

21 January 2011

Memorandum by the British Association for Applied Nutrition and Nutritional Therapy (BANT) (BC 22)

BEHAVIOUR CHANGE

The British Association for Applied Nutrition and Nutritional Therapy (BANT) is the professional association for nutritional therapy (NT) practitioners. NT comprises individualised dietary, nutraceutical and lifestyle advice within a functional medicine⁷⁶ framework to promote optimal physical and mental well-being. It is classified as 'Complementary and Alternative Medicine' as it represents a nutritional paradigm different from that which underpins current dietetic and public health nutrition practice. Functional medicine is science-based and grounded in the following principles:

- **Biochemical individuality:** understanding and appreciating the importance of variations in metabolic function deriving from genetic, epigenetic and environmental differences among individuals.
- **Patient-centred:** emphasizing "patient care" rather than "disease care," following Sir William Osler's admonition that "It is more important to know what patient has the disease than to know what disease the patient has."
- **Dynamic balance** of internal and external factors: understanding that resilient homeostasis (the buffering capacity to respond to perturbations) is important for physiological equilibrium.
- **Web-like interconnections** – human physiology functions as an orchestrated network of interconnected systems, rather than individual systems functioning autonomously and without effect on each other. Examples include: immunological dysfunctions promoting cardiovascular disease; dietary imbalances causing hormonal disturbances; and environmental exposures precipitating neurologic syndromes such as Parkinson's disease.
- **Health as a positive vitality** – not merely the absence of disease.
- **Promotion of organ reserve** as the means to enhance health span by maintaining genomic stability and mitochondrial capacity.

BANT members have considerable expertise in dealing with diet-related problems, both physical and mental. In terms of the Committee's inquiry into tackling obesity, we suggest that it requires investigation into a number of factors, which we have portrayed as a 'jigsaw', which can influence how the individual can become obese and the potential hurdles in overcoming it. We have approached the subject from that of the individual rather than the overall public health approach taken by the Foresight Project.

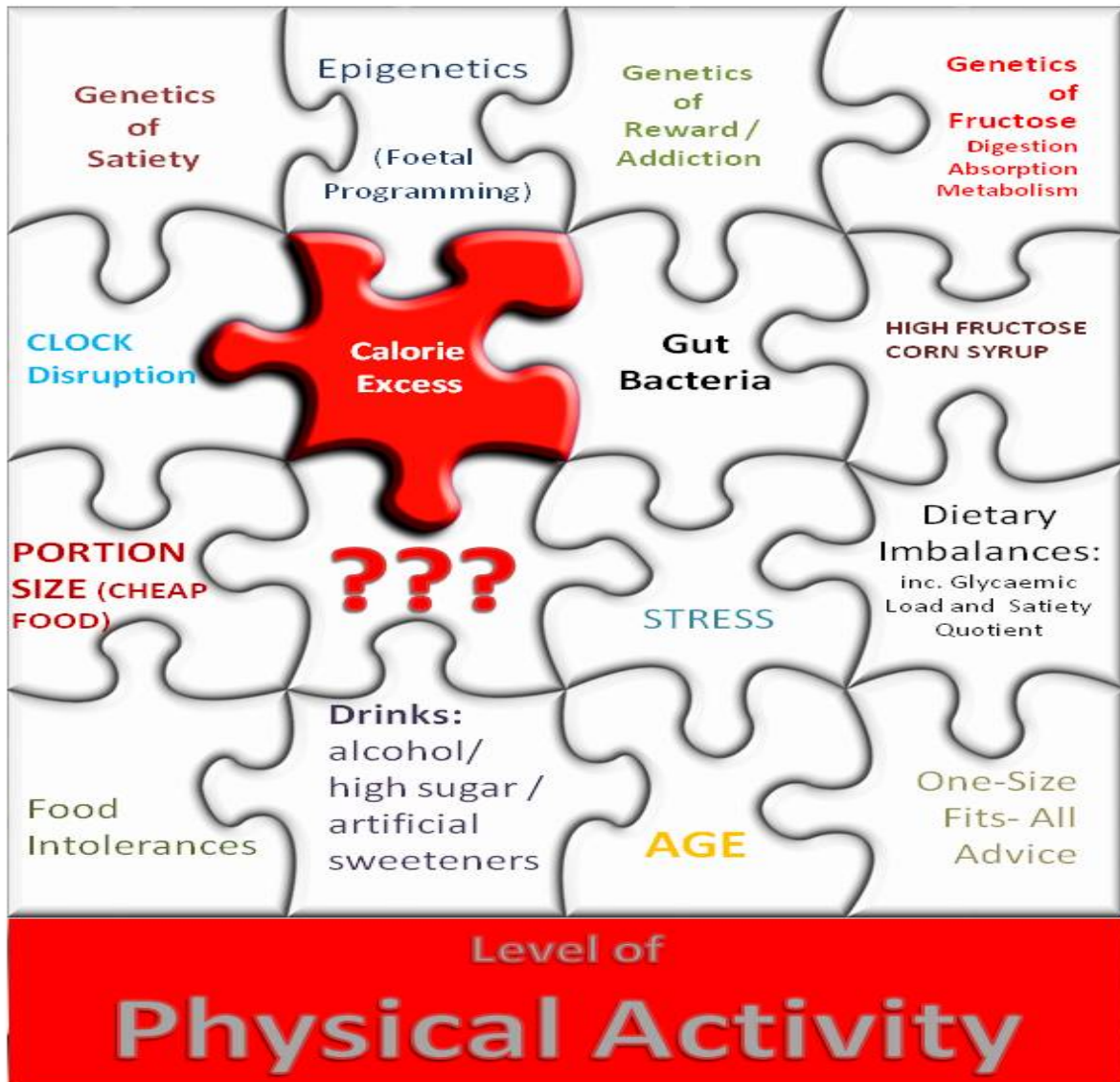
The FAT Individual: Why?

⁷⁶ www.functionalmedicine.org

'Fat' characterised not solely with BMI but by excess adiposity, and in some cases an insulin-resistant, pre-diabetic profile.

Successful behaviour change = Motivation + Determination + Ability to overcome (and awareness of) hurdles:

FACTORS INFLUENCING ADIPOSITY:



Nutritional therapists differ from dietitians and public health nutritionists in recognising the extent of genetic variation and individual response to diet and dietary components, and by the appreciation that the 'initial conditions' also determine the approach, *i.e.* a prescription for prevention may be different from intervention when overweight/obese. Putting together the jigsaw of influences spotlights a number of key determinants which can affect individuals and where to intervene to achieve a positive outcome. Going through the jigsaw:

Gut Microbiota

The calories displayed on food labels reflect a standardised value. When ingested the caloric harvest will depend in part on the make-up of the individual's gut microbiota. The gut microbiota also play a role in expressing host gene expression more generally.

- Kinross JM, von Roon AC, Holmes E, Darzi A, Nicholson JK. (2008) The human gut microbiome: implications for future health care. *Current Gastroenterology Reports* 10(4): 396-403
- Turnbaugh PJ & Gordon JI (2009) The core gut microbiome, energy balance and obesity. *Journal of Physiology* 587: 4153-8

Variation in Fructose Response/HFCS in the food chain

Fructose consumption has increased since the widespread use of sucrose and fructose (crystalline and HFCS) as sweeteners. Its effects are only now being fully explored. Genetic variation in fructose metabolising pathways may also have resulted in an apparent conversion of normally nonpenetrant 'silent' alleles into disease alleles.

- Stover PJ (2007) Human nutrition and genetic variation. *Food and Nutrition Bulletin* 28 s.108
- Johnson RJ, Segal MS et al (2007) Potential role of sugar (fructose) in the epidemic of hypertension, obesity and the metabolic syndrome, diabetes, kidney disease, and cardiovascular disease. *American Journal of Clinical Nutrition* 86: 899-906

Genetics of Satiety/Reward and Epigenetic Programming

Body mass and weight are regulated by a number of genes, maternal nutrition and the wider obesogenic environment. The level of genetic variation in the population underscores the weakness in a one-size-fits-all public health approach.

- Loos RJ (2009) Recent progress in the genetics of common obesity. *British Journal of Clinical Pharmacology* 68(6):811-29
- Hetherington MM & Cecil JE (2010) Gene-Environment Interactions in Obesity. *Forum of Nutrition* 63: 195-203
- Stice E & Dagher A (2010) Genetic variation in dopaminergic reward in humans. *Forum of Nutrition* 63:176-85
- Sullivan EL & Grove KL (2010) Metabolic Imprinting in Obesity. *Forum of Nutrition* 63:186-194

Circadian Rhythms

Obesity can cause disruption in important circadian rhythms and vice versa. Sleeping times and feeding times are therefore important determinants of overall fitness.

- Zanquetta MM, Correa-Giannella ML et al (2010) Body weight, metabolism and clock genes. *Diabetology and Metabolic Syndrome* 2:53
- Hastings M, O'Neill JS & Maywood ES (2007) Circadian clocks: regulators of endocrine and metabolic rhythms. *Journal of Endocrinology* 195: 187-198

Portion Size /Sweeteners/Glycaemic Load/Satiety Quotient

Processed food production and marketing plays a significant role in the overall obesogenic environment. Consumer understanding of how this may help or hinder their goals is important.

- Rolls BJ, Roe LS & Meengs JS (2006) Reductions in portion size and energy density of foods are additive and lead to sustained decreases in energy intake. *American Journal of Clinical Nutrition* 83:11-17

Memorandum by the British Association for Applied Nutrition and Nutritional Therapy (BANT) (BC 22)

- Yang Q (2010) Gain weight by “going diet?” Artificial sweeteners and the neurobiology of sugar cravings. *Yale Journal of Biology and Medicine* 83 pp101-108
- Green SM, Delargy HJ, Joanes D & Blundell JE (1997) A satiety quotient: a formulation to assess the satiating effect of food. *Appetite* 29(3) 291-304

One Size Fits All

Where is the evidence that the high starch Eatwell Plate represents a suitable dietary regime for the overweight/obese with insulin- and/or leptin-resistance?

Is a BMI of 25 a suitable threshold point for all populations?

What about the ‘fat and fit’ phenomenon? BMI is not necessarily an appropriate measure and regular physical activity may attenuate many of the health risks associated with overweight or obesity. Active obese individuals actually have lower morbidity and mortality than normal weight individuals who are sedentary; and inactivity and low cardiorespiratory fitness are as important as overweight and obesity as mortality predictors. It is *adiposity* and in particular abdominal adiposity which, for some people, is significantly correlated with adverse sequelae.

- Razak F, Anand SS, et al (2007) Defining obesity cut points in a multiethnic population. *Circulation* 115, 2111-2118
- Deurenberg P, Deurenberg-Yap M & Guricci S (2002) Asians are different from Caucasians and from each other in their body mass index/body fat per cent relationship. *Obesity Reviews* 3, 141-146
- Janssen I, Katzmarzyk PT, Ross R, Leon AS, Skinner JS, Rao DC, Wilmore JH, Rankinen T & Bouchard C (2004b) Fitness alters the associations of BMI and waist circumference with total and abdominal fat. *Obesity Research* 12, 525-537
- Sui X, LaMonte MJ, Laditka JN, Hardin JW, Chase N, Hooker SP & Blair SN (2007) Cardiorespiratory fitness and adiposity as mortality predictors in older adults. *JAMA* 298, 2507-2516
- Wong SL, Katzmarzyk P, Nichaman MZ, Church TS, Blair SN & Ross R (2004) Cardiorespiratory fitness is associated with lower abdominal fat independent of body mass index. *Med Sci Sports Exerc* 36, 286-291
- Janssen I, Katzmarzyk PT & Ross R (2004) Waist circumference and not body mass index explains obesity-related health risk. *American Journal of Clinical Nutrition* 79, 379-384.

Age

The decline in BMR in older age is mainly, but not wholly attributed to a progressive loss of fat free mass. Other factors which have been proposed as affecting the BMR as we age are: decline in sodium-potassium ATPase activity, decreased muscle protein turnover, and changes to mitochondrial protein permeability. The ageing process itself is also associated with a range of common diseases. Adiposity is a known risk factor because of macrophage infiltration and pro-inflammatory cytokine production. Mitochondrial genomics may offer some insight: a bioenergetic-epigenomic paradigm which has implications for the aetiology, pathophysiology and treatment of a wide range of common diseases. Replicative segregation (and the critical threshold) also offers a potential explanation of non-response in some individuals to promising interventions, for example in Alzheimer’s disease.

Memorandum by the British Association for Applied Nutrition and Nutritional Therapy (BANT) (BC 22)

- Wallace DC (2010) Energetics, epigenetics, mitochondrial genetics. *Mitochondrion* 10:12-31
- Wallace DC (2008) Mitochondria as Chi. *Genetics* 179: 727-735

Stress

Any holistic approach to weight control needs to take account of personal circumstances and the biological effects which stress engenders and the hurdle it presents to attaining goals.

- Bose M, Olivian B & Laferrere B (2009) Stress and obesity: the role of the hypothalamic-pituitary-adrenal axis in metabolic disease. *Current Opinion in Endocrinology Diabetes and Obesity* 16(5):340-346

???

Do we really have a complete understanding of the relevant biology? Can those who understand quantum metabolism [which we don't] integrate mtDNA/circadian mechanisms to illuminate further our view of calories in/calories out = linear weight gain/loss?

- Demetrius L (2006) The origin of allometric scaling laws in biology. *Journal of Theoretical Biology* 243: 455-467
- He JH & Huang Z (2006) A novel model for allometric scaling laws for different organs. *Chaos, Solitons and Fractals* 27: 1108-1114

COMMENT

What we eat has changed more in the last fifty years than in the previous five thousand. Coupled with urbanisation, decreased physical activity and everyday stress, the changes in what we eat are proving a major perturbation to our ability to adapt to this new environment. One-size-fits-all approaches to both prevention and treatment of obesity may fail to help substantial sub-populations who require individualised prescriptions to ensure they are fully informed about the potential hurdles some of them may face in this obesogenic era. Nutritional therapy is underpinned by a framework which encompasses biochemical individuality and is patient-centred in its approach. BANT members stand ready to contribute to the effort to contain the obesity epidemic.

4 October 2010

Memorandum by the British Heart Foundation (BC 48)

The British Heart Foundation (BHF) is the UK's leading heart charity. We are fighting against heart and circulatory disease – which is the UK's biggest killer and caused 53,000 premature deaths in 2006.⁷⁷ Our vision is of a world where no-one dies prematurely of heart disease.

We are committed to improving the cardiovascular health of the nation, and raising awareness of heart disease and the benefits of a healthy lifestyle is an important part of this. The BHF has produced a range of social marketing and education campaigns, such as our *Food4Thought* campaigns, encouraging children to be more physically active – and our *Doubt Kills* campaign which encouraged people to call 999 as soon as they experience chest pain.

The BHF welcomes the opportunity to respond to this call for evidence. We have chosen to focus on the evaluation and success of publically funded behaviour change interventions, as well as the relationship between Government and voluntary sector organisations in encouraging behaviour change - questions 8 and 13 in the Call for Evidence document. Our response is based on our highly successful anti-smoking campaign which ran in January, May, and October 2004.

Key points include:

- Commissioning research before developing our campaign strategy led to innovative and persuasive messages
- Campaign tracking enabled the BHF to evaluate the effectiveness and awareness of different aspects of the strategy, and to plan later phases of the campaign
- Research suggests that there are instances where voluntary sector organisations are better placed to run behaviour change interventions than the Government.

About the Campaign

In 1998, the Government launched a White Paper '*Smoking Kills*' which set targets for reducing the number of smokers in the UK, and describes the Department of Health's (DH) strategy for achieving them. A critical part of this strategy is to use advertising to persuade smokers to stop - or at least move them towards giving up by raising their awareness of the dangers of smoking. The *Don't give up giving up* (DGUGU) campaign was created to do this.

In 2003, the DH identified an opportunity to complement the DGUGU campaign and their three year strategy, by working with the charity sector and focussing on different messages. They felt that certain charity brands have the permission and authority to talk to smokers in a more hard-hitting and provocative way. In November 2002 the DH announced that it would be giving £15 million over three years to be split between BHF and Cancer Research UK (CR-UK). The successful launch of the BHF anti-smoking campaign led to the DH giving the BHF additional funding to run further bursts, and we received £10 million in 2004.

The objectives for the campaign were:

- To increase knowledge of the link between smoking and heart disease by showing the damage caused and health risks that this involves.

⁷⁷ See www.heartstats.org

- To deliver an integrated communications campaign which is hard hitting, but which also positions the BHF as the smoker's friend.
- To support the DH's DGUGU campaign by encouraging smokers to visit their local cessation support services

Developing the strategy

Research was commissioned at every stage of the campaign. We consulted smokers⁷⁸ and medical experts, and drew experience from around the World. Arterial damage caused by cigarettes was identified as new 'news' and a potent message. Showing clogged arteries makes it more real and harder for smokers to ignore. It adds urgency to the quitting decision, something which can't be put off. Research also identified that, to avoid antagonizing smokers, it was important the communication built empathy. Thus, the BHF strategy was based on a need to be seen as the smoker's friend.

The creative idea links cigarettes with the arterial damage caused by smoking. The campaign uses the similarity in shape between a cigarette and an artery to graphically portray the build up of fatty substances in arteries caused by smoking.⁷⁹

One of the benefits of this approach is that it makes the communication 'portable'. By creating an inextricable link between cigarettes and the damage they cause, we hoped that each time a smoker looked at a cigarette, they would be reminded of the damage they cause to their arteries. This would then begin to create a 'Pavlovian' connection between the cigarettes and the damage they cause.

This strategy explicitly demanded that the advertising visualised and dramatised the damage caused. Usually, anti-smoking dramatises the ultimate consequences of smoking – death and serious illness - rather than the damage that leads to that illness.

The media spend of £3.7m was compressed into four weeks ensuring the campaign was high profile, ubiquitous and completely surrounded the smoker to achieve the objective of not allowing the target market to avoid the campaign.

Phases of the campaign

The January '*Give up before you clog up*' campaign was highly successful - the advertisement achieved the highest recognition level for any anti-smoking campaign in recent times, and more significantly, the number of people attending local cessation clinics doubled year on year. It is estimated that over 5,000 lives were saved as a result of this campaign.

On the basis of these results, the DH funded the BHF to run a national poster and press campaign in May. In addition, this was supported by a strong PR programme which included the recruitment of a case study who had given up smoking as a result of the first wave of activity.

The BHF was asked by the DH to re-run our anti-smoking campaign again in October with a £4 million spend on TV, Press, Outdoor, Ambient, PR and the BHF website. This phase also targeted the Asian community as they have a high propensity to smoke.

⁷⁸ This research is described in more detail on p.4

⁷⁹ See appendix I p.10-11 (not published here)

In addition, to strengthen the performance of this third phase the BHF proposed the introduction of direct marketing. The objectives were to reach more smokers, to maintain the hard hitting and arresting nature of the campaign by delivering the message to people's homes and to prompt action e.g. calling the helpline and visiting their local cessation clinic. A £1 million direct marketing proposal was accepted by the DH. They had never used direct marketing in this way before so it was an innovative approach for them as well.

Campaign Tracking

We measured the performance and effectiveness of the campaigns in a number of ways, including commissioning a research agency to carry out a full tracking study.

Our objectives were to evaluate awareness, effectiveness, and the reaction to the anti-smoking campaign. In addition we wanted to understand how well people link smoking and heart disease, how attitudes to smoking have changed, and the effectiveness of the 'pavlovian' response.

The advertisement achieved the highest recognition level for any anti-smoking campaign in recent times. The independent research agency which evaluated the campaign found that no advert had ever "cut through so strongly" before, with 94% of the target audience recognising at least one of its elements in January. This increased to a massive 99% in October. This is exceptionally high and our research agency has never evaluated an advertisement with such a high recognition level.

There have been substantial gains in beliefs about the different problems or facts caused by smoking e.g. the link between smoking and clogged arteries increased significantly from 49% in Nov 2003 to 70% in Nov 2004. In addition increases have been made year on year with peoples' understanding of the fact that smoking leads to heart disease, from 57% in Nov 2003 to 68% in Nov 2004, and that it makes fat stick in your arteries, up from 31% in Nov 03 to 59% in Nov 04.

All elements of the campaign had a positive impact on smokers' likelihood of giving up. We found that responders to the website are the most likely to have quit. Two thirds of the people who have signed up to sms text and email support⁸⁰ have given up, which suggests that our support mechanisms were effective.

The direct mail activity was effective with 67% of people opening it, and 15% passing it onto a smoker.

How the BHF brand is perceived in terms of admiration and trust has improved year on year as a result of the campaign. In Nov 2003, 20% stated that the BHF was '*someone I'd really admire and trust*' which increased to 33% in Nov 2004.

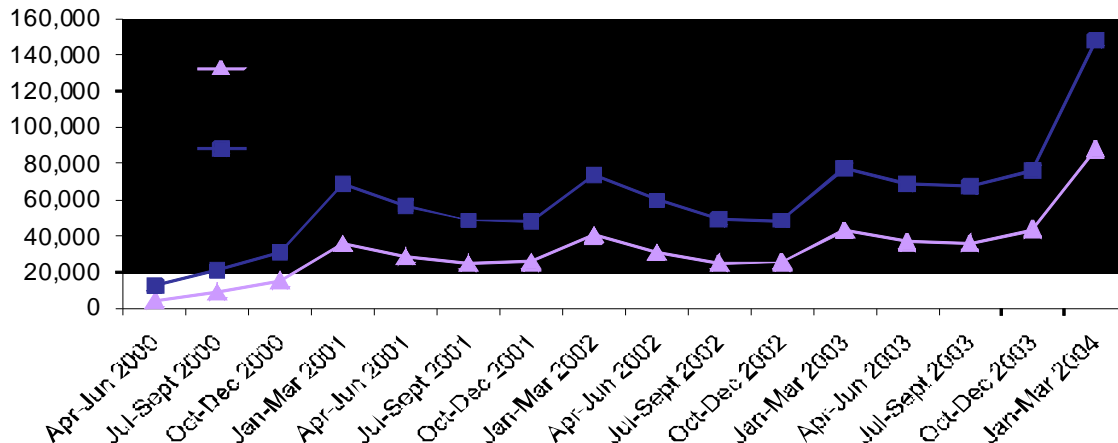
Record number of visits to cessation clinics

Historically, the number of people attending their local cessation clinic is seasonal and peaks in Jan - March each year. The number of people who attended their local cessation clinic doubled year on year between Jan – March 2004 vs Jan – March 2003. Whilst we cannot attribute this directly to the BHF anti-smoking campaign, ours was the largest campaign

⁸⁰ For more information on different aspects of the campaign strategy please see appendix I (not published here).

running at this time, and based on the evaluation results we expect that it played a major role in driving this increase. In addition, over 30,000 people searched for a map on the BHF website to find out where their local stop smoking services were.

Number of people visiting cessation clinics Apr 2000 – Mar 2004



Delivering the message – voluntary sector and Government

As highlighted above, the DH decided to partner with the BHF and CR-UK in the DGUGU project because they felt that certain charity brands have permission and authority to talk to smokers in a more hard-hitting way. This view was also supported by independent qualitative research with smokers in the development of the campaign.

We commissioned research with smokers who had unsuccessfully tried to give up smoking at least three times. All the participants fell into the CIC2D demographic groups and were split as follows -

Manchester	men aged 30-40	women aged 41-50
London	men aged 41-50	women aged 30-40

We found that no-one seriously tried to blame anyone but themselves for their addiction. However, there was some anger at authorities who were seen as hypocritical for profiting from taxing tobacco and alcohol which the respondents viewed as dangerous drugs, while outlawing marijuana – which is seen as a relatively harmless drug.

This perceived lack of logic in the laws seems to undermine Government-led anti-smoking initiatives. The general feeling amongst the groups was that, if the Government really didn't want people to smoke, they could always ban the sale of cigarettes. This would be practically difficult and would raise self-determination objections, but the groups felt that this would make Government claims to be concerned for health above all things more credible.

The profits from tobacco tax were almost universally thought to be far greater than the cost of NHS treatment for tobacco-related illness. This misconception is important because smokers can view themselves as a minority who no-one really wants to help, but are happy to tax. The cost of smoking to the economy is much greater than the tax raised, but a low

awareness of the wider costs - such as working days lost, incapacity etc – may have influenced our smokers' opinions on this. We found that the main view was that Government is, at best, ambivalent about stopping smoking, and is concerned with balancing health and revenue.

A recurrent theme throughout was that the 'smoking kills you' messages intended to persuade smokers to quit are telling people what they already know. The medical evidence for the damaging effects of smoking is overwhelming and well understood, most smokers know for themselves the effect on fitness, complexion, and general health, and most know someone who has suffered serious smoking-related illness.

We found that the response to the medical information and warnings is 'yes, we know, we should quit', and the constant reminders mean that people can't forget about the damage cigarettes are causing to their health. But our smokers reported that they don't need to be given more reasons to stop smoking - they need to be given help to quit.

Stop smoking messages from the voluntary sector

We revealed the BHF as the organisation behind the focus groups at the end of each group, although the heart-related nature of the messages meant BHF was suspected by some.

We found there was enthusiastic support of the BHF as sponsor of a heart-related anti-smoking campaign for several reasons:

- As a voluntary sector organisation, the BHF is seen as being on the side of the smoker. Suspicion of the need to balance health concerns and revenue generation can undermine Government messages, but the BHF has no ulterior motive, it just wants to help. BHF "is on our side."
- There is trust in the BHF – as an organisation with authority on medical facts and consequences, who won't exaggerate or manipulate the data.
- The focus of the campaign is not actually smoking but the heart. BHF is concerned about heart health, not smoking. Government sponsored campaigns, using ever tougher imagery, can imply a sense of failure. As one participant said - "the fact that they have to keep running stuff like they do just reminds me of my own crapness." As a new entrant with a different agenda, BHF is free of this.

There is an authority and freshness to BHF entering the anti-smoking world. This is a world which has so far consisted of Government-sponsored messages with ever-tougher images persuading people that smoking is harmful. For the respondents in this research, this message has been thoroughly communicated - reasons to give up are not needed.

However, reasons to give up *today* are missing – and the BHF can provide these with heart health messages. The BHF is expected to be able to offer help and support in quitting, and not to judge or condemn. BHF has a calm authority on medical matters, which some people believe exceeds that of the Government. There is almost no limit to the power of the imagery a charity has permission to use to make its point, whereas Government use of strong images can cause resentment.

In summary:

Question 8

- The BHF anti-smoking campaign is an example of a highly successful, evidence-based and effectively evaluated publicly-funded behaviour change intervention.
- Research was commissioned before and at every stage of the campaign, and campaign tracking enabled the BHF to evaluate its effectiveness and informed later phases of the campaign.
- Evaluation shows that the campaign was highly successful. The advertisement achieved the highest recognition level for any anti-smoking campaign in recent times, and the campaign played a major role in the number of people attending smoking cessation clinics doubling.

Question 13

Research suggests that there are instances where voluntary sector organisations are better placed to run behaviour change interventions than the Government. The BHF was seen by smokers as a trusted authority, who was on their side, and had the permission and authority to talk to them in a hard-hitting way.

October 2010

Memorandum by the British Retail Consortium (BRC) (BC 47)

1.0 Summary

This is the response of the British Retail Consortium and covers these issues:

- Government needs to ensure that interventions are based on clear evidence of need
- We are not opposed to intervention, and playing our role in supporting these when it is demonstrated they are necessary and we are the correct partners
- All interventions should be properly researched and tested before they are used
- All interventions should be evaluated and reviewed to ensure their effectiveness
- Government needs to co-ordinate interventions where there are a number of Departments. It also needs to ensure consistency, in terms of the messages it delivers

2.0 General Comments

2.1 The British Retail Consortium (BRC) is the trade association for the UK retail sector. Our members account for approximately 80% of retail spending in the UK trading in all forms of retail, high street, out of town and online. The retail sector employs almost three million people and, in 2009, retail sales were over £285 billion. There are over 290,000 retail outlets in the UK and retailing generates 8% of the Gross Domestic Product of the UK.

2.2 The retail sector is the closest business sector to the consumer. With approximately 60 billion visits by consumers each year and more than a third of consumer spending going through shops, the retail sector's relationship with the public is key to its success. Policies associated with behaviour change are therefore particularly pertinent to us and our members and we believe our insight into consumer demand and consumer awareness will be of significant interest to this inquiry.

2.3 Behaviour change is a fundamental factor in the performance of our members' businesses, as it translates into consumer demand and ultimately the success of their offer.

2.4 As responsible retailers, we want to work closely with the Government and our customers to affect positive public policy changes across a wide range of issues including sustainable production, health and nutrition and climate change.

2.5 The BRC is a policy organisation and do not claim to have expertise in the science behind behaviour change. We are not, therefore, able to answer the specific questions around the research and development of behaviour change. We do, however, have experience of working closely with Government for a number of years in a variety of policy areas, including obesity, and can comment on the effectiveness of particular interventions and the way they have been co-ordinated.

3.0 Policy Design and Evaluation

- 3.1 We believe a great deal of Government's activity could be classed as a behaviour intervention. Everything from dedicated campaigns to a statement or interview that a Minister gives which is then reported in the media could be seen as an intervention. The last point is an important one, as many consumers gain the information they use to make choices from media reports and opinions from friends and family. In this way informal statements can often have a large impact on influencing behaviour.
- 3.2 Greater thought needs to be given to where the most effective intervention can be made. Time needs to be taken to identify who will have the most influence to change behaviour and how their intervention will be most effective. This depends on a thorough understanding of the issue and a willingness to intervene at all appropriate levels. Unfortunately, political expediency can mean Government uses interventions to demonstrate they are tackling a problem rather than taking action which may be more effective in the long run but present more problems in demonstrating progress.
- 3.3 We believe it is important that, where necessary, the Government takes a strategic approach centrally to identify where problems exist and identify initiatives that would then be led by individual departments. Centrally they are in a position to assess the value of various interventions and adjust as required as well as ensuring consistent and co-ordinated messages and campaigns.
- 3.4 It is also important that a review of interventions is taken to understand its impact before further interventions. For example, to curb under-age smoking in recent years new legislation has been introduced to raise the minimum age of sale, increase the penalties for sale to under age customers and an imminent display ban without a chance or attempt to assess the effectiveness of the previous measures before the next intervention is introduced. Interventions have to be used as part of a comprehensive strategic policy, which incorporates public education and information campaigns, work with relevant stakeholders, legislative changes and fiscal incentives as appropriate
- 3.5 Interventions should be used flexibly to respond to changing factors. For example, external factors such as the media or campaigns run by organisations could change consumer understanding and mean interventions need to be adapted or targeted differently. It also reinforces the need for interventions to be based on evidence and carefully considered to be robust enough to meet challenges from stakeholders and the media.

4.0 **Practical Application**

- 4.1 Our experience of publicly-funded behaviour change interventions is mixed due in part to a lack of firm evidence base and effective evaluation.
- 4.2 One example would be the Food Standards Agency's (FSA's) scores on the doors scheme which is intended to use consumers' choice of restaurants and food outlets to drive up hygiene standards. The scheme relies on consumers' understanding of the different 'scores' that premises are given to enable them to choose where to eat on the basis of food hygiene. The FSA did not obtain consumer evidence on how it could affect consumer behaviour until after they had taken the decision to pursue a scheme. The research showed consumers did not find the proposed scheme as useful

as imagined and they preferred a different method of scoring and display. Also, despite requests before and during design of the scheme, the FSA has not produced any evidence to demonstrate the effectiveness of a scheme like this for use in food retail premises, yet shops continue to be included in the scheme.

- 4.3 We are also of the view that many interventions are judged on whether they raise awareness rather than how they affect behaviour. A good example is the 5 a day scheme designed to encourage consumption of five portions of fruit and vegetables per day. Evidence demonstrates that awareness of the scheme is high but the impact on consumption has been much slower. 5 a day is a good example of a possible future intervention that has not been appropriately developed. Previous Defra Secretary of State, Hilary Benn MP, created a task force, the aim of which was to increase consumption of British fruit and vegetables. A report with several recommendations has now been drafted, however the recommendations set to increase consumption have been based on what a group of people felt were reasonable interventions together with common preconceptions, such as people do not buy fruit and vegetables because they are expensive. No research has been done to understand whether any of the identified interventions, if taken forward, will indeed make consumers eat more fruit and vegetables.
- 4.4 We believe Government's approach to learning lessons from previous campaigns and working with industry is mixed. There have been good examples of where it has worked. For example the review and re-launch of the Drinkaware Trust, a partnership between Government, industry and stakeholders, is a positive step forward, where Government assessed the value of the Trust and its role before pursuing this as the appropriate way forward.
- 4.5 Whilst there are positive examples, we do feel that, at times, evaluation has not been as effective in terms of identifying the impact single issue campaigns have on a wider public policy issue. For example, it is not possible to assess the effectiveness of the recent salt and saturated fat campaigns have had on the overall improvements to health and nutrition in the UK. On issues such as obesity where there is no one clear action that is the answer, it is crucial that the effect of each possible action is understood and measured. This will enable further efforts to concentrate on actions that are proven to have an effect on customers and consider interventions where less progress is being made.
- 5.0 **Cross-Government Coordination**
- 5.1 We are aware of mechanisms that exist to coordinate interventions. In the area of food there was, until recently, a Cabinet Sub-Committee on food and there still is an interdepartmental group of officials examining food policy. These groups provide a fora to discuss all areas of food policy, including obesity where issues will span several departments. However, we have in the past experienced reluctance by some government departments to reconsider an approach, even when clear differences and even contradictions in approaches have been identified.
- 5.2 Our experience is that coordination could be improved, in terms of having a common understanding of the issue, setting common objectives, sharing intelligence about existing research and coordinating any needed research or intelligence

gathering. When the chosen interventions are campaigns, coordination of timing and sharing common themes are important to achieve the best results.

- 5.3 Government also needs to recognise the legal limitations that industry may face when asked to implement an identified intervention. For example in the area of obesity, industry has been unable to replicate some of the messages used by Government. A European Regulation covering the conditions allowing the use of nutrition and health claims sets strict rules for the use of these claims, which are only applicable to claims made in commercial communications. It means industry may not legally be able to use the same message that Government prefers. Due to the importance of consistency, these issues should be well assessed beforehand and avoided.
- 5.4 It is also important that Ministers ensure their comments are relevant to campaigns. For example, during the FSA's food safety week which concentrated on the danger of listeria and the importance of checking use by dates there were comments by the Defra Minister at the time questioning the use of 'sell by dates'. Not only is the term 'sell by' not used by retailers, which could confuse the public, this mixed messaging was potentially hugely confusing for consumers that were targeted in the food safety campaign. Consistency of message is one of the key considerations for the coordination of any successful campaign.

6.0 Ethical Considerations

- 6.1 We believe there is a role for the state to intervene when there is clear evidence it is required and there is no indication that change can be delivered through the existing processes, such as the market. The Government is also in a stronger position to influence all groups to participate in interventions.
- 6.2 The Government also has a role to intervene from their position of neutrality. A good example is the above mentioned issue of 'sell by', 'use by dates'. Because of the media frenzy challenging the dates given by retailers on pack, many consumers could be putting themselves at risk by consuming products that are not suitable or safe. The Government is in a position to reinforce why certain dates are used and encourage consumers to adhere to them. The FSA is a trusted source for this type of information and overcomes the incorrect presumption that retailers in some way are using use by dates for an ulterior purpose to food safety.
- 6.3 Generally, aside of clear safety issues, we do not believe prohibition is the correct approach. In our experience in areas such as obesity, the target is to reduce consumption rather than stop consumption entirely and the best way to do that is to work with consumers to help them to make clearer, improved choices. One of the reasons why campaigns like Change4life has been successful and have had strong resonance with consumers is the fact that the behavioural messages used are not stopping people from doing or eating what they like, but instead encouraging people to make small gradual changes. Consumers are unlikely to stop treating themselves entirely but most are willing to consider alternative healthier treats. The other successful element of this campaign was the wording used; instead of demonising it encourages consumers to make changes. Consumers have responded well to this approach.

- 6.4 We believe there is often but not always a role for the public in the design of interventions. This would ensure the appropriateness of an intervention and if it is likely to be effective. The example on scores on the doors earlier shows that more work was needed to help consumers understand the importance of a hygiene scheme in the first place before launching the scheme itself. Engagement with the public is also a challenge as the usual method for development of an intervention is to develop one and then consult stakeholders for comment. Our experience is there are no stakeholders that truly represent all consumers as they often have a particular opinion and in reality their responses do not reflect accurately consumer behaviour. In this case, detailed discussions with groups that are representative of consumers would be effective.
- 6.5 Greater use of pilot schemes would also be beneficial, particularly where clear evidence is not available or initial views are based on international comparisons. Retailers use pilots extensively when they are developing new ranges or store design as these allow them to observe directly how consumers react. We would encourage the Government to follow this example when considering behaviour change interventions.
- 6.6 The importance of real life evidence should not be underestimated, such as buying patterns. It is frequently the case that a consumer will respond to a questionnaire or a scenario in a certain manner to their actual behaviour or choice.
- 6.7 We also caution against the use of international comparisons to justify policy interventions that may not be transferable to the UK's culture. Examples here would be the use of limited research into the effectiveness of the tobacco product display ban in some provinces of Canada or interventions into other cultures' relationship with alcohol when it is often observed that the UK has a vastly different approach to alcohol.

7.0 **Successful Behavioural Change Initiatives**

- 7.1 As responsible businesses, retailers have been involved in a number of initiatives designed to positively influence the behaviour of consumers. Some of these have been led collectively by industry, through the British Retail Consortium, some have been championed by individual companies and others have been run in tandem with other interested parties including the UK Governments and NGO. The examples below demonstrate the diverse range of behavioural change interventions and highlight some of the key learnings that should be taken away.
- 7.2 Carrier bag usage reduction
- 7.2.1 In 2008 a commitment was made between the UK Governments, the BRC and leading grocery retailers (Asda; Co-op; Marks and Spencer; Sainsbury's; Somerfield; Tesco; Waitrose. Morrisons joined the initiative in 2010) to reduce the number of single-use carrier bags distributed to UK consumers by 50% by spring (end of May) 2009, using a 2006 baseline. This was a voluntary agreement that relied on all parties working together to influence consumer behaviour for it to be successful.

- 7.2.2 Recognising that communication to the public would be key, the UK National Governments (Department for Environment, Food and Rural Affairs (Defra); the Welsh Assembly Government; the Northern Ireland Executive; the Scottish Government) committed to support these retailers and their customers to achieve this aim by running communications campaigns in advance of the May 2009 deadline.
- 7.2.3 The results, which are monitored by the Waste and Resources Action Programme (WRAP) under the agreement was monitored by WRAP, found that 48% fewer single-use carrier bags were distributed in May 2009 compared against the May 2006 baseline. An annual reduction of 37% was achieved. WRAP and retailers jointly reviewed progress again in the summer of 2010, even though no further target was set. In 2010 further progress was made as a 43% year on year reduction was reported.
- 7.2.4 The agreement enabled a genuine, evidence-based review of progress. The success of the agreement can partly be attributed to the fact that actions were required by governments and private sector and each worked closely together to recognise the particular roles they had. One of the main reasons why this initiative was successful in achieving behaviour change amongst consumers was that it allowed companies involved the flexibility to implement the initiative in the best way for their particular consumer base. A wide range of policies were introduced by the companies involved such as charging for single use bags, promoting reusable bags, asking consumers whether they needed bags and removing them from view. Stringent restrictions would not have allowed the flexibility that recognised different consumers respond in different way and therefore require different types of interventions to gain their attention.
- 7.3 Obesity
- 7.3.1 Tackling obesity is a complex problem. Unlike smoking which everyone would agree is bad for you in any amount, there are no good or bad foods, all foods can form part of a balance diet, even the most indulgent ones when eaten in moderation. It is when the quantity of food consumed or when particular foods are consumed and combined with a lack of physical activity that a problem arises.
- 7.3.2 One of the biggest problems is that people need to take more responsibility for their own diet, accepting that they need to tackle a problem in the first place. Our members have done a lot, through improving their products and increasing information to help consumers eat a healthy diet. However to make further, sustained progress we need people to understand what is meant by a healthy diet, to recognise the influence of everything they eat, both in and out of the house and make appropriate changes where necessary.
- 7.3.3 Our members have been at the forefront to help consumers make a positive change to their diet. They have increased the information available to help consumers make easier choices through the use of simplified nutrition labelling on the front of the pack and common detailed nutrition information on the back of pack.
- 7.3.4 Secondly they have introduced healthier ranges which are sold at no additional cost to the other ranges as a healthier alternative. Healthy ranges are offered in a large

number of food categories in store and have become the food of choice for a wide range of customers and not only those watching their weight.

- 7.3.5 Thirdly, there is sustained promotion of fruit and vegetables through price reductions, the introduction of 'uglier' produce and the use of characters that increase the appeal of these products to children. This is intended not only to make fruit and vegetables more acceptable and accessible but to also de-bunk the myth that fresh produce is expensive.
- 7.3.6 Finally, they are giving confidence to consumers to cook from scratch, helping them to appreciate what is in their food and the financial and social benefits of cooking at home through recipes on in-store cards and in magazines that has led to both an increase in their purchase and a reported increase in consumption of fruit and vegetables (based on NDNS data).

29 September 2010

Memorandum by the British Psychological Society (BC 105)

The British Psychological Society thanks the House of Lords Science & Technology Committee for the opportunity to respond to this consultation.

The British Psychological Society (“the Society”) is the learned and professional body, incorporated by Royal Charter, for psychologists in the United Kingdom. The Society has a total membership of almost 50,000 and is a registered charity.

Under its Royal Charter, the key objective of the Society is "to promote the advancement and diffusion of the knowledge of psychology pure and applied and especially to promote the efficiency and usefulness of members by setting up a high standard of professional education and knowledge".

The Society maintains the Register of Chartered Psychologists and has a code of conduct and investigatory and disciplinary systems in place to consider complaints of professional misconduct relating to its members. The Society is an examining body granting certificates and diplomas in specialist areas of professional applied psychology.

Executive Summary

The Society is the leading scientific and professional organisation representing scientists and practitioners applying psychological evidence to understand, predict, and change behaviour in health contexts. The design and evaluation of evidence-based behavioural interventions is a leading area of work within the discipline and the Society membership has developed considerable expertise in applying psychological theories and techniques to changing behaviour. This response is based on the views and evidence presented by leading scientists in the field of behaviour change. This Executive Summary provides the headline points from the response. Further details, evidence, and references for the contributed views can be found in the full document under the headings provided in the Call for Evidence.

1. There is considerable research evidence regarding the cognitive, emotional and environmental factors that influence behaviour. These factors include attitudes and beliefs, motivation and intention, volition and planning, social support, self-monitoring, and the social and material environment. Furthermore, there is good evidence that behaviour change interventions are effective in changing health-related behaviour – behaviour change works. Recent pioneering work by UK Health Psychologists led to the systematic identification of the exact behaviour change techniques and strategies used to change physical activity, healthy eating, smoking, and alcohol intake, and specifically target the previously-listed factors. More research is needed to address gaps in the knowledge, including the need to identify combinations of behaviour change techniques that are relevant to specific behaviours and target groups, establish the long-term effectiveness of the techniques, and develop valid and reliable outcome measures. Behaviour change techniques are generalisable to many health behaviours although interventions for addictive behaviours (e.g. smoking cessation) need to account for both the chemical and behavioural aspects of the behaviours.

2. Further research and development work is needed to make the intervention techniques identified in research more accessible to policy makers and analysts. This can be done

through funding evidence-based translational research to develop cost-effective strategies that can be adopted and utilised in practice.

3. Research on behaviour change interventions in the UK is currently very high on quality but, by comparison, low on quantity. UK Health Psychologists lead the way in Europe and the rest of the world in basic and applied translational research in behaviour change. Examples of this world-leading research include the long-standing collaborations between Health Psychologists and Government Departments that has led to the development of health policy and behaviour-change documentation and training (e.g. NHS Health Trainers Manual and the health psychology led National Centre for Smoking Cessation and Training). The Society considers that the collaborative work between Health Psychologists and Government has recently been severely curtailed by the Government's radical cuts, including the recent termination of the Society's consultancy and the closing of all the behaviour change programmes at the Department of Health. This has meant that the strong financial support for existing collaborations between Health Psychologists and the DoH has been lost. The Society is concerned about these developments, and would recommend for the role of health psychology in Government to be re-instated and expanded, given its proven influence in developing evidence-based interventions and behaviour-change techniques. The Society also recognises a need for increased support for primary research specifically designed to identify which behaviour change techniques are effective across key health behaviours, as well as changing the behaviour of healthcare professionals. Research on behaviour change in health contexts remains significantly under-resourced in the basic and applied areas as well as in translation into policy and practice. There is also a need for further continuity in the funding of behaviour change interventions, and funding of initiatives to involve policymakers and groups likely to deliver interventions.

4. The NHS and other public health services currently lack the expertise and structures for the design and implementation of behaviour change interventions. There is a need to ensure the workforce has the competencies required to deliver behaviour change interventions effectively, including training on face-to-face interventions, brief opportunistic interventions in primary care, and generalised print and online communicated interventions. The Society considers that this will only be achieved by identifying the competencies required to deliver generic health behaviour change, and develop a national competency framework for the delivery of interventions to change health behaviours (including assessment of competency and the development of training programmes for behaviour change competency).

5. Initiatives and policies that aim to change one or more of the following components could be classified as a behaviour change intervention: the environment (e.g. pricing, availability, laws, cues to action), changes to services (e.g., changing behaviour of health professionals), changes in attitudes (e.g. acceptability of smoking, being overweight), and administration of pharmaceutical or chemical methods (e.g. appetite suppressants, nicotine patches). The focus of many recent interventions has been the use of behaviour-change techniques developed by Health Psychologists that target self-regulatory skills so people are able to actively change their behaviour in the absence of incentives. Such skills might include increasing confidence, goal setting, ability to monitor progress, and planning.

6. Improving the quality of intervention design and reporting is necessary if the effectiveness of an intervention is to be reliably evaluated. Initiatives might include using gold-standard randomised controlled designs, applying designs that focus on single components and their interaction, adherence to CONSORT guidelines in reporting the intervention components,

and including treatment fidelity checks and intention-to-treat analyses. It is recommended that there is further support for initiatives to develop a national framework for the development, reporting, and evaluation of interventions to change health behaviour. Government policy should provide support for initiatives to investigate the accurate and complete reporting of the theoretical basis for intervention design in order to ensure the highest level of quality of evidence and replication of findings.

7. Behaviour change interventions should sit alongside legislative, fiscal, administrative, and other policy interventions. High-quality complex interventions aim to incorporate these networks in the development and delivery of new ones, and should be targets of future research. These developments should be implemented through consultation with leading groups and organizations in health psychology dedicated to developing and evaluating such interventions.

8. There are good examples of publicly-funded behaviour change interventions that have been evidence-based and evaluated effectively by Health Psychologists. These include the health psychology led collaborations results in the NHS Health Trainers Manual and the National Centre for Smoking Cessation and Training.

9. Information on the success or lack of success of behaviour change interventions are often not fed back into the design of future ones, particularly in practice. This is often because there is a lack of partnership between academic and health-services research. Such partnerships need to be facilitated in order to ensure that the best evidence from formative and basic research is implemented in practice. Theory-based research using gold-standard randomised controlled designs should be conducted systematically and strong evidence needs to be developed to ensure best use of resources. Close partnerships between universities and health services are needed to ensure the translation of best evidence and theory into practice.

10. Knowledge transfer partnerships are an important opportunity for facilitating the translation of research into practice around user requirements. A growing number of researchers are engaging in translational activities; however, time spent trying to specify an intervention in practice or design new methods of engaging with the public often go largely unrecognised. It is important that systems are put in place to incentivise such activities and it should be acknowledged that the theories and techniques of behaviour change are as relevant to fostering knowledge transfer as they are to promoting health.

11-12. A coordinated approach to integrate behaviour change expertise from health psychology with key governmental organisations should be a priority to ensure that any policy is driven by the latest research and evidence. Health Psychologists registered with the Health Professions Council (HPC), trained with the specialist skills to design, implement and evaluate behaviour change interventions, would be able, when employed by Government and other relevant organisations, to help develop effective behaviour-change interventions in health care and public health contexts.

13. The Society considers that there is an ethical imperative for Government to generate an environment or 'choice architecture' that prompts or nudges the public to make healthy choices. Changing public attitudes towards personal and social responsibility for their health behaviour should also be a goal for governments and public health professionals. Such

messages are important to put across to people in order to increase public acceptance of interventions that seek to promote behaviour change.

14. Public consultation and involvement in health care policy is important in order to determine the level of acceptability of health-behaviour change interventions and also determine the behaviour change strategies that are likely to be most effective, at a conscious level, in changing attitudes and beliefs.

15. Behaviour change interventions developed in Europe and the US should be generally transferable to the UK, although some adaptations may be needed to account for specific cultural and ethnic groups. For example, the adoption of the appropriate discourse and reading standard of the target groups would be imperative. International health-behaviour change programmes implemented at a national level provide excellent exemplars of systematic, well-funded intervention programmes that show demonstrable effects on clinically-significant outcomes. The design of such programmes needs to be implemented in the UK and the content could be based on the effective behaviour-change techniques developed by UK-based experts in health psychology.

16. Systematic reviews have indicated that interventions to reduce and prevent obesity should target both diet and physical activity and adopt established behaviour-change techniques developed by Health Psychologists such as social support, goal-setting, self-monitoring, relapse prevention, and goal review. To maximise the efficiency of programmes for weight loss, practitioners and commissioning organisations should include the above components and use rigorous intervention development and evaluation techniques and theory-driven taxonomies of behaviour change techniques. Missing elements in obesity prevention interventions include the role of the psychological functions of eating, the use of message framing and implementation intentions, the tailoring of interventions to take account of key groups resistant to change, tailoring of programmes for under-represented groups, and the role of extrinsic incentives and intrinsic social rewards.

Research and Development

1. What is known about how behaviour can be influenced?

Previous research. There is considerable research evidence from primary and secondary studies regarding the cognitive, emotional and environmental factors that influence behaviour. These factors include attitudes and beliefs (e.g., acceptability of smoking, being overweight, Fishbein et al., 2001), motivation and intention, volition and planning (e.g., Gollwitzer & Sheeran, 2006), social support (e.g. Le Foll, Aubin, & Lagrue, 2002), self-monitoring (Dombrowski et al., in press; Michie, Abraham, Whittington, McAteer, & Gupta, 2009), and the social and material environment (e.g. pricing, availability, laws, cues to action Gorini, Costantini, & Paci, 2007). Most important for behaviour change is not just identifying these factors but knowing the extent to which those factors can be modified and the ease by which intervention components can affect a change using appropriate methods of delivery (Hagger, 2010). For example, there is considerable evidence to show that a factor like motivation is not enough when it comes to behaviour change. Often, people do not do what they intend or are motivated to do (Webb & Sheeran, 2006). Therefore behaviour change techniques targeting motivational factors are unlikely to be fully effective in the absence of techniques which enable people to bring their behaviour in line with their good intentions. For example, in a society where obesity is heavily stigmatised (e.g., Latner & Stunkard, 2003),

and thinness prized (Wiseman, Gray, Mosimann, & Ahrens, 1992), most people are highly motivated to lose weight (Stice, Shaw, & Marti, 2006), but many are unable to regulate their eating behaviour in the face of powerful cues to eat easily available, palatable, calorie-dense food. Thus interventions which target environmental variables alongside motivation are also critical. A synthesis of the influential factors matched with techniques to change behaviours has been the subject of recent systematic reviews and development papers (Abraham & Michie, 2008; Ashford, Edmunds, & French, 2010; Dombrowski et al., in press; Michie, 2008; Michie & Prestwich, 2010).

Current developments in behaviour change. The systematic development of the science of behaviour and behaviour change includes work around the development of a taxonomy of behaviour change techniques (Abraham & Michie, 2008; Michie, Johnston, Francis, Hardeman, & Eccles, 2008) and an emerging understanding of the competencies required to deliver behaviour change interventions using these techniques (Michie, Rumsey, Fussell, Hardeman, Johnston et al., 2008). This work has been pioneered by UK Health Psychologists seconded, with the Society's support, to Governments in England and Scotland. This work has identified many behaviour change techniques used to change physical activity, healthy eating, smoking (Michie, Churchill, & West, in press) and excessive alcohol use, for example, setting SMART (Specific, Measurable, Attainable, Realistic, and Timely) behaviour goals, making plans to deal with obstacles to behaviour change, and restructuring the environment to support the newly-adopted behaviour. Recent meta-analyses of intervention studies have identified the effective techniques for healthy eating, physical activity and obesity (Abraham & Graham-Rowe, 2009; Ashford et al., 2010; Dombrowski et al., in press).

Gaps in the literature. Although Health Psychologists are pioneering and advancing the science of behaviour change in the identification, development, and application of effective behaviour change techniques, there is a need for further research to advance these developments. In particular, further research is needed to isolate the techniques that work, establish the long-term effectiveness of the techniques, and develop valid and reliable outcome measures. Examples would include identifying the precise techniques that would be effective in reducing alcohol consumption in young people or limiting calorie intake among children in school contexts.

Isolating the techniques that work. Although research has demonstrated the efficacy of self-regulatory techniques like goal-setting, planning, and environmental restructuring in changing behaviour, this work has only been able to establish the effectiveness of a small number of techniques. There is a need for research that can establish the effectiveness of a much wider range of behaviour change techniques. Epidemiological research indicates that the population needs to change multiple health behaviours (e.g. smoking cessation, reducing alcohol consumption, eat lower calorie foods and engaging in more physical activity). Development of interventions tackling multiple health behaviours will only be achieved if a detailed understanding of the behaviour change techniques that are effective and the behaviours for which they are effective is realised. For example, the recent NICE guidance on behaviour change concludes that intervening at multiple levels is likely to be most effective in promoting behaviour change (Abraham, Kelly, West, & Michie, 2009; NICE, 2007). The Society would strongly recommend for Government to provide funding to generate capacity in these areas, including funding for basic and applied research through specialized behaviour change funding streams, setting up advisory groups to translate expertise from health psychology and other fields into practice by forging links with key stakeholders engaged in implementing policy, and training relevant practitioners to deliver interventions.

Long term outcomes. One area where evidence is relatively limited is the sustainability and long-term efficacy of interventions based on psychological theory. There are good examples of attempts to measure and report longitudinal outcomes in trials evaluating behaviour-change interventions, but these often do not extend beyond 12 months (Arbour & Martin Ginis, 2009; Armitage, 2007; Fishbein et al., 2001; Wiehe, Garrison, Christakis, Ebel, & Rivara, 2005). Few interventions provide long-term behavioural follow-ups to evaluate the efficacy of behaviour change interventions. Research in this area should be specific in terms of the length of intervention and the follow-up required to demonstrate a public health benefit.

Measurement and reporting of outcomes. There needs to be more systematic reporting of the duration and intensiveness of interventions, as well as their content and modes of delivery. Research should also target objective outcome measures in terms of behaviour and clinically-significant outcomes, as well as being more systematic in the types of outcomes measured. The disparate nature and variation in different measurements provides a considerable barrier when attempting to synthesise research findings using systematic reviews and meta-analyses. Further support is needed for synthesising evidence from existing primary research, so that we can identify which behaviour change techniques are generally effective and which are effective for particular behaviours. This could be done by applying theories of behaviour change to categorising interventions. Currently reviews, even those included in the Cochrane database, often categorise evidence on interventions in an eclectic and an ad hoc manner (Gardner, Whittington, McAteer, Eccles, & Michie, 2010).

What special considerations apply to addictive behaviour?

It is important to recognise that there are similarities and differences between all behaviours and that the addictive nature of the behaviour is just one dimension along which behaviours differ. Others include whether one is trying to stop or quit (e.g. smoking cessation) vs. initiate a behaviour (e.g., embark on a physical activity regimen) or whether the behaviour is performed many times a day (e.g. medication compliance) vs. less frequently (e.g. attend a screening appointment). Behavioural principles applied to smoking cessation are also likely to apply to modification of diet and sedentary behaviour. However, addictive behaviours can be more difficult to change due to the chemical nature of the addictive components. Chemical methods for blocking the relevant physiological and neurological pathways may, therefore, be more relevant, as well as higher intensity of behavioural counselling or individual intervention efforts. Behaviour change interventions for particular addictive behaviours therefore need to account for both the chemical and behavioural aspects of such behaviours. Better research on how to change unconscious (impulsive) processes may be required (see response to question 4 – routes to behaviour change). This is likely to involve behaviour change interventions with multiple components, targeting psychological as well as environmental factors such as social support and exposure to cues. These types of interventions, such as those applied in the field of smoking cessation, have been more effective when all these different components have been targeted (Evans et al., 2001; Hopkins et al., 2001).

2. What are the policy implications of recent developments in research on behaviour change?

There is a major drive, typified by the current House of Lords' Call for Evidence, in using behaviour change theories and techniques to affect large scale behaviour change without the need to deliver expensive face-to-face or one-to-one interventions which require a lot of resources, financial and workforce. Health psychology research on behaviour change has demonstrated that behaviour change techniques can promote change at the population and group level without the need for intensive interventions. Work is needed to make these intervention techniques more accessible to policy makers and analysts. For example many of those working on behaviour change in Government are economists, social researchers or communications experts who are more familiar with behavioural economics and social marketing than with the specific behaviour change techniques developed by Health Psychologists. Furthermore, new approaches for supporting longer-term behaviour maintenance are being developed, and some examples of change sustained for 5-10 years are available (Barnett et al., 2009; Croissant, Hupfer, Loeber, Mann, & Zober, 2008; Israel, Guile, Baker, & Silverman, 1994). The implication of this work for policy would be to continue to fund intervention research to further develop cost-effective strategies. It is also important that interventions developed from now on adopt the most effective strategies currently known based on this evidence, to ensure delivery of the most effective outcomes.

3. Is there adequate research capability within the United Kingdom to support the current pace of developments in behaviour change policy interventions?

Current research capacity. The UK is a leader within Europe in the fields of health psychology and behavioural medicine and is a major force globally. The UK also provides a model for the involvement of academics and evidence-based research in informing Government policy. For example, Health Psychologists have been involved in secondments to the UK and Scottish Governments for the past eight years, and there has been a long-standing close relationship between smoking researchers and the Department of Health's tobacco control team. These collaborations have been extremely useful in informing health policy, as well as the delivery of behaviour-change documentation and training based on sound psychological theory and evidence derived from empirical research. Examples are the NHS Health Trainers Manual (Michie, Rumsey, Fussell, Hardeman, Johnston et al., 2008) and eVersion (Michie, Rumsey, Fussell, Hardeman, Johnson et al., 2008) and the health psychology led National Centre for Smoking Cessation and Training (NCSCT, 2010). Both of these exemplary pieces of work are described in more detail in separate submissions to the House of Lords' Call for Evidence. The collaborative work between Health Psychologists and Government has recently been severely curtailed by the Government's radical cuts which include the recent termination of the Society's consultancy and closing of all the behaviour change programmes at the Department of Health. The Society considers that the role of health psychology in advising Government policy should not only be re-instated but expanded, particularly given the clear role the discipline has played in developing evidence-based interventions; outcomes have demonstrated the effectiveness of techniques based on psychological theory in promoting behaviour change in the health context. It should be noted that this work is being conducted by a small handful of Health Psychologists and there is urgent need to train Health Psychologists in the skills of building policy links and contributing to policy work.

Future research needs. There is a clear need for increased support for primary research specifically designed to identify which behaviour change techniques are effective across key public health behaviours (alcohol, smoking, diet, physical activity), as well as changing the behaviour of healthcare professionals behaviour (e.g. to provide effective advice to patients

about health-preventive behaviours, to encourage earlier return to work in those off sick, to take appropriate precautions to prevent infection). This will inform interventions that target multiple behaviours, and assist in the development of complex interventions which will involve multiple targets and points of delivery including individuals, environments, social networks, and Government policy. The continued support for the secondment of researchers from academia into Government to facilitate the translation of the science of behaviour change into policy and practice is also a clear priority and this needs to be ramped up in terms of intensiveness and breadth. The Society would like to highlight the benefit of creating a centre on health behaviour change, which would promote research on projects in which behaviour change is a key element, as well as advise on both research strategy and evaluation methods.

Is there sufficient funding for the evaluation of behaviour change interventions?

Although the findings of research evaluating the effectiveness of behaviour change interventions has been more prominent in recent years, the field remains significantly under-resourced at the basic and applied research levels as well as the policy and translation into practice levels. Dedicated research streams examining the effectiveness of interventions to change behaviour have been largely successful. For example, the National Prevention Research Initiative (a consortium of research council, Department of Health and charity funders, offering around £10million per year) and NIHR-HTA (funded disease prevention projects amount to around £5-10million per year) have provided primary evidence to develop the evidence base on behaviour change interventions. However, the majority of this funding goes to approaches for supporting behaviour change including internet /mobile phone based, one-to-one, group-based and self-help approaches. This suggests that funding streams confine the evaluation of research to a limited number of areas and there is a need to expand and intensify these funding streams and introduce further funding streams in order to meet the research goals and gaps in the literature outlined in the initial questions in this call. The impact of such research is also minimised due to relatively little continuity of funding and limited funding of initiatives to involve policymakers and groups likely to deliver interventions in practice and on the ground. The Society considers that this should become a priority in initiatives to fund intervention research.

Translation

4. Are there adequate structures and expertise across government and the public services more generally to support the translation of research developments in behaviour change into policy interventions?

In the NHS, both expertise and structures are lacking. Public Health Services in the NHS have little knowledge of the evidence base and tend to commission poorly informed and poorly evidenced approaches (e.g. exercise on referral, Weight Watchers, Expert Patient Programme, ad hoc self-developed schemes). Translation could be improved; it would require careful monitoring and targeting of resources as well as rigorous evaluation and a “learning organisation” ethos. NHS staff also requires training in the evidence base relating to supporting behaviour change and on how to select or develop options that are more likely to be both effective and cost-effective. Recent developments in the science of behaviour change, however, present two important opportunities to improve the translation of research into practice. First, there is an opportunity to ensure the workforce has the competencies required to deliver face-to-face behaviour change interventions effectively.

Second, there are several routes to behaviour change and not all these routes are currently being exploited equally.

Workforce competency and training. Effective interventions need to be delivered competently to maximise their potential for behaviour change, with the workforce needing to have the required set of competencies. Currently the NHS workforce is trained to deliver interventions for specific behaviours, e.g. trained to deliver smoking cessation, or trained to deliver alcohol brief interventions, but not normally both. The evidence that unhealthy behaviours tend to co-occur (e.g. in obesity there may be problem with both eating and physical activity) indicates a need to ensure that the workforce is competent to deliver interventions across different health behaviours (i.e. to deliver generic health behaviour change interventions). To do this, we need to identify the competencies required to deliver generic health behaviour change. There is a need to develop a national competency framework for the delivery of interventions to change health behaviours, including assessment of competency and the development of training programmes for behaviour change competency.

Routes to Behaviour Change. Behaviour change theory and evidence can be summarised in the form of two routes to behaviour. Behaviour change can be achieved through a route that requires a person to be actively engaged in the process of change. This route requires the individual to develop and maintain their motivation to change and to acquire the skills required to enable them to consistently enact that motivation to change. This route requires effortful cognitive processing and interventions. However, behaviour change can also be achieved through a less effortful route that achieves behaviour change via prompts or cues to behaviour based on past associative learning. This route does not require constant conscious active engagement by an individual. Analyses of behaviour change interventions currently being delivered through UK publicly-funded programmes indicate that the effortful route is well represented by interventions currently available but that the prompted, less-effortful route is less so. The Society would recommend for funding to be set aside to evaluate the effectiveness of interventions that involve components that target both the conscious, effortful and non-conscious, less-effortful routes to action.

Policy design and evaluation

General

Evaluation of interventions requires the content of the intervention to be reported accurately and in sufficient detail in order to enable replication. In the past, the reporting of complex interventions, of which behaviour change interventions would be an example, has been generally poor. However, recent guidance on the reporting of complex interventions (e.g. CONSORT statement) has contributed to the development of a cumulative behavioural science and a more systematic reporting of intervention components. The Society believes that Government policy could support such guidance on intervention design and reporting that could act as a driver of quality. Policy could address the need for interventions to be specified in a replicable manner, to identify the theoretical framework for their design, to specify the theoretically active ingredients and how they will be measured, to detail their mode of delivery, to identify the competencies required by the people tasked with the delivery of the intervention, and to ensure that the components of interventions are effectively executed 'in practice' – so-called intervention fidelity. Improving the quality of intervention design and reporting is necessary if the effectiveness of an intervention is to be

reliably evaluated. The Society would recommend further support for initiatives to develop a national framework for the development, reporting, and evaluation of interventions to change health behaviour.

Interventions should also be informed by a theoretical analysis of the target behaviour and consideration of the full range of interventions and policies available to support and enable change. A comprehensive, coherent and theoretically based framework of interventions and policies, based on a systematic literature review of 18 such frameworks, is summarised in the submission from ASH to the enquiry (Michie, van Straalen, & West, 2010)

5. What should be classified as a behaviour change intervention?

Behaviour can be influenced by changes to the environment (e.g. pricing, availability, laws, cues to action), changes to services (e.g., interventions to support behaviour change in health professionals), changes in cultural and social attitudes (e.g. acceptability of smoking, being overweight), and by pharmaceutical or chemical methods (e.g. appetite suppressants, nicotine patches). Interventions that target one or more of these areas could be classified as a behaviour-change intervention. It is important, however, to highlight that the level of effectiveness of these different components vary according to numerous factors like the type of behaviour involved and the target population. The focus of many recent behaviour change interventions has been the use of psychological techniques that target self-regulatory skills and empower people to actively change their behaviour in the absence of incentives and external cajoling to change (Abraham et al., 2009; Abraham & Michie, 2008; Hagger, 2010; Michie, 2008). Such changes are proposed to lead to effective long-term and sustainable behaviour change.

6. How should different levels of intervention (individual, organisational, community and national) and different types of intervention (legislative, fiscal, educative) interact in order to achieve policy goals more effectively?

There is relatively limited evidence demonstrating the most effective means to match intervention levels with behaviour change intervention strategies and other legislative means to regulate behaviour. Health Psychologists have developed intervention strategies that focus on the 'educative' aspects i.e. developing skills and encouraging actions that will lead to individual behaviour change. These can be integrated alongside other policy initiatives. A practical example would be the recent ban on smoking in public places. The legislation was accompanied with campaigns advertising smoking services for those wishing to quit. Although these campaigns were not explicitly designed alongside behaviour change techniques, it illustrates the need to integrate theory-based behaviour change interventions with policy initiatives which both pave the way for the legislation and capitalise on the legislative change. The Society would recommend the introduction of advisory groups, with expertise in the frameworks and mechanics of interventions presented at different levels. Such advisory groups would need to account for the specific behaviour, target groups, and desired outcomes of the intervention, as well as coordinate the specific types of intervention that would be most effective in exacting the desired change.

7. Should behaviour change interventions be used in isolation or in combination with other policy interventions?

Interventions which target behaviour change at an individual level but which fail to take into account environmental determinants of behaviour are likely to be less effective. For example, an intervention to reduce obesity by providing a target population with information and advice to make healthier food choices also needs to make such changes possible by reducing the salience or availability of attractive but non-nutritious, calorie-rich foods. This would require legislation to negate the attractive options, such as 'traffic light' food labelling, to help individual identify healthy and less-healthy food choices. The integration of policy interventions (e.g. training of personnel) alongside behaviour change interventions is essential in order for them to be effective. Behaviour change interventions can sit alongside legislative, fiscal, administrative, and other policy interventions. Complex interventions aim to incorporate these networks into their development and delivery, and should be targets of future research. However, complex behaviour change interventions generally fail to achieve high quality on all aspects of design and evaluation. There is a need to examine the factors that determine successful complex interventions, as knowledge in this area is relatively limited. Ensuring that high-quality evidence is used to evaluate interventions that might be used in practice should be a priority for interventionists. This can be implemented through consultation with leading groups and organizations in health psychology dedicated to developing and evaluating such interventions. Evidence reviewed by NICE suggests that interventions which simultaneously include national, community, and individual level are most effective (Abraham et al., 2009).

Practical application

8. Have publicly funded behaviour change interventions been both evidence-based and subject to effective evaluation? How successful have such interventions been?

A few good examples exist and this question is addressed in submissions to the Enquiry led by Health Psychologists on NHS Health Trainers (Michie, Rumsey, Fussell, Hardeman, Johnston et al., 2008), the National Centre for Smoking Cessation and Training (NCSCT, 2010) and pandemic flu planning (Rubin, Potts, & Michie, 2010).

9. Within government, how are the lessons learnt from the success or lack of success of behaviour change interventions fed back into the design of future interventions? Are lessons learned from industry and voluntary sector behaviour change activities also taken into account?

Within the academic and health service communities, lessons are not always well learned; this is partly because (1) the lessons are not well prepared and/or (2) the lessons are not delivered. Interventions are often not evaluated with sufficient rigor due to the adoption of poor methods, weak designs, or not adopting a theoretical basis to provide experimental tests of theory and to help identify why interventions were effective or not. Systematic reviews taking into account the components of interventions and study quality are useful but tend not to be able to identify the interactions between the various components of interventions. There is thus a continued need for randomised controlled trials (RCTs) of interventions, which employ full-factorial designs to be able to tease apart the active components of health behaviour change interventions.

There is also a need for strong process evaluations within rigorous trials to help understand how effective interventions work. Efficacy as well as effectiveness needs to be assessed and

reported in publications. More funding should be available for the careful design of theoretically based interventions that allows for an iterative user-informed process of development and a detailed consideration of the implementation itself. Interventions may be well designed but may not be delivered as intended. A further issue pertaining to 'delivery' relates to the dissemination of evidence. Unsuccessful attempts to replicate experimental effects or failed attempts to try out new interventions, or old interventions in new environments, are typically difficult to publish within academic journals. This leads to the unnecessary waste of research time and money.

It is often cited that theory-based interventions are more effective than those that are not based on theory. However, evidence to back up such claims is often weak and not rigorously tested (Michie & Prestwich, 2010). The Society believes that thorough tests are needed in order to inform the development of better theories upon which to base efficacious behaviour change interventions. Efforts have been made to bring together the key constructs and domains of psychological theories of behaviour change (such as emotion, motivation, environment and skills) by leading health and social psychologists, to increase integration and make them more usable by non-psychologists (Fishbein et al., 2001; Michie et al., 2005). This promising work requires more development to link theoretical assessment of target behaviours to behaviour change techniques likely to be effective. There remains a need for key tests of theory and the careful development of theory-based and evidence-based interventions that can be used reliably within healthcare settings.

The Society also believes that partnerships between academic and health-services research need to be facilitated in order to ensure that the best evidence derived from formative and basic research is implemented in practice. Despite the need to find quick answers, well-grounded research should be conducted incrementally rather than quickly rolling out strategies and interventions in the absence of strong evidence to ensure best use of resources. Close partnerships between universities and health services are needed to ensure the translation of best evidence and theory into practice. This could be implemented by providing specific funding streams and programmes of research that would focus on translation of basic research on behaviour change into actual policy. Simple but effective health behaviour change interventions using strategies such as implementation intentions (Gollwitzer & Sheeran, 2006) or mere measurement (French & Sutton, 2010; Sandberg & Conner, 2009) have the potential to contribute to efficient strategies within healthcare.

10. What mechanisms exist, at national and local government level, to provide advice and support during the design, piloting, implementation and evaluation of behaviour change interventions in order to ensure that they achieve intended policy goals and also cultural changes within government and public services more generally?

Knowledge transfer partnerships are an important opportunity for facilitating the translation of research into practice around user requirements. Whilst there is capacity within the UK for support of step change increase in behaviour change research, there is less capacity for taking this research and implementing it in practice. There is a clear gap between the role of researcher (as discoverer) and practitioner (as user). A growing number of researchers are engaging in translational activities (e.g. public engagement, spin out companies, media engagement). However, the knowledge and skills of academic researchers are not always best suited to this activity. Moreover, reward and promotion structures within universities may serve to discourage such activity. Grant income and publications are rewarded, but time

spent trying to specify an intervention or design new methods of engaging with the public often go largely unrecognised. Faster transition between basic research on behaviour-change intervention effectiveness and the development guidelines should be facilitated (such as further centres of transitional research centres through the “Collaboration for Leadership in Applied Health Research” initiatives). It is important that systems are put in place to incentivise such activities and it should be acknowledged that the theories and techniques of behaviour change are as relevant to fostering knowledge transfer as they are to promoting health.

Cross-government coordination

I1. What mechanisms exist within government to coordinate and implement cross-departmental behaviour change policy interventions? and I2. What mechanisms exist within government to cascade learning and best practice on behaviour change policy interventions?

Previous projects and secondments have generally been focused on primary research, and evidence synthesis, and answering questions from policy teams or politicians regarding scientific evidence on behaviour and health. The Government and the research councils already fund a patchwork of units generating evidence on behaviour change (e.g. the Centres for Public Health Excellence, the Behaviour Insight Unit) with seemingly little coordination or synthesis for policy teams. A coordinated approach to integrate behaviour change expertise and knowledge with key governmental figures and organisations should be a priority to ensure that any policy is driven by the latest research and evidence. The Society would recommend for Government, local councils, and Primary Care Trusts to open up roles within health services for Practitioner Psychologists registered with the HPC to help facilitate the translation of the best theory and evidence regarding behaviour change into practice. Health Psychologists will have been trained with the specialist skills to design, implement and evaluate behaviour change interventions in public health contexts based on the evidence presented here. Health improvement professionals and specialists working within Councils and the NHS, who are often responsible for initiative behaviour change interventions, are less likely to have such specialist training. The Society believes that these organisations would indeed benefit from employing highly-qualified practitioners to help develop effective behaviour-change interventions in these contexts (particularly given the need to change health behaviours to help deal with long-term conditions like obesity, and the range of concomitant economic benefits that can be achieved). In addition, the Society would recommend for the Government to fund the creation of a network of Health Psychology specialists and behavioural scientists to provide rapid, evidence-based advice on behaviour change. Such a body would provide advice that would directly feed in to health policy initiatives that have been given priority and need rapid advice on the translation of evidence into practice in specific settings.

Ethical considerations

I3. When is it appropriate for the state to intervene to influence the behaviour of members of the public and how does this differ from when it is appropriate for the commercial or voluntary sector to intervene? In particular, when should this be done by outright prohibition and when by measures to encourage behaviour change? Are some methods of producing behaviour change unacceptable? Which and why?

It has been argued that behaviour change interventions and efforts to promote healthier behaviours limit individual choice. However, commercial industry and enterprise frequently adopt persuasive communication and social marketing methods to change behaviour to achieve the goal of generating maximum profit. The Society believes that Government should become more involved where this commercial imperative generates an environment that produces maladaptive health behaviours, by enabling the public to choose to behave in a manner compatible with their values, without the need for individuals to engage in constant effortful processing. For example, when asked, the public expresses a desire or motivation to eat healthily, to be more active, to stop smoking, and to drink alcohol in moderation (POST, 2007). Indeed, Government would be able to act to enable the public to translate this motivation into action. For example, prompts such as the simple 'traffic light' food-labelling system have enabled the public to act on their motivation for a healthy diet. However, if this same nutritional information is presented in other more complex ways people tend not to process the information as effectively which may lead to them making less healthy choices that contradict their values. The Society believes there is an ethical imperative for Government to act to enable the public to exercise their choice by shaping and structuring the environment, supporting the enactment of healthy behaviours the public expresses a desire to achieve.

Changing public attitudes towards personal responsibility for their health behaviour should also be a goal for governments and public health professionals. It is clear that, in many cases, people want support to change their behaviour for increased physical health. This should be within the remit of the NHS/Public Health Services, as well as the commercial or voluntary sector. For those who don't wish to change, the choice should be respected to the extent that people should not be forced to change, but the onus relies on governments to engage in activities to change attitudes towards behaviours that affect both personal health as well as the health of others. Smoking is one example where legislation is appropriate as smoking in public does harm to others. Furthermore, it could be argued that people who engage in unhealthy behaviours should take more responsibility for the financial costs they impose on others through their lifestyle choices. For example, obesity generates a larger tax burden due to increased health care costs, transport costs, and individual environmental impact. Such messages are important to put across to people in order to increase public acceptance of interventions that seek to promote behaviour change.

14. Should the public be involved in the design and implementation of behaviour change policy interventions and, if so, how? Should proposed measures for securing behaviour change be subject to public engagement exercises or consultation? Should they be piloted? Do considerations differ in the case of interventions aimed at changing addictive behaviour?

Public consultation and involvement in health care policy is important in order to determine the level of acceptability of health-behaviour change interventions and also determine the behaviour change strategies that are likely to be most effective, at a conscious level, in changing attitudes and beliefs. Of course, messages that may have public acceptability or even 'common sense' appeal may not be the most effective in changing behaviour, and there are many examples of this. However, when it comes to legislation and the implementation of policy, it would be important to ascertain the level of acceptability of such policy. An example would be the high level of acceptability of legislation to change behaviour such as

the ban on smoking in public places which had high public approval. Public consultation on other legislation such as the proposed introduction of a minimum price per unit of alcohol would be an important step to evaluate legislation in this regard.

International comparisons

15. What lessons can be learnt from previous successful or unsuccessful behaviour change interventions in other countries? Which countries provide the most helpful examples of best practice? Are behavioural change interventions generally transferable between different societies?

Behaviour change interventions developed in Europe and the US should be generally transferable to the UK, although some adaptations may be needed to account for specific cultural and ethnic groups. Evidence to date suggests a high degree of transferability for the general methods/behaviour change techniques used. For example, diabetes prevention programmes in Finland, Germany, the US, Australia, China and other countries provide good examples of cost-effective behaviour change interventions (Gillies et al., 2008; Knowler et al., 2009; Lindstrom et al., 2006). Interventions to change lifestyle have reduced the incidence of type 2 diabetes by around 50% in people at high risk, with effects lasting as long as 10 years. Such programmes provide excellent exemplars of systematic, well-funded interventions that show demonstrable effects on clinically-significant outcomes. The Society would welcome the implementation in the UK of such programmes, incorporating the techniques being developed by using the evidence presented by UK-based experts in health psychology and behavioural medicine.

Tackling Obesity

16. The Committee would particularly welcome submissions on behaviour change interventions, whether in the public sector, the private sector or by voluntary organisations, designed to tackle obesity, in the United Kingdom or internationally, in order to examine:

the latest developments in the evidence-base in relation to changing eating and physical activity behaviour;

who are the most effective agents for the delivery of behaviour interventions to tackle obesity;

how current behaviour change interventions tackle obesity and what use is made of available scientific evidence;

whether such interventions are appropriately designed and evaluated; and what lessons have been learnt and applied as a result of the evaluation process.

Preventative strategies for intervening in obesity have tended to focus on three elements: changing dietary behaviour, increasing physical activity, and decreasing sedentary behaviour. In many instances, the behavioural change techniques used to instigate these modifications have not been sufficiently multiple, despite a broad range being available. Recent reviews of interventions to change eating and physical activity behaviour (Dombrowski et al., in press; Michie et al., 2009; NICE, 2006; Paulweber et al., 2010) have shown that: (1) Overall, interventions produce clinically meaningful weight loss and increased physical activity at 12 and 18 months post-intervention; (2) There is strong evidence that the effectiveness of interventions is increased by (a) targeting both diet and physical activity, (b) engaging social

support around the person attempting to change (e.g. engaging family support), and (c) using well-defined /established behaviour change techniques; (3) Increased effectiveness is associated with increased contact frequency and using “self-regulatory” behaviour change techniques (e.g. goal-setting, self-monitoring, relapse prevention, and review of goals). No relationships have been found between intervention effectiveness and intervention setting, delivery mode, study population or delivery provider. Hence, it would seem that a wide range of providers could potentially deliver successful behaviour change interventions. A number of theory-based and pragmatic interventions designed for use in real-world settings have been developed, and are currently under evaluation while further evidence is expected. To maximise the efficiency of programmes for weight loss, practitioners and commissioning organisations should consider including the above components and also using rigorous intervention development techniques (Bartholomew, Parcel, Kok, & Gottlieb, 2001; Glasgow, Vogt, & Boles, 1999), theory-driven approaches and taxonomies of behaviour change techniques (Abraham & Michie, 2008) to inform their development or selection of behavioural interventions. Missing elements in obesity prevention interventions include addressing the psychological functions of eating, the incorporation of knowledge about message framing and the formation of implementation intentions, education of the dietary implications of alcohol consumption, the tailoring of interventions to take account of key groups resistant to change, tailoring of programmes for under-represented groups (e.g., people of low socioeconomic status, ethnic minorities), and the role of extrinsic incentives and intrinsic social rewards.

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October 2010

Memorandum by the British Trust for Conservation Volunteers (BTCV) (BC 77)

BTCV's experience of pro-environmental behaviour change

Executive summary

BTCV is an environmental volunteering charity supporting over 600,000 volunteers annually. Independent researchers have investigated how involvement in BTCV volunteering changes people's attitude to the environment, how they value it and any subsequent changes in behaviour that occur directly as a result of their volunteering. Evaluations to date show that all BTCV conservation activities change behaviour to some extent, but with small modification of activities and by introducing informal learning, BTCV can increase its impact on behaviour change.

Introduction

1. BTCV is an environmental volunteering charity. Our vision of "a better environment where people are valued, included and involved" resonates with current debates on active citizenship and behaviour change.
2. BTCV is a large scale national organisation that delivers a multitude of small-scale localised projects. Our core work supports local volunteers to come together to improve the environment through practical volunteering. Last year we supported over 600,000 volunteers. We work to inspire people to value the environment; take action to protect and improve it; and live in a more sustainable manner.
3. BTCV has conducted a number of research and pilot projects to explore the impacts that being involved in environmental volunteering has on volunteers' environmental behaviours in their home, work and social lives. This research programme grew out of a desire to supplement anecdotal evidence by providing robust, quantitative evidence of change. Our first behaviour change research project was conducted by Essex University with volunteer groups in South Wales, subsequently WWF-UK and CAG Consultants have undertaken research with volunteer groups from Scotland and South East England. The research findings (from each piece of research) indicate that there is a change in environmental behaviours through being involved in BTCV's practical environmental volunteering work.

The impact of environmental volunteering on behaviours and attitudes to the environment.

4. Researchers at the University of Essex were commissioned to study the impact of environmental volunteering on behaviours and attitudes to the environment. The study comprised a two stage evaluation process to provide baseline data for longitudinal research and stand-alone findings for a snapshot survey. In total 403 volunteers took part in the research.

Evaluating the impact of environmental volunteering on behaviours and attitudes to the environment

Hine, R, Peacock, J and Pretty J *Department of Biological Sciences, University of Essex* 2008

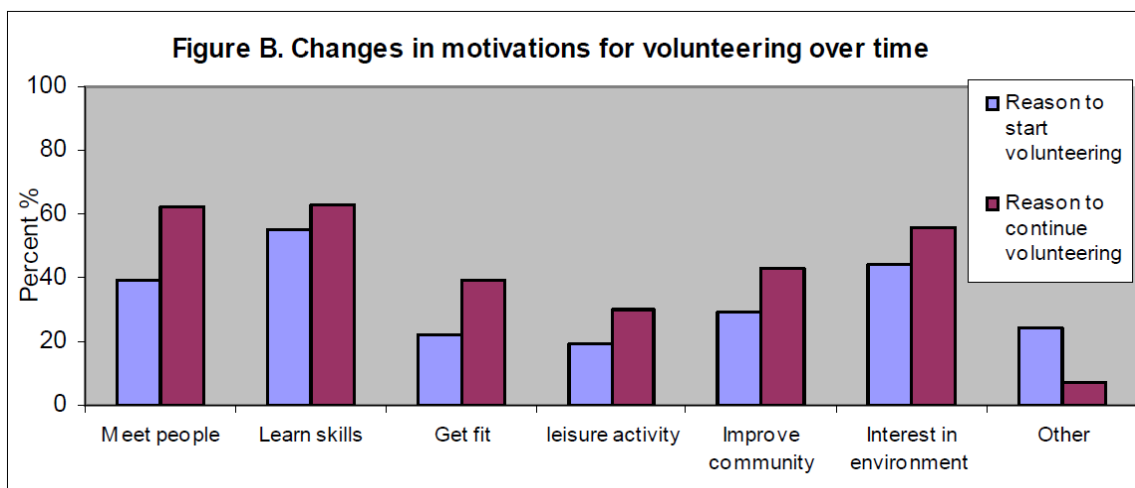
This study examined whether there is a link between volunteering with BTCV, increases in connectedness to nature, increases in both local and global environmental awareness, a change in behaviour by incorporating 'environmentally friendly' practices into everyday life and ultimately to advocate environmental protection.

Results show that such a link exists, and with an increase in connectedness to nature, there is an increase in environmental awareness and responsibility and also an increase in environmentally friendly practice. A volunteer who has a high connectedness to nature score is also likely to have high environmental awareness and responsibility and is likely to be carrying out a number of environmentally friendly practices.

5. Examining the changes in environmental awareness scores in detail across the longitudinal study showed that the biggest increases in environmental awareness were observed at the local or individual responsibility level. "This suggests that BTCV volunteers in this longitudinal study are becoming more aware of the role that they themselves can play in protecting the environment."

Motivating factors

6. The study suggests that reconnection to nature and positive environmental attitudes and behaviours are due to a range of motivators which provide the catalyst for change.



The initial motivations for volunteering are shown to change over time as individuals become more connected to nature, their environment and their fellow volunteers.

Evidence of behaviour change outcomes

7. The research recorded the level and frequency of certain environmentally friendly lifestyle options and practices, measured by a specifically designed set of 14 questions. The top 3 environmentally friendly practices which participants stated that they carried out “always” were: recycling (49% of respondents), turning off the tap whilst cleaning teeth (46%) and taking showers instead of baths (42%). Practices that were carried out “most of the time” included using energy saving light bulbs (27%), turning off the power at the plug and preferring to walk or use public transport rather than use a car (26%).

“The adoption of environmentally friendly behaviour was shown to significantly increase with the length of time participants volunteered with BTCV (as shown in both the overall and repeated measures study) and was also significantly increased with a rise in the frequency of volunteering.”

(Hine et al, 2008)

How the uptake of pro environmental behaviours can be increased

8. BTCV's Greener Living Learning Project aimed to use informal learning to bring about behaviour change towards more sustainable lifestyles by the participants. The activity took place in three areas of Kent, East Sussex and Hampshire during the first quarter of 2010.
9. In addition to testing the hypothesis that BTCV activities change people's behaviour towards sustainable lifestyles, the researchers posed the question: *is there a difference in impact between regular activities and those that are set up to and focus on changing behaviours?* Two different methods were used:
 - Four monthly informal discussions were held as part of project workdays in community groups which are members of the BTCV community network. This was supported by paper and web resources.
 - Four half day workshops offered practical activities such as talks and demonstrations from experts, visits to nearby sites (e.g. landfill sites and recycling facilities) as well as opportunities for participants to learn from each other's experiences.
10. The CAG Consultants-WWF UK “Change! Tool” was used to evaluate the project's impact. This longitudinal project level evaluation tool helps to measure changes of behaviour over quite short periods. The Change! Tool includes pro-environmental behaviours ranging from the very simple and easy to implement, to more involved long term behaviours. The tool comprises questionnaires (administered about 100 days apart), interviews with both participants and delivery staff and also case studies. Together these provide a robust, triangulated evaluation process.

Greener Living Learning Evaluation Report

CAG Consultants, 2010

Researchers evaluated levels of behaviour change stimulated by two different interventions. The evaluation particularly tracked changes in car use, air travel, food buying and food growing. The baseline showed very little room for advancement, for example 48% of the participants had reduced their energy use in the home prior to the intervention. Despite this the results show that BTCV activities do change people's behaviours towards a sustainable lifestyle, and that by making small improvements to activities by including information on, and experience of, positive behaviours this positive effect may be increased.

10% of participants reported that they were going to reduce the number of holiday flights they took.

"In both areas of study participants increased rates of composting, reconsidered flying and reduced the energy in the home. In Scotland (where regular conservation activities were researched) participants changed their behaviour towards food shopping, food growing and changing their car use." (CAG Consultants, 2010)

Conclusions and recommendations

11. Evaluations to date show that all BTCV environmental volunteering activities change behaviour to some extent, but with small modification of activities and by introducing informal learning, BTCV can increase its impact on behaviour change.
 - CAG Consultant's evaluation suggests that the more pro-environmental messages are included in BTCV's practical activities, the greater the change.
 - Environmental volunteering can bring about change in all existing groups as well as people new to the organisation
 - Behaviour change is not an instant action, rather a much longer term process. BTCV's long term involvement with volunteers makes it particularly suited to be an agent of change.
12. Government should acknowledge that awareness raising and behaviour change are not the same thing. Awareness raising is not an essential precursor to action and increased awareness does not necessarily lead to corresponding changes in behaviour. By contrast, recent research has shown that changes in action do lead to increased understanding and awareness.
13. If we want changed behaviour, cues for different patterns of thought will not be sufficient - we need cues for different patterns of action. If the starting point is action, raised awareness - and changes in personal environmental behaviour will probably follow. Furthermore, an action based approach is likely to drive policy

implementation further and faster than raising awareness and then waiting and hoping for action to follow. BTCV's evidence supports the concept that

*"Attitudes rarely translate neatly into action ... Providing information does not necessarily change attitudes, and changing attitudes does not necessarily cause a change in behaviour"*⁸¹.

Recommendation

Government should concentrate on initiatives that clearly result in action, rather than initiatives that result in potentially ineffective "awareness-raising".

14. The effectiveness of BTCV's intervention is driven by its nature as practical action, but also in the way that volunteering is sustained through time. Meeting people and social interaction is highlighted as a motivating factor for continued volunteering. Many organisations in the voluntary sector sustain long term interaction with their beneficiaries. It is possible that the sector could do more; it is possibly being under-used by government as a conduit for inspiring behaviour change.

Recommendation

Government should consider delivering behaviour change initiatives through organisations that are "agents of change" – those who are able to capitalise on face to face relationships and delivering changed behaviours through action.

Government should consider the role of the voluntary and community sector as a force for mobilising public opinion, and for translating policy into action at the grass roots level.

15. BTCV's research base is comprised of small scale research work, which has been undertaken of our own initiative. Behaviour change for pro-environmental behaviour has yet to be evaluated at the kind of scale, and with the kind of rigour to qualify as evidence based policy making.

Recommendation

Government should consider undertaking larger scale and longer term research to establish the most effective mechanisms and organisations for delivering pro-environmental behaviour change.

8 October 2010

⁸¹ Demos/Green Alliance. *Carrots, sticks and sermons: influencing public behaviour for environmental goals*. Defra, 2003

Memorandum by Mr Eric Britton, New Mobility Agenda and World Streets (BC 142)

Summary

The submittal that follows is very rough due to time limitations, but here are the key points that I would like to draw to your attention. Thank you to bear in mind that these observations and suggestions come from someone who has been in and out of the UK for professional reasons over the years but whose work is primarily international.

1. While the question you are addressing – behaviour change and ways to reduce car use in cities – is a good one, it will be important to take a step back to determine if that in fact is the best next step or issue to be considered under the circumstances. I would say that there is a boarder set of issues and trade-offs behind it which need to be sorted out first.
2. Our past international work makes it clear that the range of viable alternatives to own-car travel are too few in number and far too low in quality to give citizens reasonable options. This is true virtually all over the world and certainly true in the UK.
3. We need to bear in mind that advantages of car travel to car owners are considerable, and even more so from a psychological perspective if we bear in mind that the "next trip" one takes in ones car is generally considered as "free". So whatever our alternatives are they must be many in number – bearing in mind that the car offers quite a broad range of potential services – and they must be seen as being competitive. Including being perceived as "free" as using your own car for that next trip.
4. Which is of course far from being the case today. But at least once we are aware of this underlying reality, the real challenge of "behavioral change" becomes far more clearly delineated.
5. It is a fact that the majority of people in the UK are for a wide range of reasons not car owner/drivers: they are either too young or too old to drive, too infirm, too tired, too nervous, lack the necessary physical flexibility and reflexes, not psychologically prepared for the responsibility, cannot really afford a car (though they still may have one), have dangerous driving habits (smokers, drugs, mobile phones, text messages and other dangerous distractions), or perhaps simply prefer to live without a car – and the long list goes on. This is an important political point We are looking at a majority of the population, and all these people vote (even if they are not effectively organized as are the car and road lobbies). These people need and deserved first class options to own-car travel, and the public authorities (and private players) are not yet providing enough of them.
6. The outside looking in view of transport, mobility and infrastructure in the UK is that you have grossly overbuilt your infrastructure in and around cites – and are grossly under-managing it. This is, in fact, very good news. What it means is that you do not have to spend great gobs of taper money on expensive infrastructure – you can

instead get on with the management and creative innovation functions. The entire challenge is well within your means.

7. But you lack an overarching strategy. You have many groups working on various pieces of the puzzle, but as far as I can make out there is not broader vision or strategy. This is vital to determining what government could and should be doing next.
8. I therefore strongly recommend that you lay the base for a national dialogue on the topic of how to go from today's grossly unsatisfactory situation to a far more sustainable transport system as quickly as possible – and specifically in the period 2011 – 2015, starting this year. (You may find a bit of help when it comes to identifying some of the underlying strategic issues here at [http://worldstreets.wordpress.com/about/mission/.](http://worldstreets.wordpress.com/about/mission/))

I. The climate of unsustainable transport in the UK – An outsider's view

- "How can a man, riding on an **ox**, looking for an **ox**, ever find an **ox**?"
(You have to get off the ox).

Background:

I shall get to the questions, but to be useful to you I must first take a few steps back and share with you what I, as an interested and not entirely unformed observer of the UK transportation and government policy situation, have noted over several decades.

I hope these remarks will serve your committee as evidence from an outsider international perspective that I have been able to develop through a long process of in-place observations, consulting and advisory work exactly in the field of sustainable transport and sustainable cities over many years and around the world. (A fair introduction to my work, competence and point of view will be found in the pages of the collaborative international journal that I founded some years back under the name World Streets - www.WorldStreets.org).

I look at the issues that define transport, sustainable and otherwise, in the UK with some knowledge and considerable sympathy, if at times a certain level of impatience as I ask myself how is it that, with all the assets you have in hand, you are doing by and large so poorly in the broad area of sustainable transport, whether at the level of specific projects, cities or, indeed the country as a whole.

Policy soft spots:

Why is this? Well, as an outsider I spot a certain number of soft spots which you really could correct once you put your minds to it. And once you have the appropriate strategic structure in place – this is really at the end of the day what is most lacking – an appropriate,

articulated, explicit, responsible, consistent and continuing strategy for sustainability – many of the specific questions you bring up here will become clearer. The so-called soft spots in your policy frame include:

1. Your successive governments, of no matter what political stripe, give full expression to the idea of supporting sustainability and pattern-break innovations until they take office – at which point they become de facto bearers of the standard of old mobility, old ways, and unsustainable transport. This of course is not limited to the UK, but still that is no excuse.
2. In general one notes a tendency among a quite large number of the brightest people working in the sector in government, to be far better at criticizing and shooting down than creating and supporting useful actions. There is an almost comic situation in which new ideas from outside the assigned channels get shot down before they have had a chance to mature and advance. Greater openness and creativity needs to be encouraged (but there you really have a problem of behavior change.).
3. Local government holds the key to the move to sustainable transport but is by and large today confused and nervous. The local council leaders have a hard enough row to hoe just to keep what they have going as well as they possibly can. They face real problems of resources, but above all seem to me to have a major vision failure. And if you don't have the vision, you have nowhere to go.
4. Your NGOs and various interest and action groups are often world class, however by and large are organized into quasi self-contained silos. And those who do take a broader approach are for the most part substantially underused assets. The attitude of government to these important assets strikes me as ranging from patronizing to evasive to adversarial, and by and large altogether unhelpful.
5. Currently the deep cuts and lack of serious support for sustainability on the part of your latest government are putting just about everybody who is committed to and working on the sustainability and social issues in the sector on the defensive so there is today a general climate of despair, which I very much hope your committee will be able to help reverse.
6. The UK continues to be an island when it comes to deep knowledge about what is going on at the leading edge in other parts of the world. The EU helps a bit with its various programs, but this does not seem to be lively or creative enough. In all too many cases the process of questioning and evidence building for decision tends to get stuck in the island.

7. A clear vision and understandable (by all) is needed to pull all of this together. That vision at present does not seem to exist. This is not the place for me to articulate what I firmly believe to be the strategy that is needed to break this impasse. But let me at least try to give you a few of the main pillars of what I believe needs to be done to give yourselves the needed firm base.
8. The only possible strategic starting point is that it must be the prime government policy (a) to reduce VMT steadily starting in 2011; and (b) make this the central core of all government policy and investment decisions for the period 2011-2015. Cutting back VMT has many and enormous advantages, environmental, social, economic and strategic. And it can be done, but only with new thinking and strong leadership and participation from many levels of society. We have to help your government to understand this.
9. Once you have the strategic basics in place, the second core element of a viable sustainable transport policy has to be absolute consistency. No shilly-shallying. The same rigorous acid tests of cost-effectiveness, performance and impacts need to be applied to all public expenditures and investments. Once these principles are put into place, it is surprising how easy it becomes to separate the wheat from the chaff.
10. The third core value in the years immediately ahead has to be frugality. We are living in hard economic times. All allocations of public moneys need to be reviewed and decided rigorously on the basis of the actual impacts that are achieved within the rigorous planning and policy structure. This works out well since almost everything that is needed to achieve these strategic objectives can be achieved with far lower levels of public investment than the old heavily infrastructure-oriented policies.
11. The soul of success in sustainable development is not only vision, but also *continuity* once you get into an action mode. There is a huge amount of start and stop in Britain, which does no one any great good. It discourages and acts to sap the courage and energy of the sector.
12. And finally the grim bottom line reality. Year after year, government after government, you are consistently spending taxpayer money by and large to support cars and roads. There seems to be plenty of money for useful follies (example: the patently absurd HSR proposal that has been embraced by all three major parties, which stands no test of sanity or responsibility.) I guess the first step has to be for you to figure out who you are and who you want to be.

I thought it important that I set the stage in this broader way so that you can see from where I come on all this. But I shall now dig into three of the questions you bring up.

II. Responses to selected questions:

I. What are the most influential drivers of behaviour affecting an individual's choice of mode of travel?

Let me look for now at just one specific modal choice example to see if we can find some clues: Why people decide to join carclubs? There is plenty of experience and evidence on this. Here is my quick read of the evidence from the perspective of the user:

- a. The alternative offers an improved mobility option in specific situations.
- b. It is considerably cheaper than owning and operating an nth car.
- c. It frees the driver from the charge and cost of dealing with parking
- d. It opens up a number of advantages of being "carfree" – that is unencumbered by the burden (financial, time, inconvenience) of such things as vehicle maintenance, upkeep, insurance, fueling
- e. There are bragging rights associated with backing away from being totally unsustainable.
- f. Most if not all people who share cars in this way have at least some awareness that they are behaving responsibly in terms of environment and climate.

What can we ascertain concerning your question from this brief and admittedly incomplete off the cuff profile? Simple:

You have to be able to offer a superior travel option if people are going to make new and better choices. This is a challenge since the long standing received wisdom has been that public transport (which is almost always very narrowly defined: fixed route, schedules services, usually run on a deficit and government financed) is basically the poor man's transport that Mrs. Thatcher reminded us all about so vividly so long ago. Waiting for a bus in the rain is not an option.

Also: this suggests that we have a far broader and more strategic picture of what in fact are those "other modes" as opposed to only and travelling by own car. Here are a very wide range of alternative options and it is important to know and understand them in depth, before asking about choice criteria.

2. What is the role of infrastructure in encouraging and facilitating changes in travel-mode choice?

Of course it is vital. But not perhaps as one might at first think. Here are a couple of

important infrastructure truths which once properly understood give some useful clues for government policy at all levels.

- a. Our road and parking infrastructure in almost all of our cities across Europe, and certainly in the UK, have been grossly overdeveloped in terms of their dimensions and share of the total land area of the city.
- b. In summary: we have over built and undermanaged. When we understand this, it opens up a whole new strategy of policies and measures adapted to this situation.
- c. And we know too of course that the answers to the problems we face do not lie in more building and other forms of capacity expansion. For either moving or parked cars. This hard earned lesson is clear beyond any doubt.
- d. So, we work with what we have.
- e. Well thought out infrastructure policies will (a) shift the available street space away from inefficient users of that space (namely private cars) and make it available to efficient users, namely pedestrians, cyclists, public transit and other forms of shared transport.
- f. The strategy has to be not a "war on motorists" but a deliberate and steady tightening of the noose on all inefficient users of the city's scarce space and environment. In addition to reducing road space available for these inefficient users (a purely physical strategy) a critical component of the infrastructure use strategy has to be the strategic reduction of parking space for private cars. This is a far more cost-effective policy than congestion charging, and lends itself to being planned and handled with political address.
- g. Another key tool in infrastructure management is that of slowing down all traffic in built up areas. There is no good reason why all traffic should be strictly limited to a 10/20/30 mph strategy. The justifications for this are accident reduction and a range of public health and environment improvements.
- h. But we are for the couple of decades ahead still be seeing lots of cars in and around our cities, so our strategy must take this into account and not simply plunge into a denial mode. Cars are not the enemy, they have a place in society, but their indiscriminant inappropriate use is something that we can remedy. With strategy, with technology, with people skills and with patience.

3. What are the most appropriate type and level of interventions to change travel-mode choice?

The most creative thing you could do in the UK in the years immediately ahead and starting now (since it is possible) is to organize and offer a broader palette of high quality alternative transport options. This is a long list which can start with things like innovative public transport, car clubs, ridesharing, new uses of taxis and small bus/van systems, safer and better cycling conditions in the city, ditto for walking and the long list goes on.

The target mode has to stretch way beyond traditional public transport and bus services. They are going to be part of the solution, but only part.

A core driver for these new services is going to be ICT, so if you are going to use policy to drive innovation, here is a sector that bears far better promise than vehicle, motor and fuel technologies which are the proper affair of the private sector.

21 January 2011

Memorandum by Cambridge Weight Plan (BC 49)

Executive summary

- **Cambridge Weight Plan (CWP) offers a range of weight-management programmes for overweight and obese individuals in the UK, delivered individually by specially trained Consultants.**
- **The combination of dietary interventions with lifestyle change is a key feature of these programmes. The emphasis is on identifying lifestyle drivers of obesity and overweight and addressing any unhealthy relationship with food.**
- **Consultants work individually with participants to support and motivate them through weight loss and help with re-education towards longer term healthy eating habits and lifestyle change.**
- **This individual support aims to help participants understand their relationship with food and develop new skills to support healthier eating and lifestyle behaviours, including being more active.**
- **The successful use of dietary intervention combined with individual support and motivation that facilitates behaviour change has the potential to deliver substantial reductions in demand upon public resources by significantly reducing the incidence of obesity related conditions.**
- **Primary care professionals need to be made aware of the significant role that the private sector can play in offering effective weight loss with lifestyle changes to achieve weight maintenance on an individual basis as part of a broader package to tackle obesity.**

Introduction

1. CWP provides effective weight loss services across the country and in this submission we wish to set out how our programmes can help tackle the growing obesity crisis in the UK.
2. CWP offers a variety of weight management options, including Low Calorie Diet (LCD) and Very Low Calorie Diet (VLCD) programmes, for those who are overweight and clinically obese. The programme is provided through specially trained and accredited Consultants, who provide initial screening and advice to clients as well as individual and/or group support throughout the diet, which is a major factor in maintaining motivation and achieving long-term success.
3. Consultants keep in contact with clients throughout the programme to keep track of their weight loss. The ultimate goal of all our programmes is to allow clients to maintain a healthy weight through the use of a healthy balanced diet and appropriate amounts of physical activity.

4. Weight management programmes such as these are increasingly important if the Government is serious about tackling the UK's growing obesity crisis. Obesity consumes large amounts of NHS resources and is likely to consume even more if the obesity rate does not start to decline. Foresight's 2007 report estimates that, by 2015, the NHS will have to spend £6.3bn a year on treating overweight or obese people.⁸² In an era of increasingly tight NHS budgets this is not sustainable.
5. In addition, there is a gap in the spectrum of therapeutic options for treating obesity between smaller weight losses following use of obesity drugs (8-10kg) and larger weight losses following bariatric surgery (25-40kg). That gap can be filled in a therapeutically effective, economic cost-saving manner by formula diet low calorie and very low calorie programmes that are used in combination with individual support which helps with re-education towards longer term healthy eating habits and lifestyle change. Recent clinical research has demonstrated that weight loss following such programmes is maintained after a year.⁸³
6. In effect, the successful use of dietary intervention combined with such individual support and motivation has the potential to deliver substantial reductions in demand upon public resources by significantly reducing the incidence of obesity related conditions including cardiovascular disease and type 2 diabetes.

Answers to Specific Questions

Research and Development

7. **What is known about how behaviour can be influenced? What special considerations apply to addictive behaviour?**
8. Obesity is a consequence of an individual's dysfunctional relationship with food. Weight management programmes seek to address this relationship, which necessitates an approach involving significant efforts to change behaviours.

Policy design and evaluation

9. **Should behaviour change interventions be used in isolation or in combination with other policy interventions?**
10. Weight management programmes are most effective when using dietary interventions combined with lifestyle changes and advice on physical activity; this produces a complete programme that helps an individual lose weight and maintain that weight loss. Policy makers need to ensure that GPs are fully informed of the effective role of multi-component weight management programmes that use re-education towards longer term healthy eating habits and behavioural change, so that they can make informed decisions on what programme would best suit the individual needs of their patient.

⁸² *Tackling Obesity: Future Choice*, <http://www.foresight.gov.uk/Obesity/17.pdf>

⁸³ Christensen R, Leeds AR, Lohmander S, Christensen P, Riecke BF, Sørensen TJ, Gudbergson H, Aabo J, Henriksen M, Boesen M, Astrup A, Bliddal H. Efficacy of dieting or exercise vs control in obese osteoarthritis patients after a clinically significant weight loss: a pragmatic randomized controlled trial. *Obesity Reviews* 2010; 11 (suppl 1): 248 (T3:PO.83)

11. Government also needs to ensure that consumers are provided with sufficient information, through complete and easy-to-understand food labelling, to make informed choices on what foods to purchase. Despite pressures on Government finances, policy-makers also need to recognise that marketing campaigns such as Change4Life are likely to pay for themselves in the long-term, as the reduced prevalence of obesity will result in significant savings to the public purse.

Practical Application

12. **Within government, how are the lessons learnt from the success or lack of success of behaviour change interventions fed back into the design of future interventions? Are lessons learned from industry and voluntary sector behaviour change activities also taken into account?**
13. The effectiveness of weight management programmes that incorporate behaviour change as a tool to tackle obesity is backed up by clinical research undertaken over more than 25 years. It is important that Government takes full note of the latest research into behavioural change techniques, and the effectiveness of multi-component weight management programmes, when setting policy. Research emerging from industry and the private sector should not be omitted.

Cross-government coordination

14. **What mechanisms exist within government to coordinate and implement cross-departmental behaviour change policy interventions?**
15. Behavioural change policy interventions need to be coordinated and properly implemented across Government to maximise impact and chances of success. Obesity is a complicated issue that requires a variety of Government interventions, from NICE guidance to food labelling regulation. Responsibility for tackling obesity is also spread over many different bodies, from government departments such as health and education to governmental agencies such as the Food Standards Agency and self-regulating bodies such as the Advertising Standards Authority.
16. To bring about an effective reversal of the rising obesity trend, the mechanisms that policy-makers employ must complement each other; for example, legislation such as food labelling should be applied in a consistent and uniform manner to reinforce behaviour change in consumers.

Ethical considerations

17. **When is it appropriate for the state to intervene to influence the behaviour of members of the public and how does this differ from when it is appropriate for the commercial or voluntary sector to intervene? In particular, when should this be done by outright prohibition and when by measures to encourage behaviour change? Are some methods of producing behaviour change unacceptable? Which and why?**
18. Individuals have a greater chance of achieving changes in their behaviour if they are able to access the specialised help that experienced commercial companies can provide.

Consultants provide a 24 hour a day, 7 days a week service with individual support and motivation; such a level of service provision is not possible under NHS structures. In some cases the NHS has already recognised this and ongoing public/private partnerships are in place to tackle local obesity problems.

19. Evidence also suggests that financial incentives, as one part of a multi-component weight management programme, can play a particularly effective role in tackling obesity. This is stated in the Government's own *Healthy Weight, Healthy Lives* strategy from 2008.⁸⁴ Weight management programmes not only demand a considerable commitment from participants but also offer a financial incentive to lose weight.
20. This evidence of the effectiveness of financial incentives is an additional reason why Government should consider private providers as part of the solution to this country's obesity problem.
21. **Should the public be involved in the design and implementation of behaviour change policy interventions and, if so, how? Should proposed measures for securing behaviour change be subject to public engagement exercises or consultation? Should they be piloted? Do considerations differ in the case of interventions aimed at changing addictive behaviour?**
22. Dialogue between industry and Government, both informally and through consultation exercises, should be a key part of involving the public in this process. The experience and expertise of industry in identifying and successfully utilising key behavioural change techniques should be recognised by policy-makers.
23. Government should also ensure that commissioners have the tools in place to commission such effective and cost-effective programmes.

Tackling Obesity

24. ***The Committee would particularly welcome submissions on behaviour change interventions, whether in the public sector, the private sector or by voluntary organisations, designed to tackle obesity, in the United Kingdom or internationally, in order to examine:***
25. **Who are the most effective agents for the delivery of behaviour interventions to tackle obesity;**
26. Private providers, thanks to their experience, expertise and capacity, are well placed to deliver the sort of specialised services that obese and overweight people require in order to lose weight and maintain their weight loss.
27. **How current behaviour change interventions tackle obesity and what use is made of available scientific evidence;**

⁸⁴ *Healthy Weight Healthy Lives*, p.42,
http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_084024.pdf.

- 28.** The use of dietary interventions combined with individual support and motivation, which helps with re-education towards longer term healthy eating habits and behavioural change, can significantly reduce the prevalence of obesity. Recent research presented at the International Congress on Obesity (ICO) demonstrates not only that long term weight loss is maintained but that the symptoms of associated disorders such as sleep apnoea⁸⁵ and arthritis⁸⁶ are reduced.
- 29. Whether such interventions are appropriately designed and evaluated; and**
- 30.** Cambridge Weight Plan supported research is designed to the highest standards by internationally recognized statisticians and clinical research staff. Data analysis is likewise to the highest standard designed to survive intense scrutiny.
- 31. What lessons have been learnt and applied as a result of the evaluation process.**
- 32.** International data indicates that weight loss and maintenance is dependent on dietary control, adequate physical activity and behavioural change. Most good quality commercial weight loss providers incorporate components designed to achieve appropriate change in dietary intake, physical activity and behaviour, but few have the high quality evidence for weight maintenance obtained by Cambridge Weight Plan.

Conclusion and Recommendation

- 33.** Weight management programmes have long recognised the importance of behavioural change techniques in helping people not only lose weight but to maintain that weight loss. With individual support and specialist help from trained Consultants, private providers of weight management programmes have the capacity and experience to deliver changes in behaviour in a manner that may not possible within all NHS structures.
- 34.** Primary care professionals need to be made aware of the significant role that the private sector can play in offering specialised behavioural change on an individual basis as part of a broader package to tackle obesity.

October 2010

⁸⁵ Johansson K, Neovius M, Lagerros YT, Harlid R, Rossner S, Granath F, Hemmingsson E. Effect of a very low-energy diet on moderate and severe obstructive sleep apnoea in obese men: a randomised controlled trial. *BMJ* 2009; 339: b4609 doi 10.1136/bmj.b4609

⁸⁶ Riecke BF, et al., Comparing two low-energy diets for the treatment of knee osteoarthritis symptoms in obese patients: a randomized trial, *Osteoarthritis Cartilage* (2010), doi:10.1016/j.joca.2010.02.012

Memorandum by the Camden Weight Loss Research Team (CAMWEL) (BC 44)

Designing a behaviour change intervention to tackle overweight and obesity for the Camden Weight Loss (CAMWEL) trial.

Introduction

1.1. Helping people change behaviour in order to lose weight is challenging and requires the development and evaluation of a complex intervention. As with any complex intervention, considerable preparatory work is needed before embarking on trials of clinical and cost effectiveness. We describe the process of design and development of a study for evaluating a publicly-funded evidence-based behaviour change intervention in adults wishing to lose weight.

Background

- 2.1. In 2007, 60.8% of people aged 16 or over in England were classified as overweight or obese (BMI ≥ 25 kg/m²) and 37% had a raised waist circumference (The Health and Social Care Information Centre, 2009). Based on BMI and waist circumference, 34% men and 39% women were classified as being at high or very high risk of health problems (The Health and Social Care Information Centre, 2009). The Foresight report estimated the NHS cost attributable to excess weight as £4.2 billion in 2007.
- 2.2. The prevalence of excess weight in a population is related to levels of physical inactivity and unhealthy diet. Overall, 40% of men and 28% of women in the UK meet the minimum recommendations for physical activity in adults (at least 30 minutes of at least moderate intensity activity at least 5 times a week), although over two-thirds of adults said they would like to do more physical activity. Men and women with low physical activity levels were more than twice as likely to have a raised waist circumference as those with high levels of physical activity. In 2007, 27% of men and 31% of women consumed five or more portions of fruit and vegetables a day.
- 2.3. The UK Government White paper, 'Choosing Health' reported that there was inadequate provision of services for obesity (Department of Health 2004) making the development and implementation of effective weight reduction and weight maintenance programmes for individuals a priority. We developed a research protocol for a randomised controlled trial (RCT) for a weight management programme for overweight and obese adults wishing to lose weight using the MRC framework for complex interventions.[1-2]
- 2.4. There are many models of behaviour change and this intervention draws on aspects of a number of them. These include: the Trans-theoretical model[3]; the Health belief model [4]; the Theory of planned behaviour [5-6], 2002); Implementation intentions [6]; Goal setting [7]; Systems thinking[8]; and Enhancing self-efficacy [9] Other useful techniques include self-monitoring, reinforcement, relaxation and stress management. It has been shown that interventions addressing dietary behaviour that are based on current socio-psychological theories of behaviour change tend to be more effective than those that are not, although the effectiveness of interventions based on different theories does not differ substantially.[10-11] Studies indicate that

the more behavioural techniques used the greater the effectiveness of the intervention.[12-13] Findings from a systematic review show that interventions which combine diet and exercise result in a clinically important degree of weight loss.[14] Behaviour change techniques identified as effective components of such interventions include self-monitoring of behaviour, prompting intent formation, specific goal setting, providing feedback on performance and prompting review of behavioural goals.[15]

2.5. The use of an intervention mapping procedure[16], construction of a logic model and consideration of theories of behaviour change[17] can inform the focus of an intervention, facilitate selection of goals, provide a checklist of behaviour change techniques[18] to employ, and provide the basis for evaluating the intervention. The model can guide the selection of appropriate measures based on theoretically predicted relationships between changes in intermediate variables and final health goals to assess a range of processes and activities; such as participation, change in knowledge, intermediate health outcomes (e.g., modification of behaviour), overall health outcomes (physical or mental health state) and Quality of Life.

Developing and evaluating a behaviour change intervention

Pilot study

1.1.1. Based on responses from quantitative and qualitative surveys of nurses, GPs and patients, we developed a brief intervention (provision of pedometers) and a more intensive structured lifestyle support intervention to compare with usual care for the pilot study. The structured lifestyle support was a nurse-led 12-week intervention using two key elements - a computer-aided lifestyle package (ProHealthClinical) and pedometers - to provide information and support to patients in their efforts to change their lifestyles and lose weight. While this study was not powered to compare differences in weight loss, the level achieved was 4.0 kg for participants randomised to receive structured support compared to 1.2 kg in those receiving usual care. A third (34.0%) of participants in the structured support group achieved a clinically meaningful weight loss of 5% or more. This intervention programme followed guidelines recommended by NICE, and we showed that its implementation was feasible in primary care.[19]

Camden Weight Loss (CAMWEL) Randomised Controlled Trial

1.1.2. We are now conducting a larger scale randomised controlled trial, with integral process evaluation, to assess the effectiveness of a longer-term structured lifestyle support programme provided by a trained advisor and the provision of pedometers compared to usual general practice care in overweight/obese adults who wish to lose weight. This study will provide the evidence base to address the problem of overweight and obesity in the community. We will assess the degree of weight loss over a period of 12 months as well as related factors such as changes in waist circumference, quality of life and cost-effectiveness of the interventions.

1.1.3. For the CAMWEL intervention, we used the procedures outlined above to develop the content of the intervention as well as a range of delivery strategies including an emphasis on motivational interviewing techniques for example expressing empathy, discussing a variety of individually appropriate set of options and avoiding argument.

1.1.4. All participants were given the British Heart Foundation booklet 'So you want to lose weight for good.' Participants were randomised to two groups: 1) usual care, 2) structured support. The content and delivery of the structured support intervention is shown in Table 1. Participants are invited to attend fourteen 30-minute sessions with a trained advisor over a period of 12 months. The sessions take place fortnightly for the first 12 weeks, followed by sessions every three weeks for the following 12 weeks, monthly for the next 12 weeks, and a final session after a further 12 weeks. Advisors were trained to use a motivational interviewing approach and provided with a detailed schedule of topics for each session to help participants set realistic goals, fit more physical activity into everyday life and eat more healthily. The sessions incorporate the use of effective behaviour change techniques and are designed to promote physical activity and healthy eating. The topics include: identification of motivations for losing weight, personally agreed weight loss, eating and physical activity goals, personal cues to reduce unhealthy eating and sedentary behaviour, support from family and friends, triggers associated with habits and routines, importance of scheduling and time management and long-term benefits of small changes. Participants are provided with a pedometer and with printed information about the topics discussed at each session.

1.1.5. Ethical approval has been given by Camden and Islington Community Research Ethics Committee (REC Ref No: 09/HO722/22) and LSHTM ethics committee. It is registered as NCT00891943 with the Clinical Trials Protocol Registration System.

Preliminary findings

1.1.6. This RCT is evaluating a behaviour change intervention that recognises and addresses the complex social context in which it is located and employs a number of behaviour change techniques linked to determinants of behaviour and theories of behaviour change.

1.1.7. Preliminary findings at six months indicate that this intervention can be effective in some individuals. One interim finding of the study has been a suggestion that there is something in the dynamics of the interaction between advisor and patient that leads to a successful outcome. To this end we have added audio and video recording of sessions to our protocol and have applied for further funding to examine this in more depth.

Implications for policy and practice

1.2. Obesity is a major public health issue and achieving changes in behaviour that lead to weight loss is challenging. It is important to design and evaluate long-term interventions that address these challenges in order to provide evidence-based effective support to help people who wish to lose weight. The aim is to change habits that lead to weight loss that can be maintained in the longer term.

1.3. The intervention in this study is a behaviour change programme operating at the individual, service delivery level, but also taps into the goals, aims and targets of the Primary Care sector. Whilst the intervention itself is content heavy and might best be described as educative, early findings indicate that it may also work at a less

measurable level, inducing commitment and adherence to the programme and possibly leading to other longer term health benefits (e.g., improved emotional wellbeing as evidenced through Quality of Life scores). This may have an impact on other policy goals in the health service.

I.4. This study shows that a Primary Care setting is appropriate for this kind of intervention and that there may be benefits at an administrative and organisational level to it being delivered as a 'bought- in package'. There may however be dis-benefits to this as some patients might benefit from a nurse- practitioner led intervention or a group setting. This however cannot be shown by the findings from the current study and would require further research.

I.5. As noted above, obesity is a complex problem and as such will need a complex intervention to address it. Interventions which target behaviours in isolation from their overall social context would not therefore be appropriate. More resources are needed for the development and rigorous evaluation of complex behaviour change interventions for the longer term, using different modes of delivery and in different settings.

Table I The structure of the Camwel trial intervention programme.

Session Number	Week	Topic Materials	Handouts
1	0	Getting started: establish working relationship and good rapport with participant; elicit personal reasons for losing weight, build commitment to program, and introduce lifestyle changes approach. BHF 'So you want to lose weight' booklet	Sequence of topics Behaviour Change Diary Benefits of Healthy Habits Food Diary Recording your routines Activity Diary Deciding to Change
2	2	Changing habits: Review progress, explain importance of changing habits permanently and introduce the five steps to solving problems.	Problem Solving (Behaviour Change Diary) Build a Better Recipe (Food Diary) Just One More Step (Activity Diary)
3	4	Healthy eating: Review progress, explain importance of regular meals, portion sizes, keeping a record and discuss making easy food swaps. (Adam Portion pots; 100 kcal portion size food box)	FSA EatWell booklet Healthy Drinks Rate Your Plate Food labels card Easy Food Swaps (Activity Diary)
4	6	Let's get active: Review progress, explain importance of activity guidelines and discuss ways of incorporating physical activity into participant's lifestyle.	Being Active Your Guide to Walking in Camden Cut the fat and sugar Camden outdoor gyms Steps chart Rate your plate

Memorandum by the Camden Weight Loss Research Team (CAMWEL) (BC 44)

5	8	Taking charge of your environment: Review progress, explain importance of cues and discuss ways of changing the environment to make losing weight the 'easy' option.	Your Environment (Rate your plate) Goals & Rewards (Steps Chart) Eat Well on the Cheap Weight change graph - print
6	10	Eating when out and about: Review progress, explain keys to making healthy choices when out and about and discuss alcohol if appropriate.	Healthy choices (Rate your plate) Alcohol and your diet (Steps chart)
7	12	Tip the calorie balance: Review progress at 3-month stage of programme; explain energy balance equation, importance of healthy eating, being active, social support and action planning.	Tipping the calorie balance (Steps Chart) (Rate your plate) Weight change graph - print
8	15	Positive thinking: Review progress and introduce ways to stop negative thoughts and 'talk back' with positive ones.	Positive Thinking Camden Walk4Life maps Behaviour Change Diary
9	18	Getting off the slippery slope: Review progress, identify reasons for slips and ways of getting back on course.	Slippery Slope Weight graph - print
10	21	Social eating: Review progress, discuss social settings where it may be difficult to stay in control of eating healthily and ways to overcome this and enjoy healthy social eating.	Social eating Weight change graph - print
11	27	Staying on course: Review progress, identify successful changes made and identify situations where participant not in control and discuss ways of overcoming barriers.	Staying on course Healthy snacking (Rate your plate/ Food diary) (Steps chart/ Activity Diary/ Walks chart) BHF Food should be fun & healthy/ Healthy meals, Healthy heart Meal plans- Indian/ Minimum cooking Weight change graph - print
12	31	Staying active: Review progress; discuss additional changes made and how further activity can be added into lifestyle.	Staying active Weight change graph - print (Steps chart/ Activity Diary/ Walks chart)
13	35	Managing stress: Review progress; discuss how stress affects weight and ways to manage stress.	Day to day stress Weight change graph - print (Steps chart/ Activity Diary/ Walks chart) (Rate your plate/ Food Diary)
14	47	Reshaping habits: Review progress since start of programme; discuss ways of continuing to lose/ maintain changes in the	Reshaping habits Cancer Research UK's Ten top tips

		long term.	(Rate your plate/ Food Diary) (Steps chart/ Activity Diary/ Walks chart) Travel Camden: Camden walking map; Belsize walk; Jubilee Walk Weight change graph – print Certificate of Achievement
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6 October 2010

Memorandum by The Campaign Company (TCC) (BC 89)

ABSTRACT

Thanks to the research of Bandura, Sampson, Cialdini and others, we now know a lot about different approaches to behaviour change. However, we also know that even acclaimed behaviour change campaigns don't necessarily translate from one group of citizens to another. 'Don't Mess with Texas' may have worked wonders for litter reduction in Austin, but how does 'Don't Mess with Tunbridge Wells' sound? To run effective social marketing campaigns accurate targeting and segmentation – with the power to understand the different motivational triggers for different groups – is the nirvana that always seems just out of reach. *Healthy Foundations* was the last government's attempt, via the Department of Health, to segment the population according to health attitudes, with the aim of improving the efficacy of health social marketing campaigns. This paper sets out why, despite being a step forward, *Healthy Foundations* falls short of its goal to become a useful tool for segmenting the population for health social marketing campaigns and why *Values Modes* takes us much closer.

TARGETING AND SEGMENTATION

All social marketers understand the need for targeting. If you are running a campaign on Sickle Cell disease, you know you will want to target people of Sub-Saharan origin. Sometimes the targeting seems self evident, but once you do the analysis you are still left with dilemmas. If your objective is alcohol harm reduction, do you go for the lower hanging fruit or the really tough cases? Segmentation can help with targeting but whatever the challenges of deciding whose behaviour you want to change the more significant challenge is almost always how to change it. The better our comprehension of the target population the more likely a campaign will be a success. That requires a clear understanding of lifestyle and motivations, and that's the main purpose of segmentation.

GEODEMOGRAPHICS

Geodemographics is defined as the 'analysis of people by where they live.' The underlying premise is that similar people live in similar places, do similar things and have similar lifestyles, in other words that 'birds of a feather flock together'. Geodemographics therefore appears to simplify the problem, because it leads us to believe that 'people who live in council houses and have blue collar jobs have the same values', but scratch the surface of this argument and we know it is only half a truth. Geodemographic systems, whether fully commercial, like Mosaic, or open source, like the Output Area Classification system (OAC), partly acknowledge this, because they work on propensities, but sometimes this important nuance is lost in the design stage of social marketing campaigns. However, a more profound question for geodemographic analysis is its baseline assumption that the same behaviour equals the same motivation. We know from our own lives that this is not always so. Do two people who vote the same do so for the same reasons or are the triggers different? If someone buys a Toyota Prius, is their primary motivation respect for the environment, the fuel economy they believe they will achieve, or the status inferred as a result of celebrities like Cameron Diaz owning one? Birds of a feather don't always flock together.

HEALTHY FOUNDATIONS

Healthy Foundations adds to our knowledge. Firstly, it is based on a credible amount of data – over 5,000 face to face interviews, with additional sampling in deprived areas, and among the ethnic minority population. Secondly, it is based on a robust methodology, including

filmed immersion sessions, 52 focus groups, and in depth work in 16 locations across the UK. That's rather better than some segmentation work done for commercial organisations or by some think tanks, which occasionally stretch credibility by suggesting that 2 or 3 imperfectly selected focus groups provide sufficient data to segment the UK population. The segmentation that results from the *Healthy Foundations* analysis builds neatly on our knowledge of the importance of life-stage and environment in determining attitudes to health. It also asks many of the right probing questions to gain insight into health attitudes; questions that help us ascertain the extent of interviewees self esteem, impulse control, self efficacy, health consciousness, risk taking, and much else besides.

The result of this is five segments, defined as Health Conscious Realists, Hedonistic Immortals, Balanced Compensators, Live for Today, and Unconfident Fatalists. The pen portraits of the segments give us good flavour of why *Healthy Foundations* arrived at these titles, with Unconfident Fatalists, more likely to suffer from low self esteem, and Live for Today's more likely to smoke, and there are plenty of useful insights that help crystallize understanding.

VALUES MODES

Like *Healthy Foundations* *Values Modes* is based on credible amount of data. In fact, it is based on 37 years of data collected via the British Values Modes Survey. This survey is conducted every few years and typically asks around 8,000 people over 1000 questions each. Also, like *Healthy Foundations*, the purpose of *Values Modes* is to try and understand the different psychological perspectives of the British population – and therefore the judgements different people make about what is important to them, what motivates them, and why.

However, that is where the similarities end. *Values Modes* is much broader in its aim. Where *Healthy Foundations* focuses only on health, when the British Values Modes Survey asks questions around levels of self efficacy, its objective is to understand the impact of this on a wide variety of behaviours. Just as the Multiple Deprivation Index helps us better appreciate the wider picture of needs, a 'multiple psychological index' helps us better appreciate the wider picture of motivational triggers. This way you can really understand the differences between the underlying emotional drivers of behaviours and the behaviours themselves and that makes it much easier to identify potential 'good' replacement behaviours that satisfy emotional needs.

This is not an esoteric point. If low levels of self efficacy are the underlying problem, addressing this in the right way may result in multiple benefits. Getting a job and quitting smoking might be two sides of a coin. So a social marketing campaign to reduce smoking may want to have a wider understanding of self efficacy and how it relates to a number of variables.

Moreover, if we really want to change behaviours we need to know which incentives work best for which audiences. This is the nugget of gold that should be at the heart of any segmentation system. For which groups in society are financial incentives more likely to work? For which is status the most important? For whom is exaltation more likely to work? What about peer pressure? *Values Modes* gives us rich data on this. For example, for some the need to belong and conform defines them, so using a social norms approach is likely to be the right prescription. Others believe that their individuality is core to their identity, so a social norms approach is more likely to present a social marketing cul de sac.

For a social marketing campaign to be effective we need to understand both the optimal channel and mode for communicating messages, and this differs according to the audience. For example, which groups in society prefer to receive their communication by word of

mouth? How important is it to them that the person delivering the message is 'one of them'? Which audience is more likely to be motivated by their favourite celebrities? Which prefer stories about ordinary people? Which have large social networks? By asking a host of questions that elicit information on communication preferences *Values Modes* largely overcomes this shortcoming in the *Healthy Foundations* segmentation.

But *Values Modes* also scores better as a useable tool. Is someone who believes that locking criminals up and throwing away the key is the right thing to do also more likely binge eat, or watch lots of soap operas? These might seem like big leaps in logic, but by analysing the *Values Modes* data we can, for example, understand the relationship between authoritarian views and escapism. More particularly, as a result of multivariate analysis, a short questionnaire has been devised that can be used to map any individual's values to a precise point on the values map. This means that practitioners can survey a potential target audience and from the answers access a wealth of insight. Effectively they can mine the data, whereas by giving us access only to the outputs the usefulness of *Healthy Foundations* is limited. This brings us to the thorny issue of determining the segments. We know that every individual's psychological makeup is different. We segment because we need to simplify problems to be able to tackle them, but too few segments can result in the opposite problem. *Values Modes* begins by breaking the population down into three segments. The three main segments are defined by their dominant needs and are as follows:

- Inner directed – who seek self-fulfilment and pursue their own goals
- Outer directed – who desire the esteem of others and the development of self-esteem
- Sustenance driven – who are focused on safety and security

This is useful for helping us get a different perspective, but each segment breaks down into four further segments, making a total of twelve. In the outer six segments the values tend to be more deeply held. In the inner six segments the values are less pronounced, so there is a mushy centre where the 'pull' of values is less powerful. There are various ways that data can be mined and this makes *Values Modes* more accessible than the fait accompli segmentation of *Healthy Foundations*. One other benefit is that practitioners can learn more about themselves. Even well crafted social marketing campaigns can fall down because of innate assumptions made by the architects. Understanding your own values enables you to reduce bias.

CONCLUSION

Healthy Foundations represents a step forward social marketing campaigns based exclusively on heuristics and geodemographics, albeit a more modest one than the Department of Health might have hoped for. *Values Modes* gives us a broader, more accessible and useable approach to segmentation, and therefore a much clearer understanding of the relationship between needs, values and behaviour.

APPENDIX

To highlight the insight available from *Values Modes* we have used the mnemonic from the cabinet office publication *MindSpace* but added a third column with examples of differences among the three main segments from the *Values Modes* data base.

Messenger	We are heavily influenced by who communicates the information	Sustenance driven audiences are far more likely to trust local people who are seen as like them and prefer face to face contact
Incentives	Our responses to incentives are shaped by predictable mental shortcuts such as strongly avoiding losses	Outer directed audiences are more likely to respond to incentives that associate with status and trend
Norms	We are strongly influenced by what others do	This is less the case for those who are inner directed
Defaults	We go with the flow of present options	Sustenance driven audiences prefer clear rules without complications, whereas those who are inner directed tend to see things as more nuanced
Saliency	Our attention is drawn to what is novel and seems relevant to us	The new has more appeal to outer directed audiences and can be a negative for those who are sustenance driven
Priming	Our acts are often influenced by sub-conscious cues	The subconscious cues that are likely to influence vary across the segments. For example, inner directed people are more likely to be influenced by cues that suggest the possibility of self-actualisation
Affect	Our emotional associations can powerfully shape our actions	Emotional associations are likely to be more nostalgic for those who are sustenance driven and more futuristic for those who are outer directed
Commitments	We seek to be consistent with our public promises, and reciprocate acts	Those who are sustenance driven are more likely to commit to smaller promises at a neighbourhood level because their self efficacy levels tend to be lower and they perceive their neighbourhood as geographically smaller than those in the other segments
Ego	We act in ways that make us feel better about ourselves	What makes us feel better differs among the segments. For example, buying the latest fashion is more likely to appeal to someone who is outer directed

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Letter from Professor Martin Caraher, City University London (BC 19)

I wish to make some points and clarify some key issues concerning the use of behaviour change to the Committee. My focus is on food and health but I have worked in the past on sexual health, smoking cessation, tobacco control and drugs. See for more details of my work see

<http://www.city.ac.uk/communityandhealth/phpcftp/foodpolicy/about/martincaraher.html>. I have attempted to keep this submission short and only provide key references. I have indicated in brackets which question my responses relate to.

(Question 1) While addictive behaviours such as tobacco and alcohol have clear messages as to their harmful effects others such as food consumption have elements of addiction they also have aspects of necessity i.e. it is necessary to eat.

Food and food products can be seen as harmful or health enhancing, they are both a private good and a public good this distinction highlights the tension between the role of individual consumers and the rights of citizens & the role of the state. This divide is a major barrier between public health and the food industry who see the problem with choice and overall diets not individual foods.

(Questions 3, 6 and 8) The food industry see no individual food as harmful but overall consumption or dietary intake. This is a tension that influences the direction of behaviour change interventions, with the food industry arguing not for a focus on individual foods but on overall diet. So what constitutes behaviour change becomes a battlefield between different interest groups. There are examples of industry led and sponsored initiatives (See EPODE <http://www.epode-european-network.com/>) and of co-operation between the state, industry and civic society on agreed areas of behaviour change eg healthy eating messages. However the overall evidence suggests a need for regulation and a direct lead by the state in order to create the conditions for behaviour change. It is also clear that the three sectors (state, business and civic society) engage in behaviour change for differing reasons and outcomes.

Areas such as food introduce other elements such as preference, taste, culture and ethnicity as well as religious variations. For these reasons interventions do not always 'travel' or transfer from one area to another or across cultures.

(Question 2) NICE has produced guidance on behaviour change models and their use in public health.⁸⁷ More recent NICE public health guidance on the prevention of CVD questioned the role of behaviour choice in the absence of large-scale changes to context and policy development.⁸⁸ A Food Standards Agency review of psychological approaches to food choice concluded the same.⁸⁹ There is therefore a role to help develop a clear perspective on the place of behaviour change within public health programmes.

⁸⁷ NICE public health guidance 6 'Behaviour change at population, community and individual levels'

⁸⁸ NICE public health guidance 25 'Prevention of cardiovascular disease'

⁸⁹ Food Standards Agency. 2004. A critical review of the psychosocial basis of food choice and identification of tools to effect positive food choice
NO9017

Most behaviour change interventions are evaluated for their process and impact we know little about the long-term outcomes.



(Question 4) The new emerging area of behavioural economics and heuristic understanding are interesting but under researched.⁹⁰ There is some guidance on paying people for behaviour change but this remains a questionable approach.

(Questions 5 and 7) All choice occurs within a social context even the new developments in the area such as those to do with 'nudge' and heuristics are located within the old models developed in the 1950s. They also acknowledge social context albeit at a more immediate level or context such as the shop, supermarket or restaurant within which food choices are made (See <http://www.edenred.com/en/Corporate-social-responsibility/Committed-company/Pages/Public-health.aspx> and the European Food project **FIGHTING OBESITY THROUGH OFFER AND DEMAND [FOOD]** on <http://www.food-programme.eu/en/>). So the common approach in nudge is to alter the environment in some small way to direct people to a healthier choice, so change the menu or place certain products as eye level and remove others. There are many example of such approaches working in settings such as schools, workplaces etc. There remains as noted above two problems scaling up the initiative so that it has an impact beyond the setting and ensuring it has a population impact.

(Question 5) The basic public health principle is that small changes across a whole population are better than big changes in a small section of the population. The diagram above from Dalghren and Whitehead visually displays the link between choice and behaviour change and wider social determinants. Behaviour change interventions on their own are an inadequate response.

⁹⁰ Thaler RH And Sunstein CR. 2008 *Nudge: Improving Decisions About Health, Wealth, and Happiness*. New Haven: Yale University Press.

(Questions 6 and 7) So any programme has to have simultaneous interventions and also a long-term support mechanism built in. You can impact on immediate behaviour change but this may not be sustained six months beyond the intervention.

In this respect the two recent reports by Prof Michael Marmot display the importance of social context and determinants. This is currently highlighted in the public discourse of the book 'The Spirit Level' and the impact of inequalities and structure on choice

The third sector have been using behaviour change interventions for many years and the key to their success is social entrepreneurship. This involves community and local resources in helping shape their own behaviour change and the local environment. There is also inevitably a sense of advocacy built into such approaches. The area of social entrepreneurs is not well studied in this respect. Community behaviour change offers some potential to scale up from individual focused change initiatives. There is some evidence from the US of work with local faith based organisations as an effective way to work.

(Question 16) Obesity can be seen as a symptom of social and individual choices rather than a condition in its own right. So this relates to my earlier points about context and what is called the obesogenic environment where unhealthy choices are the easier choices and supported and influenced by the environment.

There is a major question to be addressed as to whether behaviour change interventions benefit the 'well-off' disproportionately. There is a need to build in equity monitoring of behaviour change interventions.

The issue raised in a number of the Committee's questions relate to evidence and its adequacy. There is a general feeling that we do know what works what we do not know is how to implement it and monitor it. 'Evidence-based practice' is a term that has arisen from a drive across sectors to ensure that public money is not spent wastefully or haphazardly. Put simply, it means current practice is based on past practice that has been observed and known to have worked. 'Evidence' in this context can take many forms including both quantitative data (such as statistical data, which tells us how many) and qualitative data (such as interviews that tell us the why and what. This means that it is likely that some initiatives can be premised on existing practice rather than having to start from scratch. One way of addressing this is by adopting what Robinson and Sirard call a solution-orientated approach. This means that past orientation or lack of evidence of cause can be overruled in favour of future orientation. They give the example of soft or carbonated drinks and say that:

'What is the justification for skipping over the requirement to prove soft drinks cause obesity and jump directly to an experiment testing elimination of soft drink sales? In the case of childhood obesity, it is universally accepted (and has been for at least eight centuries) that energy imbalance results in changes in weight. Therefore, without knowing the true underlying cause(s) of any individual's or any population's obesity or risks for obesity, any intervention that produces a deficit in energy balance, by increasing energy expenditure and/or decreasing energy consumption, will lead to prevention or reduction in weight gain. As described, there is face validity to the hypothesis that

eliminating soft drink sales in schools will result in a negative energy balance (future orientation) regardless of whether soft drink consumption was the cause of obesity (past orientation)' (p 196) ⁹¹

In essence, this moves the focus of future work away from developing more descriptions of the problem to working on solutions and hence the importance of a strong evaluation strand. As mentioned earlier, as well as evidence-based practice, there is also a need to be mindful of generating practice-based evidence. This is evidence that arises from actually trying to solve a problem from first principles, as in the example above (I am grateful to Prof Boyd Swinburn for this distinction). ⁹²

My key points are in summary:

- Behaviour change is an important part of public health interventions but not a substitute for other supportive initiatives and policy. Our own work here at the Centre for Food Policy on food access and choice demonstrates the limits of endeavours to change behaviour.
- There is a long history of behaviour change in the public health world and whereas there are some
- indicators of success there are a number of questions concerning the reach and efficacy of the approaches.
- From the current evidence base it is hard to disentangle the impact of behaviour interventions from others such as price interventions and access.
- How and why some individuals and communities respond more positively to behaviour change interventions is not well understood. There is clearly a 'resilience' capacity with some individuals and communities, we need more understanding and research on this.
- Culture is an important aspect of food choice.
- Price and taste tend to be the two dominant heuristics that people use when purchasing food.

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⁹¹ Robinson, T. N. and Sirard, J.R 2005, Preventing Childhood Obesity: A Solution-Oriented Research Paradigm, *Am J Prev Med*; vol 28, no 2S2, pp 194-201.

⁹² Caraher, M., Cowburn, G. and Coveney, J. (2007). Project Management. In Lawrence, M. and Worsley, T. *Public Health Nutrition: From principles to practice*. Allen and Unwin; Sydney.

Memorandum by the UKCRC Centre for Diet and Activity Research (CEDAR) and the Behaviour and Health Research Unit (BHRU), Institute of Public Health, University of Cambridge (BC 139)

Executive summary

- Travel behaviour is influenced by a combination of individual and environmental factors: an effective strategy for achieving travel behaviour change in the population as a whole is likely to require both sets of factors to be addressed
- Distance to key destinations is a critical factor in limiting realistic travel options: this can be addressed through environmental and policy interventions, but not through individual approaches to behaviour change
- Case studies of successful cities and intervention packages indicate the potential for change and the types of intervention that ought to be developed and introduced, as summarised in NICE guidance, but transferable evidence for the effectiveness of multifaceted urban policies is currently limited
- More robust and more interdisciplinary evaluation should be included at the design stage of new interventions.

Introduction

i. This evidence has been prepared on behalf of the UKCRC Centre for Diet and Activity Research (CEDAR) and the Behaviour and Health Research Unit (BHRU). CEDAR and BHRU are research collaborations between Medical Research Council (MRC) units in Cambridge and the Universities of Cambridge and East Anglia, based in the Institute of Public Health in Cambridge.

ii. CEDAR is funded by the British Heart Foundation, Economic and Social Research Council, Medical Research Council, National Institute for Health Research and Wellcome Trust, under the auspices of the UK Clinical Research Collaboration (UKCRC), to undertake research on the determinants of population-level dietary and physical activity behaviour and to develop and evaluate the effects of interventions to shift population patterns of those behaviours (www.iph.cam.ac.uk/cedar).

iii. BHRU is funded by the Department of Health Policy Research Programme to generate evidence on the effectiveness, value for money, and impact on health inequalities of interventions, and to provide policy makers with information to support decisions on investing and disinvesting in interventions designed to change health-related behaviour (www.bhru.iph.cam.ac.uk).

iv. Our evidence therefore reflects our focus on the public health and, particularly, the physical activity dimension of the issues under consideration. We agree that technical improvements in the vehicle fleet are unlikely to be sufficient to achieve the desired reduction in carbon emissions. Reducing the use of cars is therefore undoubtedly important in achieving carbon goals, and could be expected to bring about other important health benefits arising from reductions in local air pollution, noise and other direct effects of traffic. However, reducing the use of cars also opens up the possibility of replacing some car trips with walking and cycling trips. We argue that achieving a modal shift of this kind is a more

Memorandum by the UKCRC Centre for Diet and Activity Research (CEDAR) and the Behaviour and Health Research Unit (BHRU), Institute of Public Health, University of Cambridge (BC 139)

appropriate policy goal than merely reducing the use of cars, because it offers substantial potential population health benefits through an increase in the use of physically active modes of transport. A modelling study recently published in the *Lancet* shows that the health benefits of an 'active travel substitution' scenario would greatly exceed those of a 'low carbon vehicle' scenario, even after taking into account any increase in injuries associated with a large rise in walking and cycling.¹

a. What are the most influential drivers of behaviour affecting an individual's choice of mode of travel?

A1. Influences on travel behaviour fall into two domains: those associated with individuals, and those pertaining to the environment in which they live. Individual influences are frequently assessed using theories which assume that most behaviour is planned and conscious. However, it is increasingly recognised that much behaviour is automatic, triggered outside of conscious awareness and cued by influences in the social, physical, economic and regulatory environments.² This explains why using information to persuade people to change their health related behaviour has had — at best — modest effects. For complex behaviours such as travel behaviour, there is increasing support for broader models such as the socio-ecological model³ which postulate multiple levels of influence including individual factors, characteristics of the social and physical environment, and policy factors such as the relative costs of different modes of transport.

A2. Given the broad range and large number of potential influences, it is perhaps unsurprising that no single comprehensive summary of the evidence concerning the individual and environmental influences on travel behaviour is available. However, existing literature does offer some helpful insights. Home location frequently limits the travel choices that are available to people. As a result, once people have made choices about where to live and work, their travel choices are usually constrained by those decisions and largely determined by convenience and proximity.⁴ A systematic review has found the distance between, or proximity of, locations to be the most consistent environmental influence on walking behaviour, whereby the prevalence of walking decreases as the distance between destinations increases.⁵ One review⁶ and a number of cross-sectional studies (e.g. ⁷) have identified a similar effect of distance on cycling.

A3. Individual characteristics are also consistently associated with walking and cycling. Men are more likely to cycle and women are more likely to walk, and the likelihood of walking and (especially) cycling decreases with age.⁸ However, in societies such as the Netherlands where cycling is common, there are few differences in cycling prevalence by age or gender.⁹ People without access to a car also tend to spend more time walking and cycling.¹⁰

A4. Specific characteristics of the built environment — including the connectivity of the road network, safety for pedestrians and cyclists, provision of pavements and cycle paths, and mixed land use — are hypothesised to be associated with walking and cycling. However, studies of these specific factors have found somewhat inconsistent patterns of associations.^{5 6} Importantly, many of these factors are related to the distance required to travel: for example, street layouts with high connectivity allow for more direct routes and therefore shorter distances between destinations. Similarly, the evidence concerning the importance of individual attitudes, perceived benefits, and social and cultural norms for walking and cycling is mixed. Many studies of these factors have used different techniques for assessing

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behaviours and their influences, which may explain their conflicting findings and the difficulty in summarising their conclusions.

A5. In summary, research indicates that the combination of distance and individual characteristics such as age, gender and access to a car are the most important consistent influences on walking and cycling behaviour.

b. What is the role of infrastructure in encouraging and facilitating changes in travel-mode choice?

B1. Despite the limited evidence on the role of infrastructure in promoting walking and cycling (see A4), a recent study in 11 countries has shown that the more activity-friendly the physical environment, the more likely the residents are to be physically active.¹¹ The layout of the built environment may influence factors including actual and perceived levels of safety, traffic volume, crime and the travel options available to people.¹² Improvements to infrastructure therefore do have a clear potential to encourage modal shift if they reduce barriers to walking or cycling (such as the perception of danger from motor vehicles) or if they provide more direct, convenient or pleasant routes for pedestrians and cyclists to reach the places where they need to go.¹³

B2. Providing specific pieces of infrastructure such as high quality safe cycle routes may therefore facilitate active travel. However, since travel behaviour is complex and likely to be determined by factors such as the distance or cost of journeys as well as individual attributes, preferences and constraints on choices, it appears unlikely that small scale environmental changes of this kind alone will result in substantial increases in walking and cycling, particularly in areas with a low walking or cycling mode share at present. In other words, access to an environment that supports physical activity is likely to be 'necessary but not sufficient'.¹⁴ Evidence concerning the effects of specific changes in the built environment on travel behaviour is currently lacking, although some studies are currently seeking to address this (see I2).

B3. It is therefore likely that both individual and environmental influences on travel behaviour will need to be tackled in order to bring about sustained behaviour change in the population as a whole.¹⁵ Where the capacity of individuals to respond to individual-level interventions is constrained by aspects of their social and physical environments, or where the provision or uptake of such interventions or the behaviours they seek to target are inequitably socially patterned, it will be particularly important to address the environmental factors.

c. What are the latest developments in the evidence-base in relation to changing travel-mode choice and the implications of those developments for policy?

C1. Our recent systematic review of interventions to promote cycling identified 25 controlled before and after studies.¹⁶ Interventions ranged from those specifically aimed at promoting cycling to those aimed at changing travel mode choice more generally. Interventions specifically aimed at promoting cycling included individually focused motivational programmes, improvements to cycling infrastructure, and multifaceted community-wide programmes involving a variety of elements such as education, cycle training and travel planning. Some of these interventions were associated with modest increases in cycling at the population level. Sixteen studies assessed the effectiveness of

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individualised marketing programmes (see F1) for which modest, but generally consistent, increases in estimated annual cycling trip frequency were reported, although the quality of the evidence for these effects is somewhat contested (see H3). Similar caveats apply to most other published evaluative studies in this field. For example, most studies included in the cycling review did not report statistical tests of the significance of any reported net increases in cycling, and the method of adjustment for changes observed in control groups was often not clearly reported.¹⁶

C2. A more inclusive review of (mostly uncontrolled) studies of interventions to promote cycling has also recently been published.¹⁷ This review examined evidence for a range of approaches such as cycle routes, end of trip facilities, integration with public transport, promotional and educational activities and changes to traffic laws. While it appears reasonable to assume that initiatives of this kind may help to promote cycling, there is limited evidence from well designed studies to support this assumption. The review included fourteen comprehensive city-wide programmes. These typically involved substantial improvements to and expansion of cycling infrastructure (including cycle parking), traffic calming, school-based cycle training and education, and cycling events, as well as — in the case of Bogotá — restricting access for motor vehicles on certain days of the week. While routinely collected data suggest that bicycle mode share has increased in all the cities in question, it would be premature to conclude that this provides unambiguous evidence of a direct causal effect. It is possible that the interventions are the result of an existing cycling presence which creates a need and demand for better infrastructure. It is also possible that other cities in which similar measures have been introduced have not observed increases in cycling as a result.

C3. Complementing these reviews is a recent systematic review of ‘organisational travel plan’ interventions aimed at reducing single occupant car use and increasing the use of walking, cycling and public transport.¹⁸ Seventeen studies were identified, of which ten were of interventions in schools, two in universities and five in other workplaces. School-based studies typically evaluated the effect of school travel plans: multifaceted interventions involving such things as the employment of a travel coordinator, improvements to the safety of the school neighbourhood, provision of information, classroom education and ‘walking school buses’. Of the four more robust school-based studies, three reported a positive impact on travel behaviour. Of the studies in workplaces, only one (‘Walk in to Work Out’) was judged to have a low risk of bias: this study found that providing motivational materials was effective in promoting walking to work, albeit (unsurprisingly) only among those who were already contemplating or preparing to walk more.¹⁹ Similar observations about the limited population reach of interventions targeted on motivated subgroups of the population have been made in relation to individualised marketing (see C1).^{20 21}

C4. In summary, there is limited evidence from well designed studies to indicate which are the most effective interventions to change travel mode share in the population.^{16 20 21} For example, while aggregate observational data illustrate the potential impact of large scale infrastructural measures,¹⁷ to date the evidence from controlled studies suggests a much more modest impact in practice.¹⁶ That is not to say that current approaches are not effective or that future more ambitious initiatives in this area would not be more effective; it is simply that limited evidence is currently available to support their effectiveness. Approaches shown to have promise — particularly those that address the key determinants of distance, proximity or convenience (see A2) — should be developed further and more rigorously evaluated to provide better evidence.

d. What are the most appropriate type and level of interventions to change travel-mode choice?

D1. Based on available evidence from controlled studies, it is difficult to specify a single most appropriate type of intervention. While observational data suggest that large scale environmental and policy changes may have considerable potential to induce population-level behavioural change,¹⁷ there are scant data from longitudinal intervention studies to support this assertion at present. However, this reflects a relative absence of evidence at least as much as it reflects evidence of a lack of effect. It is possible that increases in cycling could be achieved at lower cost by addressing other influences such as attitudes to and perceptions of cycling,¹⁶ but it appears unlikely that a strategy dominated by such an approach would be highly effective in the population at large, for the reasons outlined in A and B. More likely, multifaceted approaches involving environmental and policy changes coupled with individual advice and support may be the most effective^{16 21} so long as these effectively address the key influences outlined in A and B.

D2. For many people, the need to go to work or school is a key reason for travelling. This suggests considerable potential for interventions focused on those settings or journey purposes, the effectiveness of which is currently under-researched using robust study designs.¹⁸

e. Who are the most effective agents for the delivery of behaviour interventions to change travel-mode choice?

E. Based on the available evidence from intervention studies, it is difficult to specify the most effective agents for change in this field, except that the obvious implication of the evidence summarised in D is that schools, workplaces, local and national governments are all likely to have key roles to play.

f. How do current behaviour change interventions seek to change travel-mode choice and what use is made of available scientific evidence?

F1. Current interventions can be classified broadly as using 'individual' or 'environmental' approaches, either separately or in combination, to affect behaviour change.

F2. Individual interventions typically rely on the provision of targeted motivational materials to influence attitudes, self-control, habit, self-efficacy and outcome expectancies as they relate to travel. One example is the individualised marketing approach (see C1), which uses marketing tailored to the needs of individual households to promote the use of environmentally friendly modes of travel: households judged to be interested in changing their behaviour receive a variety of marketing materials, information and incentives. Another is the 'Walk In to Work Out' intervention described in C3.

F3. Environmental interventions are based on the notion that factors external to an individual's cognitions including those in their social, physical, economic and regulatory environments are the key influences on their behaviour. Environmental interventions attempt to change those aspects of the environment that have been shown, or postulated, to be associated with travel behaviour, including those described in A and B. For example, the provision of a cycle route may improve safety by separating cyclists from motor vehicles, and

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may improve connectivity by providing a more direct route by which to walk or cycle to key destinations.

g. Are current policy interventions addressing both psychological and environmental barriers to change?

G1. Many policy interventions currently in place — such as congestion charging, restricting motor vehicle access, or many walk-to-school initiatives — appear to be mainly focused on addressing environmental barriers, although it is likely that they also implicitly influence psychological barriers such as the perceived safety of walking or cycling. On the other hand, the approach of personalised travel planning, which has featured prominently in UK transport policy in recent years, appears to be mainly focused on addressing psychological barriers (see F2).

G2. The recent report of the Inter-Academy Medical Panel on climate change suggests that the health co-benefits of actions to mitigate the effects of climate change (including the promotion of travel behaviour change) could be more motivating for policymakers and the public than the climate benefits.²² While we are unaware of any evidence to support this directly, it is reasonable to conclude that presenting the most motivating rationale(s) for shifting towards walking and cycling may help to engender more positive attitudes towards active travel and increase the acceptability of effective measures to promote active travel through environmental and policy changes.

h. Are policy interventions appropriately designed and evaluated?

H1. The systematic reviews cited in C clearly demonstrate the limited extent to which interventions of any kind in this field (including policy interventions) have been rigorously evaluated, at least from the perspective of public health. However, that is not to say that there have been no policy interventions, or that interventions have not been well designed as *interventions* as such. We would therefore echo the finding of the Health Committee's recent report on health inequalities that the limited evidence of effectiveness 'is in large part due to inadequate evaluation of the policies adopted to address the problem.'²³ The following three examples illustrate some lost opportunities.

H2. The London congestion charge, introduced in 2003, was accompanied by an extensive monitoring programme which has produced consistent evidence of favourable changes in the flow of vehicles (including bicycles) across the cordons into the charging zone.²⁴ These data provide strong support for the claim that the congestion charge has been effective in influencing travel behaviour. However, these data are unlikely to be sufficient to allow a full understanding the drivers of and changes in travel behaviour and its health impact in London more generally. For example, although other travel data have been reported in the 'social and behavioural impacts' element of the monitoring programme, it is difficult to draw robust inferences about overall changes in walking, cycling or physical activity in the population from them.

H3. The individualised marketing of 'environmentally friendly' modes of transport to interested households has been introduced in numerous areas of the UK, particularly under the TravelSmart brand. Evaluation reports consistently report evidence of reductions in car use and increases in walking and, to a lesser extent, cycling. However, these evaluations have often been conducted and reported by organisations involved in the delivery of the intervention, the primary studies have rarely been subjected to peer review in the scientific

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literature, and the validity of the findings has been questioned.²⁵ Although most UK studies of individualised marketing have involved comparisons with a control area, the comparability of the control areas chosen is not always clear, and given that the intervention package cannot be rolled out to all areas simultaneously, there is no obvious reason why its effectiveness could not be tested in an independent cluster randomised controlled trial.^{16 20 21}

H4. The evaluation of the Cycling Demonstration Towns made an important step forward in this field by including an assessment of changes in overall physical activity in the populations of the demonstration towns,²⁶ but the causal inference that can be drawn from those data is limited in view of the repeat cross sectional design and lack of data on physical activity in the control areas.¹⁶ These limitations could have been avoided at the design stage of the evaluation given sufficient funding.

i. What lessons have been learnt and applied as a result of the evaluation of policy?

I1. The lessons concerning the *effectiveness* of interventions are summarised in C.

I2. An important additional lesson is the need for an interdisciplinary approach to the design and execution of evaluative studies to ensure that opportunities for learning are fully exploited. Interventions in this field have potential impacts across a range of academic and policy sectors such as health and education as well as transport, but most studies have tended to focus on outcomes in one domain or, if they have also considered outcomes in other domains, those outcomes have often been poorly measured, poorly reported or derived from suboptimal study designs. NICE recommends that future studies should include 'appropriate and valid measures, including measures of overall physical activity levels before and after an intervention.'¹³ The iConnect consortium (www.iconnect.ac.uk) is an example of the new interdisciplinary approach required. iConnect is a collaboration of independent researchers with expertise spanning the fields of transport and transport economics, energy and carbon, physical activity, public health and health economics, funded by the Engineering and Physical Sciences Research Council to measure and evaluate the impacts of the Sustrans Connect2 programme (www.sustransconnect2.org.uk) across the three main domains of travel behaviour, physical activity and carbon emissions.²⁷ Another example is the Commuting and Health in Cambridge study (www.mrc-epid.cam.ac.uk/Research/Studies/Commuting/).²⁸

I3. A further obvious implication is that exploiting the potential for thorough, interdisciplinary evaluation of this kind will depend on greater and earlier collaboration between policymakers, delivery authorities, research funders and academics to identify and develop suitable opportunities for rigorous prospective longitudinal studies.

j. What lessons can be learnt from interventions employed in other countries?

J1. The lessons concerning the effectiveness of interventions are summarised in C.

J2. Comparisons of the prevalence of cycling between different countries are consistent with (although not providing strong proof for) an assumption that higher quality infrastructure for cycling, such as that found in the Netherlands, may be important in promoting or supporting cycling.¹⁷ However, when the principles of 'Dutch style' infrastructure have been emulated in the UK, they have often been applied at a much lower standard than applies in the Netherlands: such interventions appear unlikely to have any significant effect on travel behaviour. For example, a key recommendation of the NICE guidance cited in I2 is that

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routes for cyclists 'should be built and maintained to a high standard',¹³ but few UK local authorities are currently applying Dutch standards of network density, minimum width or priority over side roads to their cycle routes.

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21 January 2011

Memorandum by Centro (BC 137)

Centro, the West Midland Integrated Transport Executive and Authority, promotes and develops public transport across the seven West Midlands Metropolitan authorities of Birmingham, Coventry, Dudley, Sandwell, Solihull, Walsall and Wolverhampton. From April 2011 Centro will also take responsibility for the coordination and delivery of the West Midlands integrated transport strategy - Local Transport Plan 3.

Our aim is to transform transport so that the people of the West Midlands have a world class public transport system provided by a best in class organisation. Centro seeks to ensure everyone in the region benefits from an effective public transport system that meets the economic, social and environmental needs of the West Midlands.

What are the most influential drivers of behaviour affecting an individual's choice of mode of travel?

1. There are a range of influential drivers of behaviour which impact upon modal choice. These can be summarised as follows:
 - Congestion – longer journey times which have variable reliability
 - Economic – cost of travel (fuel, fares etc), lost productivity
 - Climate change – concern for the effects of greenhouse gases
 - Pollution – Air and noise pollution
 - Planning Policies – reducing the need to travel
 - Health – concern for the effect of less active lifestyles
2. It is recognised that decisions to use public transport/sustainable travel vis-à-vis private car are often based habit and perceptions of journey time, reliability and cost. The cost of using a private car is often significantly under estimated as it only usually includes fuel and parking cost rather than all of the operating costs (maintenance, insurance, road fund licence etc).

What is the role of infrastructure in encouraging and facilitating changes in travel-mode choice?

3. The sustainable travel demonstration towns - Darlington, Peterborough and Worcester – have been used to illustrate the potential effects of a sustained package of 'smarter choice' measures when coupled with infrastructure improvements. The three towns have shared £10m of revenue funding during the 5-year project. Initial results have been impressive, showing an increase in public transport trips (13-22%), walking trips (17-29%), cycling (25-79%) and decrease in car trips (11-13%).
4. The results outlined above are very positive, and Centro firmly believes that the benefits delivered by smarter choices can be maximised if they are supported by appropriate infrastructure improvements. Centro and the West Midlands Metropolitan Authorities have promoted bus showcase and red routes programmes which have led to some very positive outcomes. These include:
Bus Showcase

- Patronage increases on key routes (Primelines/Route 51) – up to 30%
- Journey time reductions (Route 51) – up to 17%
- Punctuality increases – up to 40%

Red Routes

- Reductions in journey times for overall traffic – over 8%
- Reliability improvements – up to 40%
- Reductions in illegal parking – over 60%
- Reductions in accidents – circa 8%

5. Centro and Metropolitan Local Authorities are building on this success through the development of Smart Routes and Low Carbon Corridors. These proposals aim to raise awareness of the travel options on offer and help communities make better travel choices. The proposals include a balanced low cost package of interventions including:

- Infrastructure Improvements
- Smarter Choices
- Technology Showcase

6. These interventions would be tailored for specific corridors and would build on the capital investment already made on Showcase, route enhancements and Real Time Information. These measures would be supported with further improvements such as targeted smarter choice measures and hybrid buses. By pulling these interventions together, a holistic approach can be taken in developing attractive transport solutions. These in turn can aid economic growth and regeneration across the urban area.

What are the latest developments in the evidence-base in relation to changing travel-mode choice and the implications of those developments for policy?

7. Centro and the Metropolitan Authorities have continued to develop their evidence base through monitoring the impacts of Smarter Choice interventions. Recent results show:

- WorkWise – has shown 89% public transport retention rates 6 months after WorkWise has issued them with a free travel pass for employment
- Coventry PTP results to date – Between June and early September 2010, a team of 10 individuals undertook the following:
 - Visited 10,500 households;
 - Spoke to 5,365 households;
 - Took requests for travel related information from 3,268 households; and delivered 16,455 travel related resources.
 - A survey of 202 households who participated in the project showed that 92% of respondents recalled the visit.
 - 16% felt they had changed their travel behaviour; 9% felt they had increased their bus use and 5% felt they had reduced their car use
 - 14% of those receiving the Jubilee Crescent Community Guide stated they had made more use of their local retail facilities.

- School Travel Plan – excellent progress made against LTP2 target with 96% of schools with travel plans in place
 - School bus brokerage pilot – 6% reduction in car use
 - Centro’s own Travel Plan – public transport and walking/cycling mode share increased from 70% in 2008 to 82% in 2010
 - Car free challenge – walking/cycling rates increased by up to 14% at the schools which have taken part.
8. The smarter choices work above has been underpinned by Network West Midlands (NWM) – which is the unified customer-facing brand for public transport across the conurbation. Following its launch in 2006, the NWM brand was extended in 2008/9 to include all sustainable forms of transport, including walking, cycling and car sharing and is now established as the unified brand for all Smarter Choices work in the conurbation and the adjoining Shires.
 9. The introduction of NWM stemmed from Centro’s core objective to achieve modal shift through developing a modern integrated and accessible public transport network and presenting and promoting it effectively.
 10. Since 2008/9, an independent NWM awareness tracking study has been undertaken on a quarterly basis. It tracks awareness and opinion of the NWM brand as well as awareness of NWM marketing campaigns. The NWM tracking study completed in May 2010 showed that overall awareness remained at 70% - an impressive figure considering that it is relatively young brand. The NWM brand is now the most recognised sustainable transport network brand outside London.
 11. The tracking study in 2009/10 asked those aware of the TV commercials and outdoor advertising if, as a result of the campaigns, they had made more journeys by public transport.
 12. As a direct result of the promotional campaigns, some 7% of those aware of the campaigns, representing 2% of the conurbation’s population (c. 50,000 people), said they were making more journeys by public transport. This represents some 3.9 million bus trips, 200,000 rail trips and 30,000 Metro trips each year.
 13. Policies for changing travel behaviour feature strongly within the emerging West Midlands LTP3 and build on the successes of existing smarter choices activity.

What are the most appropriate type and level of interventions to change travel-mode choice?

14. Centro, through its work on the Transport Innovation Fund (TIF) has examined potential transport strategies to deal with rising congestion, and continued growth in the West Midlands. This included demand management measures such as road pricing as well as infrastructure improvements and smarter choice interventions.
15. In the West Midlands, the research showed that there would be significant public and business opposition to measures such as road user charging. Residents and businesses in the West Midlands Metropolitan Area were looking for visible evidence of

investment in public transport to encourage them to change the way they travel before choosing to embark on any kind of road user charging. Following on from the TIF work, Centro developed the Integrated Public Transport Prospectus which sets out key long term vision for the development of public transport and outlines what integrated public transport network.

16. The research from the TIF work also recognised that Smarter Choices could play a significant role as part of a wider integrated transport strategy. This led to the development to a package of smarter travel choice measures being researched and developed. These included:
 - Workplace travel plans
 - School travel plans
 - Personalised travel planning
 - Community/residential travel planning
 - Public transport marketing
 - Travel awareness campaign
 - Smarter working techniques such as teleworking and homeworking
 - Introduction of cycling and walking schemes/initiatives.

17. Centro has advocated an intensive, targeted approach to the application of smarter choice measures to maximise their effectiveness for changing travel behaviour. This approach was set out in the West Midlands Sustainable Travel Cities Bid to DfT in 2009, with a concentrated Smarter Choices programme (£25m over three years), focusing on congested transport routes. Although this funding was subsequently withdrawn, Centro has committed funding to pilot this approach along the Pershore Rd in Birmingham (due to start in Spring 2011). This will help develop a local evidence base for large scale application of smarter choice measures in urban areas.

Who are the most effective agents for the delivery of behaviour interventions to change travel-mode choice?

18. Centro has worked successfully with the Metropolitan Authorities in delivering existing smarter choice measures in line with Local Transport Plan 2 commitments. This approach has worked well and led to successful delivery of the LTP2 targets for school and workplace travel plans. This has been a coordinated effort between Centro's Sustainable Travel Team and Sustainable Travel Teams within the local authorities. Working together, the teams deliver TravelWise campaigns, Workplace Travel Plans and School Travel Plans, together with WorkWise initiatives.

19. To increase and expand the travel plan support which Centro/local authority travel plan advisers can provide, a series of bespoke websites have been developed over the past two years for key target markets (schools; business residential developers; community groups). The aim of these websites is to provide a 'one-stop' resource for travel plan advisers within target organisations, while also providing travel information for their staff/visitors/pupils, etc., to enable them to travel to the site using sustainable modes. By using online resources such as this, some of the travel planning processes

and support information are automated, freeing up officer time within the Districts and Centro.

20. It is also noted that collaborative working is actively being promoted by the West Midlands LTP partnership in the delivery of network wide infrastructure measures through the Smart Routes initiative. This includes the development of a wider Smart Package that has integral Smarter Choices interventions.

Are current policy interventions addressing both psychological and environmental barriers to change?

21. Centro recognises that policies directed toward reducing private car use are significantly dependent on understanding the psychological factors that influence travel mode decisions. Focusing on just the negative consequences of car use is unlikely to have significant impacts on changing travel behaviour towards more sustainable modes. Therefore a balanced approach that addresses psychological and environmental barriers is being adopted.
22. A key aspect of this is gaining an understanding the role of a habit in a given behaviour. Centro and the Metropolitan Authorities are using Personalised Travel Planning (PTP) as a tool to greater understand what really motivates travel behaviour, and then to inform and encourage people to trial alternatives they may not have considered, supplying them with tailored support and incentives to help them substitute regular car journeys with more sustainable transport methods.
23. In addition, WorkWise has been rolled out across the Metropolitan Area. WorkWise is a multi-agency project which began in April 2003. It aims to remove transport barriers facing people seeking employment. The project has placed dedicated WorkWise Officers in prominent locations in Birmingham, Dudley, North Solihull, Sandwell, Walsall and Wolverhampton, to liaise with clients. Since the start of the scheme, WorkWise has issued over 7,000 tickets helping people to attend interviews and just under 7,000 people to travel to a new job. Research has shown that 70% of WorkWise users are still in their new jobs after six months. The initiative is also a successful way of promoting low carbon travel with more than 89% of WorkWise customers still using sustainable transport options six months after starting work.

Are policy interventions appropriately designed and evaluated?

24. Centro's approach is to work closely with schools, employers, communities and residents to ensure that the interventions are appropriate and relevant to specific organisations/partners. This does however depend heavily on resources available.
25. Centro has been keen to 'make the case' for behaviour change and going further than just saying that such measures will reduce car use. A focus is being placed on demonstrating value for money for behavior change measures and evaluating/appraising their impact in way which allows decision makers to compare benefits of spending money on smarter choices compared to other types of transport expenditure. The evidence to date suggests that smarter choice measures can deliver very high benefit-

cost ratios, and therefore undertaking a robust economic appraisal would be beneficial in securing funding.

26. The economic case for behaviour change interventions can be significant in the form of reduced congestion, reduced costs of business travel and reduced absenteeism. Individual organisations can also benefit in a number of ways including improved access to customers and more productive use of car parking.
27. There is a need to better understand and monetise the health benefits that arise through mode shift to public transport and active modes. It is recognised that smarter choice measures can deliver a range of health benefits, but it would be beneficial if there was a mechanism by which health funding could contribute to the implementation of these measures.

What lessons have been learnt and applied as a result of the evaluation of policy?

28. LTP2 largely focused on outputs in relation to behavioural change and smarter choices e.g. the number travel plans implanted. Although useful, this does not provide information on the outcomes of these travel plans e.g. modal shift. The approach being adopted for LTP3 focuses more on the outcomes and these are captured as a range of indicators. These can be used to assess the impact of the interventions against policy objectives.
29. Centro is also keen to understand the non-transport impacts e.g. job creation/productivity, carbon, housing and health. This would support the economic case and provide additional information to key decision makers on the wider impacts of behavioural change measures.

What lessons can be learnt from interventions employed in other countries?

30. In Perth and Noosa in Australia the state governments have conducted detailed cost-benefit analyses of a range of direct and indirect benefits and costs. These analyses have formed the basis in their case of diverting maintenance funding into long term investment in behavioural change programmes.

21 January 2011

Letter from Mr Kelvin Chan, University of Cambridge (BC 55)

The following is a response to the Call for Evidence on Behaviour Change. I shall focus on the topic of tackling obesity, especially as it pertains to the deployment of social marketing as a strategy to foment behavioural change in the British landscape. I focus on the Change4Life programme as a case-in-point in support of the statement that there can be no “evidence”, per se, to show a causal link between a social marketing campaign with behavioural change in a population, where evidence is used in the strictest scientific sense of the word, as is adopted, e.g. in the case of double blind randomised clinical trials (RCTs), where the intervention’s environment is tightly controlled, providing the conditions necessary to identify causality.

Social marketing campaigns operate in a diffuse environment. In the case of Change4Life, the interventional space is the entirety of the British landscape. In the form of televised adverts, Internet and print-based materials, the Change4Life message is available in public spaces, e.g. bus stops and telephone booths, and wherever televisions and Internet are available. This expansive setting for an “intervention” creates an insurmountable problem that associates the programme with a specific outcome, e.g. quantifiable behavioural change or specific health outcome, if this should be the only way to assess the programme’s effectiveness. In other words, one cannot “prove” that there is a connection between social marketing and population behavioural change. Yet, this has not stopped the production of studies that create the impression that there is a causal link between the two.

According to a tracking study, the DH reported that a year after launching the Change4Life programme, evidence “shows a high degree of claimed change, with three in ten of those mothers who are aware of Change4Life claiming to have made a change to their children’s behaviour as a direct result of the campaign.” (Department of Health 2010, p.60). But, for reasons that I suspect have to do with the validity of a study, specifically as it pertains to conducting face-to-face interviews and the propensity for social desirability bias (Evan and Miller 1969; Holbrook, Green et al. 2003), we can, at best, take these favourable results *cum grano salis*. Simply put, claims of a direct cause in behaviours as it relates to exposure to a social marketing campaign, e.g. Change4Life, cannot be taken lightly, as they are misleading. There are simply too many variables in the uncontrollable environment, i.e. the entirety of the British landscape, which makes it possible to explain behaviour change as a direct effect of social marketing.

Yet, one cannot ignore the demand for “evidence” in support of the effectiveness of an expensive social marketing campaign that is funded by the government: the government is accountable to its citizens as to how tax money is expended on public works, e.g. public health programmes against obesity. Therefore, it remains central for governmental agencies, e.g. the Department of Health, to produce materials in support of how a social marketing campaign such as Change4Life is creating a positive impact on the UK.

Rather than focusing on the impact of social marketing campaigns on the health behaviours of the population, which is something that cannot be proven, research on public health social marketing should focus on how social marketing campaign materials are impacting the ways in which local public health authorities are implementing their various interventions, e.g. exercise and educational programmes. While it is impossible to attribute social marketing with behaviours, the value of public health social marketing campaigns may be that they help

establish social contexts – through providing informed, though highly moralistic statements about what is “good” for people, e.g. being more active and eating healthier – that enable citizens to make informed choices in their daily lives which eventually lead to the adoption of lifestyles advocated for in social marketing pieces. Especially as it pertains to the reduction of obesity in the UK, a social marketing campaign may be viewed as an instigator of better public health practice, an agent that forces local health authorities to re-think how they deliver existing public health programming in order to make real the healthier world portrayed in Change4Life.

The messages within Change4Life are deliberate statements about what families *should* value in their household, i.e. healthier eating and more physical activity. As such, they are moral statements about what is the “right” thing to do. Though the choice remains that of consenting adults to make, social marketing campaigns make clear which choice is better, and how it may lead to a better tomorrow, i.e. through the rejection of sedentary lifestyle and reducing the nation’s proclivity for fast food. The politicisation of family values comes to light when considering the pathways that prevents the imagined future – a British population with lower obesity and overweight prevalence – from becoming a reality.

Family values, public health, and political ideology converge in the Change4Life campaign; this is exactly what makes this public health campaign a social movement: the more healthy the changes implemented in a family’s lifestyle as it pertains to diet and exercise, the more likely the vision of a healthier UK can become a reality. The construction of a “good” British family emerges as one that makes those changes in their lives described in the adverts, or one that already does them. This frames social inequalities as an even more contentious issue, as families incapable of performing those activities – as a matter of limited social capital or even physical incapacity – become, accordingly, “less good” along this line. This opens up the hazard of social marketing messages underscoring social inequalities in the nation than diminishing them.

What really matters in social marketing, then, is not necessarily the contents of the social marketing adverts or even how they are presented, but how well the adverts fit in the context of existing public health works in local communities. The important question becomes how well do existing public health interventions reckon with social inequalities and behaviour change? To approach this question requires re-contextualising social marketing campaigns as not merely interventions in and of themselves, but as agents that transparently instigate change in the built environment surrounding citizens of the UK. Social marketing, then, is a tool to bolster existing public health works, which may, in turn, create the right contexts to increase uptake of these interventions that, in turn, aim to create behaviour change in local communities, if not the entirety of the UK.

Unfortunately, as far as research on the effectiveness of social marketing campaigns is concerned, there does not exist a strong body of knowledge that definitively frames it as an effective public health strategy in and of itself. In addition to studies showing an inverse effect to what was expected, e.g. increased exposure and recognition of social marketing messages corresponding with increased drug use (National Anti-Drug Media Campaign, 2009), other studies show the opposite (*ibid.*). Equipped with tools from the for-profit sector, social marketing ads, “catchy” as they may be, may not necessarily inspire any behaviour changes. This is showcased in the example of parental smoking cessation in the context of children’s health, where parents’ knowledge that smoking is harmful to their child does not precipitate smoking bans in households (Blackburn et al. 2003). Evidently, the message is out that

environmental tobacco smoke exposure to children, via parental smoking, is harmful to children. In light of how there is no shortage of social marketing statements that express smoking as a “bad” thing to do, and the fact that it is standard practice for medical providers to discuss the value of smoking cessation to patients, the evidence remains weak as to how these interventions precipitate behaviour change. In the case of Change4Life, brand recognition may be strong (DH 2010), the conclusion cannot be made that the self-reported changes in behaviour reported by parents surveyed in the tracking study of the programme by virtue of the fact that the campaign is taking place in an uncontrolled environment.

In conclusion, while it may be impossible to directly attribute social marketing with behavioural change, this reality does not detract from the value that social marketing has as a public health strategy. On the basis of its impact on the environment, saturating the environment with statements about the benefits of, e.g. increased physical activity and eating 5-a-Day, may reinforce existing public health programmes to impact the lives, and therefore the behaviours, of British families. Research on how public health operations are affected by the deployment of social marketing campaigns, then, becomes an important focus for research linking public health social marketing techniques and how they serve as enhancers of public health practice will be exceedingly useful in the context of obesity control, especially if it is the expressed interest of the government’s highest authority on health, the Department of Health, to create a social movement against obesity and overweight (DH 2010). The contents of social marketing campaigns, then, become especially important to study, as their design and cultural calibration may provide the additional social and environmental support that enables citizens to enroll in evidence-based public health interventions that are proven to create constructive behaviour changes that improve the public’s health. How these impact existing public health works is central. In the context of obesity control in the UK, social marketing may well be the very element that makes the built environment sufficiently inspirational to accomplish the re-calibration of the nation’s norms about physical activity and eating healthy, adding power to the punch of existing public health programmes that provide the requisite evidence-based support and infrastructure to support behaviour change.

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8 October 2010

Memorandum by Professor Robert Cialdini, Arizona State University and Steve Martin, Influence at Work (BC 13)

I. What is known about how behaviour can be influenced?

There can be no doubting that numerous approaches have been identified and employed in order to influence behaviour. However when attempting to influence citizens' behaviour the approaches most frequently adopted by governments have traditionally been based on one, or a combination of economic, regulatory, and technological interventions. Whilst such financial, legal, and design factors can be effective in influencing behaviour they can also be very costly to implement.

Fortunately, there is another set of factors, social psychological in character, that have a long history of scientific support⁹³. As well as attaining widespread acceptance within the scientific community these factors hold the additional benefit of being relatively inexpensive to employ.

One of us (RBC) has undertaken extensive research over the last 35 years in order to identify these factors which we refer to as 'decisional heuristics'. We have found them to be both few in number (there are just six) and widely applicable in being able to effectively, responsibly and ethically influence behaviours.

In summary they are;

1. Reciprocity - we feel an obligation to return the form of behaviour that we have first received
2. Authority – the credibility and knowledge of the messenger can influence our perception of a message and our subsequent response to it; oftentimes more than the message itself
3. Consistency - we want to act consistently with our commitments and values, particularly those where we have invested effort and that are publicly known to others
4. Scarcity – the less available an opportunity becomes, the more desirable it is to us, especially when it involves a personal loss
5. Liking - the more we like an individual or organisation the more inclined we are to be influenced by them and say “yes” to them
6. Social proof – the behaviour of others often serves to guide our behaviours regardless of the desirability of such behaviour

Appropriately employing these scientifically validated principles, either singularly or in combination, can serve to increase the influence and persuasiveness of a message or communication leading to a lasting change in behaviour.

Ia. What special considerations apply to addictive behaviour?

Due to a variety of physiological, psychological, and social factors we recognise that addictive behaviours can be especially difficult to change and neither of us possesses specialist knowledge of addictive behaviour. Nonetheless, there is some evidence that social

⁹³ Cialdini, R.B. Influence – Science & Practice 5th Edition Allyn & Bacon (2009)

psychological principles of influence have been effective in generating change in some instances of addictive behaviour.⁹⁴

2. What are the policy implications of recent developments in research on behaviour change?

Processes and policies are understandably designed to be both rational and predictable. Unfortunately the citizens to whom such policies are targeted will often behave in ways that are unpredictable and irrational. One potential implication concerns situations where policy makers have a less than complete understanding of the social psychological factors that influence behaviour and as a result their campaigns may not just prove to be ineffective, but actually serve to promote unwanted behaviours.

For example, in 2007 the Internal Revenue Service (IRS) in the US introduced a series of additional penalties for any citizen who knowingly submitted a less than complete and honest tax return. The primary reason cited and communicated to taxpayers by the IRS for this change in policy was the fact that so many citizens had attempted to defraud the Treasury in the previous year. Whilst understandable the approach was short sighted and resulted in a 22% increase in Tax Fraud the following year. In attempting to address a regrettably frequent problem (e.g. Tax Fraud) IRS policy makers fell afoul of their intended outcome by communicating a much more invasive and undercutting normative message that essentially said *“and look at all the people who are doing this unwanted thing.”*⁹⁵

Unwittingly influencing behaviour in an unwanted fashion is not limited to the submission of tax returns. Studies have shown that drawing attention to the regrettable frequency of undesirable behaviours can increase environmental theft⁹⁶ and even reduce participation in cancer screening programmes⁹⁷ even though in each case the undesirable behaviours were practiced by the minority rather than the majority.

In the UK we have witnessed numerous examples where an attempt to influence or change behaviour could potentially lead to an increase in such unwanted behaviour. Hospital waiting rooms and GP surgeries often decry the amount of wasted NHS resources by publicising the number of Did Not Attend (D.N.A.s). Despite the devastating floods of 2008 The Environment Agency website continues to report that the majority of homeowners who are entitled to receive their Free Flood Warning Service have failed to do so thus potentially normalising such behaviour.⁹⁸ Both serve as examples to the potential implications of not fully understanding the current research on behaviour change.

4. Are there adequate structures and expertise across government and the public services more generally to support the translation of research developments in behaviour change into policy interventions?

⁹⁴For examples see Houben, K., Havermans, R.C., & Weirs, R.W., (2010) Learning to dislike alcohol: conditioning negative implicit attitudes toward alcohol and its effect on drinking behavior. *Psychopharmacology* 211(1):79-86 and Christakis, Nicholas A. & Fowler, James H. The Collective Dynamics of Smoking in a Large Social Network Effect of social networks-person to person "spread" of smoking cessation *New England Journal of Medicine* 2008; 358:2249-2258

⁹⁵ Cialdini, R. B., Demaine, L. J., Sagarin, B. J., Barrett, D. W., Rhoads, K., & Winter, P. L. (2006). Managing social norms for persuasive impact. *Social Influence*, 1, 3-15.

⁹⁶ Schultz, P. W., J. M. Nolan, Cialdini, R. B., Goldstein, N. J., & Griskevicius, V. (2007). The constructive, destructive, and reconstructive power of social norms. *Psychological Science*, 18, 429-434.

⁹⁷ Sieverding, M., Decker, S., and Zimmermann, F. (2010). Information about low participation in cancer screening demotivates other people. *Psychological Science*, 21, 941-943.

⁹⁸ <http://www.environment-agency.gov.uk/homeandleisure/floods/38289.aspx>

We have no direct evidence to support a response to this question but it is our opinion that any structures and expertise that translate behaviour change research into actual interventions would likely be varied and localised.

For example to our knowledge there is no formal programme that teaches healthcare professionals and those responsible for producing health information how to apply insights from social psychology when looking to influence desirable health outcomes or change behaviour. To our knowledge relatively few people employed in public communication roles in local governments are routinely trained in the science of influential communication. The increasing popularity of books in this area (including our own) being read by people working in such roles may provide anecdotal evidence of the need for such training to be provided.

It may be useful for the committee to learn of two University Teaching Hospitals in London who have recently begun pilot programmes utilising these ideas and training staff on their Leadership Programmes and in clinical settings.⁹⁹

8. Have publicly funded behaviour change interventions been both evidence-based and subject to effective evaluation?

In addition to the studies cited in our response to question 2 we would draw the Committee's attention to a series of studies that show the resounding superiority of both a social norm message and reciprocation based message to positively influence environmentally protective behaviour when compared to both a standard environmental appeal and an incentive based appeal.

In his role of chief scientist at OPOWER Robert Cialdini has been able to demonstrate the longer term sustainability of using social norms to influence energy consumption behaviour, with one data set recording a steady state reduction of 2.75% over a 16 month period.¹⁰⁰

In 2009 Steve Martin worked with a specialist collections team at Her Majesty's Revenue & Customs to pilot a series of letters designed to influence UK citizens to submit their Self Assessment payments on time. In comparison to the standard approach the pilot resulted in an additional £270 million in revenues. Results of the pilot have subsequently been provided to the Cabinet Office who is currently conducting a further analysis of the results.¹⁰¹

We feel it appropriate to also draw the Committee's attention to two new studies about to be conducted here in the UK. The first study will employ insights from the principles of social influence with the objective of reducing Did Not Attend (DNAs) in an East of England Primary Care Trust. The second study will seek to reduce inappropriate attendance at a large city centre accident and emergency department by identifying what the most effective communication strategy and advice is along a typical user pathway.¹⁰²

We would be pleased to provide the Committee with further information as these studies progress.

⁹⁹ The two hospitals concerned are the University College London Hospitals Trust and Imperial College London. Further information is available from Influence At Work

¹⁰⁰ The OPOWER data is available at <http://www.opower.com/Results/Overview.aspx>

¹⁰¹ For further information about the HMRC Pilot Studies please contact Influence At Work

¹⁰² NHS Bedfordshire Primary Care Trust. Nottingham University Hospitals Trust

10. What mechanisms exist, at national and local government level, to provide advice and support during the design, piloting, implementation and evaluation of behaviour change interventions in order to ensure that they achieve intended policy goals and also cultural changes within government and public services more generally?

Aside from the most recent government review papers (e.g. MINDSPACE, 2008 COI Behaviour Change Report) neither of us is aware of any government mechanisms that exist either nationally or locally to advise and support behaviour change interventions.

However a number of resources including ones that we have developed are in existence. Typically these include training and development workshops, consultancy services and support, communication review programmes and e-learning resources, a number of which have been procured by several local public sector organisations.

13. When is it appropriate for the state to intervene to influence the behaviour of members of the public and how does this differ from when it is appropriate for the commercial or voluntary sector to intervene? In particular, when should this be done by outright prohibition and when by measures to encourage behaviour change? Are some methods of producing behaviour change unacceptable? Which and why?

In our experience the principles of social influence can serve policy makers as productive tools to influence change, highlight the genuine strengths of a message or initiative and create worthwhile outcomes only when they are used in the best interests of all parties. When these tools are instead used unethically, for example by artificially importing the principles into situations in which they don't naturally exist, any short-term gains will almost invariably be countered by long-term losses. Any subsequent attempt by the same agency is also likely to fail due to the resulting loss of credibility.

Our consultancy, Influence At Work, has identified three approaches commonly adopted both by individuals and groups when employing the principles of social influence.¹⁰³

1. The 'Bungler' typically has little or no knowledge of the principles and therefore either uses them ineffectively (much like the examples cited in our response to Question 2) or not at all.
2. The 'Smuggler' understands the principles but uses them inappropriately or dishonestly with the single purpose to gain short-term compliance often to the detriment of their target.
3. The 'Detective' looks closely at the situation and responsibly employs only those principles that occur naturally and that serve to benefit all parties concerned. It is only the Detective's approach that we teach and would advocate.

14. Should the public be involved in the design and implementation of behaviour change policy interventions and, if so, how? Should proposed measures for securing behaviour change be subject to public engagement exercises or

¹⁰³ Influence At Work www.influenceatwork.co.uk

consultation? Should they be piloted? Do considerations differ in the case of interventions aimed at changing addictive behaviour?

One of the Prime Minister's major policy ideas is the encouragement of a Big Society. Any societal change will, as a result, require commitment from its citizens. Studies into the social influence principle of Consistency clearly point to the importance of encouraging voluntary and effortful commitments when influencing change.¹⁰⁴ As a result certain behaviour interventions should result in greater change when public engagement exercises are encouraged rather than simply imposing policies.

15. What lessons can be learnt from previous successful or unsuccessful behaviour change interventions in other countries? Which countries provide the most helpful examples of best practice? Are behavioural change interventions generally transferable between different societies?

Whilst it seems to be the case that the current majority of social psychological studies originate from the US it is important to point out these principles are foundational to the human condition rather than the cultural condition. That said studies that point towards a certain weighting or preference to one social psychological principle over another in certain cultures and societies do exist.¹⁰⁵

16. The Committee would particularly welcome submissions on behaviour change interventions, whether in the public sector, the private sector or by voluntary organisations, designed to tackle obesity, in the United Kingdom or internationally, in order to examine:

- b. who are the most effective agents for the delivery of behaviour interventions to tackle obesity;

There are many potential agents that could play a role in the delivery of messages and interventions linked to obesity some more obvious than others. The peer or social group that an individual most closely interacts with will often have a disproportionate influence over behavioural choices. For example studies show that teenagers are more likely to start smoking to the extent that two or three of their peer group members smoke. Another study across four cultural groups showed that the more fast food promotions a family experiences the more fast food they consume. Interestingly not because of any attitudinal change towards fast food or any specific recall of the advertisements themselves but because of the families perception that fast food consumption was more normal in their community.¹⁰⁶

¹⁰⁴ For more on the Consistency principle see Cialdini, R.B. *Influence – Science & Practice* 5th Edition Allyn & Bacon (2009) pp52-96

¹⁰⁵ Cross-national differences in patterns of interpersonal norms and felt obligations toward co-workers." In *The Practice of Social Influence in Multiple Cultures*, W. Wosinska, D. Barrett, R. Cialdini, and J. Rejkowski, 97–123.

¹⁰⁶ Grier, S.A., Mensinger, J.L., Huang, S.H., Kumanyika, & Stettler, N. (2007) Fast food marketing and children's fast food consumption: Exploring parental influences in an ethnically diverse sample. *Journal of Public Policy and Marketing*, 26, 221-235.

Memorandum by Professor Robert Cialdini, Arizona State University and Steve Martin,
Influence at Work (BC 13)

It is this specific insight that leads to another potential agent in the delivery of behavioural interventions, the media. It appears that obesity is typically normalised in the media due to the sometimes disproportionate number of stories and features that decry the increasing numbers of UK citizens who are obese. We believe that mechanisms should be in place to also convey marginalised messages that communicate factors such as “even if one more citizen becomes obese it affects the public services that all citizens contribute to.” In line with this thinking it might also be beneficial when reporting the unfortunately high rates of obesity in the UK to balance such a message by communicating the even greater percentage of UK citizens who do not fall into this group.

30 September 2010

Memorandum by Claradan and ClaradanMetrics (BC 60)

1. Claradan is a UK business that specialises in the research and application of Behavioural Finance (BF) and Behavioural Economics (BE) predominantly servicing the financial services industry.

Summary

2. BF and BE are concerned with the notion that decision making is often far from rational and that irrational decision making is far more prevalent in human behaviour. This is often overlooked or ignored by traditional fields of research and analysis such as economics and policy setting.
3. Behavioural economics is currently being embraced by a number of industries, including, financial services and marketing and advertising, as well as beginning to influence policy at central government level through the Behavioural Incentives Team – part of the cabinet office Strategy Unit.
4. BE is now being thought of as an agent of change and a tool to influence behavioural change adhering to the principals of improving decisions regarding health wealth and happiness, freedom of choice and libertarian paternalism, championed in the book 'Nudge' (2009) written by Richard Thaler and Cass Sunstein.
5. However, there has been a complete failure to debate the ethics surrounding the use of behavioural incentives to influence consumer decision making, or in fact to influence the population to alter their behaviour in line with government directives and goals.

Background

6. *"Behavio(u)ral finance is the study of how psychology affects financial decision making and financial markets."* Hersh Shefrin (2001) Mario L. Belotti Professor of Finance, Santa Clara University. BF is the study of decision making in environments of uncertainty and risk. It identifies and explains those scenarios where decision making can be described as 'irrational' or 'biased'. It has become increasingly influential as it highlights the gulf between expected behaviour and the reality of human reactions.
7. The pioneering research in BF was carried out by Daniel Kahneman and Amos Tversky, culminating in Prospect Theory 1979 (Kahneman & Tversky, 1979) for which Kahneman was to later receive the Nobel Memorial Prize in Economic Sciences (2002).
8. *"Behavio(u)ral Economics is a discipline that is interested in the same questions as economics without assuming that people are rational"* Dan Ariely, Alfred P. Sloan Professor of Behavioural Economics Duke University. BE has more recently been

popularised by the book “Nudge” (2009) by Richard Thaler and Cass Sunstein where BE is used to facilitate behavioural change.

Financial Services

9. BF and BE have been embraced by the financial services industry, in part due to the research carried out by Richard Thaler and Shlomo Bernartzi on the psychological pitfalls affecting retirement savings. (2004). This research looked at the role of things such as Procrastination*, Inertia**, Hyperbolic Discounting*** and Loss Aversion**** and their impact on populations failing to make adequate financial arrangements for retirement.
10. Several solutions were derived from this research and some of these solutions have gone on to influence product design around the globe. Auto Enrolment has been seen as a solution to increase saving scheme participation levels. Even in the case of Employee Pension schemes where the employer matches the contribution of the employee. I.e. employee saves 5% of their income and the employer makes an additional 5% contribution to the plan, people are prone to inaction and fail to join, when it is clearly in their best interests. Making employees automatically a member of a given scheme proved very successful in initial research, increasing membership by 85% over a 3 year experimental time frame
11. Save More Tomorrow™ is a concept that gets employees to agree to increase contribution levels at a fixed time in the future, usually to coincide with a scheduled pay rise. This helps to avoid ***Hyperbolic Discounting by merely delaying the increase in contribution rather than risking a cycle of perpetually delaying an increase. In the initial experiment (2006) over a 3 year period contribution levels increased from 3% of income per year to 14% of income per year.
12. Auto enrolment, at the time of writing (Oct 2010) is still destined to be part of the NEST scheme.
13. These techniques have been adopted across the financial services sector as a solution to the twin challenges facing pension scheme providers, administrators, trustees and employers, by firstly increasing scheme membership, and secondly, increasing contribution rates to an appropriate level.
14. Several global organisations have fully embraced the use of BF and BE in their business models, notably, Barclays Wealth Management who have established a dedicated Behavioural Finance department and ALLIANZ who have created a Behavioural Finance Centre headed by Shlomo Bernartzi. Many more organisations involved in providing financial services advice and products are looking towards BF and BE as a solution towards engaging clients who have clearly been disenfranchised due to their experiences and loss of faith as a result of the financial crisis.

*Procrastination – The human trait of deferring important tasks to a later date, in this instance, failing to make appropriate financial provision for retirement.

**Inertia – Inaction, failing to engage and make changes to savings plans such as increase contributions or switch investment vehicles etc.

***Hyperbolic Discounting – Choosing immediate gratification over future wellbeing.

****Loss Aversion – A strong preference to avoiding losses over receiving gains. Research consistently shows that people experience the emotional impact of a loss 2-3 times more than the emotional lift of a gain of equal proportion.

Marketing & Advertising

15. Another key industry that is rapidly adopting BE as the answer to reactivating client demand and action is the Marketing and Advertising industry. In the UK, 2009 saw the incoming president of the Institute of Practitioners for Advertising (IPA), Rory Sutherland, put Behavioural Economics at the top of the agenda for his tenure. The creation of the Behavioural Economics Think Tank (BETT) at the IPA demonstrates the commitment of the Institute to promoting this resource within its membership and will continue to encourage the adoption of BE throughout the industry in the UK and beyond.
16. In June 2010, DRAFT FCB, the Chicago based marketing communications agency set up the Institute of Decision Making, in conjunction with academics from Stanford and Berkeley universities, to research and develop applications from the fields of Behavioural Economics and Neuroscience.
17. DRAFT FCB are active in 92 countries and have close on 10,000 employees and intend to use the findings of the institute to support its business worldwide.
18. It is clear that there is a general shift away from brand driven marketing to understanding the motivations and environmental (economic and social) drivers of consumer behaviour. This is more than likely a derivative of the economic slowdown as the consumption economy has failed to revive as strongly as anticipated.

Ethical Considerations

19. Behavioural Economics is being seen by many, not just the financial services and the advertising industries, but Government as well, as the answer to also engaging consumers post economic crisis and as the means to achieving desired behavioural change. The danger is that BE is seen as a quick fix and is used by people and organisations that do not understand sufficiently the mechanics behind the processes they are using. The line between affecting behavioural change and manipulation is a thin one, but it should be respected and enforced from the highest level.
20. The UK Coalition Government, in line with many other governments around the world, is also looking to harness the power of behavioural economics to achieve

desired behavioural outcomes in areas such as health and other policy directives. If they are to avoid criticism and accusations that the use of BE is manipulation and not a behavioural change facilitator, then they must be at the forefront of the discussion and implementation of best practice in the use of behavioural incentives.

21. However, there has so far been a failure at any level to debate the ethical use of behavioural techniques and incentives to influence consumer's behaviour. There is no regulatory input advising the financial services sector, nor has there been any guidelines issued regarding the appropriate use and limits regarding the advertising industry.
22. With the rapid adoption of BE as an agent of behavioural change, it would be advantageous for all concerned if advice and guidance was forward looking and not retrospective.

Conclusion

23. As BE and BF are rapidly being adopted commercially by the marketing and advertising and financial services industries as well as by governments around the globe including the UK, through the Behavioural Incentives team, part of the Cabinet office Strategy Unit, there is a pressing need to discuss and debate the ethical issues associated with using psychological techniques to influence consumer decision making.
24. That debate should include appropriate industry bodies such as the IPA, the Advertising Association, the Financial Services Skills Council (FSSC), regulatory bodies such as the FSA, Advertising Standards Authority (ASA), the Cabinet Office Behavioural Incentives Team, as well as drawing support from academic institutions and practitioners such as Claradan.
25. The aim of these discussions should be to establish guidelines for best practice and create a code of conduct for the use of Behavioural Incentives to influence consumer decision making. This should incorporate areas such as consumer fairness, freedom of choice, appropriate and inappropriate applications etc.
26. The end goal should be a standardisation of direction across all industries represented by a mandatory training requirement that would give consumers the assurance that they are not being manipulated unfairly and give regulators leverage to pursue unscrupulous practitioners.

8 October 2010

Memorandum by Dr John Coggon LLB, PhD, University of Manchester (BC 93)

This evidence is submitted on an individual basis, and should be taken only to represent the views of the author.

Summary

- This submission concerns the approach to ethical questions associated with the Committee's investigation of behaviour change.
- Parliament and government's role is to address questions of general concern (within the 'public interest'), whilst upholding a form of liberalism that respects diversity of values.
- There is of necessity an apparent clash between expert, social, and individual claims about 'what is good for people'.
- Mediation of this clash is achieved through analysis of whether and why issues such as climate change, obesity, smoking, and alcohol consumption are public issues.
- 'Behaviour change' does not seem to be a particular source of ethical concern, as policy is generally designed to affect behaviour.
- This means that issues considered as 'behaviour change' may be the legitimate focus of policy.
- However, in seeking to effect change, the same due concern must be given to the high value of liberty and individuals' freedom to define their interests as applies in other cases.

Submission

1. General Introduction

1. This submission relates to the Committee's interest in "the social and ethical issues surrounding the use of behaviour change interventions by government."

2. An important question ethically is whether the Committee (and Parliament and government) already perceive a robust concept of 'needs' that must be met. If so, this implies a *conclusive* ethical position on various contentious questions. It also of itself suggests directions in which ethical argument can become political ('political' as opposed to moral, rather than 'party political') argument. In other words, if this *need* is reflective of a moral consensus, then much of the interesting ethical work has already been done.

3. The Committee (rightly, in my view) casts the issues as *social* questions, suggesting they are already taken not to be simply private concerns for atomised individuals. If these questions are to be informed by ethical considerations, it is crucial to note that moral criteria alone can not automatically serve as conclusive justifications for policy. That something is morally desirable does not immediately entail that it is the business of the State (likewise that something is morally undesirable).

4. In similar vein, moral abstractions should not be used to obscure (through simplification or partiality) the actual nature of human societies. So on questions such as whether behaviour is 'really' voluntary, whether coercion can be justified, or what role there is for

paternalism, it is important to make the assessment in the light of people as they are, not as they would be if they conformed to idealised paradigms.

5. It is equally important to approach the questions from a 'population perspective': this demands that policy be made, and necessarily it will not be perfect for everyone. Rather than allow 'hard cases to make bad law', it is necessary to concede that 'good law can cause hard cases'.

6. The clearest way of formulating the ethical arguments, and establishing the right approach, is to ask:

- How have we discerned the perceived need?
- Is the need universal, applicable to a majority, or to a few?
- Is it something desirable in itself, or desirable given some extrinsic factor it promotes (eg national interest; economic sustainability; social cohesion)?
- Are there reasonable counter-arguments that it is not a need, or that there is a greater need that 'trumps' concern for it?
- Can we make the political argument that the need is everyone's concern, or is it just the concern of some?
- If it seems to be a shared (ie a general, or public) concern, how do we formulate sound policy to see that the concern be addressed?
- Are there any side-constraints that speak against the State defining what is necessary ('natural rights')?
- Are there any political mechanisms or principles that ought to be followed (eg means of democratic decision-making; principles derived from political liberalism; human rights) to overcome disagreement on these questions?

7. This manner of consideration forms the ethical background. In what follows, I address under specific headings some of the matters that might be of interest to the Committee.

II. Liberalism, Policy, and Value-pluralism

8. English law, particularly as it relates to health and welfare judgments, has developed in the courts and Parliament to be protective of diverse values. This is part of respecting distinct cultural and moral perspectives on how we live, and allows a harmonious but richly diverse society. In the majority of cases there is a 'liberal presumption' that people are best placed to judge what serves their interests for themselves.

9. In some cases, this liberal presumption is rebutted either because an individual is judged to lack the requisite decision-making capacity, or because a certain behaviour is necessarily deemed too harmful, and must thus be proscribed.

10. Key to protections of liberty is a divide between positive and negative claims. Where individuals want to be 'left alone' to live as they choose, it is widely held that this constitutes an aspect of freedom that should only face interference from government with strong justification (eg protection of others; enforcement of important duties). Where individuals want to make a positive claim against the State by contrast, it is generally understood that such a claim can not be reliant simply on what they believe serves their interests (eg a person can not decide that he needs morphine and just demand that his doctor write the prescription).

11. When making the positive claims, there is a clear and important role for expertise. Such expertise will speak to matters such as efficacy and efficiency (eg in the case of obesity, expert opinion will say what causes obesity, which measures will reduce it, what 'side-effects' these might have).

12. What expertise can not do is afford moral or political judgments about what is good. A scientific evaluation of obesity does not of itself provide a mandate to do (or refrain from doing) anything. It is a presentation of facts.

13. Negative freedom is important, but in a political society it is not given unqualified primacy. By acknowledging the authority of a State we accept this. Where it is accepted that *by virtue of living in a shared society* we owe obligations to each other this entails that we will have our negative freedom limited by positive obligations. Meeting these obligations can obtain in payment of taxes to support those who need welfare protection (eg through the National Health Service). Crucially, it can also include being subject to general obligations (eg restrictions on who can be in possession of harmful substances) that apply to everyone, even if this presents an affront to individual autonomy in some cases.

III. Individual Autonomy, Free Decision-Making, and Paternalism

14. The hallmark of any liberal society is the importance placed on individual autonomy, and the freedom for individuals to live their lives as they choose. This is considered so important that it entails constraints against government action, even in cases where a majority might agree to them. A strong liberal democracy is seen to respect freedoms and choices of minorities, and not simply to rule according to the preferences of a majority.

15. There is a widespread—though not universal—acceptance from a whole range of ethical perspectives that some theories overstate how rational and atomised 'autonomous agents' actually are in our human societies. There are now many theories that accommodate people's relational characters, seeing them embedded in complex social networks. Equally, they speak to the fact that people sometimes are not the best guardians of their own interests, even if we are agnostic to the content of those interests and allow people to define these for themselves.

16. It is possible to recognise and respect an individual's autonomy, whilst still providing limitations to his practical freedom to act.

17. In human societies, laws and policies are developed to protect people's interests. These apply not only to ensuring negative freedoms for (supposedly) self-sufficient 'idealised rational agents', but to people who are vulnerable or lacking decision-making capacity. Accounting at a policy-level for incapacity, vulnerability, and systematic disadvantages requires that the moral underpinnings to political principles be broad enough to accommodate more than the 'needs' of isolated, autonomous individuals. Defensible policy accounts for the needs of others too, and everyone's freedoms and obligations must be modified accordingly.

18. This necessarily gives rise to paternalist agendas. But in reality, the whole function of the State can be seen as an exercise in paternalism. Although this has, in some quarters, come to be seen as a source of inherent contentiousness, it should not be so. The idea that the State

should exist to protect the common good without its being paternalistic is at best incredibly complex, and at worst incoherent. (The Committee might note that some analysts seek to avoid questions of paternalism by adopting metaphors such as the “the Steward State”. There may be political reasons for employing this tactic, but it seems a little like window-dressing to me.)

IV. Political Limits to Freedom, and Value-Certainty

20. The State has a crucial role in defining ‘the good’, and in ensuring that the good be done. There is no *ex ante* reason to suppose that it should not do this in collaboration with ‘partners’ from non-governmental organisations and the private sector.

21. Whether ‘formal partnerships’ are forged, the government should ensure that obligations are being met. It should monitor the actions of organisations—especially large and powerful organisations—that may exert considerable control on individuals’ life-choices. Although such organisations may demand to be left alone, for example by appealing to liberal paradigms related to market-freedoms, at times it is government’s duty to oversee and interfere to ensure that people are not harmed by cynical or harmful marketing strategies.

22. To do this, the government must make strong claims about the content of the good. This is controversial, and sound means must be adopted to ensure that when it is done the policy can be defended. Other submissions to the Committee will, I trust, address this question in some detail. Political checks such as refined means of democratic decision-making, limitations through human rights obligations, and constitutional commitments are examples of ‘normative yardsticks’ that might feature in such deliberations.

V. Is there Anything Special about ‘Behaviour Change’?

23. It has become a ‘received wisdom’ that behaviour change is a distinct category of concern, probably because of the particular ends it is set to serve. I note that in question 5 the Committee asks “What should be classified as a behaviour change intervention?”. Given the points I have made above, I wonder (at least from an ethical perspective) if the Committee is needlessly making a rod for its back here. There are two reasons for this.

24. First, it seems odd to start by saying ‘we are concerned about behaviour change’ and then asking ‘what is it?’.

25. Second, it seems hard to imagine how any policy is not directed to behaviour change, or conscious policy omission not directed to allow behaviour to continue. Policy decisions are intended to have the practical effect of directing behaviour (albeit with a view to different ends in different circumstances). Needlessly treating ‘behaviour change’ as an ethically distinct category will trigger demands for further processes of justification than are needed generally when policy is instituted. Provided government is acting in accordance with ethically defensible principles, as one takes it it will in other circumstances, there is no particular issue here to raise concern.

26. Concerning the extent of interference, this will clearly range from the gentlest of ‘nudges’ through to outright coercion. The latter requires considerable justification, but where the State has good reason to protect interests, this gives rise to credible and defensible reasons to introduce proportionate and effective policy measures. Equally,

heightened concerns will arise where policies limit the freedom of people who are able to judge their interests for themselves ('hard paternalism'). Such instances will be hard to justify if their only basis is to protect the individual's own good. It should, however, be noted that if a matter (eg obesity) is truly a social issue, an individual can not straightforwardly claim that his choices are purely self-regarding.

27. When devising policy, the government should not disregard the profound nature of value pluralism, and should always seek to respect the reasonable disagreement and divergence in views between citizens. The State should only in the rarest cases coercively enforce a dominant morality at the cost of individuals' moral and political freedom (eg in protection of children; public health emergencies).

VI. Conclusions

28. The important questions that might be considered under the heading 'behaviour change' do not present novel theoretical problems or issues from an ethical perspective. Rather, the Committee, Parliament, and government should be guided by (familiar) commitments entailed in democratic liberalism. This entails, amongst other things, a healthy scepticism of paternalism and due wariness of government directing people's lifestyles. But if we accept the principle that we should have a political State, we necessarily accept that there is a role for the State in defining the good. In so doing, it will design and implement policies that affect how people behave. In this sense, the most difficult ethical work—justifying *any* interference with autonomy—is already done. Following this, it is for policy-makers to apply sound political measures and judgment, engaging democratic mechanisms and political restraint (eg by reference to settled legal principles; human rights)

29. Intuitively, there may be concerns that proposals, for example, to reduce levels of obesity are problematic as they present an interference with people's autonomy. This is surely right, but no more than in other instances of interference with autonomy. Although behaviour change is for citizens' 'own good', and thus has paternalistic overtones, all policy should be for the good of the people.

30. The business of government is precisely and simultaneously to modify behaviour duly and to protect people's freedoms not to have their behaviour unduly modified. Thus, 'behaviour change' falls squarely within the competence of government, and at the level of principle this of itself is not controversial. At the level of practice, when policy is formulated there is controversy in policies that 'nudge', as well as ones that coerce. But there is controversy too in *failing* to make policy where this is needed to protect vital interests. The difficult task within a pluralist context is that in any case the government must make a positive claim about the good, which may preclude alternative and equally reasonable conceptions. Concern for welfare *and* autonomy demands that this tension be faced head on. Ideological appeals will be made, and it is not right that I should here provide my own political preferences in this regard. What is important, however, is that the processes requires careful assessment and application of settled principle, not the invocation or development of putatively novel theories simply because a 'new' problem presents itself.

October 2010

Memorandum by Dr Adam Corner, Dr Lorraine Whitmarsh, Professor Nick Pidgeon and Professor Greg Maio, Cardiff University (BC 31)

In this brief submission to the House of Lords Science and Technology Select Committee Call for Evidence on 'Behaviour Change', we will address a number of the questions described in the call for evidence. The authors jointly have considerable expertise in the psychology of attitudes and behaviour change, with a particular focus on the promotion of pro-environmental behaviour and public engagement with climate change. An additional submission led by Prof. Ken Peattie & Dr Sue Peattie (Cardiff Business School/BRASS) includes input from two of the authors (Dr Whitmarsh & Prof. Pidgeon) on the specific subject of 'social marketing' as a strategy for behaviour change.

- 1. What is known about how behaviour can be influenced? What special considerations apply to addictive behaviour?**
- 2. What are the policy implications of recent developments in research on behaviour change?**

Recent reviews of existing academic literature have demonstrated that a significant amount of knowledge exists regarding the influencing of pro-environmental behaviour¹⁰⁷, including a recent report prepared for the Department of Energy & Climate Change that attempted to explicitly draw out the policy implications of influencing environmental attitudes and behaviours.¹⁰⁸ Key insights are that information alone is insufficient to change behaviour, that social norms as well as broader structural factors (e.g., location, availability and cost of goods and services) play an important role in determining individuals' behaviour, and that using fear to affect behavioural changes is typically only effective under certain conditions (when people perceive a level of personal control over their behaviour, and feel personally vulnerable to the threat being invoked).

A great deal of behaviour is neither conscious nor deliberate, but is *habitual* – for example patterns of unhealthy eating, or home energy management. Habitual behaviour is automatic, and responds to contextual 'cues' rather than explicit instructions. Addictive behaviour can be thought of as a special case of habitual behaviour. Two ongoing DEFRA-funded projects are applying the novel theoretical insights on breaking and creating habits of Verplanken and colleagues¹⁰⁹ (directly linking behaviour change research with policy-relevant goals). Their 'Habit Discontinuity' hypothesis states that, because habits are 'cued' by the context in which behaviour takes place (e.g., using the car whenever one leaves the house to go to work), so habits can be disrupted at particular moments in time when the context changes (e.g., moving house, changing job). In the current DEFRA projects on energy saving behaviour, Dr. Whitmarsh is experimentally investigating effective targeting of behaviour change measures (including information campaigns,

¹⁰⁷ Spence, A. and Pidgeon, N.F. (2009) Psychology, climate change and sustainable behavior, *Environment: Science and Policy for Sustainable Development* 51(6) 8-18; Swim, J., Clayton, S., Doherty, T., Gifford, R., Howard, G., Reser, J., Stern, P. & Weber, E. (2009). *A report by the American Psychological Association's Task Force on the Interface Between Psychology and Global Climate Change*. Washington, DC: American Psychological Association; Dietz, T., Gardner, G., Gilligan, J., Stern, P.C. and Vandenberg, M.P. (2009). Household actions can provide a behavioral wedge to rapidly reduce US carbon emissions. *Proceedings of the National Academy of Sciences*, 106(44), 18452-18456.

¹⁰⁸ Climate Change Communication Advisory Group. (2010). *Communicating Climate Change to Mass Audiences*. Public Interest Research Centre.

¹⁰⁹ Verplanken, B. & Wood, W. (2006). Interventions to break and create consumer habits. *Journal of Public Policy and Marketing* 25, 90-103; Verplanken, B., et al. (2008). Context change and travel mode choice: Combining the habit discontinuity and self-activation hypotheses. *Journal of Environmental Psychology*, 28, 121-127

financial incentives, and norm-based social approaches) to moments when new students have just moved into halls of residence and to assess whether behavioural changes are sustained into their second year in private accommodation.

Work by Dr. Corner in the DEFRA-funded 'Climate Solidarity' project has integrated habit models with group-level behavioural models and developed novel pro-environmental behaviour change interventions based on this integrated framework¹¹⁰. This involves creating 1,000 'action groups' across England with the aim of personal reductions in carbon emissions through behaviour change. The project focuses on generating positive social norms, and creating 'implementation intentions'¹¹¹ to create new (low-carbon) habits. The social norms literature and theory was important because a significant part of the Climate Solidarity programme involves learning from colleagues and friends, and working together to achieve personal emissions reductions. The use of these two theories complements each other – people are more aware of their own behaviour because they know that they are working with others, while thinking more carefully about their own behaviour is more likely to lead to positive social norms being demonstrated.

While a great deal is known about influencing behaviour, significant questions remain about the extent to which knowledge about behaviour change in one domain (e.g. healthy eating) is transferrable to other domains (e.g. pro-environmental behaviour). In a report for the Foresight Office in 2007, Professor Greg Maio reviewed the social-psychological factors involved in lifestyle change and their relevance for policy.¹¹² The review described how some of the barriers to behaviour change are similar across diverse issues – e.g. both unhealthy eating behaviour and unsustainable transport behaviour involve breaking heavily ingrained 'bad' habits and creating new ones. However, research has also shown that there are a number of unique barriers in promoting pro-environmental behaviours as a response to climate change – for example, the 'psychological distance' between the causes/effects of climate change and individual level behaviour, and the significant uncertainty associated with debates about climate change impacts.¹¹³

3. Is there adequate research capability within the United Kingdom to support the current pace of developments in behaviour change policy interventions? Is there sufficient funding for the evaluation of behaviour change interventions?

While there is a great deal of high quality research being conducted on behaviour change, scaling this research up to a level necessary to observe politically significant change is an ongoing challenge. It is therefore essential that projects (such as the two examples described above) that seek to bridge the divide between empirically-robust research and practically applicable findings are supported financially by funders. The recent 'Energy & Communities' funding scheme provided by Research Councils UK and ESRC is a good example of supporting research that seeks to bridge this gap, and Professor Nick Pidgeon will lead a team that received funding through this scheme, studying the life histories of individuals in relation to their energy use (their 'Energy Biographies') in a range of communities and locations across the UK. The hypothesis to be tested is that there are critical moments in people's lives when patterns of high energy use become

¹¹⁰ Corner, A. (2009). A practitioners guide to the psychology of sustainable behaviour. *Climate Outreach and Information Network*. <http://www.coinet.org.uk/news/2009-10-06/psychology-sustainable-behaviour>

¹¹¹ Gollwitzer, P.M. & Sheeran, P. (2006). 'Implementation intentions and goal achievement: A meta-analysis of effects and processes', in M.P. Zanna (ed), *Advances in Experimental Social Psychology (vol 38)*, Elsevier Academic Press, San Diego, CA

¹¹² Maio, G. R., Verplanken, B., Manstead, A. S. R., Stroebe, W., Abraham, C. S., Sheeran, P., et al. (2007). Social psychological factors in lifestyle change and their relevance to policy. *Journal of Social Issues and Policy Review*, 1, 99-137

¹¹³ Lorenzoni, I., Nicholson-Cole, S. & Whitmarsh, L. (2007). Barriers perceived to engaging with climate change among the UK public and their policy implications. *Global Environmental Change* 17, 445-459.

locked-in (or alternatively changed for the better) and that such points can them for the focus for better interventions.

Evaluation of behaviour change interventions is often incorporated into government interventions – at least to some extent – in order to ensure effective use of public money¹¹⁴. However, the methods and measures used are not always sufficient to assess intended (or unintended) impacts of interventions. For example, government departments, along with many other agencies and organisations, often use information campaigns to raise awareness, change attitudes, and influence behavioural choices; but identifying the impact of a particular advertisement or campaign on public attitudes and behaviours through pre- and post- surveys does not account for the multiple other influences on these indicators (and also relies on accurate self-reports of behaviour, which we know can often be inaccurate). There is certainly scope to develop and apply more sophisticated evaluation methods (e.g., field experiments) and scientifically-robust measures (e.g., attitudinal scales, objective behaviour-change indicators, such as energy meter readings) to assess and improve behaviour change interventions. Good examples of where these are beginning to be applied include DEFRA's Action-Based Research and Greener Living Fund initiatives.

4. Are there adequate structures and expertise across government and the public services more generally to support the translation of research developments in behaviour change into policy interventions?

This is a pertinent question given the expected scale and speed of reductions in public sector expenditure, and the impact this is likely to have on fostering links between research and policy interventions. Current capacity within government is variable –notable expertise on environmental behaviours resides within the DEFRA social research evidence group, and within the Scottish and Welsh Governments. In our experience other Whitehall departments have lower levels of expertise (often none) in behaviour change issues. It seems absolutely vital that channels are maintained for regular and clear communication between university researchers and government departments, and between departments, seeking to design policies that influence behaviour. A particularly relevant example is the role that public attitudes and behaviour will play in meeting the government's stated targets for reductions in greenhouse gas emissions under the Climate Change Bill (2008)¹¹⁵. Previous research on topics as diverse as GM food, wind turbine siting and the promotion of pro-environmental behaviour shows clearly that public engagement is crucial to the success of policy interventions. Without an effective strategy for fostering public engagement with climate change and the necessary changes ahead, low-carbon policies are likely to face significant opposition. There is therefore a compelling political and economic case for maintaining strong links between research communities that study the communication of climate change and the promotion of pro-environmental behaviour, and policy makers who seek to influence public behaviour in this field.

Other examples exist of policy and research communities co-commissioning research – for example, via the Living With Environmental Change¹¹⁶ multi-stakeholder research initiative – through which there are opportunities to learn from one another and translate both natural and social science findings into policy-relevant outcomes.

¹¹⁴ Whitmarsh, L., O'Neill, S. & Lorenzoni, I. (Eds) (forthcoming, 2010). *Engaging the public with climate change: behaviour change and communication*. London: Earthscan

¹¹⁵ HM Government (2008). *Climate Change Bill*. London.

¹¹⁶ www.lwec.org.uk

7. Should behaviour change interventions be used in isolation or in combination with other policy interventions?

There is strong evidence that behaviour change interventions work best when they are combined with other policy interventions. Maio and colleagues (see footnote 6, above), in a review of social psychological factors that influence lifestyle change, have shown that as well as ‘downstream’ interventions (i.e. changing individual behaviours or attitudes), there is a great deal of scope for ‘upstream’ interventions to contribute to behaviour change. Upstream interventions attempt to promote the conditions that shape and sustain desired habits or behaviours. This is because social/structural barriers often discourage behaviour change, despite good intentions. For example, where there is limited access to healthy food, or opportunities for physical activity, interventions designed to promote healthy eating or exercise are likely to have low success rates. Similarly, aiming for more sustainable transport behaviour is difficult when public transport or safe walking/cycling routes are not readily available.

Maio and colleagues concluded that many of the most effective interventions designed to produce changes in lifestyles and behaviours use a combination of both downstream and upstream strategies. Examples of ‘upstream’ barriers to engaging in pro-environmental behaviour include:

- The cost or impracticality of making a low-carbon behavioural choice (e.g., public transport, particularly in rural areas)
- Powerful counter-messages competing with pro-environmental messages. Campaigns aimed at reducing consumption are overwhelmingly outnumbered by commercial advertisements promoting increased consumption behaviour
- A lack of visible signals that ‘something is being done’. With the vast majority of people not visibly engaged in pro-environmental behaviour (even if they are taking steps to reduce their carbon footprint), motivating people to change is hard¹¹⁷

8. Have publicly funded behaviour change interventions been both evidence-based and subject to effective evaluation? How successful have such interventions been?

There is certainly scope for more effective use of evidence in publically funded behaviour change interventions, and for more widespread and systematic evaluation. As mentioned above (in response to question 3), more sophisticated evaluation methods could include field experiments and the use of scientifically-robust measures (e.g., attitudinal scales, objective - rather than only self-report - behavioural measures) to assess and improve behaviour change interventions.

One example of a publically funded campaign to promote engagement with climate change and increase pro-environmental behaviour is the Act On CO2 campaign. This campaign was criticised for a number of reasons, culminating in the withdrawal of the ‘Bedtime Stories’ advertisement that sought to portray climate change as a ‘scary’ children’s story, but one in which a positive ending was still possible (if citizens were to play their role by reducing their personal carbon footprints). The main concern from an evidence-based perspective is that the impact of eliciting fear (and/or anger) alone, or as a predominant response in viewers, can be counterproductive. Psychological studies indicate that this can have very adverse affects when trying to elicit a state of mind that is open to and engaged in personal change: scaring people into action will only work under certain circumstances. In particular, it will only work when people feel *personally* vulnerable

¹¹⁷ Corner, A. Group based models of pro-environmental behaviour change.
<http://coinet.org.uk/sites/coinet.org.uk/files/Group-based%20models%20of%20pro-environmental%20behaviour%20change.pdf>

to a threat, and feel that they are in a position to control it.¹¹⁸ Messages that elicit a fear response also need to contain clear positive options for involvement and ideally a way to share the feeling with others. A resolved anxiety message can be a powerful tool but unresolved anxiety can be very counter-productive.¹¹⁹

12. What mechanisms exist within government to cascade learning and best practice on behaviour change policy interventions?

It is not clear to us whether effective mechanisms do exist to co-ordinate programmes, expertise or learning. More could be done here to link current nodes of excellence such as those in DEFRA or the Scottish Government with other interested departments (DECC, Communities and Local Government, DfT etc).

14. Should the public be involved in the design and implementation of behaviour change policy interventions and, if so, how? Should proposed measures for securing behaviour change be subject to public engagement exercises or consultation? Should they be piloted?

While public engagement should not be seen as a method of increasing acquiescence to a particular policy intervention, there is evidence that providing opportunities for public deliberation of topics such as climate change, and their policy implications, may actually have the effect of increasing public support for more ambitious mitigation policies. The recent World Wide Views on Global Warming project was a global citizen consultation that took place in 38 countries, involving 4,400 citizens. Participants discussed and debated views on the policy goals of the United Nations Climate Change Negotiations in Copenhagen. One outcome of the project was that there was greater consensus after deliberation about the need for stringent climate change targets.¹²⁰ There is also evidence that public debate can actually help to introduce strong interventions. For example, research in Japan has found that public debate was a useful tool for introducing a system of charging for waste disposal – a charge that was not popular before the debates (Ohnuma, 2010).¹²¹

It is important to note that processes of deliberation and participative engagement are very different from ‘top down’ marketing or advertising programmes (such as the Act On CO₂ campaign), and permit a much deeper level of engagement with important societal issues where behavioural change is necessary.

16. The Committee would particularly welcome submissions on behaviour change interventions designed to tackle obesity

The review of social psychological factors relevant to lifestyle change conducted by Maio et al and described above (see Footnote 6) was instrumental in helping to shape the Government Foresight

¹¹⁸ Witte, K. & Allen, M. (2000). A meta-analysis of fear appeals: Implications for effective public health campaigns. *Health Education and Behaviour* 27 (5): 591-615; O'Neill, S. & Nicholson-Cole, S. (2009). 'Fear Won't Do It': Promoting Positive Engagement with Climate Change through Visual and Iconic Representations. *Science Communication* . 30(3): 355-379.

¹¹⁹ Hamilton, C. & Kasser, T. (2009). Psychological Adaptation to the Threats and Stresses of a Four Degree World. *Paper presented at the 'Four Degrees and Beyond' conference, Oxford University, UK, September 2009.*

¹²⁰ <http://www.wvviews.org/node/277>

¹²¹ Ohnuma, S. (2010). Effects of communication between government officers and citizens on procedural fairness and social acceptance: A case study of waste management rule in Sapporo, *International Society for Justice Research*. Banff, Alberta, Canada.

Memorandum by Dr Adam Corner, Dr Lorraine Whitmarsh, Professor Nick Pidgeon and Professor Greg Maio, Cardiff University (BC 31)

Office's Tackling Obesity Map. It focussed heavily on examples of interventions aimed at promoting healthy lifestyles. Some of its central conclusions were:

- Combinatorial interventions (i.e. both upstream and downstream components) tend to be most effective.
- Generating and promoting positive social norms is an important way of increasing the effectiveness of a behavioural intervention (i.e. what social signals are there around healthy eating? Are all of an individual's friends and peers unhealthy?)
- Periods of 'transition' or change provide good opportunities to target existing habits and introduce new behaviours (e.g. when an individual moves house, or gets a new job).

30 September 2010

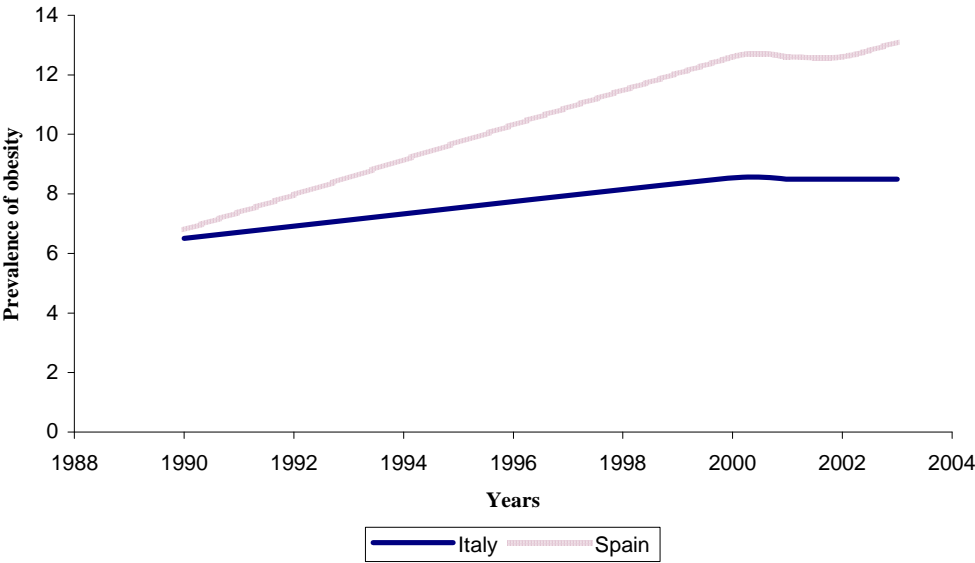
Memorandum by Joan Costa-Font, London School of Economics (BC 3)

Cultural Transmission of Obesity: Empirical Evidence

This project presents evidence of three studies on child and adult obesity that suggest the influence of cultural transmission, namely that obesity is in part of a cultural phenomenon and hence, intervention should operate at the social and not only at the individual level. Two studies using data from Spain and Italy (Study 1 and 2) prove the importance of cultural transmission, and one a study using data evidence from England show that child obesity is clearly the results of parents lifestyles (Study 3).

Study 1. A relatively unexplored question in health production research is the influence of socio-economic and environmental factors on weight gain and obesity. This paper takes advantage of a markedly different pattern of obesity between Italy in Spain to undertake a non-linear decomposition analysis of differences in the prevalence of overweight and obesity between the two countries. See Figure 1. We have attempted to isolate the influence of lifestyle factors, socio-economic and socio-environmental effects in explaining cross-country differences in BMI status. Our findings suggest that when the social environment (proxied by different measures of peer effects and regional BMI) is not controlled for, our model covariates explain about 27 to 42% of the overall Spain-to-Italy overweight and obesity gaps. Although gender and age specific, the differences in eating habits and education between the two countries the main predictors of the obesity gaps. However, when social environment is controlled for our determinants explain between 76 to 92% of the obesity and overweight gaps and the effects of eating habits are wiped out. These results suggest that health body weight depends on cultural or socio-environmental incentives rather than only at the individual level health production determinants.

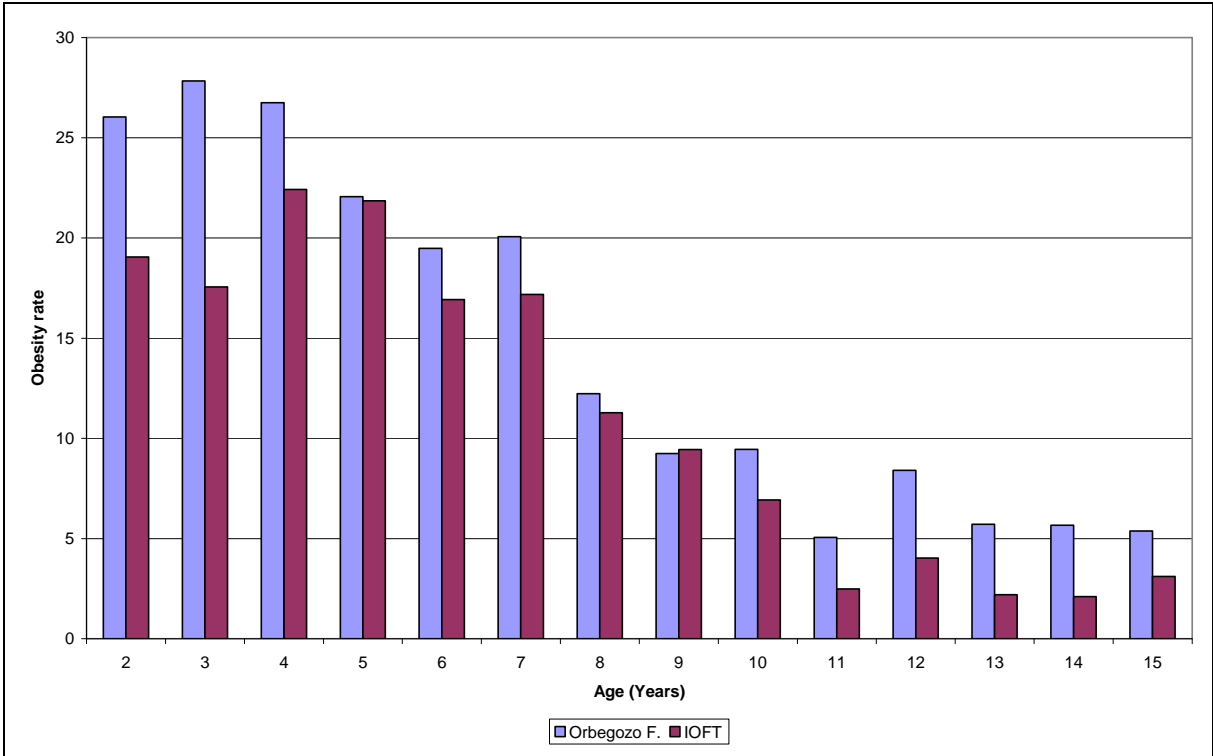
Figure 1. Patterns of obesity in Italy and Spain, 1990-2003



Source: OECD Health Data, 2005

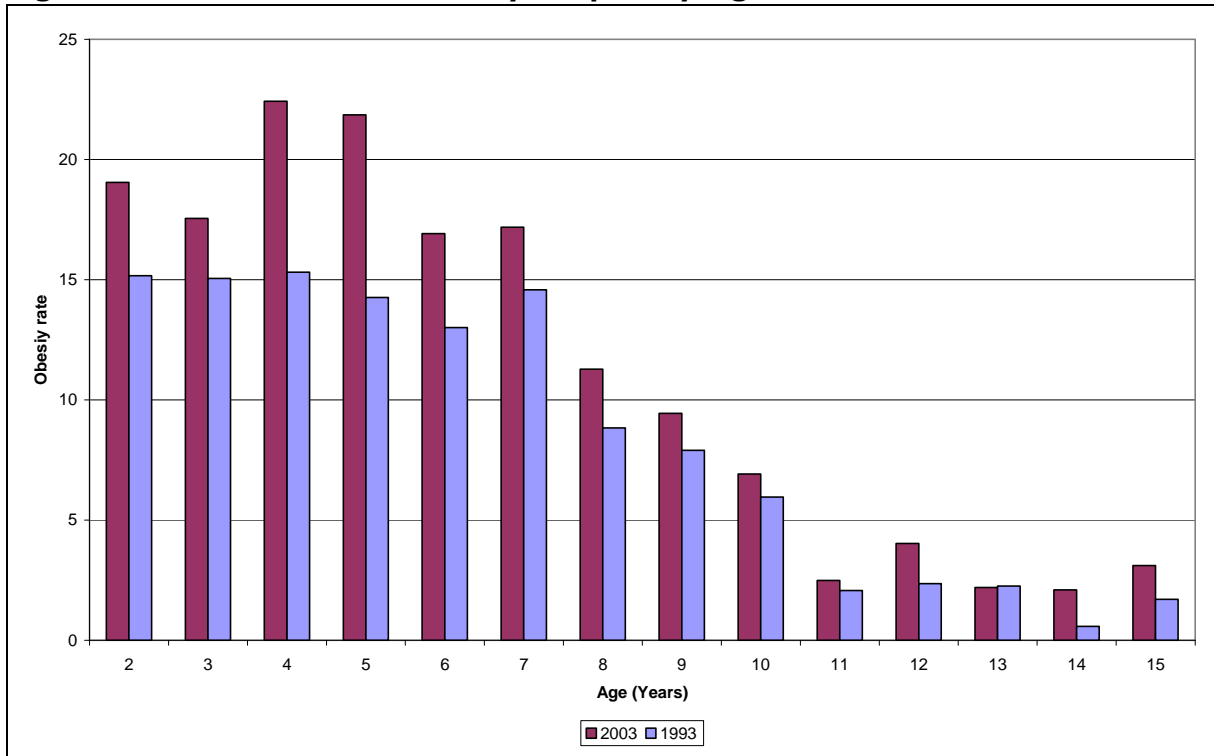
Study 2. Unlike among adults, we argue obesity in children to be the results of an agency failure that might well override socio-economic effects. This paper empirically explores child obesity in southern Europe, and more particularly in Spain. We draw upon an agency model to develop an empirical specification to analyse childhood obesity determinants' using the 2003 edition of the Spanish National Health Survey which suggest important measurement effects (Figure 2) and temporal effects of child obesity rise (Figure 3). Our results suggest evidence that parent's obesity on average gives rise to a higher probability of obesity in children which confirm the so called "child to adult body mass effects". Interestingly, when such effects are controlled for the socio-economic position in child health fades away and only parental education appears to remain significant. On the other hand, mothers labour market participation is only significant for women with secondary education and

Figure 2. Prevalence of Child Obesity in Spain by Age, SNHS 2003: Orbegozo F. vs. IOFT definitions



Note: Mean values computed using sample weights. Source: Spanish National Health Survey 2003 and 'Orbegozo Foundation' and IOFT BMI reference cut-off points. Own elaboration.

Figure 3. Patterns of Child Obesity in Spain by Age: SNHS 1993-2003



Note: Mean values computed using sample weights. Source: Spanish National Health Survey, 1993 and 2003 editions, and IOFT reference cut-off points. Own elaboration.

Study 3. We study whether health behaviours are inter-generationally and culturally transmitted in the UK. To remove genetic determinism, we take advantage of a natural experiment by using information on households where no genetic association exists between parents and children. Our results indicate that there is vertical transmission of healthy styles. BMI of children is positively and significantly correlated to BMI of parents for adopted children. But while the BMI of the mother explains both types of children's BMIs, the BMI of the father explains only natural children BMIs.

September 2010

Memorandum by the Countryside and Community Research Institute (CCRI) (BC 39)

1.1 The Countryside and Community Research Institute (CCRI) is a collaboration between the University of Gloucestershire, the University of the West of England, the Royal Agricultural College and Hartpury College. It is one of the leading specialist rural research centres in the country with programmes of research in rural community development, rural poverty, agri-environment policies, agri-tourism, local sustainability, local economic development, EU and UK rural development, and the planning system in the countryside. CCRI conducts a large volume of research for commercial and academic clients. Further information can be obtained from the Institute's website: www.ccri.ac.uk

1.2 The institute has completed a number of projects which have involved the evaluation of initiatives designed to encourage behaviour change. We are replying to Questions 6 and 7.

Question 6: How should effective levels of intervention (individual, organisational, community and national) and different types of intervention (legislative, fiscal, educative) interact in order to achieve policy goals more effectively?

Levels of Intervention:

2.1 We would extend your list of levels at which interventions can take place to include local authority and European Union. We consider that there are 2 aspects to the level of intervention:

- The level making the intervention
- The level at which the intended behaviour change would take place

2.2 Furthermore behaviour changes can be cascaded through levels. For example, EU policy encouraged local authorities to facilitate recycling which in turn encouraged individuals to recycle.

2.3 Hitherto, interventions have tended to be aimed at the individual, although, depending on the change desired, this may not be the most effective level.

Types of Intervention:

2.4 We have listed types of intervention as follows:

- Compulsion (legislative)
- Enforcement (of existing law)
- Financial Incentive (including taxation)
- Reward (within a reasonably short time) and recognition
- Education
- Exhortation/persuasion
- Facilitation (including building communities of interest)
- Peer pressure
- Good examples

2.5 We would stress that individuals will in general not respond to exhortations to change that are at variance with the overarching philosophy of society. For example, mainstream political and policy discourses have managed to start talking about the environment (but doing very little in a strategic sense), without engaging with environmental philosophy ethics which has, since the 1960s at least, argued that behaviour is based on the underlying values and ideologies of society. Only when these underlying values and philosophies change will behaviour change in any serious way.

Question 7: Should behaviour change interventions be used in isolation or in combination with other policy interventions?

3.1 Of the types of intervention listed above, only the first three seem to be effective alone. Agri-environment schemes, for example, are a form of financial incentive that has successfully brought about behaviour changes in some of those farmers taking part in the scheme (others were either already meeting the demands of the scheme or would have done so anyway. This became apparent in a review of the environmental benefits of agri-environment schemes completed by CCRI in 2008, http://www.ccri.ac.uk/Projects/FoodandFarming/Completed/Review_environmental_benefits_supplied_by_agri-environment_schemes.htm) and in a review of the socio-economic benefits of Environmental Stewardship schemes completed by CCRI in 2010, <http://www.defra.gov.uk/evidence/economics/foodfarm/reports/es-socioeconomic/index.htm>

3.2 Other ‘softer’ forms of intervention seldom seem to work alone. For example, exhortation or education to encourage sustainable travel will not work unless public transport is possible, reasonably convenient and affordable. In many cases the system needs to be changed not just the individual. In cases such as this, individual behaviour change without an interlocking set of changes at various levels of policy and across a range of agencies is not going to result in substantial change.

3.3 CCRI have a good understanding of farmer behaviour. We have found that developing shared ownership of the agenda through networking and influencing skills/training/capacity-building, awareness-raising, building communities of interest to engage with practical problem-solving, have been successful in changing farmer attitudes. These kinds of activity are also reflexive, in that the people transmitting the message are also transformed by the interaction and their agendas become more sensitive to the real and perceived barriers to change in society. A lot of it is about building bridges.

3.4 A review of Agricultural Co-operatives by CCRI, completed in 2008, <http://www.ccri.ac.uk/Projects/FoodandFarming/Completed/agrienvironmentcooperatives.htm> demonstrated how influences interweave to create behaviour change – groups responded to a combination of external financial opportunity, backed by regulations but from that they used the assets they had at their disposal to change in different ways. It was a about negotiation, creativity, debate and guidance but created some projects that had considerable lasting value and exceeded the basic provisions that most forms of compulsion/incentivisation reach on their own.

3.5 In 2006-7 CCRI worked with Macaulay Institute on a project that investigated the means by which the advice provided by Defra and its agencies can best be implemented to promote long-term positive behavioural change in land managers. Its focus was specifically on environmental behaviour with respect to soils, water and waste. Findings have shown that

farmers differ in terms of their engagement with the initiatives. This is influenced by how advice is given, who gives advice and how the message and messenger are evaluated. In terms of their capacity to change, this is influenced by farm characteristics; finance; markets; human capital; labour; social capital; and time. Finally, in terms of their willingness to change, this is affected by individual values and self-identity and social influence. Thus approaches that can combine provision of advice with enabling mechanisms to enhance capacity for change and strategies that endeavor to change mind sets and social norms are more likely to work. The research also shows that any set of interventions need to be tailored to different contexts. The report *Understanding and influencing positive behaviour change in farmers and rural land managers* can be accessed at http://randd.defra.gov.uk/Document.aspx?Document=WU0104_6750_FRP.doc . The report was accompanied by a Good Practice Guide intended for policy makers who are developing and implementing advice initiatives. This sets out several key principles to engaging with farmers which would be relevant to other spheres.

3.6 Our work in the community field, in particular a project for Natural England on 'enabling communities to deliver national environmental targets' which is currently being written up, has delivered similar messages. It is important to understand that those at the local level are not fools and will quickly see when they are being talked down too. Stakeholder engagement has to be meaningful and have a purpose and behaviour is changed in the long-term through the development of social learning initiatives or communities of practice.

7 October 2010

Memorandum by Cyclists' Touring Club (CTC) (BC 130)

Introduction

- 1 CTC, the national cyclists' organisation, was founded in 1878. CTC has 70,000 members and supporters, provides a range of information and legal services to cyclists, organises cycling events, and represents the interests of cyclists and cycling on issues of public policy.
- 2 CTC has been the recipient of several grants over the years to implement key projects to help promote cycling within communities, targeting disadvantaged, ethnic groups and others.
- 3 CTC is also involved in a partnership which runs Workplace Cycle Challenges, an innovative approach to stimulating behavioural change through motivating employees to try cycling in a competitive environment over a two week period. To date over a dozen challenges have been run in towns and cities across the country.
- 4 The response to this inquiry will set out some of the evidence for the effectiveness of 'smarter choices' measures to increase levels of cycling and explain in detail the operation of the Workplace Cycle Challenge process.

a. What are the most influential drivers of behaviour affecting an individual's choice of mode of travel?

- 5 A variety of push and pull factors effect modal choice of travel, ranging from real to perceived pressures of time, relative costs of different modes, distance, demands of the particular journey type and cultural or social influences. It is the latter wherein lies a very large potential for achieving changes in travel behaviour.
- 6 Mode of travel is often determined by cultural or social influences. For example in a workplace environment if the culture is in place that everyone uses their cars, even for relatively short distances, then everyone drives. However, in environments where the culture is to take public transport, walk or cycle then different modes of transport are used.
- 7 Wide variation in cycling levels across the country can in part be explained by these social and cultural influences. For instance, Cambridge is the town with the highest level of cycling to work – 26% of the total working age population, equivalent to good cycling towns elsewhere in northern Europe. However, similarly flat and ancient towns elsewhere in Britain have levels of cycling that are far lower, such as Chichester or Norwich (around 8% cycling to work). The impact of measures to reduce car travel, such as the historical restrictions on car use imposed by the University authorities, together with an expectation on new residents or students that 'to get around Cambridge you get a bike.'

b. What is the role of infrastructure in encouraging and facilitating changes in travel-mode choice?

- 8 Shifting travel behaviour through 'smarter choices' measures must be supported by changes in the physical environment. For instance, measures taken to persuade people to cycle to work will be more effective if they are accompanied by improvements to the road network to support cycling. Similarly, however, those infrastructure changes will be less successful if unaccompanied by the marketing and communication measures encouraging people to use them.
- 9 Poorly designed road networks prioritise car travel over sustainable modes – the concept that the 'car is king' is sadly obvious in some urban and rural areas. People walking or cycling feel intimidated by fast motor traffic coming too close. Improvements to the layout of streets by reducing traffic speeds and volumes are at the top of the Department for Transport's 'Hierarchy of Solutions' for planning for cyclists and pedestrians, with other measures, such as cycle lanes to be considered only where speed and traffic restriction measures cannot be implemented (DfT, 2008).
- 10 Over the longer term planning policy can restrict development to ensure that people are located close to the services they require and at densities that ensure certain forms of transport are privileged over others. For instance, the very high densities of population and businesses found in city centres ensures that highly space efficient modes of travel, such as walking, cycling or public transport, are usually prioritised over the private car.
- 11 The location of public services is also a key driver. Trips to school by children and parents make up 11% of all journeys made in the UK. Ensuring that these are close enough to ensure walking and cycling is the first step to enabling more of these trips to be shifted away from cars. Currently 92% of the population live within 15 minutes by foot or public transport from local primary schools, 62% live within 15 minutes of secondary schools, 79% from their GP and 22% from their local hospital. (DfT, 2009)
- 12 Only if services are located close to where people live on acceptably safe and pleasant routes can behavioural change measures succeed. For many communities these preconditions are already met, yet patterns of travel are still dominated by private car use. It is in these circumstances that behavioural change through 'smarter choices' interventions can be most effective.
- 13 Reducing speeds in urban areas to 20 mph, through either physical changes (through traffic calming) or through changes to speed limits is one of the most effective ways of achieving a supportive cycle/pedestrian friendly environment. The former requires re-engineering some roads to include road humps or other measures, whereas the latter relies on drivers to reduce their speeds to stay within the law. Both approaches have proven to be successful and can reduce the perceived fear barriers that prevent more walking and cycling (Grundy, 2010; Atkins, 2010).
- 14 Residential streets with lower levels of traffic create neighbourhoods in which people are more likely to know each other than in roads that are not used by heavy traffic. Quieter streets encourage people to come outside their homes and be more sociable with their neighbours – this increases social capital and a sense of community and belonging (Hart, 2009).

c. What are the latest developments in the evidence-base in relation to changing travel-mode choice and the implications of those developments for policy?

- 15 'Smarter choices' measures to achieve shifts in travel behaviour have been found to be highly cost effective, with benefit to cost ratios often in excess of 10:1 (Cairns et al, 2004). These methods include travel planning in workplaces and schools.
- 16 The very strong evidence for the success of these measures led to the development of new programmes, including the Sustainable Travel Towns, the Cycling Demonstration Towns and the Healthy Towns. The review of the first stage of the Cycling Towns and Cities programme found that each £1 invested created health benefits of £2.59. An average increase in cycling of 27% was achieved over the first few years of the scheme (Cavill et al, 2009).
- 17 Changes in policy following the change of Government means that these programmes are being discontinued and decisions on whether individual 'smarter choices' projects will continue to be funded has been left up to local authorities.

d. What are the most appropriate type and level of interventions to change travel-mode choice?

- 18 Interventions to change travel mode behaviour can operate on all levels, ranging from legislative changes down to small scale interventions within a single organisation or community group. One example of an intervention at the local level is CTC's Workplace Cycle Challenge (WCC), which can be used to influence mode of transport choice in the workplace.
- 19 One of the major outcomes of the WCC is that it raises the profile of cycling within the work community. This can be expanded on by encouraging the setting up of Bicycle User Groups within the workplace community, which lends sustainability to the programme and encourages those who have started to cycle to continue and has the additional effect that it encourages others to take up cycling. The Safety in Numbers paper (CTC, 2009) illustrates how more people cycling leads to greater safety for cyclists generally.
- 20 The other additional effect from the WCC programme is that once the workforce has been encouraged to cycle more they may go on to have an additional beneficial effect on the local community. For example, in the 2010 WCC on the Isle of Wight the Lifeboat workforce were inspired to continue with their cycling prowess (once the WCC had been completed) and they started organising family rides which have continued over the winter.

e. Who are the most effective agents for the delivery of behaviour interventions to change travel-mode choice?

- 21 The WCC has demonstrated that the employer is a very effective person to influence mode of travel choice. If the employer is keen to enter the WCC then it is easy to get the Challenge up and running. The new Responsibility Deal says that the employer will have a greater responsibility for the health of their employee and therefore this is a ready made product to encourage more employees to become more physically active to improve their health.

22 The WCC has also demonstrated that use of the voluntary sector can lead to successful implementation of behaviour change programmes, by being able to move seamlessly across different sectors and adjust to changing circumstances. For instance, in 2009, a WCC was run in two towns as a 'head to head' competition, an arrangement which would have been difficult to achieve without third party mediation.

f. How do current behaviour change interventions seek to change travel-mode choice and what use is made of available scientific evidence?

23 WCC is a behaviour change programme that encourages more people to take up cycling. WCC is a programme that has been developed in New Zealand and has been successfully run in Australia and America. To date there is potentially information on over 80,000 participants worldwide.

24 The WCC has been brought to the UK by Challenge for Change who are working in partnership with CTC to implement the programme throughout the UK. There are several WCC programmes within the UK that have been successfully completed by the partnership to date (www.ctc.org.uk/workplacechallenge). An additional WCC programme was run in 2010 using funding from Department for Transport, Cycling England and involved partnerships with the Department of Health Southeast, six PCTs and local authorities.

25 The WCC programme is a challenge to workplaces to get as many people as possible within their organisation cycling for ten minutes as a taster. These short sessions allow for maximum participation, giving non-cyclists a chance to experience riding a bike again. The Challenge uses a competitive element that allows departments to compete against each other for prizes and awards, including for those that have achieved the most 'new' cyclists and those who have highest participation rates overall.

26 The programme is based around a purpose built website that is tailored to individual use. Once people have registered on the website this medium is used to adapt individual and specific messages to that particular person. For example, the registration asks about how long they have been cycling, the respondent may answer that they have not been cycling for the last year – the website may then ask whether they have a bike, whether it is in working order, do they require cycle training or bike maintenance classes. The answers to the questions change as a direct result of the answer provided by the participant.

27 The person registering on the website is asked to set their own goals regarding the frequency and amount of cycling that they intend to do. Prompts are then automatically created to encourage and support the individual. Setting your own goals has been shown to be a realistic and achievable way of encouraging further activity (DH, 2010). The website is then used to record the number, distance and purpose of trips. Levels of physical activity are measured pre and post challenge to see if physical activity levels are improved as a direct result of the WCC.

28 The key behaviour change theories that the Cycle Challenge programme utilises are:

- **Self Perception Theory** – An understanding that people's experiences of a behaviour will give them their strongest perceptions of that behaviour. Giving

someone a positive cycling experience is an ideal way to quickly and convincingly change a person's perceptions towards cycling.

- **Self Efficacy** – An understanding of what people perceive they are able to do or achieve. Self efficacy is similar to self confidence, but focussed on one particular behaviour.
- **Social Learning Theory** – An understanding that people learn through observing other people's behaviour. If people observe positive desired outcomes, they are more likely to adopt the behaviour themselves.
- **Principles of Community Based Social Marketing (Barrier and Benefit Theory)** – An understanding that most behaviours can be broken down into a series of sub-behaviours that need to be carried out in order to complete the main behaviour. For example, starting to cycle can be broken down into: getting a bike, setting it up correctly, learning to ride, finding a safe route to cycle on. Each of these sub-behaviours has its own perceived barriers and benefits to carrying it out. These need to be identified and addressed in order to get people to implement the main behaviour.

29 Each programme is measured and evaluated via a baseline survey, two weeks and then three months after the Challenge to monitor changes in people's behaviour after they took part in the WCC programme.

30 Some of the key additional data collected by the Southeast Workplace Challenge are displayed in the results box below. The most noteworthy results to mention are the number of miles cycled resulting in a **saving of 81,819 kgs of CO2**.

Finding New Solutions – Workplace Cycle Challenge - DHSE - CTC Challenge for Change							
Oxford	Chichester	Southampton	Milton Keynes	Isle of Wight	Ashford	Total	
58	39	55	76	57	57	342	organisations
210	175	258	247	188	71	1,149	departments
1334	1039	1302	1171	837	375	6,058	people
121	138	134	169	139	78	779	rookies
11800	7118	11515	10355	7068	1896	49,752	cycle trips logged
99332	63701	95886	103484	61359	15249	439,011	miles cycled
12.9	8.3	12.4	13.4	8	2	57	million KJ of energy burnt
9233	4826	8667	6928	4697	1047	35,398	trips cycled for transport
21956	10689	18698	17394	11045	2037	81,819	kilograms of CO2 saved

g. Are current policy interventions addressing both psychological and environmental barriers to change?

31 Current policy interventions only offer a partial solution to the problem – much more could be achieved in this regard. Currently just 2% of trips in the UK are made by bike, compared to 26% of trips in the Netherlands.

- 32 The most commonly asserted personal barrier is fear. A Government survey found that almost half of its respondents strongly agreed that 'the idea of cycling on busy roads frightens me', with a further 27% tending to agree with this. Women are more likely to express concerns about safety (85%) than men (61%) – and, in fact, fewer of them cycle (DfT, 2007).
- 33 People worry about mixing with too much traffic travelling too fast and bad driving. Hostile road conditions and junctions, plus dangerous vehicles, especially lorries, are equally intimidating. Not only does it stop many adults from cycling, it deters them from allowing children to cycle too.
- 34 Some of these fears relate to the speed and volume of traffic, others to personal concerns about image and confidence in ability. Changes to legislation and the physical environment can reduce the former, while interventions such as cycle training may help with the latter.

h. Are policy interventions appropriately designed and evaluated?

- 35 Learning from the Healthy Towns and Cycling Towns and Cities programmes has demonstrated that there needs to be a significant period for realistic results to reflect the success or the failure of the project. The learning from the Healthy Towns programme is still being collected and collated although the funding for the programme is already nearing completion and it is not anticipated that any further work will be completed.
- 36 For basic evaluation of obesity and physical activity programmes a template has been designed and developed by the National Obesity Observatory which attempts to bring together a standardised form on the types of information that should be collected on any physical activity intervention. If everyone adopted the same template for evaluating programmes then this would achieve some comparability between programmes where this is appropriate.

i. What lessons have been learnt and applied as a result of the evaluation of policy?

- 37 One of the major lessons from evaluation is that time is needed to allow results from programmes to be demonstrated. Behaviour change at a population level can take several years to bear fruit.
- 38 The WCC is running for a second year to build on the success of the first year's programme.

j. What lessons can be learnt from interventions employed in other countries?

- 39 CTC's Workplace Cycle Challenge programme already builds on experience from similar schemes operated in many other countries.
- 40 In the Netherlands a similar scheme operates called 'Trappers' (translation: pedals). Every day a cycle passes a control point at the workplace, a sensor picks up the record of their presence through a chip. Each visit gains points that can later be exchanged on

an internet shop. Similar programmes have since been implemented for pedestrians through the Healthy Towns initiative.

- 41 Similarly, the UK's Cycle to Work scheme also follows similar programmes elsewhere in Europe. The scheme allows employees to obtain cycles at a low cost basis through salary sacrifice. The Dutch version – in which employers provide a contribution to the cost of the bike - saw the proportion of employees cycling 'always', 'often' and 'regularly' rise from 72% to 89%, while the proportion riding 'occasionally' or 'never' fell from 28% to 11% (Ministerie van Verkeer en Waterstaat, 2009).
- 42 Many of the above world wide examples demonstrate that central funding and legislation aid the success of any programme, with changes to infrastructure to support active travel being critical to the long term success of the project.

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21 January 2011

Memorandum by Cycle to Work Alliance (BC 143)

Executive Summary:

- This submission is made on behalf of the Cycle to Work Alliance, a group of the leading providers of the cycle to work scheme, including Cyclescheme, Cycle Solutions, Evans Cycles and Halfords.
- Our submission focuses on how the cycle to work scheme encourages the take up of cycling to work and drives behavioural change.
- The submission argues for greater awareness of the scheme. This help local authorities engage with employers and will increase the number of commuters cycling to work.
- We demonstrate how businesses are able to engage with their employees and deliver behaviour interventions to change travel-mode choice.
- We show, through the findings from our recent survey, how encouraging people to cycle to work results in reduced CO₂ emissions; for both businesses and individuals, and how the financial savings offered by the scheme increase the number of cyclists.

1. Introduction to the Cycle to Work Alliance:

- The Cycle to Work Alliance (the Alliance) is a group of the leading providers of the cycle to work scheme, including Cyclescheme, Cycle Solutions, Evans Cycles and Halfords.
- To date over 400,000 people have taken advantage of the scheme, which involves over 2,220 bike retailers and 15,000 employers.
- The cycle to work initiative is a tax-efficient, and on the whole, salary-sacrificed employee benefit that provides a way of encouraging more adults to take up cycling.
- Introduced in the 1999 Finance Act, the scheme encourages employers to loan bicycles and cycling safety equipment to employees as a tax-exempt benefit for the purpose of cycling to work.
- Under the scheme, employers buy cycling equipment from suppliers approved by their scheme administrator, and hire it to their employees. At the end of the loan period, the employer may choose to give the employee the option to purchase the equipment.
- The savings that individuals make through the cycle to work scheme improves the affordability of, and access to, cycling. Employees who participant in the scheme on average, save up to 40% of the total cost of a new bike.

2. The importance of financial savings to deliver behavioural change:

- In a recent report, which surveyed over 44,500 cycle to work participants, the Alliance discovered that 61% of scheme users did not cycle to work before using the scheme. This equates to 158,000 new cyclists commuting every year.¹²²
- 73% of users said that the savings the scheme offered were very important to their choosing to take part. 76% of users also declared they would not have bought their bicycle if it had not been offered it through the cycle to work scheme. The savings offered, as a tax-exempt benefit, clearly play a vital role in incentivising individuals to reduce their carbon emissions and contribute to a more sustainable transport system.
- As well as encouraging individuals to reduce their carbon footprint the scheme makes cycling more affordable for lower paid employees. With the cost of living rising rapidly and petrol and rail fares on the increase, employees need to be supported with cost efficient modes of transport. The cycle to work scheme is used predominantly by basic rate taxpayers (73%) providing them with a low cost commute to work.

¹²² The full survey will be released on 10 February 2011

- The savings offered by the scheme provide the tipping point to encourage behavioural change while at the same time helping employees reduce the cost of commuting.

3. Reduction in car usage and CO₂ emissions:

- The cycle to work scheme plays an important role in encouraging people to cycle instead of drive.
- The majority of respondents to our survey (71%) said they would travel to work by car, if they did not cycle.
- 70% of respondents said they had reduced the number of miles they drive per week as a result of using the cycle to work scheme and 70% of respondents felt the scheme was an important way to reduce their carbon footprint.
- It has been estimated that, currently, members of the Cycle to Work Alliance are helping approximately 260,000 people take part in the cycle to work scheme. Extrapolating from this, it is possible to estimate that current users of the cycle to work scheme are saving **133,442 tonnes of CO₂** per year. This is the equivalent of the CO₂ emissions of 24,000 homes per year or a city larger than Hereford or 76 full Boeing 747s flying around the world - more than the combined fleet of British Airways and Virgin Atlantic's Boeing 747s.
- Additionally 90% of companies surveyed, believed the scheme was an important way to reduce their carbon footprint.
- The reduction in car usage the cycle to work scheme encourages has a clear benefit to the environment. The scheme promotes sustainable commuting, reduces car use in towns and cities and therefore the level of carbon emissions.

4. Conclusion:

- As our survey demonstrates, the Cycle to Work Alliance believes the most influential driver of behaviour affecting an individual's choice of mode of travel is financial. 67% of cycle to work scheme users commute to work by cycle in order to save on their travel costs. The financial savings offered by the scheme need to be maintained in order to successfully encourage individuals to change their behaviour and reduce their carbon emissions.
- While the cycle to work scheme is supported by Government through legislation, the Department for Transport does not actively collect data on it. The Alliance believes their survey is the first attempt to collate data and create an evidence basis for cycle to work scheme participants. The results clearly show the environmental and behavioural change benefits of the scheme.
- The cycle to work scheme is a well established and cost efficient way of encouraging businesses as well as individuals to reduce their carbon footprint. In line with the Government's localism agenda and the new Local Sustainable Transport Fund, the Alliance believes local authorities are best placed to deliver behaviour interventions to change travel-mode choice. However, central Government could do more to encourage more people to use the scheme, and more employers to offer it, by highlighting the scheme's benefits to local authorities and should cite the scheme as an example of best practice for local authorities to achieve their sustainable transport duties.

January 2011

Memorandum by Andrew Dapaah, Tinashe Chirenje, Ann Paraiso, Vivienne Richards, Lucy Reynolds and Kazira von Selmont, Leicester University Medical Students (BC 112)

An Ethical Review: Tackling Obesity

Introduction

1. Obesity is a growing epidemic which, in the UK at least, has shown no signs of slowing (1). For the first time in 200 years children have a shorter life expectancy than their parents in the USA due to the prevalence of obesity (2). This, together with a so called 'policy cacophony' has led to widespread disagreement and confusion over how to target obesity (3,4). Slimming products had a turnover of £65 million at the start of the 1980s (5) and on Amazon.com alone currently there are 217,000 books that refer to diet or dieting (6). It seems counterintuitive to even question whether the state should try to stem the tide of obesity: it might seem obvious to argue that the state has a basic duty to protect its citizens from harm (7); but there are factors which mean many interventions designed to target at-risk citizens will also be targeting citizens who are not at risk, and therefore be unnecessarily encroaching on their liberty (8).
2. With regard to the protection of the citizen from harm, there is abundant evidence that obesity is a harmful condition, predisposing to co-morbidities such as type 2 diabetes, hypertension, and gall bladder stone formation to name a few (9).
3. Does the concept of harm only extend to physical aspects? It might seem logical to assume that the obese have worse psychological functioning, and any intervention designed to help them lose weight will improve their mood. The evidence however, runs contrary to this. Not all obese or overweight people, whether adults or children are depressed or have impaired psychological functioning, but some do (4). The research has not been able to reveal why some people are adversely affected while others are not. Further stigmatisation by any health education or promotion campaigns risks the psychological well-being of not only the obese and overweight, but also those that perceive themselves as overweight. This is important, not only because there is a moral argument that a state should care not to cause harm to its citizens, but also from the research findings that show those who are not suffering psychological distress are more successful in weight loss attempts than those that are (10). Logically, promotions that endanger psychological functioning may impair citizens' ability to lose weight, completely undermining their aim.
4. In public opinion, there is widespread support for the belief that obese people are largely responsible for their own plight (8). As mentioned previously, any addition of shame or guilt will be counterproductive in helping people to lose weight or make healthier choices. Personal responsibility is an important factor on the road to obesity but it is certainly not the sole cause that leads to this condition (4).
5. A contentious issue with any campaign related to obesity is how tenuous the evidence is. Scientists are very honest with how little is known about the link between diet, exercise, genetics, environment, culture, socioeconomic class and

weight status (3,4). The most appropriate guidance given on the basis of the current research findings may be completely overturned in fifteen years time. This has important implications for any policy directive: indeed is it ethical for the state to direct its citizens to certain types of behaviour when the evidence for them is so poor? *Is it ethical for the state to indoctrinate children of the nation with the current thinking, knowing full well they may not adapt to any change of advice once they are adults and 'set in their ways' (8)?* It is admitted now that the links between lifestyle and obesity are less clear than they were once thought.

6. An intervention might be to subsidise weight loss clubs such as Weight Watchers and Slimmer's World, to make them more accessible to those that perhaps cannot afford them. This poses problems as these programmes have never been formally tested and as such there is no empirical data, only anecdotal evidence that they have any effectiveness at all (11). Furthermore, not all people are helped by dieting: some are harmed (12). The long term effects of yo-yo dieting on the metabolic rate have been widely discussed (4). Pre-occupation with food include lack of concentration and may trigger eating disorders such as bulimia nervosa and binge eating disorder (6). It has been argued that individuals who will benefit from dieting should be identified first and then an individualised diet package be tailored to them. However as yet, no attempt at identifying which individuals will benefit from dieting has been successful (13,14). Population-wide campaigns targeting everyone, including those who will not benefit, may not be appropriate. Indeed state subsidisation may also, indirectly give legitimacy to the wider dieting industry, who have 'published diets modifying every nutrient' ... 'for use by a gullible and optimistic public' (4).
7. Alternatively or additionally, some sort of subsidy of gyms, swimming pools or expanding the Counterweight Programme to include 'gym buddies' could be favoured. There is no doubt concerning the benefits of exercise in the fight against obesity (15). Widening choice by lowering price or increasing availability preserves individual liberties.
8. The introduction of food labelling has been viewed favourably by consumers and hopefully making this information more readily accessible allows people a more informed choice. A further step could be to reduce package sizes of products so consumers would be forced to buy two or three items to get the same amount as currently purchasing one provides. Issues arise from what price producers will set for these items, it may be viewed as unfair if someone now has to pay 2 or 3 times for the same amount of said product. On balance, producers will only set the price at what the market will bear, and consumers ultimately determine what that price is.
9. Cognitive behavioural therapy has demonstrated it is successful while people are having the therapy sessions, but many patients relapse afterwards (14). It could be argued that keeping these sessions running life-long for people could work out cheaper than the current state of affairs if it managed to help people avoid all the obesity related complications. Of course, further research would be needed to demonstrate the potential success of such a scheme, but as people are able to self-select, this does not curtail their freedom to choose not to participate.
10. Prior health promotion messages could be deemed unethical as they are a distortion of the epidemiological evidence, 'saturated fat is bad for you, eat less'. All saturated

fat is not always bad for everyone. Some authors have gone so far as to call this approach 'broadcasting of propaganda based on half truth, simplification and distortion' (16). Population interventions give the same (simplified) message to everyone. One study identified of those obese people seeking treatment, 1 in 3 suffered from binge eating disorder (17). This has been described as qualitatively different from overeating and requires different treatment methods. It is possible people suffering from binge eating disorder may need tailored health promotion to prevent those at risk from developing the disorder. As mentioned previously some health campaigns may unfortunately trigger this disorder in some people. *This is particularly concerning, given that children will undeniably be exposed to such messages and may very well be more vulnerable to developing disordered thinking about food.*

11. All these soft paternalistic approaches which are intended to give the individual freedom of choice and liberty do not take account that it is not clear to what extent lifestyle is actually a conscious choice (8). Citizens should be entitled to decide whether or not to make unhealthy choices, however with lack of available alternative options and the social construction involved in acquiring a particular lifestyle, this protection of free choice could be protecting something which does not exist for many (5). Indeed for most people, the current environment does not allow maintenance of a non-obese body weight without conscious effort (4). A constant battle against one's surroundings is referred to as an 'obesogenic environment' (4) It is recognised that the most efficient method of mass behavioural change is 'changing the norms or rules of behaviour', essentially, to 'change culture itself' (16). *One approach at changing culture is the targeting of children and in doing so, indirectly targeting the adults involved in their lives. Children are more receptive to change and more flexible in their behaviours. Children's attitudes may influence the adults in the child's home. Moreover, children are the next generation of society 'empowered' with healthy eating they will set new cultural norms for their cohort.* However these methods, the more aimed at changing culture they are, perhaps the more they encroach on individual rights. Is it open for debate whether it is ethical to use children as a conduit in this way? The state must ensure justification for any such measure (7).
12. More controversial measures, aimed at changing culture, would be to expand the current ban on children's television for junk food to include all advertising of unhealthy foods with little nutritional value. State owned BBC could curtail the number of cooking programmes or encourage their TV chefs to cook low calorie, nutritious meals. Indeed this could reduce the need for cooking and nutritional courses if the information was being regularly presented on television. The citizen is still free to buy these products if they desire, but less advertising of such items may perhaps lessen the desire for such things (8).
13. There is much that the commercial sector could do. Aggressive marketing of confectionary could be curtailed, (e.g. WH Smith offers heavily discounted chocolates at their cashiers which their employees are obliged to indicate). This practice is particularly questionable when certain branches are in hospitals treating patients for obesity and obesity related conditions. Permitting branches to still sell these products, but without the sales pitch, would still allow the individual freedom to buy the product if they so wished.

- 14.** Another measure which widens individual choice is that some restaurants (e.g. Harvester) already do a few low calorie meals with the Weight Watcher's points and Slimmer's World 'syns' ready calculated and printed on the menu (18). If the state could offer some sort of incentive for other restaurants to follow suite offering some low calorie options this could eventually, completely change restaurant culture and perhaps even extend to other spheres. Bacardi now do an 'alco-pop' range of flavours which are 100 calories for a 375ml bottle. While this may not help alleviate the drinking alcohol culture of the UK, it nonetheless is minimising calorie intake and therefore lessening risk of obesity.
- 15.** Provision of information seems so targeted on foods to avoid that perhaps healthier options get ignored. Supermarkets could do their own marketing of so called 'super-foods' perhaps pointing out the vitamins, minerals and health benefits in a particular product. This may encourage people to eat more fruit and vegetables.
- 16.** In addition, gyms could be incentivised or encouraged to offer their own gym buddies to overweight or obese people who otherwise would be too shy to go alone, thereby making the gym a real possibility for them. After an initial ten sessions or so people could have developed the confidence to go without their buddy, this could work out commercially viable for gyms by this method of recruiting new members. More gyms could be encouraged to introduce short term contracts (rather than 12 months) to allow inexperienced gym people a chance to become accustomed to regular gym use without having to commit for an entire year, and to make 'pay as you use' prices appear better value to potential customers.
- 17.** The voluntary sector could be playing a pivotal role if religious centres, e.g. Churches and Mosques were to become involved. Certain festivals and celebrations could be adapted to include low calorie, low fat food options and religious leaders could be key for promoting and helping maintain a healthier lifestyle. Many people look to their religion for guidance, including healthy eating and exercise (already alluded to in the Qur'an) as part of the religious practice can be justified on best interests of the community and of the individual, but it is questionable whether it is acceptable to transmit government messages via this method. People often have far greater respect for their religious leaders than their politicians; any alliance may risk damaging this relationship.
- 18.** Other organisations (Overeaters Anonymous, Weight Wise, Big Matters and Weight Concern to name a few) provide support to the obese and overweight and their families. A simple Google search will bring them up, but as many are free to members and depend on donations they do not have the finances for large scale advertising or promotion. It is arguable that these organisations by themselves do not provide sufficient alternative to the tide of obesity culture and that measures taken by both the state and the commercial sector are required in order for any substantial benefit to be made in the population as a whole.
- 19.** Childhood obesity is a growing problem. The effects are great and long lasting, the mental and physical well being of obese children are often problems fully translated into adult life. Beyond the immediate problems of the individual are the large generalised economic challenges. The question may not only be when is it ethical for the state to intervene, but how? Is aiming interventions at children the correct path

to take? Firstly any scheme aimed towards children will not be effective without cooperation from the parents. In some schemes aimed at children, such as those in schools, the parents are given no choice but to support it, raising the question of whether their participation is coerced. Secondly if parent cooperation is imperative, parent non-cooperation would be detrimental, so is aiming strategies at children an effective method?

- 20.** Educating children in school about the dangers of obesity, and eating healthily will be wasted unless the same message is given to the parents, as only if the child is eating healthily at home and at school will any benefit be seen. Asymmetrical focus of education about healthy eating could mean children bringing home the message about healthy eating, and warning about what they're eating at home. Parents cannot be expected to make alterations to their behaviour if they are ill-informed and ill-equipped to do so. Healthy weight, Healthy lives: a cross-government strategy for England from the department of health is one document that acknowledges the need for strategies aimed at children to be supported by promotions aimed at their parents, because parents only spend a minority of their time in the schools and children's centres (19).
- 21.** Providing extra classes for children outside of school such as swimming, is a great way to encourage physical activity. To facilitate schemes such as these makes the demand of parents to be able to take their children. Which at first seems trivial, but in families with multiple children others need to take consideration of other children in the family, and families in a low socioeconomic class may struggle to transport their children weekly. The point being that targeting children in isolation may give rise to problems of implementation.
- 22.** The evolution of our society has led to a fast life style. Commercial enterprises have taken full advantage of our vulnerabilities producing gadgets and foods designed to make the lives of busy people easier. The consequences are health disasters.
- 23.** It could be argued that our easier lives have made us lazier people resulting in more time than ever devoted to sitting watching the TV, exercising less and eating cheap readily prepared processed foods that are high in fat, salt and sugar.
- 24.** The trade off for our easier life is loss of the skills to prepare healthier meals from scratch. Now we are paying the price financially as money is poured into schemes in disadvantaged areas teaching people how to cook (20).
- 25.** The drive to improve the health of the nation is well underway. Money is being ploughed into schemes directed at encouraging children to eat fresh fruit and vegetables (20). Ironically there has never been a greater selection of fresh fruit and vegetables available in shops, markets and supermarkets, but the government has to provide huge supplies to primary schools in order for children to try them. There is strong evidence to support the association between dietary habits and health yet obesity is on the rise and so are the risk factors associated with obesity such as heart disease, diabetes and strokes (21).
- 26.** Children have healthy eating codes imposed on them by their schools. Only healthy snacks are permitted in many schools, indirectly children are being used to pressurise

parents into providing healthier snacks. It is not hard to see that this could create a financial burden on parents considering the evidence suggesting that a healthy shopping basket is 35% more expensive than an unhealthy one (22).

- 27.** Perhaps targeting commercial and retail sectors would be a more effective option. Processed food brings in huge revenue helping to balance the economy, this presents the government with an ethical dilemma i.e. clamp down on the food industry and upset the fine economic balance. Tighter regulations on advertising directed at children could improve the situation although there is little empirical data to support this argument. The number of advertisements promoting confectionary and fast food aimed at young children is alarming. Clearly the current advertising regulations are inadequate (REF on 2005 regulations).
- 28.** The impact of retail advertising could be used in a positive way to improve knowledge and dietary intake. Strict regulations on offers involving unhealthy foods could be enforced. If 'buy one get one free' and 'three for the price of two' offers were only applicable to fresh fruit and vegetables, fish and lean cuts of meat then perhaps these foods would be more affordable and accessible to all sectors of the public driving down the cost of the healthy shopping basket. Large supermarkets have blatant double standards claiming to advocate healthy eating yet providing 'value' options on foods high in fat, salt and sugar making them more accessible to people on low incomes than healthier options.
- 29.** Schools that subscribe to healthy eating schemes should question whether it is appropriate to embark on school trips to commercial attractions such as Cadbury's world.
- 30.** Outright prohibition of foods with misleading health claims should be brought into effect. For example food and drinks that claim to be healthy because they are 'low in fat' despite the fact that they are high in sugar. The sunny D scandal is a fine example of this with early versions having a high sugar and low fruit content in addition to vegetable oil (23).
- 31.** As can be appreciated, the Government is under an immense set of pressure to tackle the obesity epidemic. Evidence based literature on behaviour interventions has been generally poor, with most concluding that 6 months to a year after intervention, individuals usually regain the lost weight. Efforts to find effective strategies are now of somewhat priority. But are some methods to get these results unacceptable?
- 32.** *Law against being obese* - Although misleading at a glance, it has been proposed in some instances to involve aspects of the law in tackling obesity. On one extreme, initiatives like taxing foods of high fat, sugar and salt are more acceptable and have indeed been supported by the World Health Organization. But on the other, charging the obese higher insurance premiums where applicable is far less acceptable (24).
- 33.** Although this has been debated in countries like Australia and America, we feel this is ethically unacceptable as it discriminates against obese individuals in society. Although one could argue that life-style choices do indeed play a significant role in obesity, a strategy of such kind also tends to neglect the multi-factorial nature of obesity. Interventions like charging higher insurance premiums could therefore be by the public

as being paternalistic and received very negatively by libertarian individuals of society, whether obese or not.

- 34.** *Denying obese patients treatment* - Leading on from the above, some individuals have proposed that obese people (and smokers) be denied preferential treatment from health care organizations. For reasons similar to above, we again feel this is an ethically unacceptable method to win the fight against obesity. The law dictates every doctor to treat his patient regardless of sex, religion or ethnic origin. Discrimination based on weight conflicts this fundamental code to practice.
- 35.** It is well documented that obesity is a serious risk factor to post-operative complications. Therefore in some instances, doctors chose to rather pursue conservative forms of treatment. We simply feel that such decisions should remain strictly on medical grounds. Any reason beyond these we feel are unacceptable (e.g. treating gallstones as 'self-inflicted' on the basis that obesity is a risk factor). Having said the above, unfortunately studies have shown that health professionals already have a negative attitude towards the obese (25). If anything, a more positive attitude should be encouraged amongst health care professionals to insure equality in the delivery of health care.
- 36.** *Sending letters to school children* - Although already in practice, letters sent out to parents spelling out their children's BMI and health risks associated with obesity in an area of ongoing controversy. Health education is agreeably a very powerful tool in changing health behaviours and encouraging health prevention. But the methods in which these messages are passed to the public should be treated in a delicate manner. One potential outcome is the negative psychological implications this could have on children and this is further discussed in chapter 52 (fear of fatness).
- 37.** *Limiting food choices* - The government has also proposed a ban to certain food types, which we feel is different from encouraging healthy food types (26). A ban on certain foods interferes with peoples' freedom of choice and the government suffers the risk of again being labelled a 'nanny state'. Whether an individual picks up a bar of chocolate from the counter for example should remain their choice. Therefore for a ban to be placed on food types is in a sense ethically unacceptable likewise.
- 38.** *Social service involvement* - Incidences have been reported in which parents have been charged with neglect for 'allowing' their children to get morbidly obese (27). As a group we had an appreciation for social services input in insuring the health of the population, especially children who are more vulnerable to neglect. But how such matters should be carried out is yet another topic of debate and controversy.
- 39.** Health education and motivational interviewing are examples of methods that we feel social services should focus on in instances where parents are struggling to keep their children's weight in a healthy range. But going on to charge parents with neglect we felt was crossing the line as far as ethics are concerned.
- 40.** Having heard many statistics about the growing problems associated with more and more people in the UK being labelled obese, could public involvement perhaps be implemented to target this rise in obesity which is proving to have detrimental effects on the nation? It has been previously discussed that perhaps there is a duty of the

state and also therefore the public to prevent harm to individuals. Striking statistics about the prevalence of obesity related complications surely proves that intervening early to prevent obesity can be seen ethically as aiming to reduce harm to the greater number.

41. There are a growing number of children in the UK who are either overweight or obese. 31% of boys aged between 2 and 15; and 29% of girls in the same age bracket are classed as either overweight or obese. These figures are striking and are leaving children of this generation at risk of serious complications in the future (28). Table 1 below shows the relative risks associated with obesity in adults. It is evident from those few examples that obesity leaves individuals more at risk of harm from conditions such as hypertension and type 2 diabetes, and therefore interventions to try and curb these complications should be beneficial. By aiming interventions at children, it could be argued that the risks of future health problems can be minimised even further.

<u>Disease</u>	<u>Relative risk for women</u>	<u>Relative risk for men</u>
Type 2 Diabetes	12.7	5.2
Hypertension	4.2	2.6
Myocardial Infarction	3.2	1.5

Table 1 adapted from (29)

42. So how can the public intervene? Thompson describes a community based program already in place which looks at tackling diabetes (30). The article discusses how this program could be adapted to focus on tackling obesity among adolescents in the community. The idea of the program is to consider youth development practice and theory and employ strategies to prevent obesity that provide opportunities, skills, and support in a safe environment (30).
43. The diabetes program works on the basis of workshops where individuals from communities get together and read through information, do role plays together aiming ultimately for promotion of healthy living as a tool for self learning. Implementing the same style workshops for targeting obesity could be a very good idea. One particular slant on this would be to have volunteers who offer to run these workshops for young people. Surely preventing obesity from a young age is beneficial in the sense that ethically you are reducing the risk of complications and therefore promoting good for the greatest number of people?
44. On face value this sounds ideal, however, targeting campaigns at young people could induce a 'fear of fatness,' an area which will be discussed later (see paragraph 52). So are these workshop groups also going to cause this? To minimise the chances of inducing a 'fear of fatness,' rather than focussing on 'good' and 'bad' food, the workshops should focus on promoting healthy lifestyles, including healthy eating, eating everything in moderation, cookery classes and also promoting exercise regularly.
45. Workshops for children should allow them to discuss ideas about healthy dinners, how they could encourage children in their communities to get together and have

regular exercise meetings such as rounders in the park weekly or something along the same lines. Could however, promoting healthy living in children, have a positive effect on their parents lives as well and hopefully make them re-think their lifestyles and promote reductions in obesity? If the children go home from their workshops with healthy dinner ideas, they can get involved with the cooking and have a say in what they are eating rather than relying on their parents to cook their meals, which due to financial issues and work commitments to name a few, may be convenience foods or fast food take-aways. After all, it has been shown that children are more at risk of having an overweight/obese BMI if they are from families where their parents have a raised BMI. Figures show that 24% of boys aged 2 to 15 have a raised BMI if their parents do compared with 11% of boys having a raised BMI from families in which their parents have a normal BMI (28).

- 46.** In order not to discriminate against anybody, these workshops must not 'pick and choose' the children they allow to attend. They must be open to all children from the community. After-all, promoting healthy living to children who are not obese already may have positive effects on their future lives, so the aim is to impact their lives now for the better and also for their future lives as well. Making children aware from an early age may also make them less likely to raise obese children in the future.
- 47.** In terms of liberty, some people may argue that these workshops are taking away peoples freedom of choice and forcing children to attend. However, advertising these workshops as open to everybody will allow individuals, either the parent or the child the choice as to whether or not they want to attend.
- 48.** Public involvement enhances ethical backing to planned interventions, and in the case of tackling childhood obesity could prove useful. Seeking public input prior to starting an intervention means that they are given the choice to opt out, voice disapproval or suggest improvements. The involvement of parents before implementation of childhood obesity-tackling schemes could be integral to ensuring only realistic and effective strategies are used.
- 49.** Introducing measures in the future without any prior public involvement, could lead to public opposition and ineffectiveness. Intervening without this knowledge would probably lead to more tentatively approached, conservative interventions that may not have the decided effect.
- 50.** Health promotion is an increasingly evidence based field, so should public involvement and pilot studies be introduced to look at not only the effect promotions have on children, but also the knock-on effect on the parents in terms of their ability to facilitate this behaviour change? The converse could also be considered though; do health promotion schemes aimed at adults provide an initial trigger for parents to help change the lifestyle of their children?
- 51.** Obesity is a tough issue to tackle due to an overall measurable outcome for a community being tough to establish, and to have any effect takes a long time. The information gathered from pilot studies etc. would prove useful in creating justification for future interventions.

- 52.** Encouraging 'fear of fatness in children' - There has been much publicity about the rise of obesity in children, including Government campaigns targeting schools and supermarkets. It was estimated in the Department of Health's 'Obesity Guidance for Schools' (2007) that one-in-five children aged between 2-15 in England would become obese by 2010 if no action was taken (31). This has indeed occurred even with an increased awareness of healthy and unhealthy foods, and the benefits of exercise (32). However, far less exposure is given to the rise in schoolchildren of the potentially serious condition 'fear of fatness' that, evidence shows, has occurred as a result of these campaigns.
- 53.** It is argued that the over-simplistic nature of the campaign messages, plus the great emphasis placed on obesity in the young, may be beginning to create its own set of new problems, whilst having limited or no impact on the growth in obesity itself.
- 54.** The following extract is taken from 'The Times' (November 3rd 2008) and highlights the potential consequential effect following simplistic health messages sent out to children:

'A nine-year-old I know has recently "taken up" cycling. A few pounds over the mark, though by no means obese or even significantly overweight, he believes that exercise in regular bouts is the solution to his podginess. So on Saturday mornings he heads out with one of his parents on a predetermined bike route with the sole aim of burning fat. The farther he cycles the greater his sense of accomplishment, not in terms of sporting endeavour but because he can congratulate himself that day on expending more calories than he has consumed.

This boy equates exercise with slimness, and slimness with conforming to society's ideal of how a person of his age should look. He can tell you which foods are calorie-laden and the number of daily steps that need to be taken to stay healthy. On the face of things, perhaps, such a level of bodily awareness should be applauded among a generation so prone to obesity. Yet this boy is deeply self-conscious about his appearance and weight - warning signs, say experts, that he is one of a growing breed of youngsters with an extreme fear of obesity known medically as baryphobia.

Evidence that his mentality is becoming more common among his peers came last week in a survey of 150,000 children by the education watchdog OFSTED. Findings indicated that almost one quarter of ten-year-old boys and one third of girls the same age are worried about their body image and shape'. (*Names have been changed*) (33).

- 55.** One view is that anti-obesity messages delivered in schools have been over-simplified, to the extent that children believe that some foods are 'good' and others are 'bad' and that exercise can prevent getting fat. This was briefly discussed

previously as an issue which could perhaps arise as a result of workshops put on for children in the community. There seems to be no effort to explain the importance of balance, and 'everything in moderation'. It does not require much of a leap of imagination to see how more extreme behaviours and attitudes to food and exercise can emerge as per the 'fear of obesity' condition, as children compete with their peers to live up to the standards as presented, seeking to avoid entire food groups, or over exercising. In the most extreme cases, evidence indicates this can lead to eating disorders such as anorexia nervosa and bulimia.

- 56.** Meanwhile, despite the campaigns, the obesity epidemic continues in children and young people. There have been no significant changes in proportions of overweight and obese children of school age since the health publicity began (32) While the over-simplified explanation focusing on the individual's choice of whether or not to put food into the mouth may be the easiest to communicate in a campaign, the underlying science tells us there are many more dimensions to this condition other than behaviour of the individual alone. Some children may live in an environment or socioeconomic climate where to eat healthily is difficult. Some may have a familial, endocrine or genetic condition that predisposes them to an 'overweight' status. This being the case and if having told them that being fat is bad, couldn't it lead to low self-esteem and depression in these disadvantaged children? If conforming to society is not possible, bullying and discrimination by those 'normal weight' children may result. For example, the genetic condition Prader-Willi, where the feeling of satiety is not felt and if not recognised and dealt with early on, continuous eating will lead to obesity (34). This could potentially lead to their exclusion in society.
- 57.** The evidence is clear that current campaigns are not stopping the increase in obesity, whilst they are leading to an increase in the potentially serious condition of 'fear of obesity'. The opinion is offered that unless the campaign message is made less simplistic, and encompasses concepts of moderation and normal variation rather than simplistic 'right and wrong' behaviours, it will continue to create more problems than it solves.
- 58.** With all the different diets and slimming programmes available, it is not hard to see that the public is confused about what, or what not to eat. Although the link between lifestyle and obesity is less well understood than was previously thought, the fact is what constitutes a healthy diet and lifestyle has never changed, only people's perceptions, and a clear, unified message to the public is required. It was interesting to hear this particular view point when, as a group, we interviewed a dietician with a background in public health. She eluded to the fact that if advertising campaigns aim at the 'eat-well plate,' the message about healthy eating would be much more clear cut and leave fewer people confused about the conflicting messages out there around the topic of healthy eating (35).
- 59.** Obesity is a large problem that for many reasons mentioned above needs tackling. Behaviour change is a promising method of doing this, but whatever intervention is used needs to be effective and ethically sound. The problem posed by obesity is its multi-factorial nature, which means for an intervention to be effective it must account for as many of these factors as possible. Aiming it at multiple demographics such as children and adults, in multiple places; at school, home and in the community, and promote different messages such as a good diet and sufficient exercise.

60. A message widely spread in this manner is more ethically acceptable, as it aims to avoid the possibility of coercion, because it is aimed equally at different people, so no one group of people is better informed than another.

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October 2010

Memorandum by Andrew Darnton, AD Research & Analysis Ltd (BC 86)

Submitted on an Individual Basis.

What is behaviour change? [Questions 5 and 7]

1. Behaviour change is best understood as a practical discipline, and an approach to policy making. This definition suggests that it is misleading to distinguish between 'behaviour change interventions' and 'other policy interventions' [Question 7]. Behaviour change can best be thought of as a capability, providing policymakers and associated staff with different ways of thinking about behaviours when designing policy interventions.

2. Policy intervention itself is described in the HMT's Green Book as being required to address either of two objectives (HMT 2003:51):

- i) *The achievement of economic objectives by addressing inefficiencies in the operation of markets and institutions; and*
- ii) *The achievement of an equity objective, such as local or regional regeneration*

Understood in this way, there is little difference between the purposes of policy intervention and behaviour change interventions, which are often designed to achieve a specific social good, such as an 'equity objective' (see for instance definitions of social marketing, in eg. French & Blair Stevens 2005). If the ends of intervention are similar, it is the means of behaviour change interventions which are different: behaviour change puts an understanding of human behaviour at the heart of the policy process. In this context, the (increasing) use of the term 'behavioural insight' can be helpful: drawing attention to the process of policymaking, not the type of intervention which results from that process.

3. Such a definition can be helpful as it reminds us that:

- a) An understanding of behavioural theory should be embedded in all policy making processes (behavioural insight should be a matter for policymakers, researchers and strategists of all ranks, not a bolt-on capability vested in eg. an analytical or communications team)
- b) Interventions which are explicitly labelled as 'behaviour change interventions' are supplementary to the existing policy context for a behaviour – they are likely to be counteracting the effects of the pre-existing policy landscape, and more than likely at an additional cost
- c) Targeting individuals through 'behaviour change interventions' may not be necessary (or effective) when their behaviour is in large part determined by the existing policy context, and the kind of everyday life it sustains

4. If we work from the definition above, the next question to ask is naturally...

What kinds of theory should provide the understanding of human behaviour which underpins policymaking for behaviour change? [Questions 1 & 2]

5. Numerous academic disciplines provide theories which explore the motivations of or influences on human behaviour. These disciplines can be taken as complementary to one another; each (to varying extents) compensates for blindspots in the others' methods, and pushes into areas which preceding disciplines had not accounted for. For instance, behavioural economics addresses shortcomings in the working assumptions of standard (neoclassical) economic theory regarding the goals and methods of the human agent. Taking

this view, no one discipline or theory has a monopoly on explaining human behaviour; they work on different assumptions, model different factors, and account for different amounts of variance in the end behaviour (or decline to believe these outcomes can be modelled empirically). Accordingly, as complete an understanding of a given behaviour as we can muster is likely to be assembled by reference to multiple theories of behaviour. While this is the case for relatively simple behaviours – such as brushing teeth – it is even more apparent when faced with complex networks of behaviours, such as those relating to obesity or climate change. And in the case of such complex and seemingly intractable behavioural problems, it is especially likely that we will need to draw on behavioural insights from multiple disciplines – hence the truism of behaviour change guidance that there is no ‘silver bullet’ (eg. Defra 2008; OECD 2010). Indeed the challenge for those developing behaviour change guidance is to provide a framework which is sufficiently rigid to enable straightforward and consistent application by practitioners, but sufficiently flexible to enable the use of diverse and sometimes conflicting models and theories.

6. As the GSR Knowledge Review concluded, there is no “*one winning model*” (Darnton 2008:28). The skilful practitioner should be able to run multiple models and flick between them, drawing on the strength of each disciplinary approach in building insight, and developing policy approaches. To underline the differences between some of the principle schools of theory, and their implications for policy, the following points are sketched out below (and illustrated with figures in Annex A):

- **Behavioural Economic principles**

7. Behavioural economics takes as its starting point the working assumption of standard economics of the individual as rational actor, operating to maximise his utility. However, behavioural economics recognises that in fact we tend to accept suboptimal outcomes on a regular basis, not because we are irrational, but because we are operating under cognitive constraints (of time, or with imperfect information – see eg. Simon 1957). The resulting behavioural theories take the form of principles designed to work with the heuristics and biases on which people tend to base their judgements (see. eg. Tversky & Kahneman 1974). These principles have been popularised recently through ‘Nudge’ (Thaler & Sunstein 2008), and form the core of the understanding of human behaviour represented in the ‘MindSpace’ guidance from the Cabinet Office (Dolan et al 2010 – see Figure 1).

Implications for Interventions

Behaviour change interventions should work with an understanding of the automatic mind, and targeting the ‘decision context’ within which individuals act (providing incentives, framing options, priming the senses etc). An emphasis on ‘choice editing’ is apparent, which preserves the autonomy of the individual agent, but within a prescribed environment (which is conceptualised narrowly, as the ‘decision context’, not broadly as eg. the ‘social world’).

- **Social-psychological models**

8. Social psychology holds that behavioural outcomes are determined by individuals, acting in the context of their social networks. The most prominent models here, like Ajzen’s Theory of Planned Behaviour (eg. Ajzen 1991 – see Figure 2 below), show behaviour arising in individuals’ beliefs, and following a course via intentions through to behavioural outcomes. The individual is prominent in this conceptualisation of behaviour; s/he is the driving force, and all the determining factors which matter are measured at the level of the individual, through their self-reported perceptions.

Implications for Interventions

Behaviour change interventions should seek to win hearts and minds, using information and persuasion to change individuals' attitudes, and hence their intentions. Social norms are also prominent, and norm-based interventions can play on the magnetic power of norms, sharing information about what (important) others do in order to influence people's behavioural choices.

- **Ecological models**

9. Ecological models evolved from social psychology, and have been widely applied in contexts such as public health, recognising the evidence that health inequalities arise from poor quality local environments. Ecological models set the individual in the context of their immediate environment, and ultimately wider society. Models such as Gatersleben and Vlek's Needs Opportunities Abilities (NOA) model effectively nest individual motivations (Needs, Opportunities, Abilities) within a higher tier of macro-societal influences (Gatersleben & Vlek 1998 – see Figure 3). These macro influences, such as technology, institutions and culture, set boundaries around the behavioural choices that are open to individuals.

Implications for Interventions

Behaviour change interventions should target both individual-level factors (intra- and inter-personal) as well as local environmental factors, and recognise the influence of the macro societal drivers. Individual-level interventions are likely to be insufficient without changes to the local environment, and in society more widely.

- **Systems Thinking**

10. Systems thinking is a practical discipline more than a body of theory; it has been described as “*a discipline for seeing wholes*” (Senge 1990). The central premise is that systems have “*emergent properties*” (Checkland 1999); the components of systems interact to create effects (often unforeseen) which the components could not have generated singly. Thus systems are more than the sum of their parts. One of the outputs of adopting systems thinking approaches are systems maps, which can be used to describe complex networks (or “*messes*”, being systems which are particularly defined by uncertainty – with climate change being a good example, although the NHS could also qualify). One of the best known recent maps is the Obesity System Map, produced for the Foresight ‘Tackling Obesities’ project (Foresight 2007 – see Figure 4).

Implications for Interventions

Behaviour change interventions should target factors across the system, aiming for change at multiple points; anything less, and the system will bounce back, due to its inherent resistance. Multi-component interventions are thus required, working at multiple levels of scale (eg. individual; community; organisational; societal).

- **Sociological models**

11. Sociologists tend to talk about practices rather than behaviours, and through this terminology they put the emphasis on the origins of human conduct in the structures of society, rather than in the agency of individuals (see eg. Giddens 1984). A branch of sociology called practice theory addresses these concerns centrally, describing how practices are recognisable entities which exist as concepts in their own right; individuals simply reproduce the practices. While practice theory is an emerging area of study, models are being developed to describe the elements which come together in a practice; one of the most functional of these is Elizabeth Shove's model of the three elements in a practice: Materials, Meanings and Procedures (Shove 2008– see Figure 5). In practice theory,

individuals are effectively 'off the model', and the practice itself, and the elements which comprise it, is the proper area of enquiry.

Implications for Interventions

Behaviour change interventions should focus on understanding the elements in the practice in question, and identify stakeholders who are responsible in some way for each of the elements. In concert, these stakeholders should modify their elements, with the objective of changing the overall practice by breaking and remaking the bonds between the elements. Ultimately, practice theory suggests there may be no need to target individuals directly – instead, altering the materials, procedures and meanings which make up the elements of the practice to be changed.

12. This breathless overview of five distinct disciplinary perspectives on human behaviour is intended simply to underline that different theories can reveal different factors, influences and elements which contribute to behavioural outcomes. Different of these theories may be more suitable for intervening in different kinds of behaviour (we might suggest referring to, for instance, behavioural economics where there is some kind of decision (especially financial), systems thinking where there is a complex 'systemic' problem involving resistance and feedback, or practice theory for routine behaviours embedded in the patterns and rhythms of daily life). However, above all it is vital that all these perspectives – and more – are open to policymakers for them to draw upon in building behavioural insight. No one discipline should in principle be privileged among any other – although in practice, when tested in context, those approaches which produce the best outcomes should be preferred.

What are the implications of these kinds of theory for evaluation? [Questions 8 & 9]

13. The above theories have different implications for policy evaluation. For instance, individual-level interventions are likely to be the most easily evidenced, by observing individuals' actions, or asking them to respond to surveys (ie. economics and psychology). However, even here there is a distinction between causal evidence from laboratory experiments (being the more numerous) and that gathered in the real world (where behavioural experiments are harder to set up – especially Randomised Control Trials). Compared to these individual-level interventions, ecological interventions are complex to evaluate (and especially to isolate the effects of different factors), while looped theories (eg. from systems thinking or practice theory) tend towards impossibility for evaluators, given their different accounts of causality.

14. It is also true that there are relatively few evaluations of behaviour change interventions available, especially those coming from the UK government (this was certainly our experience during the preparation of the DFT Thinkpieces on 'Behaviour Change: What Works for Transport?' – see Bonsall et al 2009 – and it was apparently also the case during the IfG team's work on Mindspace – Dolan et al 2010). What evidence is available tends to relate to individual-level interventions, especially those following the 'therapeutic' model from public health. For instance, meta-analysis of individualised health prevention interventions has identified the most effective 'Behaviour Change Techniques' (BCTs) from which those interventions are composed (Abraham & Michie 2008). In terms of diet and physical activity interventions, the most effective interventions were those which included the BCT 'prompt self monitoring', in combination with at least one of four other BCTs ('prompt intention formation', 'prompt specific goal setting', 'prompt reviewing of goals', and 'provide feedback' – see Michie et al 2009). While this close and well-evidenced work

supports the translation of effective techniques between interventions designed for comparable purposes, there still remains the question of whether the factors being measured are all the factors which count. For instance, self regulation is key to dietary control, but ecological models popular in public health would also point to the availability of cheap, energy-dense food in people's communities (see eg. Canoy & Buchan 2007).

15. An alternative approach is to look for where behaviour change has occurred, and a new behaviour has become normative in society. When this approach is followed (as we did on the DFT Thinkpiece projects), what results is effectively a narrative – for instance, the story of how recycling became normative. Elements here include EU legislation, sparking fiscal measures and market mechanisms, which transform the practice of local government and the waste sector. Meanwhile innovative recycling practices are drawn in from the community sector, and new institutions (such as WRAP) are set up to oversee public engagement, and employ educational and marketing techniques. Most importantly, the new infrastructure – kerbside collection – is highly visible, and brings social norms strongly to bear on the practices of streets and neighbourhoods. A similar exercise can be undertaken for smoking (see eg. *ibid*, and earlier versions in Halpern et al 2003, and West 2007), resulting in a similar narrative format, showing how an array of measures and stakeholders come together during the process of social change –but not accounting empirically for their relative influence.

16. While such narratives are arguably the most accurate way of assessing what works in policymaking for behaviour change, they do not respond well to calls for cost-benefit analysis of interventions. Furthermore they resist any attempts to bring behaviour change under the auspices of a single licensing body – a NICE for behaviour change. If a systemic understanding of behaviour is applied, empirical support for particular approaches is likely to prove illusory; but we must also guard against the danger that what we can measure becomes the sum total of what we aim to achieve.

What are the cost implications of these kinds of theory? [NB Additional Question to those included in the Call for Information]

17. Just as different disciplinary approaches bring with them different implications for interventions, so those interventions are likely to have different cost implications. This question demands to be asked in the context of behaviour change given the current emphasis on cutting the deficit. Mindspace is positioned as part of the 'more from less' agenda, through which smarter policymaking, grounded in behavioural economics, can produce improved outcomes for a lower price:

“New insights from the science of behaviour change could lead to significantly improved policy outcomes, and at lower cost, than the way many conventional policy tools are currently used.”
(Dolan et al 2010:10)

18. There may be a class of policy problems in which this cost-saving scenario is plausible. As with the definition at the start of this submission, Mindspace positions behavioural insight within the policy process, such that behavioural insight informs policy development, rather than generates 'behaviour change interventions' which are additional to more traditional policy interventions. Yet for there to be a saving, presumably the behavioural problem needs to substitute a 'smarter' policy for a pre-existing (dumber) one; hence the savings are to be found in correcting inefficiencies in existing policies, effectively cutting wastage. Where new behaviour changes are needed, it may be likely new interventions are required – however 'smart', these are likely still to require some initial investment.

19. Many of the objectives to which behaviour change approaches have been applied are not about correcting inefficiencies, but bringing about long-lasting social change. For instance, tackling obesity is likely to be a long-term project (needing a strategy running for 20 to 25 years – see Fox & Hillsdon 2007). The model for re-engaging the public in their own health, presented in the Wanless Review of 2003, runs across a 20 year timeframe. That model, on which the Choosing Health white paper was based, pursues an ‘invest to save’ model, whereby the costs of public health interventions are offset against the total cost to the NHS of not intervening, estimated at £30bn across that 20 year period. A similar ‘invest to save’ model is apparent in the Stern Review on climate change, where pounds should be spent now to avoid having to spend £5 for each of those pounds in 2050. Other embedded social problems also follow similar timeframes – for instance, extending working life (a DWP agenda) - and are likely also to require some central investment to catalyse the “*deep-rooted shift in cultural values and social norms*” which is required (as Susan Jebb has written in the context of tackling obesity – see Jebb et al 2007:28).

20. However it is in this context that one of the disciplinary approaches outlined above may prove particularly applicable. While work to apply practice theory to policy problems is only just beginning (see Darnton 2010 forthcoming), this sociological approach may have advantages over other methods: first, because it precisely does not seek to target individuals (they are, it will be recalled, ‘off the model’), and second, because it means working in collaboration with a group of likeminded stakeholders, united by their shared interests in a common practice. Government should take the lead here, and the practice-based approach identifies many places where government could refocus existing policy in order to support particular practices. For instance, taking the example of cutting car use from the school run (see ‘worked example’ developed in a workshop with the DFT – Figure 6 below), government could change the hard infrastructure (eg. road planning) as well as the softer infrastructure (eg. local parking regulations, or school hours). But many of the elements are in the hands of other stakeholders, both on the ‘hard’ (eg. kit manufacturers) and ‘softer’ side (eg. media portrayals of SUVs as ‘safe’).

21. Employing an understanding of behaviour grounded in practice theory could enable government to take a convenor role, and put the onus on change out there among the stakeholders in society. Not only might this chime with current attempts to cut the deficit, but it might also resonate with the Big Society.

Conclusion [Questions 4, 11 & 12]

22. The vision of behaviour change outlined in this paper is one characterised by interdisciplinary and multi-stakeholder working. This approach is deemed best for tackling intractable problems, such as those around climate change or obesity, where the longterm trends are going the wrong way, and transformational change is required to curtail further personal harms and head off impending costs to the state. While nudging has been shown to deliver effective outcomes in particular decision contexts, it is unlikely that we can nudge our way to a normal-weight population, or to 80% less carbon emissions by 2050. Behavioural economic insights are needed as part of a bigger kitbag of theory, from which we can pick the tools best suited to the task at hand. While a central behaviour change resource for government departments (in the shape of the Cabinet Office’s Behavioural Insight Team) is to be welcomed, it is to be hoped that this development does not close down the range of explanations for human behaviour, and the range of potential multi-stakeholder interventions, at a time when innovative solutions from all comers are required.

The vision of behaviour change outlined here is one of thinking spaces created across and beyond government, where collaborative interventions can be developed across society as a whole, to advance social change. Models are one part of that vision, not as prescriptions for how policy should be made, but as “*concepts that will help people use their heads*” (Triandis 1977:283).

8 October 2010

Annex A: Figures

Figure 1: The MINDSPACE mnemonic (Dolan et al 2010)

M I N D S P A C E	Messenger	we are heavily influenced by who communicates information
	Incentives	when responding to incentives, we are loss averse and strongly discount the future
	Norms	we tend to do what those around us are already doing
	Defaults	we ‘go with the flow’ of pre-set options
	Salience	our attention is drawn to what is novel and seems relevant to us
	Priming	our acts are often influenced by sub-conscious cues
	Affect	emotional associations can powerfully shape our actions
	Commitments	we seek to be consistent with our public promises, and reciprocate acts
	Ego	we act in ways that make us feel better about ourselves

Figure 2: Ajzen's Theory of Planned Behaviour (TPB, 1986, in Ajzen 1991))

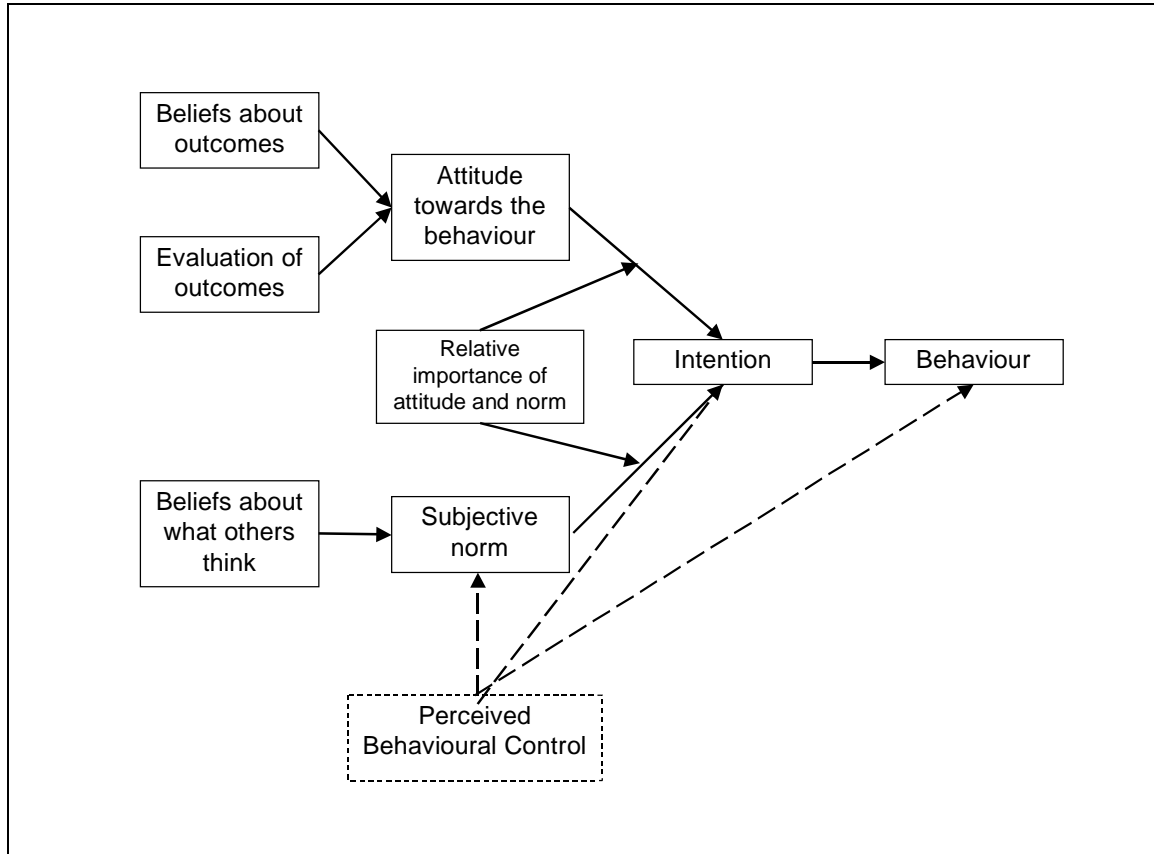


Figure 3: Vlek et al's Needs Opportunities Abilities (NOA) Model (1997)

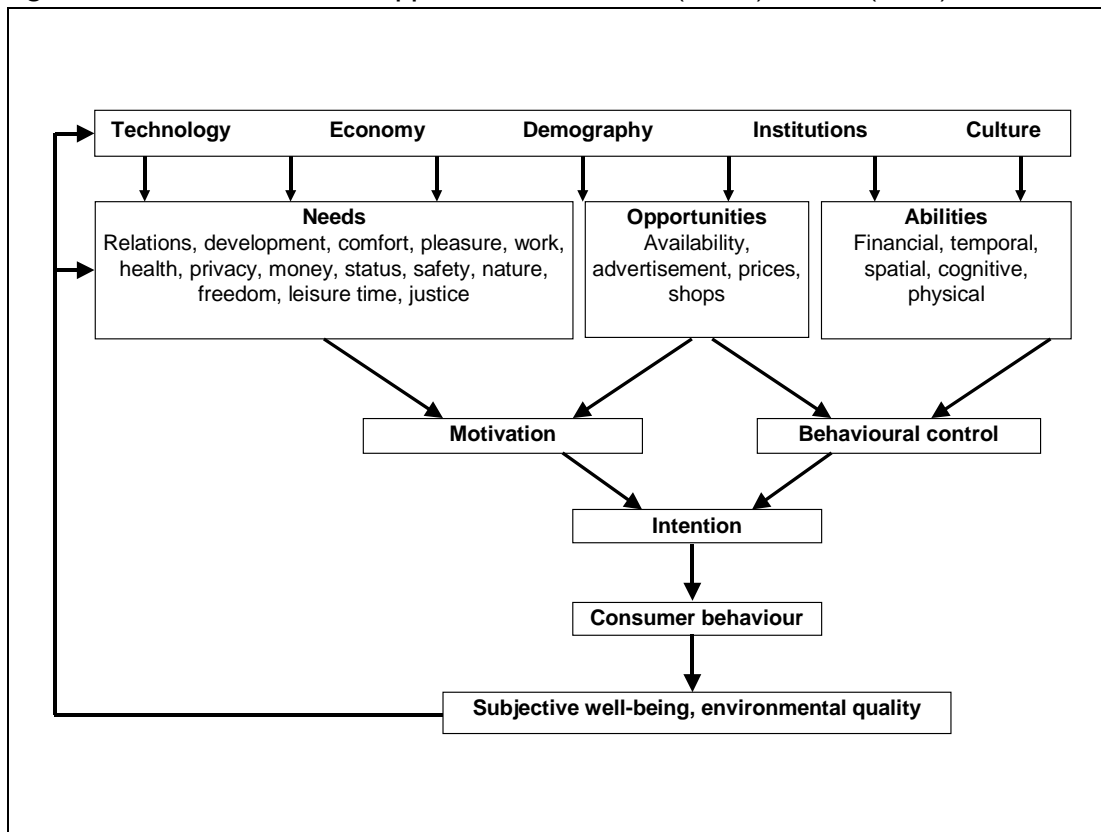


Figure 4: Foresight's Obesity System Map (2007)

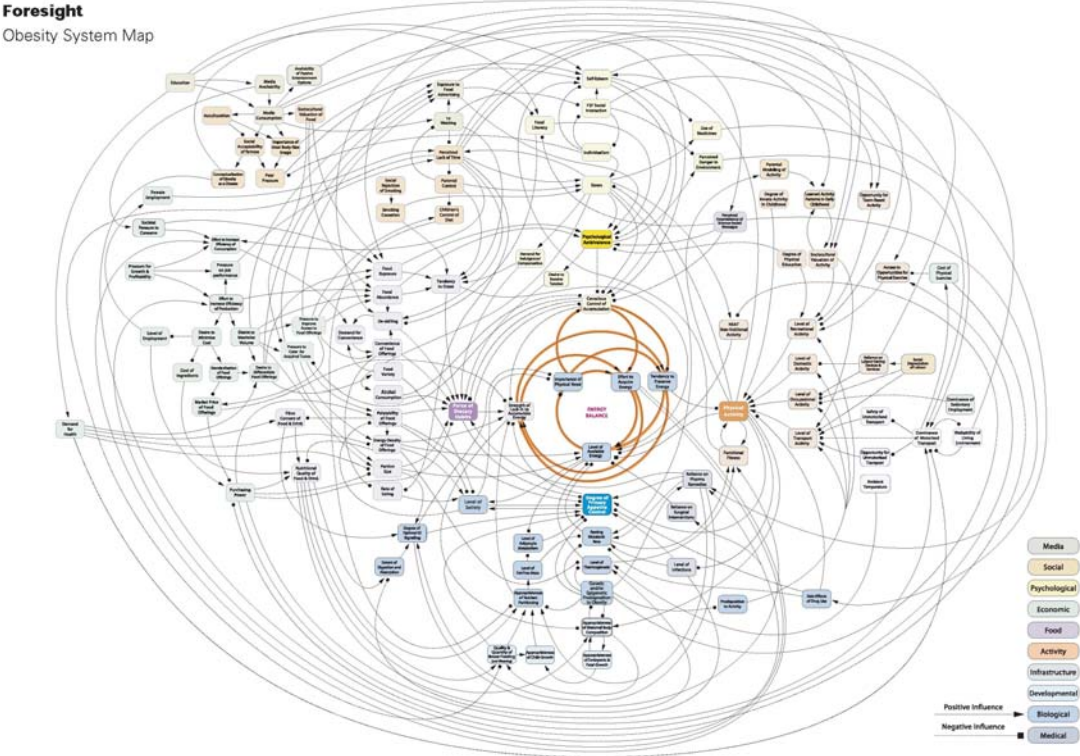


Figure 5: The integration of elements in practices as habits (Shove 2008)

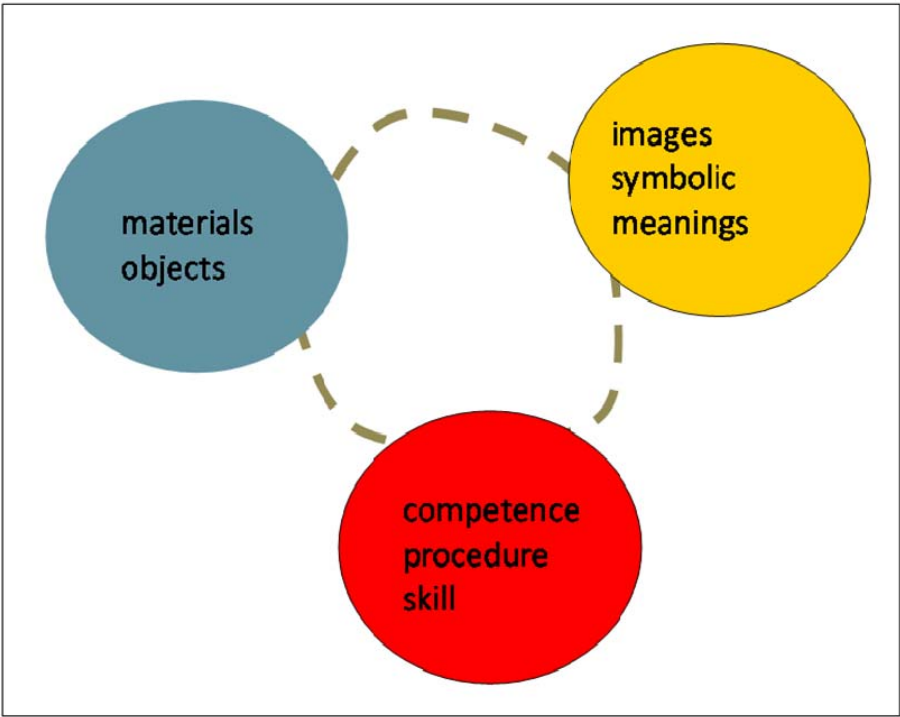
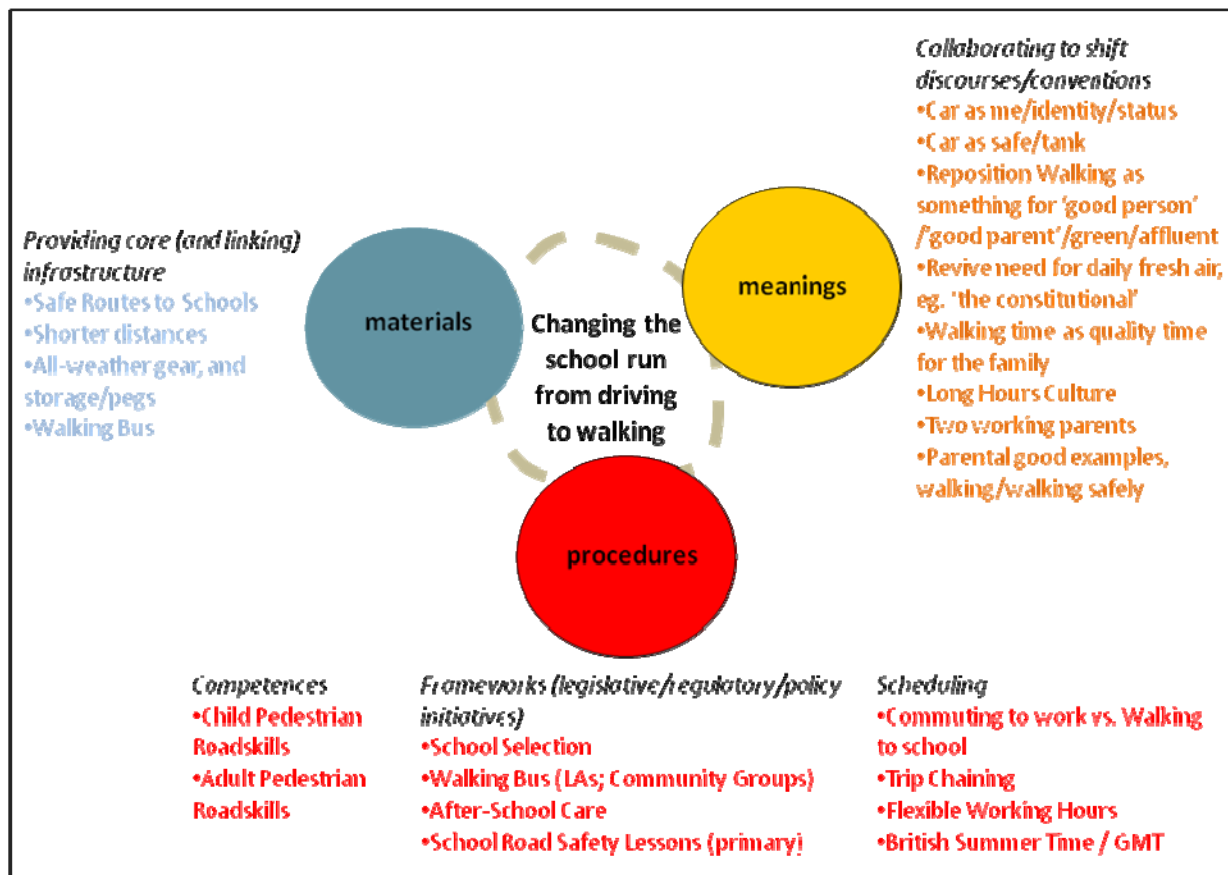


Figure 6: 3 Elements Worked Example: Changing the School Run (Darnton 2010)



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8 October 2010

Memorandum by the Development Education Association (DEA) (BC 63)

I. About DEA

I.1 DEA is an education charity that promotes global learning. We work to ensure that people in the UK learn about global issues such as poverty and climate change and develop an open-minded, global outlook. DEA defines global learning as education that puts learning in a global context, fostering:

- critical and creative thinking;
- self-awareness and open-mindedness towards difference;
- understanding of global issues and power relationships; and
- optimism and action for a better world.

I.2 In recent months DEA has been focusing particularly on the role of education and engagement in promoting behaviour change on global issues. **The evidence for this submission is taken from a recent internal review of 95 literature sources on behaviour change and associated topics.**

I.3 DEA is a membership body, with over 150 organisational members including subject associations, universities, local authorities and many development and environment NGOs in the UK.

2. Response to specific questions

2.1 What is known about how behaviour can be influenced?

2.1.1 There is an ongoing debate within the behaviour change field regarding the relative efficacy of choice editing ('nudge') and deliberative engagement (broadly characterised as 'think'). DEA's review of research finds an important place for deeper deliberative engagement to complement behaviour change work through the media and through 'nudging' members of the public. Research finds that deliberative dialogue helps the public to learn more about an issue, empowers them to take action, and could prevent a damaging loss of public trust in government policy and practice.

2.1.2 There is widespread agreement in the literature that effective engagement, whether deep or shallow, fosters a person's emotional connection to an issue and encourages them to view an issue through a positive frame. There is also evidence that effective engagement on issues such as international development and decarbonising public behaviour appeals to people's latent values of empathy, co-operation and security, and that deliberative dialogue can be particularly effective at bringing these values to the fore.

2.1.3 The literature suggests that deliberative engagement will not appeal to everyone, but nor is it only for those who are already engaged in an issue (such as tackling global poverty or pursuing sustainable development). There is evidence that deliberative engagement is particularly valuable when communicating with the public about complex, uncertain areas of policy where there are no easy answers (for example how to eradicate absolute poverty globally).

2.1.4 Any organisation (government or NGO) seeking to implement a programme of mass deliberative public engagement is likely to face considerable challenges. The literature

suggests that these challenges relate primarily to the costs of deeper engagement, bringing engagement to scale, and creating a compelling offer for people to take part. Whilst these challenges are not insurmountable, DEA's analysis of the literature suggests that an alternative to mass engagement may be more feasible. One alternative is to seek out 'catalytic individuals' who can engage their own communities in changing their behaviour on a particular issue.

2.1.5 Reviews of the literature on catalytic individuals indicate that they are people who have a disproportionate influence on the attitudes of those around them. They tend to be charismatic, trustworthy, altruistic and motivated by actions that can help their community. Evidence suggests that engaging them in an honest, in-depth conversation about international development can give them sufficient knowledge and convince them to act as catalysts for public behaviour change. Investing in deep engagement with these catalytic individuals could yield a disproportionate return in terms of public behaviour change.

2.1.6 However, the literature also indicates that it is not enough to advocate a particular view on a public policy issue to catalytic individuals, because they place a high value on finding things out for themselves, tend not to trust 'received wisdom' and therefore would need to be enabled to reach conclusions based on their own learning.

2.2 What are the policy implications of recent developments in research on behaviour change?

2.2.1 Consider focusing part of central and local government behaviour change work on finding ways to seek out and invest in a relatively small number of catalytic individuals.

2.2.2 Given the novelty of this approach to behaviour change, consider investing in a pilot project to test the impact of work with catalytic individuals.

2.2.3 When engaging with catalytic individuals, offer them opportunities to come to their own conclusions about the public policy issues being discussed.

2.3 How should different levels of intervention (individual, organisational, community and national) and different types of intervention (legislative, fiscal, educative) interact in order to achieve policy goals more effectively?

2.3.1 DEA's review of research indicates that behaviour change interventions are often most effectively delivered at a community level, by a trusted and known source (for example a fellow community member).

2.3.2 Notwithstanding this finding, there is a clear case for combining educative interventions with both legislative and choice editing ('nudge') interventions (which may include fiscal interventions). Changes in behaviour rely on a complex system of factors, and tend to require all three of these types of intervention if their effectiveness is to be maximised.

2.4 Should behaviour change interventions be used in isolation or in combination with other policy interventions?

2.4.1 See paragraphs 2.3.1 and 2.3.2 above.

2.5 What mechanisms exist within government to coordinate and implement cross-departmental behaviour change policy interventions?

2.5.1 Mechanisms to coordinate and implement cross-departmental educative interventions relating to behaviour change are at present inadequate. The recent draft joint Global Learning strategy between the Department for Education and the Department for International Development is a very promising development to promote cross-departmental

coordination on education about tackling global poverty and pursuing sustainable development.

2.6 When is it appropriate for the state to intervene to influence the behaviour of members of the public and how does this differ from when it is appropriate for the commercial or voluntary sector to intervene? In particular, when should this be done by outright prohibition and when by measures to encourage behaviour change? Are some methods of producing behaviour change unacceptable? Which and why?

2.6.1 Nudging members of the public into a particular behaviour, whilst proven to be effective, raises ethical concerns in some cases. This is because it does not empower a member of the public to take control of their own circumstances, and understand the reasons for the choices they make.

2.6.2 By contrast, a deliberative dialogue approach has been shown numerous times to be an empowering approach to behaviour change and public engagement in government policy. By entering into an honest, detailed conversation with members of the public about a particular issue, this enables participants to understand the reasons for and against any choices they make, and helps to build understanding and trust about the need for behaviour change.

2.6.3 The ethical issues are not clear-cut here, but on balance DEA's research indicates that a deliberative dialogue and/or educative approach to behaviour change can be more acceptable than either a legislative or choice editing ('nudge') approach.

2.7 Should the public be involved in the design and implementation of behaviour change policy interventions and, if so, how? Should proposed measures for securing behaviour change be subject to public engagement exercises or consultation? Should they be piloted? Do considerations differ in the case of interventions aimed at changing addictive behaviour?

2.7.1 Where possible, public involvement through deliberative dialogue and education can yield strong benefits both to participants and to the government. As such, the public should be involved wherever possible, and one effective way to create this public involvement is through deliberative dialogue about the need for behaviour change.

2.7.2 For further comments on this question, please refer to paragraphs 2.1.1, 2.1.3-2.1.6, 2.2.2. DEA has no comments to make on the case of interventions aimed at changing addictive behaviour.

8 October 2010

Memorandum by Dr Diane Dixon and Professor Marie Johnston (BC 9)

This is a private submission from Dr Dixon and Professor Johnston. Dr Dixon and Professor Johnston are chartered health psychologists (British Psychology Society) and are registered health psychologists (Health Professions Council), Professor Johnston is also a chartered clinical psychologist (British Psychology Society) and a registered clinical psychologist (Health Professions Council).

Research and Development

1. The development of the science of behaviour and behaviour change has seen much progress over the last 5 years. Of particular note is the work around the development of a taxonomy of behaviour change techniques¹²³ and an understanding of the competencies required to deliver behaviour change interventions¹²⁴. This work has been pioneered by health psychologists seconded into Government in Westminster and Edinburgh. This collaborative work between Health Psychologists and Government means that the UK is now well placed to deliver the best evidence from behavioural science and theory into health policy and its implementation.
2. This work has identified many behaviour change techniques, for example, setting SMART (Specific, Measurable, Attainable, Realistic, and Timely) behaviour goals, making plans to deal with obstacles to behaviour change, and restructuring the environment to support the newly adopted behaviour. Recent meta-analyses of intervention studies have identified effective techniques for healthy eating, physical activity and obesity¹²⁵. However, this work has only been able to establish the effectiveness of a small number of techniques. That is not to say only a few techniques are effective, at present we lack the research evidence as to whether other techniques are or are not effective. Thus, there is a need for evidence that can establish the effectiveness or not of a much wider range of behaviour change techniques. Epidemiology indicates that the population needs to change multiple health behaviours, e.g. to stop smoking, reduce our alcohol consumption, eat less but more nutritionally rich food and be more physically active. As a consequence, interventions will need to address multiple health behaviours and this will only be achieved if we have a detailed understanding of which behaviour change techniques are effective and for which health behaviours.

Action Points for Research & Development

- API. Support further research to synthesise evidence from existing primary research to identify which behaviour change techniques are generally effective and which are effective for particular behaviours
- AP2. Support primary research specifically designed to identify which behaviour change techniques are effective across all key public health behaviours (alcohol, smoking, diet, physical activity) and for particular public health behaviours

¹²³ Abraham, C. and Michie, S. A Taxonomy of Behavior Change Techniques Used in Interventions. *Health Psychology*, 2008. 27(3): p. 379-387. Michie, S., et al., From theory to intervention: mapping theoretically derived behavioural determinants to behaviour change techniques. *Applied Psychology: An International Review*, 2008. 57(4): p. 660-680.

¹²⁴ Dixon, D. and Johnston, M. *Generic Health Behaviour Change: a comprehensive competency framework*. Submitted to The Health Improvement Strategy Division, Health Directorates, Scotland, 2009.

¹²⁵ Michie, S., et al., Effective Techniques in Healthy Eating and Physical Activity Interventions: A Meta-Regression. *Health Psychology*, 2009. 28(6): p. 690-701. Dombrowski, S., Sniehotta, F.F., Avenell, A., Johnston, M., MacLennan, G. and Araújo-Soares, V. Identifying active ingredients in complex behavioural interventions for obese adults with obesity-related comorbidities or additional risk factors for co-morbidities: A systematic review. (in press) *Health Psychology Review*

- AP3. Continue to support the secondment of researchers from academia into government to facilitate the translation of the science of behaviour change into policy and practice

Translation of Research into Practice

3. Recent developments in the science of behaviour change present two important opportunities to improve the translation of research into practice. First, there is an opportunity to ensure the workforce has the competencies required to deliver face-to-face behaviour change interventions effectively. Second, there are several routes to behaviour change and not all these routes are currently being exploited equally.

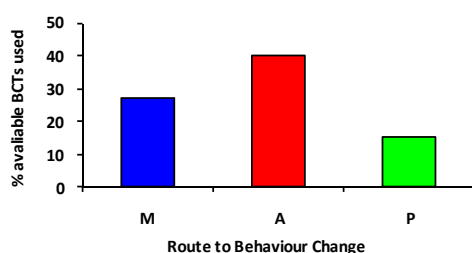
Workforce Competency and Training

4. Effective behaviour change interventions need to be delivered competently to maximise their potential for behaviour change. The workforce needs to have the competencies required to deliver interventions at the level at which they are working. Currently the NHS workforce is trained to deliver interventions for specific behaviours, e.g. trained to deliver smoking cessation, or trained to deliver alcohol brief interventions but not normally both. The evidence that unhealthy behaviours tend to co-occur (e.g. in obesity there may be problem with both eating and physical activity) indicates a need to ensure that the workforce is competent to deliver interventions across different health behaviours, i.e. to deliver generic health behaviour change interventions. To do this we need to identify the competencies required to deliver generic health behaviour change. To this end work that is ongoing in Edinburgh has developed a *Generic Health Behaviour Change Competency Framework* (attached)⁴. This framework is currently being developed into a competency hierarchy to be used to plan training courses at different levels of competence.

Routes to Behaviour Change

5. Behaviour change theory and evidence can be summarised in the form of two routes to behaviour. Behaviour change can be achieved through a route that requires a person to be actively engaged in the process of change. This route requires the individual to develop and maintain their motivation to change and to acquire the skills required to enable them to consistently enact that motivation to change. This route requires effortful cognitive processing and interventions exploiting this route would employ techniques to increase motivation and action on motivation. However, behaviour change can also be achieved through a less effortful route via prompts or cues to behaviour. This route does not necessarily require constant conscious active engagement by an individual. Analyses of behaviour change interventions currently being delivered through UK publicly funded programmes indicate that the effortful route is well represented by interventions currently available but that the prompted route is less so¹²⁶. For example, the figure below shows an analysis of behaviour change techniques used in current UK interventions to promote healthy eating

¹²⁶ Dixon, D. and Johnston, M. *Generic Health Behaviour Change: a comprehensive competency framework*. Submitted to The Health Improvement Strategy Division, Health Directorates, Scotland, 2009.



Percentage of available behaviour change techniques (BCTs) identified in current UK interventions to promote healthy eating

6. Techniques to increase **Motivation (M)** and to enable **Action (A)** on motivation are well represented but techniques that exploit the **Prompted** or cued (**P**) route are less well represented. Interventions for physical activity, alcohol and smoking cessation have similar profiles of intervention techniques. These data present an opportunity to ensure that interventions exploit the prompted route more widely. This neglect of techniques that exploit the prompted route may be of particular importance because they can be delivered at the public health level and do not necessarily require active engagement by individuals. As a result, they may be helpful in reducing social inequalities in health.

Action Points for Translation of Research into Practice

- AP4. Work to develop and establish a national competency framework for the delivery of interventions to change health behaviours, including assessment of competency and the development of training programmes for behaviour change competency
- AP5. Fuller involvement of behavioural scientists in developing practice to ensure that the full range of behaviour change methods are used and in particular that the less effortful methods are not neglected

Policy Design and Evaluation

7. Evaluation of interventions requires the content of the intervention to be reported accurately and in sufficient detail to enable replication. In the past the reporting of complex interventions, of which behaviour change interventions would be an example, has been generally poor. However, this aspect of our science has shown much improvement, recent guidance on the reporting of complex interventions (e.g. CONSORT statement) is contributing to the development of a cumulative behavioural science. The application of CONSORT principles to behaviour change interventions is the focus of **Workgroup for Intervention Development and Evaluation Research (WIDER)**¹²⁷. Government policy could support such guidance on intervention design and reporting that could act as a driver of quality. Policy could address the need for interventions to be specified in a replicable manner, to identify the theoretical framework for their design, to specify the theoretically active ingredients and how they will be measured, to detail their mode of delivery and to identify the competencies required by the people tasked with the delivery of the intervention. Improving the quality of intervention design and reporting is necessary if the effectiveness of an intervention is to be evaluated reliably.
8. The question of whether or not an intervention to change behaviour has been effective has been answered in a variety of ways. Randomised controlled trials using intention to treat analyses remain the gold standard. However, the RCT was designed primarily to establish the effectiveness of pharmaceutical interventions and needs to be carefully implemented in

¹²⁷ WIDER can be found at <http://interventiondesign.co.uk/wp-content/uploads/2009/02/wider-recommendations.pdf>

the evaluation of complex interventions such as behaviour change interventions. The question of whether a complex behaviour change intervention has been successful has been addressed in a variety of ways, but not all of these sources of evidence warrant implementation of the intervention in practice. A briefing note, developed for HISD in Scotland, on different types of evidence of effectiveness is attached (attached).

9. It remains the case that complex interventions, such as a behaviour change interventions, generally fail to achieve high quality on all aspects of design and evaluation. Typically an intervention might be very well developed and designed but poorly evaluated, e.g. the *Health Trainer Manual*¹²⁸, where others are poorly developed but well evaluated¹²⁹.

Action Points for Policy Design and Evaluation

- AP6. Support the work of WIDER to develop a national framework for development, reporting and evaluation of interventions to change health behaviours
- AP7. Ensure that high quality evidence is used to evaluate behaviour change interventions that might be used in practice

Ethical Considerations

10. It has been argued that efforts to promote healthier behaviours limits individual choice. However a large commercial industry is committed to persuasion rather than choice. Commerce is committed to behaviour change through its commitment to selling to generate maximum profits. This requires purchasing behaviour from the public. Where this commercial imperative generates an environment that produces negative health behaviours the Government should act to at least balance the persuasive environment to enable the public to express their freedom to choose.
11. Government should act to enable the public to choose to behave in a manner compatible with their values, without the need for individuals to engage in constant effortful processing. For example, when asked, the public expresses a desire and motivation to eat healthily, to be more active, to stop smoking and to drink alcohol in a manner that does not adversely affect their health. Government could act to enable the public to translate this motivation into action. For example, prompts such as the simple traffic light system to label foods as green for healthy, amber or red for less healthy enables the public to act on their motivation for a healthy diet. However, if this same nutritional information is presented in other more complex ways, for example in the form of a detailed breakdown of constituent ingredients, people do not process that information and make less healthy choices, choices that contradict their values. The ethical imperative for Government is to act to enable the public to exercise their choice by shaping and structuring the environment so it supports the expression of the healthy behaviours the public expresses a desire to achieve.

23 September 2010

¹²⁸ Health trainer manual can be found at:

http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_085779

¹²⁹ Johnston, M. Interventions in primary care: health related behaviour change. In: *Preventing Coronary Heart Disease in Primary Care*. Editor: I. Sharpe for The National Heart Forum. 1995. London:HMSO.

Memorandum by Professor Paul Dolan, Dr Dominic King, Dr Robert Metcalfe, Dr Ivo Vlaev (BC 103)

Influencing behaviour is central to public policy and behavioural approaches can provide tools for policy-makers seeking to reduce obesity or crime, or to increase personal savings or recycling. There are many ways of approaching these problems, and from a range of disciplinary perspectives.

We focus here on the ‘contextual’ determinants of behaviour rather than on the rational or ‘cognitive’ ones – how behaviour can be influenced by the ways in which choices are presented rather than how they are processed. We focus on how much of our behaviour is automatic, driven by the context we find ourselves in (as opposed to reflective, driven by the person we are).¹

There a number of policy tools available to policy makers including incentives and information. The rational choice model, which assumes people consciously seek to maximise their welfare, underlies much of public policy. New insights about the role of the ‘choice architecture’ on our behaviour can be used to enhance existing incentives and information and could generate a new interventions that ‘nudge’ us directions we would like to be nudged.²

In this brief note, we concentrate our efforts on five key issues that require urgent attention, particularly as more academic and policy efforts are directed towards behaviour change: public permission, provider behaviour, distributional concerns, evaluation and dissemination. We conclude with some practical recommendations.

Public Permission

Many people dislike the thought of government intruding into areas of personal responsibility, though they also realise that the state should have a role in behaviour change, especially when one person’s behaviour has consequences for another person’s wellbeing. So before policy-makers consider *how* they can apply new insights, they need to determine whether they *should* be attempting to change behaviour in the first place.

It is vital that where possible the public’s views are taken into account when introducing interventions and permission sought. It may be useful for government to engage better with citizens to explore what is and is not acceptable. For example, in 2006, over 1000 participants took part in the interactive ‘National Pensions Day’, and voted using keypads.

Of course public acceptability should not be the only reason for going forward with behaviour change. Consider, for example, the shifts in attitude of the public following the London congestion charge, where support grew considerably following its introduction.³ The role of experiences on preferences is an under researched area,⁴ and it could be that what people want before a policy is different to what they want after it.

Better theoretical modelling of shifts in opinion – and changes in wellbeing – given the expected impact of an intervention could provide enhanced permission for intervention. A possible ‘test case’ is the *Green Deal*, which seeks to radically overhaul the energy use of

homes and small businesses. In addition to energy savings, the government predicts the programme could support 250,000 jobs – but public support is currently fairly muted.

Provider behaviour

When thinking about applying new insights from the behavioural sciences, we tend to think more about interventions aimed at the public, rather than the providers of public services (e.g. health care workers, teachers and police officers). There is much scope to improve the cost-effectiveness of services by targeting the behaviour of providers.

In healthcare, despite the rise in evidence-based medicine and the existence of clinical practice guidelines of proven benefit, rates of adherence can be very low.⁵ Medicare spending varies more than twofold among regions in the USA and these variations persist even after differences in healthcare are corrected for.⁶ Some regions appear more willing to adopt low cost, highly effective patterns of care, whereas others are more prone to adopt high cost care and to deliver treatments that provide little benefit.⁷

The government has an agenda of improving public sector efficiency. One traditional way of doing this is to offer workers financial incentives to reach targets – despite questionable efficacy.⁸ Some research has previously shown that incentives may crowd out intrinsic motivations⁹ and public sector workers may be more motivated to work harder in response to social norms and disclosure rather than payments. For example, the publication of cardiac surgery mortality data has been associated with decreased risk adjusted mortality.¹⁰

Using behavioural science to change provider behaviour is an under-researched area, but the potential benefits in doing so are large. Whether it is providing catering services in hospital and schools or transporting prisoners to court, we should also recognise that private sector/third sector organisations provide a broad range of public services, and are increasingly likely to. They should also be encouraged to influence behaviour in direct and meaningful ways and disseminate the findings of any work done.

Distributional concerns

The public may be more supportive of interventions that reduce inequalities. Most information and education programmes work best on changing the behaviour of the better informed and educated. Since the 1970s, the smoking prevalence rate among men in the UK has halved¹¹ but the most deprived members of society has come to form an increasing proportion of remaining smokers.¹²

Such findings extend beyond health behaviours. For instance, a recent review by Elliott et al have found that those who are well educated are those who respond better to financial information and education.¹³ It seems that those who want the education, advice and information are those who change their behaviour, but such advice and information has little effect on those who do not search for it.¹⁴ So recent attempts to change financial behaviour using the traditional route to changing behaviour has increased the gap in financial capabilities across the UK.

Focussing on contextual changes to influence behaviour may be less dependent on income and education than targeting the rational brain. Changing the pensions default to automatic enrolment has been seen to increase uptake across the board. Interestingly, it brought a

particularly large increase in take-up for low income workers, eliminating most of the previous differences in participation due to demographic factors.¹⁵ It is far from clear-cut but interventions targeting the automatic system may be a more effective and equitable way of influencing behaviour.

Evaluation

Behaviour change policy is complex. We know that some interventions work in certain contexts but that does not mean they will translate to all policy areas. We need to understand better the range of factors that affect behaviour, and good evaluation is the only way to do this. The Government has spent huge sums on interventions that have sought to change behaviour. Unfortunately, a lack of thought about how to robustly evaluate impact means that it is often difficult to provide evidence of effectiveness.

The size and nature of the intervention, its aims and objectives and the underlying theory of behaviour change used should determine the form of evaluation. As evaluations can be complex, there should be greater collaboration between policy makers and academics. We should be applying the same rigour we do to the evaluation of pharmaceuticals and medical devices to evaluate behaviour change interventions.

It seems sensible to make use of pilot studies before rolling out expensive wide-ranging interventions. These pilot studies should involve researchers engineering carefully crafted exogenous variation into real world environments.^{16 17} In particular, there is the need to insights from the laboratory into designing natural field experiments that take place in natural environments, in which people do not know that they are being experimented on, and also framed field experiments can allow the individuals to understand that they are part of the experiment.

On the whole, a more transparent way of evaluating policy is to involve academics at the start of a field experiment. This will allow us to understand how people actually engage with policy in the real world, and in doing so eliminates any focusing effects, Hawthorne effects and selection biases.

Many of the effects in the behavioural sciences, and from our work on MINDSPACE, operate on the automatic system. There is a question of how long these effects last. Is their effect on behaviour ephemeral or enduring? In most cases, we want to see enduring change. Again, working with academics in a robust evaluation framework will enable governments' departments to provide evidence on such behaviour change.

Dissemination

We must ensure that evidence is effectively communicated so that policy-makers can learn from what has gone on before. A number of resources currently exist to disseminate information; these include NICE public health guidance, research and review databases (such as the Social Science Citation Index and the Cochrane Library).

A more user-friendly resource for policy makers may be more helpful. A Canadian Government website [www.toolsofchange.com] contains numerous case studies of successful campaigns and is an example of what could be done here. Publishing results of

projects where no significant benefits were found can be challenging for civil servants and commissioners of public services. A culture of 'publicising failure' needs to be created and encouraged (and in academia too).

Recommendations

Against the background and issues outlined above, the eight recommendations below will place the Government in a stronger position to tackle some of the issues and challenges in behaviour change research and policy.

1. **Establish an institutional centre that can evaluate behaviour change.** This does not need to be a new body (it could reside in NICE, for example) but it does need scientific competence and a degree of independence. The centre would be tasked with determining which methods were most effective and cost-effective for changing specific behaviours.
2. **Encourage a climate of policy innovation but ensure dissemination** e.g. through a website similar to the Canadian one [www.toolsofchange.com]. Policy makers should be encouraged to think of new ways of changing behaviour but there should be an acceptance that on occasion things will not work out as hoped for. Dissemination of both positive and negative results should be promoted.
3. **Set up an awards scheme e.g. the 'Policy Innovation Oscars'** to engender a culture of innovation amongst policy makers – recognising that innovation can be risky but is also likely to lead to paradigm shift in behaviour and performance rather than incremental improvements.
4. **Establish a journal in which case studies and advice could be published** e.g. the 'Journal for Evidence Based Policy' that is widely disseminated around the civil service. The head of the civil service could be one of the editors-in-chief.
5. **Register a pilot field experiment to an internal government website** (equivalent to the Cochrane Library in healthcare <http://www.cochrane.org/>) and the results can only be published if the pilot/experiment was registered before it went ahead. This could then link into a review website to enable academics, policymakers and other individuals to know what works in what areas. It may also serve to reduce repetition of efforts across the regions and domains.
6. **Enhance the integration between academics and policy-makers** e.g. provide courses on academic literature searches, open access to academic journals and a mentorship scheme with relevant University departments. Increasing the knowledge base on pilot/field experimentation in the Government is urgently required. If the expertise does not exist internally then academic partners/external consultancies could be contracted to run the evaluation.
7. **Host a 'Dragons Den' for innovative behavioural ideas.** The public and workers can come up with innovative ideas, which are pitched to a panel of experts. Convincing cases are given support for implementation and evaluation.

8. **Apply a behavioural science ‘checklist’ to policies.** This will serve to embed the latest evidence into policy as it will be updated continuously as new evidence emerges. This could be along the lines of a MINDSPACE checklist (see additional attachment).

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October 2010

Memorandum by Do Something Different Behaviour Change Programme (BC 18)

Authors:

Professor Ben (C) Fletcher, *Head of School of Psychology, University of Hertfordshire.*
Professor Karen J. Pine, *Professor of Developmental Psychology, University of Hertfordshire.*
Mr. Ian Burbidge, *Policy & Partnerships Manager, Borough Council of King's Lynn & West Norfolk.*
Mr. Martin Slater, *Partnership Delivery Manager, Borough Council of King's Lynn & West Norfolk.*

Key points:

1. Most behaviour change initiatives fail because they do not tackle people's natural inertia.
2. Do Something Different (DSD) targets the habits and inertia that impede change and is both easily implemented and evidence based.
3. DSD is effective because the experience is enjoyable for the participant, it can be integrated into normal living, and it provides new experiences which foster sustained lifestyle changes.
4. DSD has been widely used with great success. We report here on one project in West Norfolk that is producing excellent results on a range of health measures.
5. The **Do Something Different** technique has the advantage that:
 - The DSD intervention can be delivered by existing non-specialist staff.
 - Staff can be trained quickly to deliver the intervention (e.g. 2 days, even for non professional community-based workers).
 - DSD is well-received by clients who perceive benefits quickly.
 - DSD can be used with individuals and groups, and also with families including children.
 - DSD is a generic behaviour change programme and so can be applied to a range of problems (e.g. smoking, alcohol misuse, poor diet) without the need for specialists in each domain.
 - The evidence for DSD comes from robust research studies and large-scale community and commercial projects. These demonstrate its efficacy for improving health behaviours, relationship quality, psychological health, personal development and general wellbeing.

If the health of the nation is to improve we have to find new ways of transforming the behaviour of individuals. Interventions that provide information, education or incentives assume that people will willingly take health messages on board and then act in ways that reflect their best interests. Most don't.

Our research has unearthed the reasons why current methods fail. It has identified the barriers to effective behaviour change and a way of overcoming them. Inertia and ingrained habits stop people adopting new healthier lifestyles. It's not that people don't want to be healthier, they simply default to doing what they have always done. The human brain is designed to automatise as many behaviours and processes as possible. As a result humans are inclined to become 'habit machines'.

Do Something Different cuts through people's inertia and triggers different, more positive behaviours. Support for using this method to change behaviour comes from academic research in psychology and neuroscience, particularly research on brain plasticity. In short:

- The brain resorts to using the same pathways when initiating behaviour. As a result people literally get 'stuck in their ways'. To change behaviour their inertia has to be tackled.
- DSD gradually breaks down ingrained habits that are the main obstacles to behaviour change.
- Do Something Different gets people shaking up their everyday lives in enjoyable ways, encouraging new behaviours to create alternative brain pathways.
- The person becomes more flexible and more amenable to adopting healthier behaviours.
- Existing interventions and educational messages are given a new potency, no longer falling on 'infertile' ground.

How the DSD Behaviour Change Programme works

DSD gets people to try to vary their everyday routines and behaviours in simple but interesting ways. The programme gives them ideas for small things to change each day, e.g. take a different route to work, swap the TV for the radio, contact an old acquaintance, sit in a different seat. The tasks are not demanding, or punitive, yet they break down habits and increase behavioural flexibility. This results in different experiences and thinking processes, rendering the individual amenable to positive change.

The techniques are useable by all, irrespective of educational level. Other approaches that address negative thought patterns, or require introspection, are beyond the capability of many people. Exhortations, or negative health information, often fail to bring about lifestyle changes because they require willpower, which is a limited resource. Also, triggers and cues in the environment will continue to activate the person's usual, habitual behaviour. It is these that DSD targets. To bring about behaviour change the brain needs new experiences. Then old patterns do not get re-triggered and new pathways can be laid down. Thus there is a sound neuroscientific rationale for why DSD is so effective.

Do Something Different in West Norfolk: A Success Story

In 2008, a new project was started as a partnership between the University of Hertfordshire and the Borough Council of King's Lynn and West Norfolk, local NHS trusts, and other local partners. The aim was to give community organisations, local agencies and residents a simple but effective behaviour change tool to improve the health and wellbeing of people living in the most disadvantaged areas (see www.fairsteadsd.com and www.westwalthondsd.com).

Nearly 100 existing staff (from Mind, SureStart, Home Start, local school Parent Support Advisors, Learning Catalysts and NHS health staff) have been trained in using DSD for behaviour change. Since being trained they have begun using it with chronic service users, targeting issues such as smoking, obesity, alcohol abuse, anxiety, depression, parenting and family functioning. Diagnostic information on a range of measures has been collected pre- and post intervention. After a DSD programme of six weekly sessions, delivered by one of the DSD-trained staff, our data show a marked or significant improvement on the following measures of physical and mental health:

- Increase in frequency of exercise (rose from 1.82 to 4.18 days per week)
- Increase in fruit/vegetables consumed per day (from 2.31 to 3.31 portions per day)
- Improved physical health ratings (from 2.88 to 3.23 self-rated physical health)
- Improved life satisfaction ratings (from 2.46 to 3.12 on a 5 point satisfaction scale)
- Smoking reduction or cessation (100% quit rate at 4 weeks)
- Weight loss (1lb lost for every DSD session attended)
- Fewer cases of clinical depression (47% moved from clinical to normal range)
- Reduction in levels of anxiety (35% moved from clinical to normal range)
- Greater coping skills (15% improvement in coping)

The project in West Norfolk is already demonstrating the efficacy of DSD on a wide range of health and social behaviours. By simply re-skilling existing NHS and other agencies' staff, DSD can replace more expensive and specialist services. DSD can be transitioned seamlessly into existing care provision by using the current health and social infrastructures. DSD is also an effective preventative programme for people who are at risk of developing long-term conditions. It is cost-effective to implement and is likely to yield long-term cost savings to the NHS.

The Science Behind the Do Something Different Approach

Do Something Different (DSD) is derived from a branch of psychology called FIT Science. FIT stands for *Framework for Internal Transformation*, founded by Professor Ben (C) Fletcher and developed over more than thirty years. FIT people have more satisfying jobs and relationships, they have greater physical and mental wellbeing, and are able to behave with high levels of self-responsibility. At the core of the FIT person, Professor Fletcher discovered, is behavioural flexibility, or the ability not to be driven by one's habits and natural tendencies. Professor Fletcher was the first to uncover a link between behavioural flexibility and a person's Body Mass Index. In 2004 he presented a paper showing that individuals with a high BMI had low behavioural flexibility. He went on to publish trials showing that increasing a person's behavioural flexibility, by Do Something Different, lowered their BMI. The DSD technique has been further proven in PhD studies of health, personal projects, and parental stress, and a number of academic journal articles and is the subject of three books applying the techniques to different issues. It has many applications in practical situations e.g., in personal development courses for University students and for specialist companies, including the University spin-out *Corporate FIT Science Ltd*. A robust and consistent by-product of the DSD intervention is a reduction in anxiety and depression of participants, and this has led to it being piloted as a first-step treatment.

Summary: Health education and initiatives are not changing people's behaviour. People's ingrained habits and inertia mean they will continue to repeat negative behaviours. DSD is the only behaviour change intervention that chips away at inertia and circumvents habits. DSD can be delivered by non-specialists. It is enjoyable to do and it empowers the client to adopt more positive, healthier behaviours.

October 2010

Memorandum by Dr Mike Esbester, Oxford Brookes University (BC 113)

Summary

- Influencing behaviour is a central aim of public policy in Britain; education campaigns are one method of achieving this end.
- Knowledge of the historical context of education campaigns will assist policymakers in understanding the current position and some of the potential difficulties of using education campaigns to change behaviour.
- This memorandum describes the processes by which education campaigns were introduced into Britain, by private industry, and spread throughout society, including being adopted by the state as a tool of policy.
- Education campaigns were – and are – designed to persuade; as a result they are partisan. Care must be taken to avoid suppressing alternative points of view or other potential solutions to problems.
- Education campaigns in the past have appealed to people partly because they were given the freedom to choose whether or not to follow advice given in the campaigns.
- The impact of education campaigns upon behaviour change is difficult to assess because of the range of variables involved.
- The experience of the past suggests that future policy will need to consider all possible techniques of changing behaviour together (rather than just use education), and use education with caution.

I. Introduction: an historical perspective on behaviour change through education campaigns

I.1 According to the recent MINDSPACE report (2010), influencing behaviour is central to public policy in Britain.

I.2 There are a number of ways to achieve this aim, including: legislation, inspection, enforcement, engineering (to make certain actions physically impossible, for example), and education campaigns.

I.3 Education campaigns typically use media such as posters, booklets and films to try to persuade people to change their behaviour. They are nearly all non-institutionalised, in the sense that they are provided and encountered in environments outside formal schooling (though they may also be encountered in schools).

I.4 Education campaigns are more than the provision of information (which suggests objectivity); they are intended to persuade, and as such are partial.

1.5 Education campaigns can be aimed at the entire population, or targeted at certain groups (which can include children).

1.6 Education campaigns are often used in areas where compulsion is not currently available (for example, to encourage healthy lifestyles), though they can be used in conjunction with legal sanctions (for example, against drink-driving).

1.7 The state currently produces education campaigns at the national level, through bodies such as the Central Office of Information, the Department for Transport and the National Health Service, and at the local level through regional and local government initiatives.

1.8 A number of non-governmental bodies also produce education campaigns, the most notable of which are the Royal Society for the Prevention of Accidents, the Scottish Accident Prevention Council, and the British Safety Council.

1.9 This memorandum provides historical background to the use of educative techniques to change behaviour in Britain. It concentrates initially on the railway industry, responsible for introducing education campaigns into Britain, before discussing the rise of education campaigns across British society in the twentieth century.

1.10 It seeks to expose some of the implicit assumptions upon which current conceptions of education campaigns are based, to indicate the complex interactions between public and private provision of education campaigns, and to highlight some of the difficulties of using education campaigns to change behaviour.

2. The origins of behaviour change through education campaigns: the railway industry before 1939

2.1 During the nineteenth century, work in mines, on ships, in factories and on the railways could be extremely dangerous. Safety was promoted through a number of formal measures, including: supervision of workers, rules and regulations, and warning notices. These were couched in official language and were not intended to be attractive to workers.

2.2 At the same time, the state played an increasingly active role in regulating dangerous workplaces, introducing legislation and inspection and setting a limited number of minimum standards (such as guards on some machines).

2.3 Whilst this is believed to have had an impact on casualty rates by the twentieth century, deaths and injuries in the industries noted above were still numerous: in the railway industry in 1913 alone the available statistics show that a minimum of approximately 30,000 workers were injured or killed.

2.4 In response to trades union agitation and threatened state intervention, in 1913 the railway industry introduced a safety education campaign, aimed at its workers. Amongst the innovative techniques employed to make safety messages attractive to workers and easily understandable, the campaign used images to show safe and unsafe practices and used informal, almost colloquial, language that the campaign producers believed the workers would relate to.

2.5 This educative technique was imported from the United States, where railroad companies had adopted it in 1910, following the lead set by the steel industry in 1906.

2.6 In 1913 the British railway system was operated by over 120 separate companies; the Great Western Railway Company (GWR) introduced the education campaign, but many other companies adopted it in 1914 and thereafter.

2.7 Throughout the 1920s and 1930s the state body responsible for railway safety (the Ministry of Transport) called for the increased use of safety education. By the mid-1920s the entire railway industry was using safety education, aimed at manual workers (such as those driving the trains or maintaining the track). At the same time, the state's role (largely confined to investigating casualties and making recommendations for changes to the railway companies) continued.

2.8 The educative campaign on the railways made use of a variety of techniques to try to influence worker behaviour, including: articles in the company magazines, booklets, posters, films, competitions, songs, mottoes, talks, a safety emblem (distributed on stickers, badges, cigarette cases and many other items), and a 'safety token' (which bore safety slogans and was kept in the pocket amongst the change; when money was taken out the token was supposed to remind workers to be safe). These techniques often represented early attempts to use industrial psychology.

2.9 These techniques were dependent upon voluntary uptake by the workers. The railway worker safety education campaign only had the status of advice; adherence to the principles laid down could not be compelled.

2.10 Education was a considerably cheaper method of attempting to change behaviour when compared to other potential solutions to worker safety (such as modifying systems of work to ensure that people were not put in dangerous situations, or the introduction of new technologies to improve safety). For example, issuing a safety education booklet to the 80,000 employees of the GWR in 1914 cost approximately £200 (there were approximately 600,000 workers at this time in the railway industry as a whole). In contrast, the railway companies estimated that the cost of introducing one technology intended to improve worker safety (a device to remove the necessity for workers to get between wagons to join them together) across the whole industry was claimed to be 'several million pounds' – and this would only have addressed one source of casualties.

2.11 Combined with the national economic difficulties in the 1920s and 1930s and the emergence of other more immediately pressing concerns (including road safety), the relatively low cost of education ensured that it became the *de facto* solution to railway worker casualties.

2.12 The railway worker safety campaign was accepted uncritically by the state, trades unions and public. Claims made by the railway companies for the effectiveness of the education campaign were not interrogated or challenged; the companies tended to ascribe any reduction in numbers of worker casualties to safety education. This set the scene for the general acceptance of education campaigns as a valid and successful means of changing peoples' behaviour.

2.13 In addition, in terms of content the railways' safety education campaign was a partisan offering. Material was authored or created by managerial grades with no direct experience of the manual work they defined as safe or unsafe.

2.14 Campaign material implicitly emphasised values that the management believed important (such as loyalty to the company) and reinforced the idea that the existing systems of work (some of which placed workers in dangerous situations) were the only way of organising work.

2.15 It also explicitly put forward the idea that a certain level of casualties was inevitable, and that behaviour change through education was the only way of addressing safety (thereby disavowing other potential solutions, such as legislation, state inspection, or technological changes).

2.16 Some of the advice given was as much to do with creating norms of behaviour and ensuring employees worked efficiently, thereby maximising productivity for the company, as it was to do with safety.

2.17 To this day, safety education is used to try to change worker behaviour on the railways. Material produced after 1939 has made use of a similar mix of techniques as that before 1939: notably posters, booklets, films and, most recently, web-based resources.

2.18 Conclusion: Education campaigns were introduced into Britain by private railway companies early in the twentieth century, through a worker safety campaign. This campaign was seen as a means of deflecting unwanted state and union attention from the companies, and spread quickly throughout the railway industry. Whilst the techniques of persuading people to change their behaviour were an important departure from previous practice, the messages conveyed by this campaign were partisan.

3. The spread of education campaigns

3.1 The model of the persuasive educative campaign spread rapidly. With reference to safety, education was used by other transport concerns (such as the London General Omnibus Company by 1915), as well as by other industries: particularly factories (including Lord Leverhulme's Port Sunlight complex by 1917) and coal mining, but also the chemical industry, the printing industry and others.

3.2 These education campaigns were aimed at workers. They were produced by private companies, with the encouragement (particularly in the 1920s and 1930s) of state bodies such as the Home Office.

3.3 The key to the rapid spread of education campaigns in wider society was road safety. The introduction of motor vehicles onto the roads resulted in large numbers of casualties. One response to this was the formation of the London Safety First Council in 1916; this was followed by the establishment of similar safety councils in other (urban) areas. These groups came under the umbrella organisation the National Safety First Association (NSFA) in 1924, which received the royal charter in 1941, becoming the Royal Society for the Prevention of Accidents.

3.4 These safety organisations were voluntary associations, funded by subscriptions. The NSFA also received financial support from the state.

3.5 Although they addressed all areas of safety, in practice the main focus of these organisations was road safety. They were reliant upon education campaigns to spread their messages, and used similar tactics to the railway safety campaign: posters, booklets, films, competitions, and games amongst others.

3.6 These education campaigns followed in the mould of the well-established railway safety education campaign. Consequently, as well as using the same sorts of techniques to try to change behaviour, they inherited the same problems: notably that they were dependent upon voluntary uptake and that the educative material reflected the assumptions of its creators.

3.7 One example of this partiality will suffice. Much of the road safety education that was produced during the twentieth century was framed around the principle that roads were intended for the smooth and speedy passage of motorised vehicles. Other road users – pedestrians, cyclists, horse-riders – were constructed as having less of a right to use the road. (In law all of these groups had equal right to use the road; in practice this right was often disregarded.)

3.8 This message was contested. During the 1930s in particular the Pedestrians' Association (now known as Living Streets) opposed the NSFA, which was seen as promoting a pro-motorised view of road use and was regarded as a wing of the motoring lobby.

3.9 Education campaigns were not neutral. Which behaviours – and whose behaviour – were chosen for modification embodied complex assumptions, both implicit and explicit.

3.10 During the twentieth century the state also tried to change behaviour through education campaigns. Health was the key area of concern. Before 1939 this role was relatively limited, and was largely enacted through state-supported groups such as the Central Council for Health Education or at a local level.

3.11 The Second World War increased the state's role in persuasive campaigns, with the reconstitution of the Ministry of Information (MOI), responsible for production and distribution of wartime propaganda. Although some of this was different in conception to education campaigns, the material produced by the MOI was in many respects analogous, as both aimed to change behaviours. Indeed many contemporaries used 'safety propaganda' or 'health propaganda' to refer to education campaigns, demonstrating the close parallels in ethos and methods used to try to change behaviour.

3.12 After the war, the residual functions of the MOI were reconstituted as the Central Office of Information (COI). One part of the COI's remit was keeping citizens informed about matters deemed of significance by the state. This has included behaviour change through education campaigns. The COI remains active to this day, and has been responsible for producing hundreds of public information films (including the 'Charley Says' and 'Green Cross Code' campaigns of the 1970s).

3.13 Since 1945 other branches of state activity have also produced education campaigns intended to change behaviour, most notably including the National Health Service, the Health and Safety Executive, and the Department for Transport.

3.14 In all of these cases (whether produced by state or non-state organisations), education campaigns have appealed to people on two levels: they tend to be more understandable and aesthetically more attractive than formal, legalistic warnings; and because they have been presented as advice, to be followed voluntarily, the individual citizen has been left in control of their own decisions. This last point feeds into a supposed national belief in liberty and the freedom to choose; it has been particularly important for the state as it has ensured that it was seen to be addressing social problems, but at the same time not enforcing compulsory measures.

3.15 Private manufacturers have also used the semblance of education campaigns to promote their own products. For example, in the 1930s, Marmite issued a small, coloured leaflet giving children advice on road safety – yet it was made clear that this was a gift from the Marmite company. Similar examples are known to have been issued by: W.D. & H.O. Wills (cigarette cards); British American Tobacco (cigarette cards); Robertsons' marmalade (booklet); John Masters (matchbox labels); Shell and BP (booklet); and Spear's Games (board game).

3.16 This is unsurprising, as education campaigns are, in many ways, similar to marketing, in that they seek to influence peoples' behaviour. Manufacturers seized on what were then current cultural concerns, using the appearance of social responsibility to promote their products.

3.17 During the twentieth century, education campaigns intended to change behaviour spread throughout the world (to both Anglophone and non-Anglophone countries).

3.18 Conclusion: Education campaigns intended to change behaviour grew in number and scope during the twentieth century; they are now found in many aspects of life in Britain. They have been, and continue to be, produced by a variety of organisations, public and private, with the central state playing a significant role. As a means of trying to change behaviour, education has proven to be attractive to individuals, private companies, voluntary organisations and the state. This attractiveness stems from a number of factors, including the fact that in most cases it leaves the individual the power to choose whether or not to follow the advice.

4. The problems with evaluating the impact of education campaigns on behaviour

4.1 Current research has questioned whether education campaigns on their own are able to change peoples' behaviour. The evidence that such campaigns have an impact upon behaviour is ambiguous.

4.2 This ambiguity is partly a result of the number of factors involved in influencing peoples' behaviour. The MINDSPACE report demonstrates some of the complexity of this issue. Ascribing changes in behaviour to any single variable – such as an education campaign – is extremely difficult, if not impossible.

4.3 For example, before 1939 the railway companies claimed (and the state believed) that the reductions in the absolute numbers of worker casualties were a result of the safety education campaign: behaviour was supposedly modified.

4.4 However, a number of other variables might have been involved, including: the introduction in 1919 of the eight-hour working day (thereby reducing the number of hours in which people were exposed to the threat of casualty); the degree to which rules were enforced (by companies and by the state); industrial action (particularly in 1924 and 1926; again, reducing the number of occasions on which people were exposed to the threat of casualty); times at which the British economy underwent contraction (in the early 1920s and early 1930s, and meaning that fewer people were employed on the railways); changes in the definition of what constituted a reportable incident (in 1923 and 1934); and overall decreases in the numbers of people employed on the railways between 1913 and 1939.

4.5 Whilst it might, with statistical analysis, be possible to correct for these factors, the railway companies and state did not do so at the time. The case has not satisfactorily been made that the pre-1939 safety education campaign for railway workers had any impact upon accident rates or on employee behaviour.

4.6 Additional difficulties associated with education campaigns include: persuading people to follow what it is, in the main, voluntary advice; remembering to apply the advice at the relevant moment (often some time after exposure to campaign material); and the need to vary material, providing new items sufficiently frequently to ensure that the campaign is not ignored because it has become familiar.

4.7 Education campaigns have never existed in a vacuum: there has always been a regulatory context (whether for the railways, the roads, or otherwise), ensuring that education has always been one of several approaches to behaviour change. This makes it very difficult to separate the relative impact of any single factor in changing peoples' behaviour.

4.8 Existing evaluations of the effects of contemporary education campaigns have tended to assess factors that are easier to measure than behaviour change, such as impact upon attitudes or information retention.

4.9 An additional factor that makes the introduction of state-produced education campaigns more problematic is an apparent hardening of public attitudes towards state involvement in daily life over the last ten to fifteen years. Even advisory education campaigns are now viewed by some (albeit probably a minority) as an extension of the 'nanny state' – despite the fact that there is no compulsion involved.

4.10 Conclusion: There are too many factors involved in changing behaviour to be able (on the basis of current evidence) to quantify the specific role of education campaigns in behaviour change. This is not to discount the possible effect, but merely to offer caution at claims of success. Public receptiveness to state-produced education campaigns may, in the early twenty-first century, be starting to change.

5. General Conclusions

5.1 Education campaigns have been used in Britain for nearly 100 years. For much, if not all, of the twentieth century, education campaigns have – either deliberately or unconsciously – carried hidden messages and tried to create certain norms of behaviour.

5.2 The historical evidence suggests that education campaigns are vulnerable to conveying the implicit assumptions of their creators. This can be a particular problem when there are differences in socio-economic status between producers and consumers of educative messages.

5.3 Education campaigns can present debates as settled when they might be contested; this has the potential effect of suppressing alternative points of view and solutions to problems.

5.4 What might be perceived as an advantage of education campaigns – that they are advisory rather than compulsory, and leave individuals responsible for making their own decisions – can also be a disadvantage, as there is no guarantee that behaviour will change.

5.5 It is extremely difficult to assess the impact of education campaigns on target audiences and to determine whether or not they have any influence in changing peoples' behaviour.

5.6 Further research is needed to provide evidence that education campaigns are able to achieve their objectives and change behaviour.

5.7 If education campaigns are to be used to try to change peoples' behaviour, the most effective course of action would be to use them with caution, as one tool alongside other options (including legislation, enforcement and engineering).

5.9 In the twenty-first century, if education campaigns are to be used to change behaviour, it would be advisable to consider the most appropriate techniques for delivering messages (potentially incorporating social networking and web 2.0 technologies).

5.10 It would also be important to consider how state initiatives work in relation to education campaigns produced by charitable or voluntary organisations or by private companies.

5.11 Whilst wary of ahistorical claims about the 'information age' and 'information overload' it is worth noting that in the early twenty-first century a further difficulty of using education campaigns to try to change peoples' behaviour might be the quantity of information and advice that is directed at people. It is possible that people have or will become inured to education campaigns: they are a part of the contemporary cultural landscape and as such run the danger of being considered 'background noise.'

5.12 All of these points suggest that the state must be very careful when using education campaigns to try to change peoples' behaviour.

October 2010

Memorandum by Sandy Evans, ProHealthClinical (BC 69)

I am a dietitian with over 20 years experience in primary care, community health and weight loss clinics including specialist medical and bariatric surgery clinics. I have also worked and developed a range of lifestyle and weight loss interventions for clinical trial patients and have run weight loss groups for the Medical Research Council (MRC) in Cambridge.

I co-developed ProHealthClinical as a private initiative during 1998 and 2004. It is a comprehensive computer programme that has a range of well documented behaviour modification tools that can enhance lifestyle changes and improve weight loss. It records a range of health parameters, weight, lifestyle and personal goals. It produces a wide range of self-monitoring forms that includes tracking activity increases and personalised lifestyle goals. It provides a large activity and eating lifestyle database that can be easily adapted for local initiatives and personalised for generating tailored behaviour change goals.

ProHealthClinical was designed to be used in a range of settings, by a variety of practitioners with and without time restrictions. It can support behaviour change in both brief interventions and provides a number of structured lifestyle and weight-loss programme protocols. It enhances the weight management skills and increases the practical advice provided by multi-disciplinary users. It was selected in 2005 to be used in an independent RCT primary care weight loss pilot. It showed a three-fold increase in patient weight loss achieved by practice nurses using the computer programme and its' materials compared to the control patients.

Weight loss, health parameters and lifestyle goals are summarised in both individual and group graphical and tabular formats. Providers can group patients and monitor weight loss outcomes. The summary reports also enable providers to easily audit weight loss achieved for patients attending a variety of weight loss interventions. The majority of this paper describes the various ways ProHealthClinical is being used in the UK and the outcomes achieved.

Tackling Obesity Interventions – Practical Interventions using ProHealthClinical

ProHealthClinical is being used effectively in both 1:1 and group settings. It is a multi-component comprehensive weight management computer programme offering health care and non-health care professionals a range of evidence-based practical weight loss and behaviour modification tools (e.g. healthy meal and snack plans, physical activity guidance, goal setting, self-monitoring and personalised feedback). A brief description of the programme and training is outlined in the Department of Health Directory of Obesity Training Providers. (figure 1)

Department of Health - April 2009

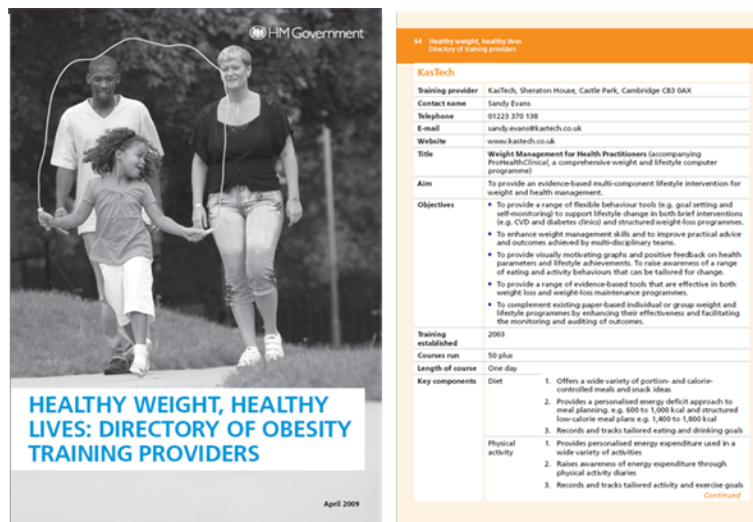


Figure 1. Healthy Weight, Healthy Lives: Directory of Obesity Training Providers: KasTech Ltd. pg 64-66. April 2009. Website: www.kastech.co.uk

It quickly produces health and weight loss progress reports and summarises outcomes. This enables primary care practitioners to monitor a range of in-house weight loss interventions and also compare outcomes for patients referred externally (e.g. commercial or local NHS groups, exercise referral, secondary care, bariatric surgery, etc.) (figure 2)

ProHealthClinical Group Review

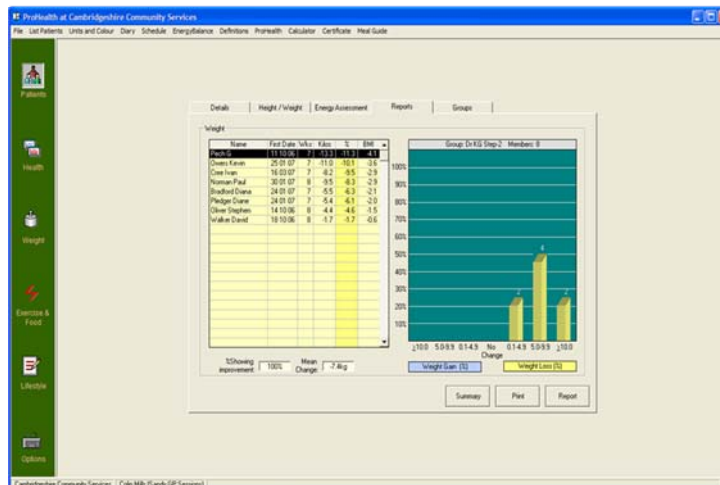


Figure 2. Group Outcomes Summarised

ProHealthClinical in 1:1 Settings

The ProHealthClinical Structured Lifestyle Protocol was used in a randomised controlled trial (RCT) in primary care in 2006. It produced a three-fold increase in primary care patient weight loss compared to control patients in a 12 week independent RCT pilot funded by The British Heart Foundation. Thirty-four percent of the patients achieved a clinically significant 5% or more weight loss. Over twice as many patients in the ProHealthClinical groups were i) satisfied with their weight loss, ii) felt they met their expectations and iii)

found the personalised graphs and computer guidance helpful in achieving their goals. Patients were also asked to identify components of the computer programme they found helpful. (figure 3)

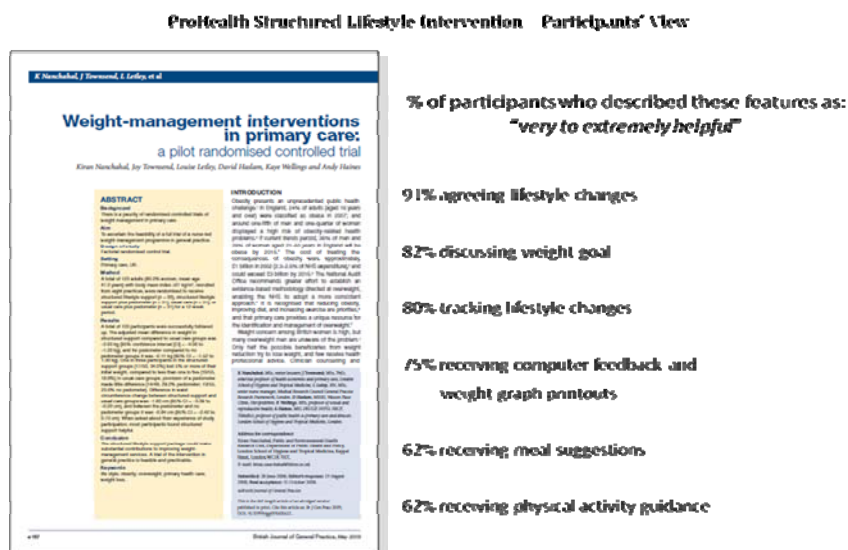


Figure 3. Br J Gen Pract 2009; 59:349-355. Weight management interventions in primary care: a pilot randomised controlled trial

The majority of Practice Nurses using the programme had very little previous weight loss experience. Practice Nurses report it is i) easy to use, ii) helps them deliver flexible, personalised care to their patients, iii) offers practical activity and eating advice and iv) provides excellent, visually motivating graphics.

ProHealthClinical users receive training on a range of weight loss and lifestyle protocols that can be used by both health care and non-health care professionals. This enables practitioners to provide a number of cost-saving multi-level weight loss and behaviour interventions in primary care and the community. Evidence-based interventions include guidance for personalised brief interventions and structured lifestyle and weight loss clinics.

It is used in the community, primary care and specialist obesity centres by a range of individuals with varying levels of obesity skills and experiences (e.g. Obesity Consultants, Medical Staff, Nurses, Dietitians, Fitness Instructors, Health Care Assistants, Health Trainers and administrators). Professor Nick Finer, FRCP Obesity Consultant at University College Hospital, London attributes ProHealthClinical to improving the quality of management they offer patients and ideal for multi-skilling teams in exercise, diet and behaviour change.

The evidence-based tools in ProHealthClinical ensure a wide range of practitioners can provide patients with short-term and long-term personalised lifestyle and weight loss support and guidance. It is well recognised that weight loss maintenance is heavily dependent on long-term support. Ongoing support and monitoring can easily be integrated into primary care chronic illness clinics or brief weigh-in clinics. (figures 4 and 5)

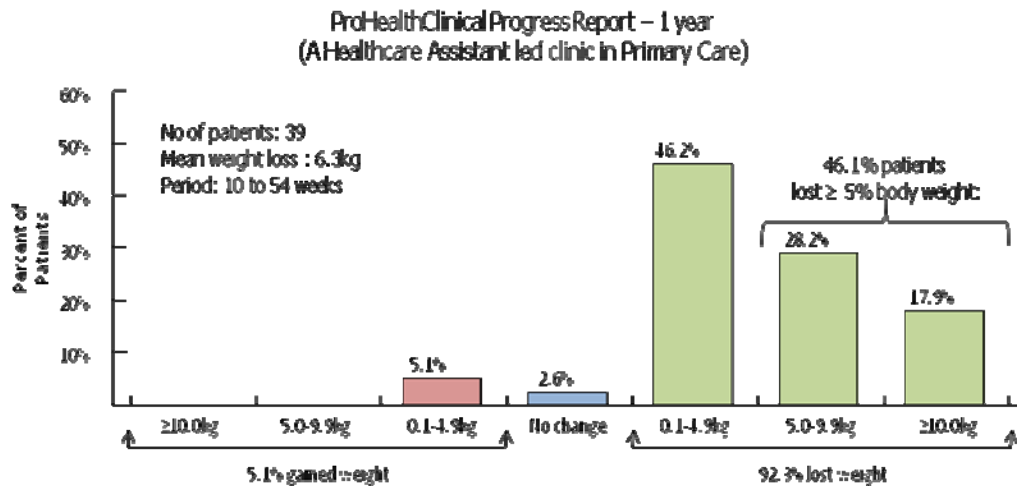


Figure 4. Example of one year Healthcare Assistant led clinic in Primary Care, June 2010

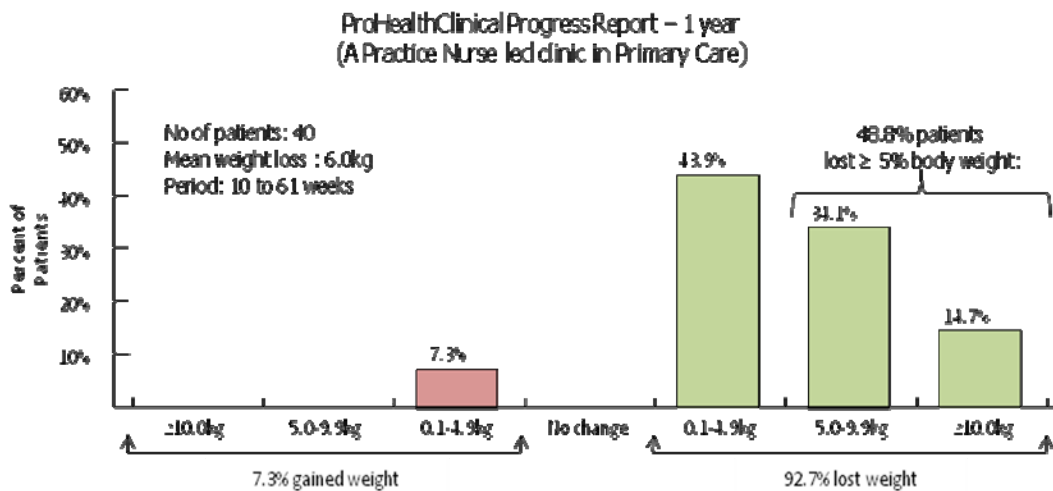


Figure 5. Example of one year Practice Nurse led clinic in Primary Care, June 2010

Five key steps for facilitating behaviour change include:-1) identifying personalised behaviour change goals, 2) review when, where and how behaviours will be performed, 3) have patient keep record of behaviour change, 4) review progress at next visit and 5) congratulate patient on successes. (Wadden and Foster. Med Clin North Am 2000: 84:441) ProHealthClinical Structured Lifestyle Protocol encourages personalised lifestyle goals that are regularly monitored. This can lead to problem-solving discussions to identify a range of solutions for difficult or high risk situations. (figure 6)

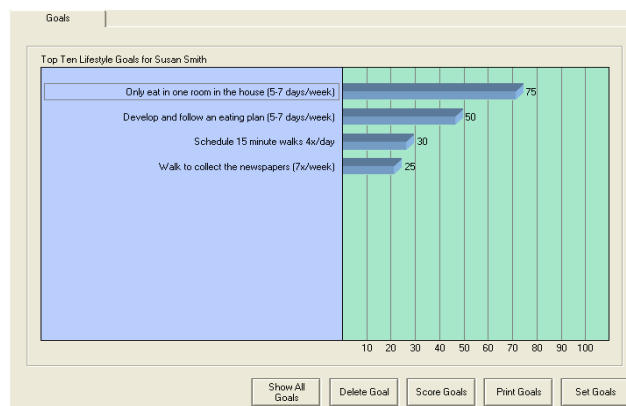


Figure 6. Example of ProHealthClinical for monitoring lifestyle goals and discussing a range of solutions

Discussing and agreeing lifestyle goals is a part of all ProHealthClinical protocols. It can be achieved in brief out-patient clinics. It offers patients opportunities to explore small eating and activity behaviours they are willing to change in a stepped approach. It encourages adults and teenagers to take ownership of their behaviour changes. (figure 7)



Figure 7. A 16 yr old patient in Primary Care – winner of the 2006 regional Teen Success Award, Weight Wise: the Next Generation campaign.

ProHealthClinical in Group Settings

Life (Lifestyle Improvements for Everyone)

I initiated the *Life* (Lifestyle Improvements for Everyone) in 2003 in response to patients' comments at GP evening patient association meetings. It was a large GP-based community programme developed initially for GP patients requesting help with weight management. Patients were registered on ProHealthClinical at The Spinney Surgery, St Ives Cambridgeshire. They received individual health assessments and were given individual 5% weight loss goals. They received specific ProHealthClinical lifestyle monitoring forms to track eating and activity behaviours between workshops. They worked in teams of 8 to 12 people to score points and improve their lifestyle choices while attending 7 practical skill-based workshops over 9 months. Throughout the programme, participants received personalised health information, healthy eating plans, food and activity fact sheets generated by ProHealthClinical. Patient weight and health parameters were recorded on ProHealthClinical.

The participants outcomes were summarised and this initiative won 2004 best practice awards from the Association for the Study of Obesity (ASO), National Obesity Forum (NOF) and the Patient Participation award from the Royal College of General Practitioners (RCGP). It was recognised in the 2005 NHSalliance report as an example of best practice in primary care. (figure 8)



Figure 8. LIFE programme recognised Aug 2005A 16 yr old patient in Primary Care – winner of the 2006 regional Teen Success Award, Weight Wise: the Next Generation campaign.

ProHealthCHIP (Community Health Improvement Programme)

This was initially a 10 week programme of 6 fortnightly skills-based interactive workshops for groups of patients referred from Cambridgeshire GP practices. It was modelled on the GP-based *Life* programme mentioned above and initially funded through a joint partnership with the PCT and District Council.

It targets area of inequalities and encourages GP practices to do a brief health assessment prior to referring patients to locally run CHIP programmes. This data is entered into ProHealthClinical and patients receive a 5% weight loss goal. A second brief GP health assessment is done at the end of the programme. ProHealthClinical provides a variety of healthy eating meal and snack suggestions, general information handouts and lifestyle goals monitoring forms with fortnightly challenges. The initial programme in 2007 covered 4 market towns in Huntingdonshire and included 67 patients. The outcomes were presented at the 2008 Public Health Annual Conference in Liverpool. (figure 9)

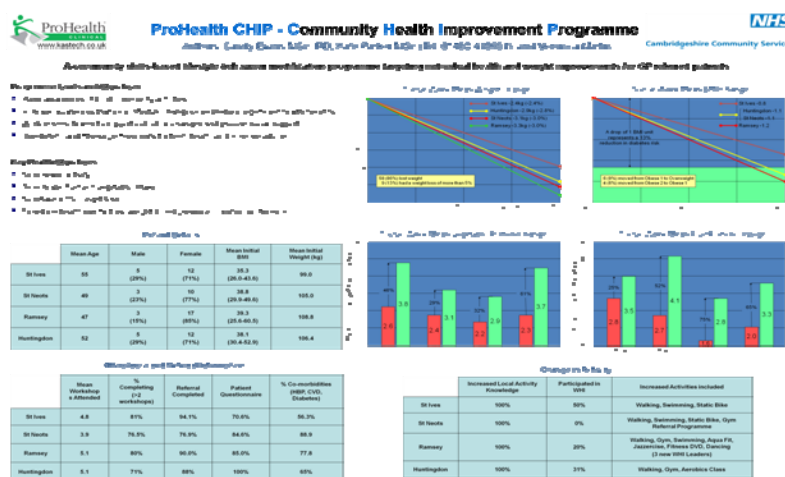
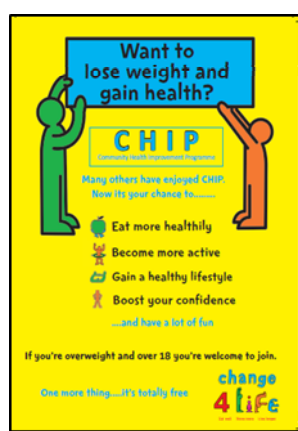


Figure 9. ProHealth CHIP poster presented at the Public Health Annual Conference, Liverpool 2008.

Groups of 10 to 25 patients are led by a variety of trained facilitators (e.g. Community Development Workers, Health Trainers, Dietitians, etc.) who have a wide knowledge of

local community activities and resources available to support lifestyle changes. The overall workshop goals are to raise the awareness of local community activities (e.g. physical activity or exercise classes, cooking classes, adult education courses, etc.) and offer participants social support as they work in small teams to support individual lifestyle changes. Partners and spouses can also participate, without formal referral, to encourage family support. The key objectives are to 1) increase individual activity levels, 2) increase fruit and vegetable intake, 3) initiate weight loss and 4) reduce health risks.

The current programmes are developed with various community partnerships (e.g. health promotion units, district council leisure services, falls prevention team, GP surgeries, etc.) and workshops cover a range of topics with Dietitians and Fitness Instructors participating in 4 of the 6 workshops as they are recognised as reliable health information resources. (figure 10)



6 Fortnightly Workshops (10 weeks)

- Workshop 1 – Goal Setting and Habits Discussion
- Workshop 2 – Food Energy and Portions
- Workshop 3 – WHI Walks and Local Exercise Classes
- Workshop 4 – Good Heart, Blood Pressure Foods
- Workshop 5 – Home Based Exercises
- Workshop 6 – Eating Triggers Problem Solving

Figure 10. CHIP poster and workshops topics, 2010.

The programme has steadily grown to 20 programmes annually with over 200 patients participating in 2009. Approximately 24% of participants are male. Funding is being discussed to expand the programme from 6 workshops to 10 covering 24 weeks (6 months). This would also enable additional topics to include workshops covering discussions and skills to handle problem-solving and high risk situations.

Outcomes showed patients attending 3 or more workshops 84% lost weight during the 10 week fortnightly programme. A mean weight loss of 2.4kg was shown for those attending 3 or more workshops and this increased to a mean weight loss of 3.6kg for those attending all 6 workshops. At the end of the programme, patients reported a daily increase of fruit from 2.5 to 3.2 portions (28% increase) and vegetables from 2.0 to 3.7 (85% increase). Active days per week went from 3.1 to 5.0 (61% increase). (figure 11)

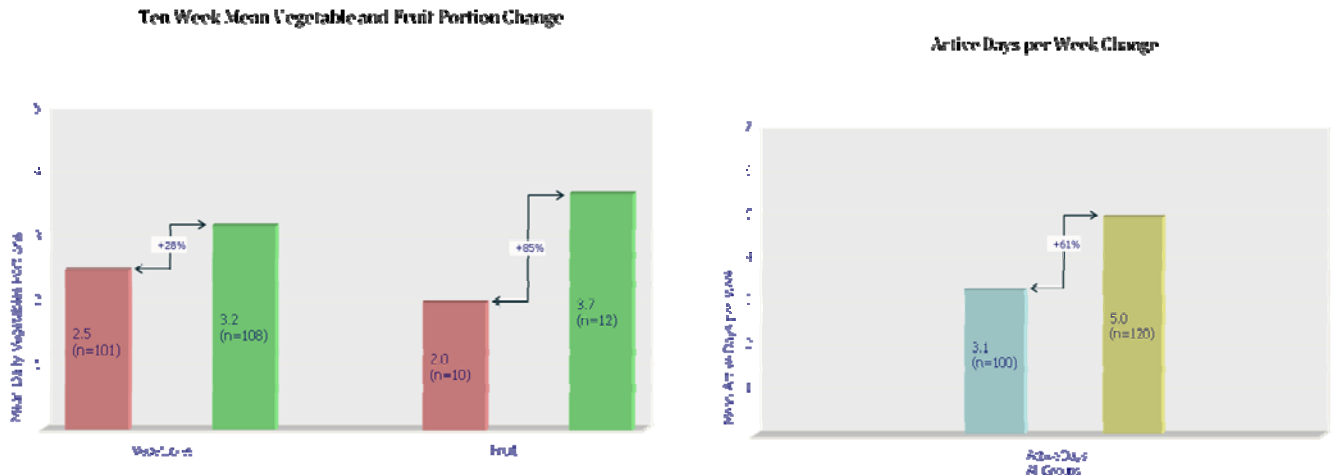


Figure 11. CHIP participants fruit and vegetable intake and days active per week outcomes, 2009.

CHIP workshops run twice a year starting in February and September. Some patients attend multiple programmes with one patient attending three programme over 18 months who has lost 38.2kg (30.4%) of her initial weight. (figure 12) The workshop evaluations show patients enjoy working in small teams and appreciate the personalised health information. This programme is seen as a very cost-effective way to engage GP patients in making small, gradual lifestyle changes.

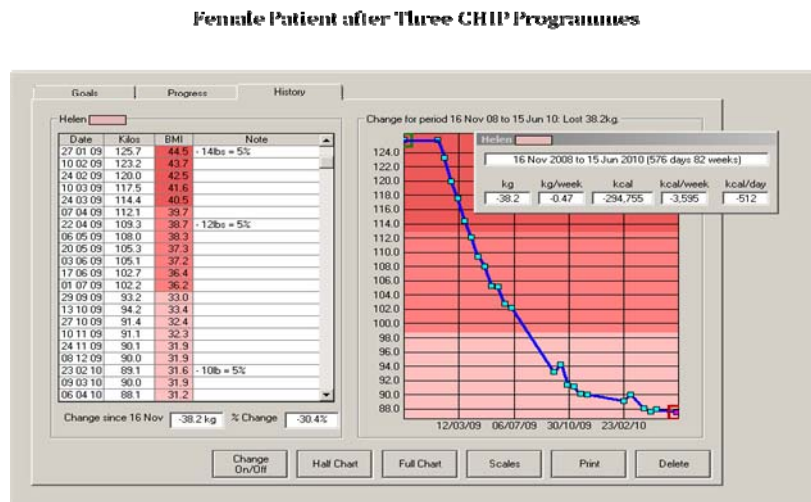


Figure 12. One CHIP participant weight loss after attending three 10 week programmes over 18 months.

October 2010

Memorandum by Dr. Bennett Foddy and Dr. Eric Mandelbaum, Oxford University (BC 56)

The opinions noted herein are provided on an individual basis and do not represent the position of the Oxford Martin School or the Future of Humanity Institute.

Summary

Behaviour modification programmes run the risk of infringing on the rights of the relevant parties by limiting their autonomy in certain unacceptable ways. A programme that resulted in positive behavior change but did not respect the autonomy of targeted groups would generally not be an actionable *nor successful* programme.

States (but not private corporations) can sometimes justify overriding individual autonomy in the name of preventing harm or loss of liberty to the society as a whole. But even then, the autonomy of targeted groups must still be considered and preserved. In particular, groups of substance-addicted individuals should not be singled out as a group whose autonomy can be disregarded.

In order to preserve the autonomy of affected groups, programmes should aim to avoid the use of emotional manipulation, especially the use of aversive or negative emotional states. The use of emotional manipulation is not only antithetical to respecting autonomy but it will also not result in effective long-term behavior change. For related reasons, programmes should avoid explicit mention of the problematic behaviour.

Introduction

When a government interferes with the liberty or autonomy of individuals for the benefit of those individuals, we say the state acts *paternalistically* with respect to the affected individuals.

J. S. Mill, a pillar of British moral theory, argued that paternalistic policies could not be justified when it would reduce the liberties of competent, autonomous adults. Many individuals prefer to act in ways that lead to self-harm, medically construed. But liberal principles of justice entail that policies that interfere with individual self-harm can only be justified if the harmful behaviour is also harmful to others, or if it significantly constrains the liberties of others. This 'harm principle' is one of the guiding norms within liberal democratic societies.

Of course there are cases where the behaviour in question is harmful to others, and in such cases the state may wish to intervene in ways that reduce individuals' liberties or autonomy in order to protect the welfare of others within the society. When criminals are imprisoned, or when weapons are prohibited, these are cases in which the state acts *coercively* in order to defend the liberties and welfare of the population. Whether a coercive policy is justified depends not on whether or not the problematic behaviour is legal, but on how burdensome it is. Obesity and over-eating, for example, was estimated to cost the NHS £3.2 billion in 2007.[1]

In such cases, states may seek to implement coercive behaviour modification programmes which constrain the liberties of overeaters. Such coercive schemes must be justified by appealing to the burden that the problematic behaviours place on society. However, the harm principle is a necessary *but not a sufficient* condition for interfering with the autonomy

of individuals. That is to say, individuals' autonomy must still be weighed as an important concern, even when their behaviour is harmful or burdensome to others.

As one final note, it should be recognized that, just as it is never legitimate for private individuals or corporations to imprison criminals or to confiscate property, it will never be legitimate for private individuals or corporations to unilaterally enact behavioural modification measures, insofar as those measures reduce the liberty or autonomy of affected individuals. When the state acts, it does so under the auspices of the authority of the people it governs. However, private entities lack such authority so are not entitled to interfere with individual's liberty.

With these basic tenets in mind, there are four necessary questions to consider when it comes to state-operated programmes of behaviour modification:

- 1) Is the programme likely to reduce the liberty or autonomy of competent, autonomous adults? Does it limit the ability of affected individuals to select and perform a course of action in accordance with their own preferences and goals? If so, the programme will be either paternalistic (if the behaviour in question is harmless to third parties) or coercive.
- 2) Does the programme seek to interfere with behaviours that are harmful to others, or are the affected behaviours only harmful to the persons who perform them? If the former is the case, then coercive policies may be justified provided the cost to autonomy is sufficiently low, and the behaviour in question is sufficiently burdensome.
- 3) Is the programme likely to be beneficial to the target groups? That is, is this a genuine case of paternalism or is it just a harmful reduction in liberty or autonomy? If the programme is not likely to be beneficial to the target group, then the programme can only be justified if the target group's behaviour is burdensome to others.
- 4) Will the programme be enacted by a state body with appropriate oversight? If not, the programme cannot be justified no matter how burdensome the target behaviour is, and no matter how 'beneficial' the behaviour modification is.

Autonomy

In general, if a programme provides some minor distributed benefit to the members of a society, these benefits will only be enough to justify the most minor reductions in individual autonomy. However, there are measures which may be taken to ensure that policies will have only minimal impact on personal autonomy.

Limit use of affect (emotion) modulation

Frequently programmes of behaviour modification are proposed which take effect by harnessing the affective states of individuals. For example, it is sometimes proposed that pregnant women who seek an abortion should be forced to look at photographs of fetuses before they can obtain an abortion.[2] This strategy aims to reduce the overall use of abortions by eliciting a certain emotional state in women who visit an abortion clinic.

When affect is a core part of a behaviour modulation, it only serves to diminish a person's ability to weigh the value of different alternatives, reducing their ability to pursue their own preferences and thus reducing their autonomy. Moreover, the use of affective behaviour modification as a long-term solution is dubious. After a habituation period, exogenously

produced affect wears off, returning the target subject back to their original position. Even more worrisome is that after the initial habituation to the affective stimulus, endogenously created affect, which is the type of affect that is useful in long term behaviour modification, proves to be less effective, thus robbing the subject of one of his/her natural self-guided techniques for modifying his/her behaviour. In other words, state-run behavioural controls can erode individual self-control.

Strongly limit use of negative affect

As well as reducing the autonomy of affected persons, there is a sense in which a person is directly harmed if their emotional state is modulated in a negative way. If fear, anger, guilt or shame is induced by a behaviour modification programme, the modulations will cause suffering and emotional harm in addition to reducing the autonomy of affected persons, and of course not providing a sustainable behavioural solution.

There are a wide range of effective means of behaviour modifications which do not operate by exogenous affective manipulation. Thaler and Sunstein's paradigm example of the opt-out investment plan, for example, harnesses the human tendency to prefer the status quo, rather than the emotional states of participants.[3]

Mental Obsession

Outside of the ethical realm, there is also the question of how successful different types of behavioural interventions will be. We have already touched on this topic by arguing that exogenous affective conditioning will have adverse long-term effects. We would also suggest against explicitly mentioning the concept underlying the behavior that we would like to extinguish. Such explicit mentioning tends to, ironically, have the opposite intended effects. For example, if we wish to curb public smoking, one of the least successful campaigns we could mount would be to have a campaign that directly mentioned smoking. Our cognitive faculties are set-up to, in a certain sense, 'see through' negations straight into the negated content.[4] Thus by erecting signs that say, "Don't Smoke" or "Smoking Can Kill You" we will be implicitly triggering the concept of smoking in them and thus making it more probable that they'll immediately reach for their cigarettes.

Effects on non-targeted groups

It can be legitimate for the state to enact policies which limit individuals' freedom to engage in behaviours which harm or constrain the liberties of other individuals. However, it is important that the policies do not unintentionally constrain the liberties of individuals who are not involved in harmful behaviours.

For example, it may be suggested that a tax on fattening food could be justified because the costs of treating the morbidly obese was imposing serious costs on the rest of society. Even if this kind of intervention would be justified in terms of its impact on the obese or overweight, it may be much more difficult to justify in terms of its impact on underweight people. If the underweight choose to eat fattening food, that behaviour poses no risk to the rest of society, and so there is no reasonable justification for infringing on the liberties of the underweight by taxing their intake of fattening food.

Is addictive behaviour an exceptional case?

Sometimes it is claimed that addicts have no ability to control their addictive behaviour, and thus that any intervention which is beneficial to either the addict or the society will be justifiable, *especially if those interventions help addicts to 'recover' and reclaim their autonomy.*

One of us has published a view that addicts may not suffer from reduced autonomy, a view which is echoed in the recent work of a number of authors.[5-8] But even if it were true that addicts suffered reduced autonomy with respect to their drug use, interventions that are aimed at reducing drug use tend to reduce the autonomy of addicts in domains where they are fully autonomous. For example, when a drug addict is imprisoned as a means of reforming her drug-taking behaviour, her imprisonment causes her to lose liberties that she enjoyed fully despite being addicted: freedom of movement, freedom of association, etc.

Drug users are frequently singled out as a group whose behaviours can be forcibly modified with little regard to their autonomy, but if there is any justification for this kind of policy, it should be limited to behavioural interventions which *only* limit an addict's ability to use drugs, and do not limit her ability to pursue other worthwhile goods.

Conclusions

In sum, coercive behaviour modification policies can only be justified when the behaviour in question is harmful, and when the reduction in liberty for target groups is modest. Justifiable and effective policies must not harness the affective states of citizens in ways that diminish their autonomy. Since most behaviour modification programs that use exogenously created affect would diminish citizens' autonomy, exogenously created affect should not be seen as a viable method of behavioural control. Finally, addicted individuals should not be treated as a special group whose autonomy can be ignored in the design of these programmes.

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October 2010

Memorandum by the Food and Drink Federation (FDF) (BC 73)

Introduction

The Food and Drink Federation (FDF) represents the interests of UK food and drink manufacturers – the country's largest manufacturing industry. Our sector comprises 7,000 businesses, directly employs 440,000 people and turns over almost £73bn annually.

As the voice of that economically-vital sector, we welcome the opportunity to contribute to this enquiry examining the range and effectiveness of behavioural change and policy interventions. In our submission, we have focused on what makes a successful public health campaign examining previous reports from across the field.

Detailed Response

FDF would like to make some specific comments in relation to the question on Policy and Design – points 6-10, by examining successful elements of existing public health nutrition interventions

Scope & Limitations

This paper is an overview (not a systematic review) of **evidence-based and evaluated initiatives in relation to nutrition and obesity in the general population**. This short review primarily covers two key recent papers, both of which are detailed reviews of the evidence for what is effective in interventions for the general population:

1. **WHO (2009): 'Interventions on Diet and Physical Activity: What Works'**.¹³⁰
2. **BNF (2004): 'Successful ways to modify food choice: lessons from the literature'**.¹³¹

In addition, two other papers [132 and 133] have been included to provide supporting information.

The social marketing initiative paper [3] draws conclusions from evidence relating to the determinants of and associations with risk of obesity (rather than reviewing evaluated interventions). By highlighting barriers to success it does indirectly suggest characteristics that could be included in social marketing campaigns to help increase their effectiveness. The last paper [4] looked specifically at what works for black and minority ethnic groups (rather than the general population) and as such provides an example of how interventions can be targeted to specific sub-groups of the population.

¹³⁰ WHO (2009). 'Interventions on Diet and Physical Activity: What works'
<http://www.who.int/dietphysicalactivity/whatworks/en/index.html>

¹³¹ Buttriss, J. et al (2004). 'Successful ways to modify food choice: lessons from the literature' *British Nutrition Foundation Nutrition Bulletin*, 29, 333-343.

¹³² Dept of Health (2007) 'The 'Healthy Living' Social Marketing Initiative: A review of the evidence'. Prepared by Dr Susan Jebb, Dr Toni Steer, Christopher Holmes
http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_073044

¹³³ FSA Wales (2009) Review of Dietary Intervention Models for Black and Minority Ethnic Groups Part 2: A review of evaluated dietary interventions from the UK targeting BME groups'. Prepared by Lynn Stockley.
<http://www.food.gov.uk/multimedia/pdfs/reviewdietethic2may09.pdf>

Each of these four papers note that there are limitations to the study designs, and that the evidence-base is generally weak due to a lack of well-evaluated studies or clear outcome criteria. Thus further research is required - particularly in terms of demonstrating the sustainability and the long-term effectiveness of the interventions. All four papers make recommendations to fill the knowledge gaps in this way and suggest other areas where more evidence is needed (such as in relation to certain vulnerable groups or the identification of explicit measurable outcomes).

Key Elements

Combined key findings from the WHO and BNF reviews are presented in this section and a brief summary of each of the four papers is attached as Annex I. The WHO summary in Annex I includes further characteristics found to be 'effective' in particular settings with further details of actual interventions provided in the WHO Summary Report [1].

Outlined below is an overview of results from the WHO and BNF reviews that indicate that programmes incorporating the points below are most likely to be successful:

1. ADAPT AND TARGET TO THE LOCAL COMMUNITY

Programmes should be adapted to the local context and be culturally and environmentally appropriate. They should use the pre-existing community social structures and local groups, such as those relating to ethnicity, religion, parenting, education institutions, sports and activities and other community-led groups to help ensure that the interventions are appropriate and relevant to the target group.

2. COLLABORATE WITH SUITABLE PARTNERS

The development of good partnerships (including health professionals, local food suppliers and producers, public and private sector organisations) and motivated groups of people within the community are crucial to help create accessible and supportive environments. Collaborations could occur within or across the following areas:

- Policy and environment
- Mass media
- School and higher education settings
- The workplace
- The local community
- Primary health care
- Age cluster groups (children; teenagers; adults; older adults)
- Religious settings

3. INVOLVE THE TARGET POPULATIONS

Programmes should ensure that stakeholders and community leaders participate throughout the process, including the planning, implementation and evaluation of interventions. Parents, families and schools should be involved and planning should include listening to and learning from target populations about their needs to ensure that interventions are meaningful and relatively undemanding to fit in easily with lifestyles.

4. DEVELOP MULTI-COMPONENT PROGRAMMES

Interventions that have multiple components have been shown to be more effective, such as those that combine diet and physical activity, or more than one dietary component such as reducing salt and saturated fat in cooking. In some cases covert approaches may also be effective, for example a gradual unannounced stepwise reduction in the salt or fat content of a product or dish.

5. REINFORCE MESSAGES WITH MEDIA, ACTIVITIES, MULTIPLE SETTINGS & ENVIRONMENTAL CHANGES

Positive outcomes are also related to increased exposure to the interventions, both in the community and by using the mass media to raise campaign message awareness. Mass media has been shown to be effective for sustainability of the intervention, but only if supported by other activities, such as environmental changes and/or tailored advice that offer realistic suggestions to help individuals achieve positive changes. Interventions that include hands-on and interactive activities, especially for children, have also been shown to improve effectiveness, possibly through increasing familiarity and understanding the desirable behaviour, food or activity and reinforcement of the message. In some cases incentives or rewards can be offered for positive changes to reinforce the behaviour. In schools nutrition education combined with supportive changes in canteens, tuck shops and/or vending machines has also worked better than a single approach.

6. UNDERSTAND THE LIMITATIONS

The relevant evidence-base should be thoroughly reviewed to identify both what works, what doesn't and if possible why, to better understand limitations that may have been experienced by previous health promotion specialists. For example it has been shown that programmes based in supermarkets are generally more effective for women and people with more disposable income are going to benefit from programmes designed for restaurants. Pricing strategies which make healthier food choices more attractive economically can be effective when targeted at people with less disposable income. However, consideration needs to be given to the financial impact on commercial outlets as this may limit the implementation of the intervention. Similarly competing promotions and campaigns may limit their success.

TACKLING OBESITY – POINT 16

In relation to the section “Tackling Obesity”, the food and drink manufacturing industry continues to respond to society's concerns about the health of the nation, particularly in relation to obesity levels. We are absolutely committed to playing a positive role in this debate, as demonstrated by our ongoing efforts and significant investment to reformulate, innovate and offer greater product choice; protect children through responsible advertising and marketing; provide clear, informative labelling; and sponsor healthy lifestyle education initiatives.

We remain convinced that the most successful approaches to tackling complex lifestyle issues such as obesity are those that are based on empowering healthier choices, rather than

through discriminatory taxes on food and drink, which would do little to tackle the root of the problem: the imbalance between calories consumed and energy expended.

In the UK there is not much scope to use the VAT system to subsidise certain foods. Many foods judged to be 'healthy' are already zero rated with some notable exceptions such as mineral water, fruit juices and rice cakes. No direct price manipulation to subsidise healthy food and drink has yet to be suggested. However, there are a number of pilot projects that are focused on incentivising behavioural changes, including food voucher schemes and food reward initiatives. However, there is no clear evidence at this stage to show that the desired long term behaviour change is achieved when tackling obesity.

If obesity is to be tackled successfully then it requires a coordinated, multi-stakeholder approach. We have seen that the best results will be achieved when Government works in genuine partnership with industry to educate individuals to be more aware of the impact of the choices they make in terms of both diet and exercise, for themselves, their families and, ultimately, society.

CONCLUSION

It is clear that **there is no "one-size-fits-all"** approach and an in-depth understanding of the target group and its particular needs is essential for the development of a successful programme. This brief document is intended to give a sense of what is most likely to work in public health nutrition interventions, if they are **well-researched and designed specifically for their purpose**. In addition the following point highlighted by WHO [1] should be noted, ***'it should be underlined that interventions are only truly effective when national policies are aligned, coherent and supportive (portfolio approach)'***.

The key elements above are a starting point for discussions in the planning of interventions, but they are relatively meaningless if they are not **customised and suited to a particular context and target group**. In planning targeted interventions health promotion specialists should review the body of evidence relevant to their target group and locality to identify specific details about what has been shown to work.

An example relating to black and minority ethnic groups in Wales [4] included in the Annex attached highlights the importance of researching for specific groups and their needs.

In addition to including key elements noted above, FDF suggests that the following **general considerations** should be addressed when undertaking public health nutrition interventions, **to facilitate transparency, efficiency and cost-effectiveness**:

1. Have aims and objectives been set in advance about what the programme intends to achieve?
2. Is the programme design grounded in evidence and is the methodology theoretically sound?
3. Have clear and measureable endpoints been set to enable evaluation, such as specific health outcomes and/or dietary, behavioural or psychosocial changes?
4. Are reputable health organisations, academics and community leaders and community representatives participating?
5. Is the programme targeted, appropriate, reproducible and sustainable?
6. Has the programme been costed and is it clear who will fund it?

7. What is the mechanism to share the outcomes with policy-makers and the wider health promotion community – will results be published in a peer-reviewed journal to help build the knowledge base?

6 October 2010

Letter from the Food Standards Agency (FSA) (BC 16)

The Food Standards Agency (FSA) is delighted to respond to the sub-committee investigating the use of behaviour change interventions to achieve policy goals. Much of the FSA's work is about behaviour change - in recent years there has been an increasing emphasis on needing to understand and influence behaviours in order to achieve our strategic priorities¹³⁴. This applies as much to our ongoing work on food safety as it did to our work on dietary health (which transfers to the Department of Health on 1st October 2010).

We have identified issues within our food remit – for example reducing foodborne disease, lowering the salt and saturated fat in people's diets – and developed policies, advice and campaigns to reduce the potential adverse impact of food on health. Bringing about behaviour change often involves dealing with multifaceted issues and our approach has frequently been to use a number of interventions, often in parallel, aimed at changing behaviour – ranging from raising awareness, providing better information, training, encouragement, fiscal incentives, through to legal sanctions.

We have established a Social Science Research Unit and an independent Social Science Research Committee to give us access to professional social science expertise to help better inform our work and also to help evaluate its effectiveness.

Our general approach as a science (both natural and social science) and evidence based organisation is to strive to integrate behaviour change and behavioural research into the policy development cycle. As we step-up our behaviour change agenda in relation to food safety we have been mindful to draw on previous learning, for example from the Government Social Research service (GSR) 2008 Behaviour Change Knowledge Review, on previous empirical evidence and make good use of our Scientific Advisory Committees, in particular the Social Science Research Committee (SSRC)¹³⁵.

Two examples, our work to introduce a national Food Hygiene Rating Scheme and our earlier Salt Reduction Programme, may help explain our general approach to behaviour change.

Food Hygiene Rating Scheme

Our current work to introduce a national Food Hygiene Rating Scheme (FHRS), is designed to provide consumers with information about the hygiene standards found in food business premises¹³⁶. The overarching policy goal of the FHRS is to reduce the incidence of foodborne illnesses and the associated costs to the economy, by providing consumers with easily accessible information on food hygiene inspections (carried out by Local Authorities) which, in turn, encourages businesses to improve hygiene standards. Apart from consumers, the scheme is designed to influence behaviour change outcomes in two other groups: food businesses and local authorities.

¹³⁴ Food behaviour is one of our science and evidence themes for 2010-2015 Science and Evidence Strategy and there are behavioural elements inherent in all of the other themes

<http://www.food.gov.uk/multimedia/pdfs/publication/sciencestrat0210.pdf>

¹³⁵ <http://ssrc.food.gov.uk/>

¹³⁶ <http://www.food.gov.uk/safereating/hyg/scoresonthedoors/>

The behaviour change model that lies behind the policy depends on the consumer using the public outputs of the inspection regime- the aim is that consumers will look at the food hygiene ratings of food businesses, understand them and then alter their behaviour to make a decision that prioritises food hygiene in choosing where to eat out or shop for food. The pressure on food businesses to improve food hygiene will come primarily through this customer behaviour change and also through competitive pressure from other food businesses. The success of the scheme relies on local authorities being willing to participate (it is voluntary) and on them making their inspection findings publically available in an easily accessible format as a matter of routine, rather than providing their inspection reports on request, as would otherwise be the case.

This intervention illustrates how we are relying on individual behaviour change as a driver of organisational change. The success of the FHRs also depends on the FSA providing support to local authorities to encourage their participation. This is being achieved through the provision of guidance, training and a national online search facility for publishing hygiene ratings. The FHRs initiative has been designed in such a way that all desired behaviour change outcomes lead to the ultimate goal of the scheme (to reduce the incidence of foodborne illnesses). Articulating how the FHRs is intended to impact on each group, using a Theory of Change approach, helps expose what sorts of questions need evaluating and what sort of evaluation design is required and feasible. As a result we will be taking forward an independent evaluation of the FHRs which will have both an impact and a process study component. We plan to commission the evaluation by the end of 2010-2011.

Salt Reduction Programme

The second example is our work on salt, which arose from the scientific evidence on the potential health consequences of high salt intakes. To address the issue, the FSA's approach combined raising awareness among consumers through various waves of salt campaign work and working with industry stakeholders to encourage the gradual reformulation of products, to bring about a reduction in salt in the UK diet. This combined approach was thus attempting to change consumer preferences and behaviour (and ultimately health outcomes) as a result of increased awareness of salt and also by a gradual change to the "default" options through product reformulation. The dietary evidence suggests that population salt intakes have seen, on average, a 0.9g reduction from 2001 to 2008.

Turning to address some of the questions in the call for evidence in more detail:

What is a behaviour change intervention? Broadly put, behaviour change intervention is any policy that has a behavioural intention in its design (how the policy needs to operate in order to be effective) and/or outcome (what the policy is intended to achieve). Much of the FSA's work could be described as behaviour change. This is why it is important to classify behaviour change and focus on those interventions/policies that are explicitly underpinned by the academic literature on theory and models of behaviour and previous empirical literature about what works/doesn't work; either as part of the work we do to develop policy and/or in the design of policy evaluation.

Evidence base for behaviour change: as a science and evidence based organisation, we seek to ensure that our policies are underpinned by evidence and are fully evaluated. The behaviour change evidence base includes:

- **Evidence Reviews** to tell us what works/doesn't work in achieving outcomes and what the evidence gaps are (e.g. an analysis of the literature on organisational behaviour change and partnership models to support the FSA's work on incident prevention¹³⁷; exploring business cultures and food hygiene behaviours in the home)
- Research which describes and helps understand behaviour so that we have robust time series data **monitoring key food behaviours** and their drivers/barriers for different groups in the population (e.g. Food and You survey¹³⁸)
- Activities to support the **development and testing of interventions** (e.g. we have recently formed a working group comprising members of our SSRC and other social science experts to advise on options for designing a new approach to slaughterhouse inspections¹³⁹)
- **Roll-out and evaluation of national schemes** (e.g. evaluation of the Food Hygiene Rating Scheme (FHRS)¹⁴⁰)
- **Campaigns** – many of our interventions are underpinned by campaigns and campaign evaluations (e.g. our annual Food Safety Week¹⁴¹)
- **Methodological work** e.g. on how we measure behaviour and how we measure the effectiveness of initiatives to bring about behaviour change (eye-tracking technology; accompanied shops/meals)¹⁴² and 'Theory of Change' or 'Programme Theory' workshops to draw-out the theory (or causal mechanisms) underpinning interventions and understand how these are expected to be activated to produce desired short-term and longer-term outcomes.

Policy design and evaluation: Our experience suggests that behaviour change draws on and relies on a number of disciplines. Behaviour change is arguably as much about robust evaluation as it is about behaviour change. This is because in order to know whether an intervention has worked, changes in behaviour need to be captured and measured. This can be difficult to do when the policy environment is rapidly changing and the issue being addressed is complex in its causes and interactions. To help us access the range of relevant specialised expertise we are establishing a social science research framework and we already have a Register of Specialists (comprising UK and international experts) whom we can draw on for relevant subject, theoretical, methodological and evaluation expertise in relation to behaviour. The Register helps us comply with the GSR professional code¹⁴³ in the way in which it offers us a mechanism for seeking external scrutiny and peer review.

Tackling Obesity: The Committee have asked for submissions on behaviour change interventions designed to tackle obesity. Prior to nutrition policy transferring to the Department of Health on 1st October 2010 the FSA has had a significant portfolio of work and evidence to help improve the dietary habits and health outcomes of the population.

¹³⁷ <http://www.food.gov.uk/science/socsci/ssres/crosscutss/sspartnership>

¹³⁸ <http://www.food.gov.uk/science/socsci/surveys/foodandyou/>

¹³⁹ <http://www.food.gov.uk/multimedia/pdfs/committee/ssrc1022.pdf>

¹⁴⁰ <http://www.food.gov.uk/safereating/hyg/scoresonthedoors/>

¹⁴¹ <http://www.food.gov.uk/safereating/hyg/germwatch/2010/>

¹⁴² <http://www.food.gov.uk/science/socsci/ssres/labelss/labelbehavres>

¹⁴³ <http://www.civilservice.gov.uk/my-civil-service/networks/professional/gsr/professional-guidance/gsr-code-main-page.aspx>

Some examples of this work are contained in the Annex and the Committee may wish to consider this work in more detail.

Conclusion

Behaviour change is an increasing feature of our work and it is critical to achieving our strategic goals. There will be a more explicit focus on behaviour, behaviour change and evaluation in our on-going and future work and we look forward to the opportunity to provide more details about our work to the sub-committee.

1 October 2010

Annex: Examples of dietary health work carried out by the FSA (Responsibility for this area moves to Department of Health from 1 October 2010)

- Review of Reviews in nutrition which assesses the effectiveness of dietary behavioural interventions to provide an understanding of the individual barriers to, and enablers, of dietary improvements¹⁴⁴
- National Diet and Nutrition Survey (NDNS)¹⁴⁵
- Calorie scheme with early adopters¹⁴⁶
- Front of Pack labeling¹⁴⁷
- Salt and saturated fat campaigns^{148 149}

¹⁴⁴ forthcoming

¹⁴⁵ <http://www.food.gov.uk/science/dietarysurveys/ndnsdocuments/>

¹⁴⁶ <http://www.food.gov.uk/science/socsci/ssres/nutritionss/evalcalinfocateringoutlets>

¹⁴⁷ <http://www.food.gov.uk/news/newsarchive/2009/may/pmp>

¹⁴⁸ <http://www.food.gov.uk/healthiereating/salt/campaign>

¹⁴⁹ <http://www.food.gov.uk/healthiereating/satfatenergy/satfatcons/>

Memorandum by Friends of the Earth and Campaign for Better Transport (BC 145)

CONTEXT—THE NEED TO CUT TRANSPORT EMISSIONS THROUGH BEHAVIOUR CHANGE

It is clear that in order to play its part in preventing dangerous climate change the UK must urgently make significant cuts in carbon emissions and that transport policy has a key role to play in this. The Committee on Climate Change has recommended that the UK adopts a 2020 target of a 42% reduction from 1990 levels¹⁵⁰. A recent report by Friends of the Earth (peer reviewed by Kevin Anderson from Manchester University found that a 56% reduction by 2020 would be necessary¹⁵¹

Transport is often considered to be a sector where emissions cuts are most difficult but it is responsible for approximately a quarter of UK domestic emissions so it is clear these emissions will need to be cut significantly if we are to meet carbon reduction targets. Technology will have a role to play. Low carbon cars are coming on to the market and the average emissions of cars sold in the UK is declining. In the long term, electric cars are likely to play a significant role in cutting transport emissions - providing the electric grid is rapidly decarbonised and the necessary technology and supporting infrastructure developments take place. However it is extremely unlikely that electric vehicles will be a significant part of the UK fleet until well into the 2020s¹⁵² and consequently behaviour change policies will (along with cleaner conventional car technology) be the main driver of carbon reduction from surface transport until at least 2020.

Broadly there are 3 'agents' of behaviour change:

1. Infrastructure (i.e improvements to public transport, walking and cycling routes and reallocation of road space, speed limits)
2. Fiscal incentives (i.e taxes or charges to discourage car use and/or increase use of alternatives including lower carbon vehicles)
3. 'Soft Measures' (i.e smarter travel choices, promotion, advertising and land use planning policy)

We believe the most effective package of policies to achieve modal shift will involve all 3 'agents' but at the very least 'soft' measures will be most effective if complimented with infrastructure improvements.

a) WHAT ARE THE MOST INFLUENTIAL DRIVERS

Cost

The relative costs of different transport modes are a significant driver to use of cars over public transport. Despite public perception, the overall cost of running a car has been declining for many years while the cost of using buses and trains has been increasing¹⁵³. There is also considerable evidence that higher petrol costs in recent years have resulted in

¹⁵⁰ (providing other international action is forthcoming)

http://downloads.theccc.org.uk/s3.amazonaws.com/4th%20Budget/4th-Budget_Exec%20Summary.pdf

¹⁵¹ http://www.foe.co.uk/resource/reports/reckless_gamblers.pdf

¹⁵² Between 1-10% of cars could be electric by 2020:

http://www.parliament.uk/documents/post/postpn365_electricvehicles.pdf

¹⁵³ <http://www.publications.parliament.uk/pa/cm200910/cmhansrd/cm100205/text/100205w0001.htm#10020537000025>

changed travel behaviour¹⁵⁴ such as – car sharing and a shift to walking and cycling shorter journeys. Effective fiscal policy designed to achieve behavioural change will need to make low carbon modes cheaper than driving but also provide clear disincentives to undesirable behaviour that can be shifted relatively easily - such as single occupancy car commuting into city centres or using the car for very short journeys.

Possible fiscal policies will include:

- Congestion Charging
- Work Place Parking Charges
- Road User Charging

Congestion charges have been introduced in a few cities and have been effective both as revenue raisers and as an agent of modal shift. The original central London Congestion Charge cut traffic volumes by over 20% in 2003-2005 (during charging hours compared to pre charge levels) there was also an increase in bus passengers entering the central zone of 37% during the same period – partly down to the congestion charge.¹⁵⁵

The only Workplace Parking Levy planned so far will be introduced in Nottingham in 2012¹⁵⁶, it is predicted that the levy will reduce traffic growth from 15% to only 8%. The number of public transport journeys in and out of the city centre will increase by 20% and the demand for Park & Ride will increase by 45%. The transport improvements will take 2.5 million cars off our roads by 2015.

The last Government planned introduction of a national Road User Charging scheme and then later dropped, the coalition has no plans to consider such a scheme. Neither has one been introduced abroad.

The Committee on Climate Change said in its 4th budget report that introducing road pricing could save 5.6MTCO₂ in 2030, primarily due to reduced car mileage¹⁵⁷

Habits

Sustrans Travelsmart work identified that habit and convenience largely govern travel choice and behaviour. More than half of all journeys under 5 miles are made by car. The Sustainable Travel Towns pilots revealed that nearly two thirds of all journeys could be made by foot, cycle or public transport under existing conditions and more could be with improved infrastructure and land use planning.

There is widespread evidence of the potential for behaviour change – 80% of car commuting journeys are single occupancy. Transport Secretary Phillip Hammond recently acknowledged the potential for behaviour change on short journeys and that it is necessary¹⁵⁸. Transport consultant Lyn Sloman estimated that only 20% of car journeys could not realistically be done by any other mode.¹⁵⁹

The potential for behaviour change is clear.

¹⁵⁴ During the last oil price spike in 2008, two thirds of motorists in an AA poll said they had cut their car journeys <http://www.travelfootprint.org/news/story/139>

¹⁵⁵ <http://www.tfl.gov.uk/assets/downloads/FourthAnnualReportFinal.pdf>

¹⁵⁶ <http://www.nottinghamcity.gov.uk/index.aspx?articleid=2566#RUC>

¹⁵⁷ http://downloads.theccc.org.uk.s3.amazonaws.com/4th%20Budget/4th-Budget_Chapter4.pdf

¹⁵⁸ Phillip Hammond MP – Sustainable Transport speech 10th September 2010: <http://www.dft.gov.uk/press/speechesstatements/speeches/hammond20100910?view=Standard>

¹⁵⁹ 'Car Sick' Lyn Sloman

b) WHAT IS THE ROLE OF INFRASTRUCTURE

Infrastructure plays a key role in facilitating behaviour change, by:

- 1) providing easier journeys by active modes and public transport and by
- 2) reducing the road space available for vehicles

Sustrans Connect 2 project provides key linking infrastructure, often bridges, to connect sustainable transport routes together. In many cases these key links significantly shorten routes and thereby encourage active travel as an alternative to car use.¹⁶⁰

All three Sustainable Travel Towns pilots used 'hard' infrastructure developments as part of a package to 'lock in' the benefits of the 'soft' smarter travel choices measures.

c) WHAT ARE THE LATEST DEVELOPMENTS IN EVIDENCE BASE

Recent Government research indicates that the potential for behaviour change is high: The Future of Urban Transport report for the Cabinet office (2009) quoted research that more than three quarters of car journey under 5 miles could be replaced with walking, cycling or use of public transport. The sustainable travel towns pilots also demonstrated how relatively modest interventions could achieve significant behaviour change.

d) WHAT ARE MOST APPROPRIATE TYPE AND LEVEL OF INTERVENTIONS

The most effective interventions combine more than one of the three agents: hard measures, soft measures and fiscal instruments. Both the Sustainable Travel Towns and the London Congestion Charge used two of the three. It should be noted that the Congestion Transport Innovation Fund introduced by the last Government positively encouraged bids that included all three.

e) WHO ARE THE MOST EFFECTIVE AGENTS OF DELIVERY

In our view, Local Councils together with the 3rd sector should be the agents of delivering behaviour change on the ground, locally, but the overarching policy and implementation framework should be set by central Government. The Sustainable Travel Towns pilots operated in this way. However it is not enough to simply leave implementation up to Local Councils, simply because some Councils are more committed to this agenda than others. In our view it is significant that the coalition Government have just introduced a dedicated local transport fund, the 'Local Sustainable Transport Fund' largely designed to ensure that smarter travel choices initiatives are introduced. This is in contrast to a strong political preference for the 'localism' agenda – giving freedom to Councils to spend their grant money as they wish. In our view this strongly illustrates that overarching policies and incentives are necessary to make these innovations happen on the ground. Friends of the Earth has been campaigning for a system of Local Carbon Budgets¹⁶¹ for every Council, we believe this would help provide a strong incentive for Local Councils to introduce behavioural change policies but ultimately it would be down to each Council to decide how they meet their commitment to cut carbon.

Central Government has a key role to play in several other areas including:

- Fiscal policy (see part a response)
- Land Use Planning Policy, and
- Policy Guidance

¹⁶⁰ <http://www.sustrans.org.uk/what-we-do/connect2>

¹⁶¹ http://www.foe.co.uk/resource/briefings/local_carbon_budgets.pdf

Planning policy has a vital role in determining what development takes place and where, it is therefore of some concern that the coalition Government has already scrapped some planning guidance which is designed to achieve behaviour change by providing an incentive to reduce car use¹⁶².

Central Government also has a vital role to play in setting the overarching policy framework, a good example of this would be 'Manual for Streets' guidance for street design which is supported by practitioners such as the CTC and Sustrans.

i) WHAT LESSONS HAVE BEEN LEARNED

We have learned from the Sustainable Travel Towns pilots that packages of Smarter Travel Choices measures work in separate small towns. We have also learned from the Smarter Travel Sutton project¹⁶³ that these type of innovations work in a London Borough, or in one area within a City. It is likely that the synergy benefits of neighbouring schemes would mean even greater behaviour change would result. It is likely that at least one city wide bid to the Local Sustainable Transport Fund will be made shortly, so evidence should be available fairly soon.

However there are at least 2 areas where we need pilot schemes to evaluate the potential for behaviour change:

- 1) Smarter Travel Choices in a rural area
- 2) Long distance Smarter Travel Choices

j) WHAT LESSONS FROM OTHER COUNTRIES

The contrasting examples of Phoenix (US) and Copenhagen (Denmark) in Lyn Sloman's 'Car Sick'¹⁶⁴ provide a useful illustration of how public policy can influence behaviour change. In Phoenix, a city that has prioritised land use planning and road building to cater for cars 93% of trips are by car. In contrast, Copenhagen has progressively cut the number of parking places, pedestrianised streets, built an extensive cycle route network and public transport network. In that city a third of commuters cycle, a third use public transport and a third drive.

CONCLUSIONS AND RECOMMENDATIONS

- Behaviour Change is absolutely vital in the short term if transport is to make its necessary contribution to meeting carbon reduction targets
- There are three agents of change and the most effective innovations will use all three
 - Soft measures
 - Hard measures
 - Fiscal measures
- Relative pricing trends of different modes must be addressed
- There is enormous potential for behavioural change
- Local Councils together with third sector have a key role in implementation, but Central Government also has a key role with:
 - Planning policy
 - Local Carbon Budgets
 - Policy Guidance

¹⁶² <http://www.communities.gov.uk/news/corporate/1809333>

¹⁶³ <http://www.smartertravelsutton.org/business-travel-networks/sustainable-travel-solutions>

¹⁶⁴ See Chapter 7 'Car Sick' Lyn Sloman, Green Books

Memorandum by Friends of the Earth and Campaign for Better Transport (BC 145)

- Significant behaviour change is possible with the right policies and political will to implement them

January 2011

Memorandum by Dr Benjamin Gardner and Dr Phillippa Lally, University College London (BC 68)

This submission is entered on an individual basis.

Habit formation as a means to cost-effective diet and activity change and maintenance

Key messages

1. Dietary and activity behaviour change interventions are effective in promoting weight loss, but the scale of weight losses is relatively small. One way to improve the cost-effectiveness of such interventions is to minimise the resources devoted to aspects of intervention development or implementation. This submission focuses on habit formation as a means of achieving cost-effective interventions.
2. Recent theoretical and empirical work suggests that the formation of habits (i.e. learned automatic responses to particular contexts) offers a potentially low-cost mechanism for long-term maintenance of change in diet, activity and weight. Once formed, habits are reinforced by environmental cues, and so maintenance of habitual behaviour does not require continued assistance from health professionals or practitioners.
3. We present findings from a trial of the 'Ten Top Tips' weight-loss intervention, based on a leaflet which provided simple advice on how to perform dietary and activity behaviours in a manner conducive to habit formation. Implementation required negligible involvement of health professionals. Significant weight losses were observed over a 32-week follow-up period.
4. These results highlight the feasibility of using habit formation principles to design reduced-cost self-guided behaviour change programmes.

Aim

5. This document seeks to address the following questions posed by the Select Committee:

1. What is known about how behaviour can be influenced?

2. What are the policy implications of recent developments in research on behaviour change?

16a. The latest developments in the evidence base in relation to changing eating and physical activity behaviour

Background

6. Behaviour change interventions have the potential to be effective by promoting weight loss through behaviour change. Recent reviews have concluded that, overall, interventions based on healthy eating and physical activity typically produce weight losses of around 3-5kg at 12 months, and 2-3kg at 36 months^{1,2}. A considerable proportion of participants in diet and activity behaviour change programmes are thus

likely to achieve at least 5-10% body weight reduction associated with positive health benefits³⁻⁵.

7. Designing, evaluating and implementing behaviour change interventions is however often resource intensive, requiring the investment of considerable time and effort from developers, deliverers and participants⁶.
8. The cost-effectiveness of behaviour change interventions may be improved by maximising the magnitude of effects on behaviour and health outcomes, or by minimising costs associated with aspects of intervention development or delivery. We have undertaken work to design interventions, based on theory and evidence around habit formation, which use behaviour change methods which are simple to understand, administer and adhere to. Such interventions should minimise costs associated with training health professionals in intervention delivery, and decrease participant burden, which may enhance acceptability among target populations.

Habit formation as a mechanism for maintenance of behaviour change

9. Theoretical work into the formation of behavioural habits offers recommendations for the development of low-cost interventions with potential for achieving long-term behaviour change. Below we outline the habit formation model, and describe evidence from our recent trial of the first behaviour change intervention based on this model.

Principles of diet and activity habit formation

10. Habits are behavioural patterns which have been frequently performed within a given context (e.g. within a physical location, in the presence of others, at a certain time of day, or at a given point within everyday behavioural routines⁷, such that they have become relatively automatic responses to associated contexts^{8,9}. For example, an individual who consistently goes for a brief walk each day after breakfast may, after sufficient repetitions, will likely begin their preparation for going walking automatically when they finish breakfast⁸. Automaticity distinguishes habitual and non-habitual behaviours¹⁰.
11. Diet and activity behaviours can become habitual^{8,11}. A recent study showed that, among participants eating a healthy food, drinking water or juice, or taking physical activity on a daily basis, the formation of diet and activity habits was best characterised by an asymptotic increase in behavioural automaticity⁸. Initial repetition led to considerable gains in the automaticity with which the behaviour was performed, but increases diminished with further repetitions, until levels of automaticity reached a plateau.
12. Habits are triggered automatically by environmental cues and so require little forethought¹². Thus, as habit strength increases, the behaviour becomes easier to initiate and perform¹³. Performing healthy diet and activity behaviours in a manner conducive to habit formation should therefore ensure that the behaviours are maintained beyond any active intervention period^{14,15}.

A habit-based weight loss intervention programme: the 'Ten Top Tips'

13. The 'Ten Top Tips' is a weight-loss intervention programme which centres on a leaflet suggesting ten simple diet and activity-based actions for weight management. All ten 'tips' recommend behaviours which are relatively simple to undertake, and so, if consistently adhered to, are more likely to become habitual than more complex actions. Advice given with these behavioural recommendations encourages people to plan ahead and perform the behaviours in the same way everyday to promote the development of automaticity. Two of the 'tips' are explicitly based on principles of habit formation¹⁶: advice to 'keep to your meal routine ... try to eat at roughly the same time each day' aims to promote consistent eating contexts, and 'focus on your food ... do not eat on the go or while watching TV' seeks to prevent unconscious lapses into prior unhealthy eating habits. Self-monitoring of diet and activity is also prescribed: one of the 'tips' recommends that participants 'walk 10,000 steps per day ... use a pedometer to count the steps', and a tick-sheet is employed to allow participants to track their progress.
14. A small exploratory trial of the 'Ten Top Tips' intervention has been undertaken, using a sample of overweight and obese adults¹⁶. Intervention recipients were given the leaflet and received no further external support. An intention-to-treat (ITT) analysis found that intervention recipients lost significantly more weight than did a waiting-list control over 8 weeks (habit group: -2.0kg; control: -0.4kg). Weight loss continued after the end of the active treatment period, reaching -3.6kg in completers at 32 week follow-up (ITT=-2.6kg), with 54% (ITT=26%) of participants achieving at least 5% weight loss associated with beneficial health effects. Minimal assistance from healthcare professionals or other skilled workers was required to achieve these effects, although assistants were required to conduct participant weigh-ins at baseline, and weekly or every four weeks (depending on the experimental condition) up to 32 week follow-up. A more rigorous, large-scale evaluation of this intervention, funded by the National Prevention Research Initiative, is underway.
15. These findings demonstrate that the intervention had clinically significant long-term effects on weight loss. The likely mechanism for maintenance of behaviour change in the TTT intervention was the formation of habits, which allowed for behaviour to be self-maintained with minimal external support¹⁶.
16. The 'Ten Top Tips' intervention was developed as part of a collaboration between Cancer Research UK and Weight Concern. Following the success of the intervention trial, the 'Ten Top Tips' has been incorporated into Cancer Research UK's public health campaigns (see <http://info.cancerresearchuk.org/healthyliving/obesityandweight/tentoptips/>).
17. We are currently developing a second intervention based on habit theory, which aims to promote the formation of novel healthy child-feeding habits among parents of young children. Parents are required to choose three behaviours relevant to their child's current eating behaviour which the parent wishes to change. Parents are encouraged to set action plans specifying where, when and how the behaviours will be performed, and to perform the behaviour consistently in specified contexts, so as to form habits. Preliminary data obtained from a small pilot sample have highlighted the feasibility and acceptability of this intervention, and point to increases in the strength of focal child-feeding habits and healthier child diet following the intervention.

Policy implications

18. Habits are self-maintained, and so, once formed, place little demand on healthcare resources. We have shown that interventions which seek to promote the formation of healthy diet and activity habits are feasible, and can have positive long-term effects on diet, activity, and weight¹⁶. These findings demonstrate the potential for the implementation of behaviour change programmes which are largely self-guided and so do not require extensive training of staff. The promotion of habit formation may therefore offer a potentially cost-effective method of achieving lasting behaviour change.
19. To date, our 'Ten Top Tips' intervention remains the only public health initiative to have been explicitly based on principles of habit formation. Further applications of this approach are needed to assess the effectiveness of habit formation as a means of maintaining change among a wider range of health behaviours.

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Memorandum by the Gateway Family Services (BC 12)

Case Study - 24/05/10 - Teresa Curzey/Wayne Price

Teresa joined the Health Trainer Service in Autumn 2009 after meeting a Health Trainer at her local GP surgery – Frankley Health Centre in Northfield.

Health Trainers promote the service in GP practices across South Birmingham as well as at local events and community sites.

Wayne Price, Health Trainer explains; “As I usually do during my days at Frankley, when I am not seeing a client I promote the Health Trainer Service to the visitors in the waiting room at the centre. On this particular day I approached a lady, who looked to be in a low mood. I introduced myself and after 10 minutes of talking to her and explaining about the HT service, she seemed to be interested and because of my earlier observation I felt this service would be very beneficial for her”.

Wayne explained the key areas of the service including weight management and physical activity and she stated that she would be interested in both of these areas as she wanted to lose weight following a period of ill health and a major operation.

At the first appointment Wayne and Teresa completed a Personal Health Plan which helped them decide on specific goals and decide on a plan of action to achieve these. Wayne also measure Teresa’s BMI, height and weight.

As part of the Personal Health Plan, Wayne agreed to refer Teresa to a 12 week, free weight loss class (Weight Watchers through the Lighten Up provision).

Wayne Agreed to support Teresa whilst she was attending Weight Watchers in order to help her maintain motivation and also to assist with her additional goal of increasing her physical activity.

Teresa explains; “Wayne was there at just the right time. I was feeling very low after my operation so while I was determined to lose weight myself, I would not have done it so quickly and so soon after my operation without the support of the Health Trainer”.

Wayne and Teresa continued to work together, looking at free physical activity services in the area and monitoring progress at each appointment so Teresa could see how well she was doing and Wayne could support her through any setbacks, giving her tools to aid her such as cook books, pedometer, BMI calculator and gentle exercise guides.

Teresa continued to set small, SMART goals with motivation and encouragement from Wayne.

At her sixth and last appointment Wayne took a final reading of Teresa’s BMI and they were both very pleased to learn that Teresa had lost an amazing 3 stones in weight and her BMI had reduced from 36.2 to 30.6!

Memorandum by the Gateway Family Services (BC 12)

Teresa had started to attend swimming classes and was carrying out gentle exercise at home using information supplied to her by Wayne.

Teresa was given the knowledge and confidence by her Health Trainer to continue with her goals when her sessions had ended though she was encouraged by Wayne to ring him if she needed telephone support or just wanted to update him on how she was doing.

She continues with the weight loss and exercise classes and is keen to lose a further half a stone in order to achieve her goal.

When asked why she thought the Health Trainer Service worked, Teresa replied that the Health Trainer “listened, and more importantly, heard what she had to say”. The service offered encouragement with convenient appointments to suit and follows up made as agreed.

Teresa is now 4 dress sizes smaller than when she started and “fully intends to carry on the good work that she was encouraged to do”.

October 2010

Memorandum by Global Action Plan (BC 51)

Global Action Plan

1. Global Action Plan has 17 years practical experience of helping people to change their environmental behaviour at home, school, work and in the wider community. During this period we have worked with a wide variety of partner organisations to deliver a wide range of practical, innovative and measurable initiatives. Where feasible we have sought to work with academic institutions to evaluate the impact of our activities and to develop knowledge and understanding.
2. The organisation has grown steadily and we now employ 65 members of staff, with a turnover of £3.3 million. Our work has won awards and uniquely been endorsed by the United Nations Environment Programme. A growing range of organisations are seeking to utilise our expertise including companies such as Sky, O2, RBS and Friends Provident.
3. We also have strong connections with Central Government. We sit on DEFRA's Third Sector Advisory Board and helped shape their environmental behaviour change segmentation model. We have had staff placed on secondment within DEFRA and DEC. Our CEO sits on the newly established Green Deal Consumer Advisory Board and we have received funding from DEFRA funds such as the Environmental Action Fund, the Greener Living Fund and the Climate Change Challenge.

Submission Summary

4. This submission of evidence will draw on Global Action Plan's experience of Government funding for its EcoTeams programme. This evidence suggests that the Government does fund programmes that are both evidence based and subject to extensive evaluation. It will also demonstrate that whilst Third Sector organisations are perfectly placed to deliver behaviour change, to achieve effective delivery they require the formation of long-term collaborative partnerships with Government.

Are existing government funded behaviour change programmes evidence based?

5. Under both the Environmental Action Fund (EAF) and Greener Living Fund (GLF) DEFRA has funded a variety of behaviour change programmes. One such example is Global Action Plan's EcoTeams. DEFRA's requirement that all funded programmes must be "tried, tested, evaluated and demonstrated to have worked"¹⁶⁵ was met here through the 2 streams of evidence base underlying EcoTeams outlined below, the theoretical support underlying its principles and design, and the impact evidence showing its effectiveness.
6. The EcoTeams programme is a household level programme designed to bring about pro-environmental behaviour change in the areas of waste, water use, transport, energy consumption and shopping. Once households have registered, they meet in groups of 6-8 households for 4-6 months. Households use materials provided by Global Action Plan to discuss and map out practical changes that they can make.

¹⁶⁵ DEFRA (2008) *Greener Living Fund 2009-2011 | Guidance notes for applicants – concept note stage*. p.5

Participants are required to measure and provide records of their waste production and in-home energy use. At the end of the programme, participants receive an energy and waste report that shows improvements in energy/ waste/ recycling levels over the course of the programme along with a UNEP certificate.

The evidence behind EcoTeams

7. Energy and resource consumption behaviours are the product of a complex set of drivers¹⁶⁶, they provide a tool for social identification¹⁶⁷, and are often embedded in unconsidered behavioural habits that make up daily life¹⁶⁸. Delivering lasting pro-environmental behaviour change is therefore not easily achieved by relying on mass marketing or information campaigns alone¹⁶⁹. Instead, effective behaviour change programmes should operate using a number of key principles which allow individuals to learn new behaviour. Examples include principles underlying persuasion, social groups and social learning. Davidson (2010, In press)¹⁷⁰ describes the socio-psychological principles that Global Action Plan's EcoTeams apply to achieve lasting behaviour change.

Information delivery

8. Achieving behaviour change through the route of persuasion requires that the messages are delivered through a credible and trusted source¹⁷¹, or through trusted social peers¹⁷². The message itself should be focused and positively worded¹⁷³, creative and encouraging¹⁷⁴, tailored to the specific local environment¹⁷⁵, and can be effective if promoting the take-up of small behaviours as a gateway to more difficult

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<http://dissertations.ub.rug.nl/faculties/ppsw/2007/w.abrahamse/> [Accessed on 13/01/10];

¹⁷⁵ Abrahamse, W., Steg, L., Vlek, C., and Rothengatter, T. (2007) The effect of tailored information, goal setting, and tailored feedback on household energy use, energy-related behaviors and behavioral antecedents, *Journal of Environmental Psychology*, vol 27, pp265-276

behaviours¹⁷⁶. The use of public commitment to act is useful to cement involvement.¹⁷⁷ The design of EcoTeams utilises each of these principles.⁶

Measurement and Feedback

9. The integration of measurement and feedback into the programme firstly serves the purpose of creating an obligation to act, therefore reducing the ability of individuals to commit but not act, a practice known as 'free-wheeling'¹⁷⁸. Using feedback to reveal the impacts of specific behaviours uncovers the consequences of previously unconsidered behaviours, creating a 'Why do I do that' revelation¹⁷⁹ and a motivation to re-examine habitual behaviours and develop new behaviours¹⁸⁰. The continued positive reinforcement¹⁸¹ and new sense of efficacy provided by the ongoing feedback not only encourage maintenance of the new behaviours, but also the adoption of further pro-environmental behaviours¹⁸².

The importance of Social Groups

10. Central to the functioning of EcoTeams is the formation of the social groups who work together to reduce their environmental impacts. As described above, individuals respond more positively to messages delivered by trusted peers, additionally, where the group participates in the creation of the behavioural actions, participant uptake is significantly improved.¹⁸³ Through mechanisms described under Social Identity Theory¹⁸⁴, an individual will be motivated to emulate the behaviours and attitudes of their social group. Where that group has a strong pro-environmental make-up, individuals will tend to adopt similar practices, positively impacting their self-esteem. Once motivated to act, the social norms of the group will guide the formation of appropriate new behaviours, and provide confirmation to the individual of their behavioural choices.¹⁸⁵

¹⁷⁶ Thøgersen, J. (1999). Spillover processes in the development of a sustainable consumption pattern. *Journal of Economic Psychology*, 20, 53-81.

¹⁷⁷ Goldstein, N. J., Martin, S. J., and Cialdini, R. B. (2007) *Yes! 50 secrets from the science of persuasion*, Profile Books. London.

¹⁷⁸ Rivera, J., deLeon, P. and Koerber, C. (2006) Is greener whiter yet? The Sustainable Slopes Program after five years. *The Policy Studies Journal*, vol. 34 (2), pp. 195-221;

¹⁷⁸ Potoski, M. and Prakash, A. (2004) The regulatory dilemma: Cooperation and conflict in environmental guidance. *Public Administration Review*, vol. 64 (2), pp. 152-163.

¹⁷⁹ Hobson, K. (2001) 'Sustainable Lifestyles: Rethinking barriers and Behaviour change.' In M.J. Cohen and J. Murphy (Eds.) *Exploring Sustainable Consumption: Environmental Policy and the Social Sciences*, Pergamon: Oxford, pp191-209

¹⁸⁰ Giddens, A. (1984) *The Constitution of Society*. University of California Press, Berkeley

¹⁸¹ DeYoung, R. (1996) Some psychological aspects of reduced consumption behavior. The role of intrinsic motivation and competence motivation. *Environment and Behavior*, vol 28, pp358-409;

¹⁸¹ Lehman, P. K. and Geller, S. E. (2005). Behavior analysis and environmental protection: Accomplishments and potential for more. *Behavior and Social Issues*, vol. 13 pp. 13-32.;

¹⁸¹ Schultz, W. P. (1998). Changing behavior with normative feedback interventions: A field experiment on curbside recycling. *Basic and Applied Social Psychology*, 21 (1): 25-36.

¹⁸² Bandura, A. (1977) *Social Learning Theory*, Prentice Hall, Englewood Cliffs, NJ;

¹⁸² Stern, P (2000) Toward a Coherent Theory of Environmentally Significant Behavior, *Journal of Social Issues*, vol 56, no 3, pp.407-424;

¹⁸² Feltz, D, Short, S., and Sullivan, P. J. (2008) Self-efficacy in Sport: Research strategies for working with athletes, teams and coaches, *Human Kinetics* vol 3, no 2, 293-295.

¹⁸³ Lewin, K. (1947). Group decision and social change. In T. M. Newcomb & E. L. Hartley (Eds.), *Readings in social psychology*, pp. 330-344. New York: Holt.

¹⁸⁴ Tajfel, H. and Turner, J. C. (1979) An Integrative Theory of Intergroup Conflict. In W. G. Austin and S. Worchel (Eds.), *The Social Psychology of Intergroup Relations*. Brooks-Cole, Monterey, CA

¹⁸⁵ Burgess, J. and Nye, M. (2008) *An evaluation of EcoTeams as a mechanism for promoting pro-environmental behaviour change at household and community scales*. Unpublished report, Global Action Plan.

The evidence supporting EcoTeams effectiveness

11. EcoTeams combines all of the above methods into a comprehensive package targeted at achieving long term behaviour change. Since its inception in 1993 EcoTeams has demonstrated that these methods work, it has reached over 150,000 individuals and saved hundreds of thousands of tonnes of carbon.¹⁸⁶ Below is a summary of the successes of EcoTeams.
12. The first applications of EcoTeams in the United States and the Netherlands, demonstrated that savings of up to 42% in waste, 25% in water and 4.6% in energy use could be achieved and maintained for up to 2 years.¹⁸⁷ This evidence supported funding through the EAF.
13. Under the Environmental Action Fund (EAF), Global Action Plan delivered EcoTeams to 3,602 households across the UK and an independent in-depth evaluation of the EcoTeams process was carried out through an academic partner. As well as highlighting the impacts achieved by EcoTeams, this extensive evaluation confirmed that the theoretical processes described in the previous section are effective mechanisms for achieving lasting behaviour change. For example:
14. 94% of participants reported doing more to reduce their environmental impact than before. On average they reduced their in waste production by 19%, electricity consumption by 5% and CO₂ emissions by 14%.¹⁸⁸
15. Participants reported the biggest impact of the programme as the development of a holistic re-examination of habitual behaviours. This allowed participant's to try new things and promoted a new 'joined-up thinking'. Direct changes included increased recycling, composting and avoidance of excessive packaging, use of energy saving light bulbs and an increased diligence in turning off appliances. Subsequently, participants began to re-examine other higher impact behaviours which proved to be inconsistent with their developing pro-environmental lifestyle.
16. All participants reported maintaining their new behaviours after the end of the programme¹⁸⁹ and many participants had gone on to attempt more difficult behaviours around travel choices and low-carbon diets¹⁹⁰. As a consequence of their holistic lifestyle examination participants reported adoption of more environmentally

¹⁸⁶ Moser, S. C. and Dilling, L. (2007) *Creating a Climate for Change: Communicating Climate Change and Facilitating Social Change*, Cambridge University Press, Cambridge, UK, pp294

¹⁸⁷ Gershon, D. (1996) Global Action Plan for the Earth (GAP) Available at <http://www.toolsforchange.com/en/case-studies/detail/9> [Accessed on 03/10/2010];

¹⁸⁷ Staats, H., Harland, P., and Wilke, H. A. M. (2004) 'Effecting Durable Change: A Team Approach to Improve Environmental Behavior in the Household', *Environment and Behavior* vol 36, no 3, pp341 – 367.

¹⁸⁸ GAP (2008) *EcoTeams Evaluation Report*. London, Global Action Plan.

¹⁸⁹ Weeks, L. (2009), *Sustaining sustainable behaviour: Investigating the long-run impact of the EcoTeams 'simple and painless' behavioural change programme in the UK*. Thesis (MSc). University of Bristol.

¹⁸⁹ Baxter, M (2009) *What are the main motivators and barriers to the uptake of difficult pro-environmental behaviours within the EcoTeams programme?* Thesis (MSc). University of Surrey.;

¹⁸⁹ Stofberg, N. (2010) *Are Voluntary Environmental Programs that Target Individuals Effective in Bringing about Behavioural Change?* Thesis (MSc). University of Surrey.

¹⁹⁰ Baxter, M (2009) *What are the main motivators and barriers to the uptake of difficult pro-environmental behaviours within the EcoTeams programme?* Thesis (MSc). University of Surrey.

friendly behaviours at work, and over a third of the participants reported influencing a colleague or friend.¹⁹¹

17. Measuring impacts and receiving feedback was commonly cited as a key motivation to reduce consumption and maintain behaviours, particularly around waste. The relevance of the social group setting played a key part in motivating continued attendance at meetings and facilitated further change by acting as a forum for sharing practical information about the local area.
18. The evidence above subsequently allowed Global Action Plan to develop the programme further and obtain further funding through the GLF. The evaluation of the GLF EcoTeams is still ongoing, final results are expected in late 2011.

Are existing funded behaviour change programmes effectively evaluated?

19. DEFRA's Environmental Action Fund and Greener Living Fund set out clear requirements around evaluation. As well as delivering a behaviour change project, funded organisations must carry out extensive evaluation, providing assessment of the project impacts and what the project adds to the evidence in the field.¹⁹² Under both EAF and GLF funded EcoTeams, Global Action Plan have carried out extensive evaluation in three core areas.
20. Primary evaluation focuses around the environmental impact of the programme. Using actual measures of in-home energy use and waste disposal, Global Action Plan have identified substantive environmental impact savings. Self-reported participant data has allowed Global Action Plan¹⁹³, the University of East Anglia¹⁹⁴ and numerous other researchers¹⁹⁵ to clearly demonstrate the impact that the programme has on the behaviours and lifestyles of the participants, as well as the effect the programme has beyond the participants' homes and individuals targeted.
21. Further evaluation by the University of East Anglia¹⁹⁶, Icaro Consulting¹⁹⁷ and other researchers¹⁹⁸ has provided an in-depth understanding how core features of the

¹⁹¹ Stofberg, N. (2010) *Are Voluntary Environmental Programs that Target Individuals Effective in Bringing about Behavioural Change?* Thesis (MSc). University of Surrey.

¹⁹² DEFRA (2008) *Greener Living Fund 2009-2011 Guidance notes for applicants – concept note stage*. p.5.

¹⁹³ GAP (2008) *EcoTeams Evaluation Report*. London, Global Action Plan.

¹⁹⁴ Burgess, J. and Nye, M. (2008) *An evaluation of EcoTeams as a mechanism for promoting pro-environmental behaviour change at household and community scales*. Unpublished report, Global Action Plan.

¹⁹⁵ Weeks, L. (2009), *Sustaining sustainable behaviour: Investigating the long-run impact of the EcoTeams 'simple and painless' behavioural change programme in the UK*. Thesis (MSc). University of Bristol.;

¹⁹⁵ Baxter, M (2009) *What are the main motivators and barriers to the uptake of difficult pro-environmental behaviours within the EcoTeams programme?* Thesis (MSc). University of Surrey.;

¹⁹⁵ Stofberg, N. (2010) *Are Voluntary Environmental Programs that Target Individuals Effective in Bringing about Behavioural Change?* Thesis (MSc). University of Surrey.

¹⁹⁶ Burgess, J. and Nye, M. (2008) *An evaluation of EcoTeams as a mechanism for promoting pro-environmental behaviour change at household and community scales*. Unpublished report, Global Action Plan.

¹⁹⁷ Icaro Consulting (2010) *Research & Evaluation of the EcoTeams Greener Living Fund project*. Unpublished Report, Global Action Plan.

¹⁹⁸ Weeks, L. (2009), *Sustaining sustainable behaviour: Investigating the long-run impact of the EcoTeams 'simple and painless' behavioural change programme in the UK*. Thesis (MSc). University of Bristol.;

¹⁹⁸ Baxter, M (2009) *What are the main motivators and barriers to the uptake of difficult pro-environmental behaviours within the EcoTeams programme?* Thesis (MSc). University of Surrey.;

¹⁹⁸ Stofberg, N. (2010) *Are Voluntary Environmental Programs that Target Individuals Effective in Bringing about Behavioural Change?* Thesis (MSc). University of Surrey.

programme act on individuals to motivate behaviour, the barriers they face and the developments needed to push the programme forward.

22. The evaluation outlined above would not have been completed to the standard it has without the GLF provision of support, training and advice from experienced research organisations, namely Brook Lyndhurst and Kathryn Rathouse Social Research.¹⁹⁹ The evaluation workshop and bespoke advice provided by these organisations not only helped to guide evaluation under each fund, but fundamentally improved Global Action Plan's internal research capacity. Through the development of reusable measurement tools and staff research skills, Global Action Plan has been able to extend their research programme around EcoTeams yielding further important data.²⁰⁰
23. The above evaluation projects have fed directly into the development of Global Action Plan's EcoTeams and other behaviour change programmes. Development has included extensive website design, content re-writes, recruitment delivery methods and structure of the programme. With continuing support, Global Action Plan are well placed to take the reach and effectiveness of the programme to a truly large scale fitting of the challenge we face.

How can delivery partnerships enhance the delivery of behaviour change programmes?

24. The success of Global Action Plan's EcoTeams behaviour change programme has been a consequence of the partnerships at the core of the delivery of each programme. If lasting behaviour change is to be achieved on a scale fitting to the challenge we face, it is clear that central Government will need to build long term partnerships with key delivery partners from the Third Sector.
25. Third Sector organisations are perfectly placed to deliver behaviour change programmes and as such are a valuable resource that central Government should be investing in. Third Sector organisations are a trusted source to deliver messages²⁰¹ and the values they share with the programme allow them to provide clear leadership²⁰². Their existing networks of relationships allow delivery of behaviour change to some of the most socially excluded groups in society, and their expertise allows them to adapt to the complex behavioural landscape.²⁰³
26. Central Government plays a key role in providing the direction and infrastructure necessary to deliver behaviour change programmes on a large scale. The Government will need efficient delivery partners, but the current relationships between Government and Third Sector organisations create an inefficient delivery

¹⁹⁹ Davidson, S. (Global Action Plan), Personal Communication, September 29th 2010.

²⁰⁰ Weeks, L. (2009), *Sustaining sustainable behaviour: Investigating the long-run impact of the EcoTeams 'simple and painless' behavioural change programme in the UK*. Thesis (MSc). University of Bristol;

²⁰⁰ Baxter, M (2009) *What are the main motivators and barriers to the uptake of difficult pro-environmental behaviours within the EcoTeams programme?* Thesis (MSc). University of Surrey.;

²⁰⁰ Stofberg, N. (2010) *Are Voluntary Environmental Programs that Target Individuals Effective in Bringing about Behavioural Change?* Thesis (MSc). University of Surrey.

²⁰¹ Charity Commission (2010) 2008 Study into Public Trust and Confidence in Charities. Available at http://www.charitycommission.gov.uk/Library/about_us/ptc_survey_2010.PDF. [Accessed on 03/10/2010].

²⁰² Green Alliance (2010) New times, new connections. Civil society action on climate change. Green Alliance, London.

²⁰³ Green Alliance (2010) New times, new connections. Civil society action on climate change. Green Alliance, London.

landscape. Under short-term funding, knowledge and tools are cyclically developed, lost and then redeveloped elsewhere. Creating long-term collaborative partnerships with key delivery partners would allow these organisations to develop their capabilities and become more efficient at both delivery and evaluation. The ongoing process of evaluation and shared learning between partner organisations and central Government would increase the knowledge of the most effective and cost efficient delivery methods in a wide range of environments.

27. This process has already been demonstrated under Global Action Plan's continued funding through EAF and GLF. Global Action Plan have been able to develop and retain skills, staff and an innovative behaviour change programme. However, with the lack of secure funding, the investment that GLF made in developing the capabilities of its fund recipients may well be lost as organisations are unable to retain these skills and resources. Third Sector organisations are increasingly forging links with industry partners, and whilst this builds their capacity in some areas it does not allow them to directly focus on the requirements of Government.

October 2010

Memorandum by Green Alliance (BC 107)

About Green Alliance

Green Alliance is an environmental think tank working to ensure UK political leaders deliver ambitious solutions to global environmental issues. While not a formal alliance, we work closely with partners in the third sector, business and other spheres to advocate proposals salient across the political spectrum. Our activities include research, advocacy and convening high-profile events with senior politicians and key influencers.

Introduction

Green Alliance thoroughly welcomes this inquiry on the use of behaviour change interventions to achieve policy goals, which we feel is extremely timely.

“Nudge” is the new government buzzword²⁰⁴ when it comes to the environment, with a new unit²⁰⁵ set up in the Cabinet Office to address this area. But we are yet to have a real understanding amongst politicians of what a ‘nudge’ policy truly is. There are the shoots of an understanding of behavioural economics, but this is not yet broad or deep enough to get beyond the historic way that environmental policy has been designed, with a rational model at its core.

Defra has been championing a behavioural evidence-based approach since the publication of *A Framework for Pro-Environmental Behaviours*²⁰⁶, but as yet it has not been particularly successful in getting it applied to environmental policy-making across government. Whilst the International Development and Health fields have made progress with regards to how to run pilots in a way that can be evaluated effectively, this has yet to be fully embraced on the environmental side. Equally whilst there is a growing wealth of research from academics in Cardiff, Surrey, Manchester, Nottingham and other universities on sustainable living, and on the psychology of pro-environmental behaviour, this needs to be brought together and interrogated, and connected with policymakers if it is to make a difference.

We are starting to see movement in the right direction with behavioural units being set up in DECC, CLG and DfT, and pockets of people in the Cabinet Office. Yet these posts are not yet core to the policy creation process, and the rational actor model is still largely prevailing.

DECC’s 2050 Pathways Analysis²⁰⁷ work is beginning to quantify the large proportion of emissions reductions that energy demand reduction will need to deliver if we are to meet our overall targets. This initial analysis concluded that even if strategies for low-carbon technologies (renewables, CCS and nuclear) are ambitious and successful, we will not be

²⁰⁴ See Eric Pickles article in The Guardian ‘We’ll boost recycling with a gentle nudge’

<http://www.guardian.co.uk/commentisfree/cif-green/2010/jun/08/recycling-reward-scheme>

²⁰⁵ The ‘nudge’ unit in the Cabinet Office will be run by David Halpern, author of *Mindspace* and will take advice from Prof Richard Thaler among others, <http://www.guardian.co.uk/society/2010/sep/09/cameron-nudge-unit-economic-behaviour>

²⁰⁶ Defra, 2008, *A Framework for Pro-Environmental Behaviours*,

<http://www.defra.gov.uk/evidence/social/behaviour/documents/behaviours-jan08-report.pdf>

²⁰⁷ DECC, July 2010, 2050 Pathways Analysis Report

<http://www.decc.gov.uk/assets/decc/What%20we%20do/A%20low%20carbon%20UK/2050/216-2050-pathways-analysis-report.pdf>

able to use as much energy per capita as we do now, concluding that “ambitious per capita energy demand reduction is needed.”

27% of UK emissions come from the housing sector. Individuals are responsible for much more than that if we include emissions produced by the production and consumption of products and food.

The need is therefore even greater for properly designed behaviour-change policies focused on individual/household and community interventions to reduce our environmental impact that can deliver guaranteed reductions.

Our response will be written with pro-environmental behaviour change as its focus.

Responses to selected questions

Research and Development

- 1. What is known about how behaviour can be influenced? What special considerations apply to addictive behaviour?**
- 2. What are the policy implications of recent developments in research on behaviour change?**

(answered together)

As Andrew Darnton stated in his paper as part of the GSR knowledge review²⁰⁸, the literature on the factors influencing human behaviour is extensive, to the extent that, as Professor Tim Jackson noted, it “borders on the unmanageable”²⁰⁹. The research evidence is drawn from a wide variety of disciplines and there have been many reviews from government of the wide evidence base.

All the bodies of evidence show that human behaviour is complex, arising from diverse psychological factors and from social, societal and contextual influences²¹⁰. The diversity of factors at play shows why changing behaviours has been so challenging for policy makers. They argue that change is a process, not an event and interventions must be sustained over time and incorporate a wide variety of different parts to be effective. Underpinning the intervention process should be a thorough understanding of the target behaviour and the context within which it is to be developed.

Evaluations such as MINDSPACE go some way to showing how this knowledge can be applied in a practical way. This analysis is being looked at in departments and is providing a useful framework, but it has yet to make an impact on actual policy making.

For example, it is now understood that rational information deficit models in practise rarely work²¹¹: information alone is insufficient to lead to action. Yet in our analysis of the existing policies aiming to change energy using behaviour in the home we found that 11 out of the 23 policies had information as their main component. Further, the majority of this information

²⁰⁸ Andrew Darnton, July 2008, Reference Report: An overview of behaviour change models and their uses

²⁰⁹ Tim Jackson (ed), 2006, The Earthscan Reader in Sustainable Consumption

²¹⁰ Andrew Darnton, July 2008, Reference Report: An overview of behaviour change models and their uses

²¹¹ Green Alliance/Demos 2003, Carrots, sticks and sermons
<http://www.demos.co.uk/files/CarrotsSticksSermons.pdf?1240939425>

relied on the individual taking a proactive approach to going to find this information (we can provide more information on this policy mapping if you are interested). Typically the policy requires an individual either deciding to phone a helpline, go online for information about energy efficiency, or visit an advice centre. Given what we know about people tending to go with the flow and sticking to default options, this is a significant barrier that only those who are very keen are likely to overcome. The obvious policy implications are that we should move away from interventions whose only output is information.

Government needs to take a strategic response to these developments so that behaviour change is embedded in core policy design. There is a commitment in the Department of Health's Draft Structural Reform Plan²¹² to issue guidance on the most effective behaviour change techniques by December 2010. Yet when it comes to Defra, the department which has previously championed evidence-based pro-environmental behaviour change policy, there is no real mention of sustainable consumption and production in its structural reform plan, let alone guidance on behaviour change²¹³.

Further, there needs to be an assessment at a government level of how current behavioural theory should be incorporated into environmental policy design and whether there is sufficient capability within departments to deliver this.

Fundamentally the Treasury needs to be skilled up on behaviour change. Despite isolated individuals who think differently, the rational actor model is still dominant in Treasury. Since they hold the purse strings, funding will not be available for effective behaviour change measures until Treasury values them.

3. Is there adequate research capability within the United Kingdom to support the current pace of developments in behaviour change policy interventions? Is there sufficient funding for the evaluation of behaviour change interventions?

Whilst we cannot comment on the research capability in the UK (or its funding), we note that the design and evaluation of pro-environmental behaviour change interventions for policy development is nowhere near as robust as it could be. Good examples are the recent smart meter and PAYS pilots, both developed to help inform the coming policies. Whilst these pilots examined useful aspects of the design of these interventions they were not designed in a way that allowed robust evaluation to take place, or comparability between the various pilot schemes, for example they used multiple changing variables.

4. Are there adequate structures and expertise across government and the public services more generally to support the translation of research developments in behaviour change into policy interventions?

There is not yet adequate translation of research developments into policy making, nor structures to support this. As said previously, although Defra attempted to do this, they have not yet managed to get sufficient traction within other departments.

Positions such as that of the behavioural expert and academic Rachel McCloy based in Treasury are essential to helping bridge this gap, yet this is nowhere near enough. For

²¹² http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_117371

²¹³ <http://www.defra.gov.uk/corporate/about/what/documents/defra-srp-100716.pdf>

government to keep on top of the wealth of academic progress, and to ensure the latest research is impacting on decision-making, needs greater dedicated resource.

As an NGO spanning the interaction between academics and policy-makers we are constantly surprised at how research is not known by those inside government. As a result NGOs and others in similar positions often have to act as a bridge for this knowledge, for example with the development of the current Green Deal policy. Yet campaigning NGOs are regarded as coming from a particular viewpoint and therefore are not seen as the impartial deliverers of this research.

This question also needs to address the question of political motivations. A prime example of this is the recent u-turn on waste charging and alternate weekly corrections²¹⁴ by the current government against the face of convincing evidence that these are effective ways to address waste minimisation. This is clearly driven from a political motivation, and the resulting implication is that those charged with delivering waste reduction at a local level are in a quandary, unable to respond to what the evidence base would suggest.

5. What should be classified as a behaviour change intervention?

We support the Institute for Government's proposition in MINDSPACE that almost all policy is attempting to influence people's behaviour in one way or another. On the environmental front this can be seen for example in how roads are designed (affects whether people cycle), how rubbish is collected (affects how much rubbish for landfill people produce) or how water is priced (affects how much people use of it). The design of products and buildings (for instance how user-friendly a thermostat on a heating system is, and what the default settings are) has a big impact on people's use of them.

Therefore we should not limit our definition of behaviour change purely to communications programmes (although they are also an important part of the behaviour change picture).

A behaviour change intervention should be classified as *any intervention that will affect how people live and what they do, whether or not it does this through overtly persuading them.*

This could take a wide range of forms, from regulation, incentives and opt-out mechanisms to social marketing strategies.

6. How should different levels of intervention (individual, organisational, community and national) and different types of intervention (legislative, fiscal, educative) interact in order to achieve policy goals more effectively?

Different levels of intervention will frequently need to be combined in order to bring about a change in behaviour. For example, tailored, personalised feedback on an individual level is known to increase the likelihood of someone making changes to their energy use, but this is even more effective if it involves comparing their energy use to others in the community, or working within groups to bring about behaviour change (the weight watchers model). But there will be some elements that can only happen at a higher level – for instance energy companies could develop tariffs to make energy use more expensive at peak times and

²¹⁴ For example Eric Pickles and Caroline Spelman's support for paying people to recycle (through Recyclebank) and ruling out 'pay-as-you-throw' schemes which have proved effective overseas.

cheaper when demand is lower, or government could ban private landlords from renting out inefficient houses to their tenants. These measures are complementary and need to be done together for best effect.

Different types of interventions also need to be combined. Defra's 4 Es model provides a framework for doing this²¹⁵. It suggests a combination of enabling (putting in place the necessary infrastructure, information etc), encouraging (persuading people through incentives, communications, regulation etc), engaging (involving people in the design of a programme to give some ownership) and exemplifying (government leading by example). This provides a valuable framework to ensure a balance of interventions, although it would need to be used alongside relevant behavioural models as it omits socio-psychological factors and needs to be seen within a context.

The Institute for Government's MINDSPACE²¹⁶ model provides another framework through which policy interventions to drive behaviour change can be assessed to ensure a comprehensive and reinforcing mix of interventions.

Sometimes different types of interventions can undermine each other. For example, if there are relatively strong social norms around doing something then offering a financial incentive can undermine the social norms. If the incentive is not high enough this may result in fewer people doing the behaviour, and if the financial incentive is taken away then the social norm, having been undermined, may not return²¹⁷.

What is clear though is that there needs to be a model (or framework) that the government commits to following throughout its policy development process.

7. Should behaviour change interventions be used in isolation or in combination with other policy interventions?

The answer to this question depends on what definition you give to what a behaviour change intervention is. If we take the broad definition we used in our answer to Q5, then we would argue that behaviour change interventions only work when in combination with other forms of behaviour change interventions.

In addition, if we are to achieve our emissions reductions, behaviour change interventions must be combined with more upstream interventions that are essential for further demand reductions.

For example, reducing demand for energy needs to be combined with increasing the generation of renewable energy, reforming the energy markets, and building a 'smart' grid capable of handling our electricity better. Only then will we be able to support developments such as electric cars and micro-generation hooking up to the grid in volumes²¹⁸.

²¹⁵ Defra, 2008, A Framework for Pro-Environmental Behaviours,

<http://www.defra.gov.uk/evidence/social/behaviour/documents/behaviours-jan08-report.pdf>

²¹⁶ Institute for Government, March 2010, MINDSPACE: Influencing behaviour change through public policy

<http://www.instituteforgovernment.org.uk/content/133/mindspace-influencing-behaviour-through-public-policy>

²¹⁷ Dan Ariely, Predictably Irrational, 67-89; Journal of Economic Psychology 14 (1993) 635-664, North-Holland, 635, Motivation as a limit to pricing, Bruno S. Frey

²¹⁸ Green Alliance 2009, Futureproof <http://www.green->

[alliance.org.uk/uploadedFiles/Publications/reports/Future%20proof%20electricity%20network%20for%201st%20century.pdf](http://www.green-alliance.org.uk/uploadedFiles/Publications/reports/Future%20proof%20electricity%20network%20for%201st%20century.pdf)

Equally, only by considering our behaviour change interventions with upstream issues in mind, can we drive broader developments. For example only by designing smart meters (which have the potential to reduce energy use in the home) with a smart grid in mind can we ensure that we don't limit the potential of the development of the grid as a whole.

8. Have publicly funded behaviour change interventions been both evidence-based and subject to effective evaluation? How successful have such interventions been?

There are examples of publicly funded evidence-based pro-environmental behaviour change interventions; however this has not been the norm.

One example of a successful intervention is that of WRAP's 'Love Food, Hate Waste'²¹⁹ campaign. This was based on the commissioning of several studies in 2006 and 2007 investigating householder's knowledge, attitudes, beliefs and behaviour around food and food waste. This research helped them to understand the range of factors that hampered a reduction in food waste ranging from poor food storage knowledge to confusion over food date labels. The programme harnessed the power of messaging, by combining local and national activities under a single emotive brand. It used a wide variety of methodologies from practical solutions to improved communications to make it easier for consumers to get the most from the food they buy and to waste less of it. This work was alongside an upstream programme under the Courtauld Commitment, working with the retail sector to help them reduce packaging and food waste. WRAP's Impact Review in October 2008 showed that there had been a reduction in food waste of 110,000 tonnes (10% over their target).

What is also clear is that the current model for delivery sees government very much reliant on the private sector to deliver its pro-environmental behaviour change interventions. This has two implications: first any knowledge and best practise on delivering the intervention, or piloting a scheme, needs to be shared with the private entity delivering it, to ensure robust design. Second government needs to have an understanding of the motivations of the company and aligning motivations with the delivery of the intervention through a robust framework. There is a tendency for companies to fall back on deliverables that they can tick off (for example the posting out of low energy light bulbs under the Carbon Emissions Reduction Target) rather than actually ensuring they are delivering the required behavioural effect.

13. When is it appropriate for the state to intervene to influence the behaviour of members of the public and how does this differ from when it is appropriate for the commercial or voluntary sector to intervene? In particular, when should this be done by outright prohibition and when by measures to encourage behaviour change? Are some methods of producing behaviour change unacceptable? Which and why?

The HM Treasury Green Book²²⁰ provides a two-fold rationale for government intervention: to enhance economic efficiency or to enhance a social good such as promoting equity. For tackling the issues of climate change and global resource depletion the case is a strong one:

²¹⁹ <http://www.lovefoodhatewaste.com>

²²⁰ HM Treasury, 2003, Green Book: Appraisal and evaluation in central Government http://www.hm-treasury.gov.uk/d/green_book_complete.pdf

intervening for pro-environmental behaviour change is achieving equity through avoiding harm for current and future generations. We do not believe that further rationale is needed for the case for intervention.

Whilst there is rationale to intervene, the end deliverer of an intervention might well be members of the private and third sector. In particular the voluntary sector may be perceived as more trusted messengers and deliverers of interventions on a number of issues.

There is no doubt that some methods of producing behaviour change would be politically unacceptable if introduced with little warning and with little chance for business, the third sector or individuals to prepare. However there is often greater scope for leadership on this area than government perceives, as the public will often accept more change than is believed to be acceptable. Take for example the introduction of the congestion charge in London which did not have great acceptance before its introduction (around 40% opposed its introduction), yet became more popular and accepted once it was in place (around 30% opposed).

There is a case for prohibition when it is most cost effective to do so, and no other means will produce the desired effect in the required timescale. Prohibition should then be introduced with a clear timescale and as part of a complementary suite of measures. For example there was a clear case for banning smoking in public places and we would argue there is a clear argument for removing some of the most polluting products from the market place through regulation rather than relying on consumer choice.

15. What lessons can be learnt from previous successful or unsuccessful behaviour change interventions in other countries? Which countries provide the most helpful examples of best practice? Are behavioural change interventions generally transferable between different societies?

One thing we can learn is that certain policies that are unpopular for political reasons in this country have never-the-less been successful in other countries. For example there is a large body of evidence that supports charging people to dispose of their rubbish as a way of reducing waste to landfill. See attachments, and in particular the work of Eunomia research and consulting.

In the case of designing the Green Deal there is much that can be learnt from experiences overseas and evaluations such as that of Property Assessed Clean Energy.

October 2010

Letter from Greener Journeys' (BC 129)

Greener Journeys is an initiative of the UK bus and coach industry aimed at reducing CO₂ emissions from transport by delivering unprecedented modal shift from the car. Over the next three years we plan to remove one billion car journeys from the UK's roads through the implementation of our recently launched **ONE Billion Challenge**. In reaching this goal the UK will benefit from a reduction of 2 million tonnes of CO₂, which would deliver 50% more savings from transport than anticipated by Government policies over the same period. Aside from the obvious and positive environmental implications, the Challenge will also deliver social and economic benefits too - a 'triple win'.

Greener Journeys fully supports the Committee's call for evidence and strongly believes that reducing car use is the only realistic solution to meeting the UK's carbon targets. Achieving modal shift from cars to buses and coaches offers the quickest and most cost effective way of reducing CO₂ emissions and congestion. Buses and coaches run on existing infrastructures, provide real flexibility and can offer extra capacity without additional resource.

Greener Journeys looks forward to working with the House of Lords Science and Technology Select Committee officers on this matter.

Greener Journeys national promotion and million bus ticket giveaway

In September 2010, Greener Journeys launched the first-ever national consumer marketing campaign to persuade people to get out of cars and on to buses. Using the slogan 'Sometimes you can't beat the bus', three pilot schemes were initiated in Exeter, Milton Keynes and Norwich with intensive supporting advertising campaigns (local radio, press, roadside and high street adverts). The full results of these pilot schemes will be known to us shortly, but early indications reveal that as a direct result a level of modal shift has been achieved. Changing just over one journey each month from car to bus or coach will help us to achieve in the ONE Billion Challenge.

In addition to these pilot schemes, the UK's bus and coach industries also joined together to give away one million FREE single journey bus tickets in the Million-Fares Club. With over 40 UK bus and coach operators actively supporting this promotion and ticket giveaway, and with 90% of the UK's bus routes represented, habitual car users were targeted and persuaded to think about the types and numbers of journeys they make by car. Free bus tickets were sent to all those who registered in an online competition to leave the car at home and make the same journeys by bus or coach instead. Free tickets were redeemed on participating operators' services during November - modal shift at work.

Questions

- a. The most influential driver of behaviour affecting an individual's choice of travel mode is that of **habit**. A recent NS Omnibus report (February 2009) revealed that 45% of those surveyed stated that the 'convenience of the car' was the main reason why they don't use local bus services. A further 15% and 9% respectively cited longer journey times and reliability as determining factors, with 8% preferring to walk or cycle. Just 5% claimed that the cost of tickets was the reason they don't travel by bus. Research carried out by the Department for Transport shows that satisfaction

levels for bus travel is at 82 (out of 100), much higher than figures perceived by non bus users.

- b. Infrastructure plays a **critical** role in encouraging and facilitating changes in travel-mode choices. Well positioned bus stops (located in safe environments close to local amenities, places of interest, schools, hospitals, businesses etc), bus lanes, clear and concise timetable information and other priority measures all help to make a passenger's bus travel experience more enjoyable. More importantly, it helps to make the bus a more attractive alternative to the car. For instance, if a person's place of work offers free or affordable on-site parking and the nearest bus stop is over a mile away, then the employee is unlikely to switch to a more sustainable mode of travel.
- c. Greener Journeys recently launched three pilot schemes in Exeter, Milton Keynes and Norwich persuading people to get out of cars and on to buses. A qualitative and quantitative study of the schemes is now being carried out with the results due in early February. We will be in a position to contribute evidence to this question at this time.
- d. The essence of the Greener Journeys campaign, persuading people to get out of cars and on to buses and coaches, is echoed by its slogan, 'Sometimes you can't beat the bus'. Our research has shown that by making small changes to our travel behaviour, 'sometimes' using the bus instead of the car, then big differences can be achieved. In switching just 1 journey in 25 (just over one a month) from car to bus or coach, we'll see a reduction of 2 million tonnes of CO₂, which would deliver an additional 50% reduction in CO₂ from domestic transport to that anticipated over the same period by current Government policies.
- e. Partnerships between bus/coach operators and local authorities, with support from industry bodies such as the Confederation of Passenger Transport UK (CPT) and Greener Journeys, continue to help improve bus services. Research undertaken for CPT's On the Move study shows that where bus operators and local authorities work closely together to provide transport services and solutions, it is easier, more cost effective and attractive for people to use public transport, and as a result passenger numbers have grown. Bus operators are ideally positioned to understand their market and passengers' expectation of services, whilst local authorities have the power and authority to manage the highways and put in place bus priority measures that assist in improving the bus experience.
- f. Ahead of the roll-out of the pilot schemes, Greener Journeys ran a series of focus groups up and down the country in order to gain an understanding of people's thoughts and perceptions towards buses and bus travel. The results of these sessions helped to shape the 'Sometimes you can't beat the bus' campaign, with the vast majority agreeing that in certain situations 'sometimes' the bus is the best and most effective mode of travel.

I hope this response is helpful. We believe Greener Journeys is in a position to provide valuable assistance and an insight into the bus and coach industry's behavioural change initiative.

20 January 2011

Memorandum by Professor Frances Griffiths, University of Warwick (BC 34)

Evidence submitted on an individual basis.

1. This evidence is submitted in response to the questions about Research and Development
2. This evidence uses one empirical study²²¹ to illustrate the issue but draws on my extensive knowledge of social and medical literature, my academic expertise in research methods for studying the complexity of medicine and its interaction with society, and my experience as a general medical practitioner.
3. The empirical study interviewed women who were pregnant and had pre-existing diabetes.
 - 3.1 The study was undertaken because women with diabetes who become pregnant have a relatively high risk of adverse pregnancy outcome
 - 3.2 Maintaining good blood glucose control early in pregnancy reduces the risk of adverse pregnancy outcome
 - 3.3. National Institute of Clinical Excellence (NICE) guidance suggests all women be offered pre-conception counselling. Less than half of women with diabetes go to such a clinic.
 - 3.4 Our exploratory study suggests women look to themselves and the health professionals they are usually in contact with regarding the control of blood glucose around conception and in early pregnancy.
 - 3.5 Our study explored whether and how women prepare for pregnancy. This varied between pregnancies (even for the same woman) and was influenced by multiple biological, psychological, social and environmental factors at the time of conception.
 - 3.6 The women with experience of pre-conception counselling and had not previously had a pregnancy or an adverse pregnancy outcome found it distressing.
 - 3.7 We concluded that the health professionals in regular contact with women may be in the best position to remind women about maintaining best possible blood glucose control around conception and early pregnancy.
4. The type of intervention suggested in 3.7 is diffuse, opportunistic and repeated. It is difficult to evaluate such interventions. Evaluation is made more difficult in a society where there is extensive advocacy and broadcast health messages (for example Diabetes UK media campaigns) as these interact with other interventions.
5. An intervention such as a pre-conception counselling clinic can be evaluated using well developed experimental study designs (such as randomised controlled trials). There is a danger we only develop interventions where we have established methodology for their evaluation.

²²¹ Griffiths F, Lowe P, boardman F, Ayre C, Gadsby R. Becoming pregnant: exploring the perspectives of women living with diabetes *British Journal of General Practice* 2008; 58: 184-190

6. Further investment is needed for developing evaluation methodology for diffuse, 'nudge type' interventions. This is a hard problem.

7 October 2010

Memorandum by Halton and St Helens – NHS Health Improvement Team (BC 26)

Tackling Obesity

Translation

Are there adequate structures and expertise across government and the public services more generally to support the translation of research developments in behaviour change into policy interventions?

There are lots of missed opportunities for client facing services to deliver on behaviour change interventions. Without a driver for the implementations (eg commissioned brief interventions teams training up public sector workers to deliver) staff will not be skilled up or knowledgeable in how to conduct behaviour change. When implemented correctly these programmes are able to keep people motivated to deliver behaviour change interventions. Models of behaviour change need to be consistently co-ordinated in order to be effectively translated into policy implementation.

Policy design and evaluation

1. What should be classified as a behaviour change intervention?

It needs to be recognised within everybody's role as part of organisational policies locally

Examples of tools we feel should be classified as behaviour change interventions include:

Brief advice - this describes a short intervention (usually around 3 minutes) delivered opportunistically in relation to a service user's reason for seeking help. It can be used to raise awareness of, and assess a person's willingness to engage in further discussion about, healthy lifestyle issues. Brief advice is less in-depth and more informal than a brief intervention and usually involves giving information about the importance of behaviour change and simple advice to support behaviour change.

Brief interventions - providing a structured way to deliver advice and representing a step beyond brief advice. This involves the provision of more formal help, such as arranging follow-up support. Brief interventions aim to equip people with tools to change attitudes and handle underlying problems. As part of a range of methods, brief interventions may contain brief advice and may use a motivational interviewing approach in the delivery.

Social marketing plays an important part in strategies to bring about behaviour change, by describing a strategic approach, based on traditional marketing techniques, to delivering a programme of activities to encourage behaviour change. As such it is important to recognise the role of social marketing as a valuable tool in this area. Social marketing programmes may include the delivery of brief advice or brief interventions.

Practical application

Have publicly funded behaviour change interventions been both evidence-based and subject to effective evaluation? How successful have such interventions been?

Our publicly funded behaviour change interventions have been evidence-based through NICE guidelines and by working in conjunction with Healthy Weight Healthy Lives. All our

new services will be evaluated based on the set up and structure of the individual programmes/interventions, and the evaluation methods are being built into data collection applications.

Health Trainer services are evaluated through Data Collection Reporting System which is a nationally-developed database which will compare individual behaviour change services as well as evaluate the national picture of the effectiveness of these interventions.

Through evaluation reports lessons have been learnt regarding length of interventions and methods of delivery to improve outcomes. The British Psychological Society Health Trainer Handbook has also been utilized through Health Trainers and other frontline services e.g. fire service.

Ethical considerations

13. When is it appropriate for the state to intervene to influence the behaviour of members of the public and how does this differ from when it is appropriate for the commercial or voluntary sector to intervene? In particular, when should this be done by outright prohibition and when by measures to encourage behaviour change? Are some methods of producing behaviour change unacceptable? Which and why?

Support services should be offered to the public to help them make positive behaviour change by providing signposting and guidance. In particular the focus should be on areas of deprivation making behaviour change possible where there are significant perceived barriers e.g. finance, education etc.

14. Should the public be involved in the design and implementation of behaviour change policy interventions and, if so, how? Should proposed measures for securing behaviour change be subject to public engagement exercises or consultation? Should they be piloted? Do considerations differ in the case of interventions aimed at changing addictive behaviour. In the case of public involvement from health improvement, we actively encourage the public to be involved as this is an essential part of design and implementation of behaviour change programmes. From creating a name for the service to how the service should operate the public are the experts that ensure services are appropriate and well-utilised.

In the past the traditional model of service and intervention design in the UK's public sector has often revolved around 'experts' outlining their preferred model that they believe will work. The introduction of social marketing techniques and greater levels of public consultation has helped steer us away from this approach, and has instead placed the patient/public at the heart of design and development – with demonstrable results from a broad range of interventions, including many examples in Halton and St Helens. It is extremely important that the core target audience for any behaviour change intervention is closely involved in its construction to ensure it has the best possible change of success.

October 2010

Memorandum by the Health and Safety Laboratory (HSL) (BC 87)

I Background

- I. This submission is intended to capture the Health and Safety Laboratory's (HSL) experience in applying behaviour change research to the health and safety context. Over recent years we have been commissioned to undertake a number of research projects involving application of behaviour change principles to promote safer and healthier work practices. Through our work we apply behaviour change principles to affect change in both duty holders, and employees through their employers as well as affecting employees directly. Examples are listed in Annex A. In doing so, some key differences between behaviour change in an occupational as opposed a public health setting have become increasingly apparent. The first relates to locus of control



²²². In public health an individual is more likely to view themselves as responsible for their own welfare. By comparison, in the occupational context, individual's awareness of their employers duty of care obligations can make the task of motivating employees to change a still greater challenge. A second key difference concerns the threat of enforcement. If perceived as a real eventuality, enforcement can incentivise employers to honour their duty of care obligations. Whilst this incentive does not directly apply to employees, its knock on effects can form part of their organisational environment. In public health, failure to engage in healthy behaviour does not typically have legal ramifications for the individual. A third difference relates to consequences. Engaging in unsafe work practices can have implications that extend far beyond the individual taking the risks. In public health, immediate risks are generally limited to the individual. Despite these differences, we believe that we can offer some more unique perspectives that can add value to the contemporary evidence in behaviour change, particularly if a joined up approach to behaviour change is to be adopted that transgresses the public and occupational health boundaries.

2 About HSL

2. HSL is the UK's leading health and safety research facility employing over 350 risk scientists, ergonomists, engineers, psychologists, social scientists, health professionals and technical specialists. We have a long track record of effective operation throughout the UK and beyond. Our capabilities encompass a wide range of topics including: human factors and risk assessment; fire, explosion and process safety; occupational health; safety engineering; work environment and specialist photographic and technical services. This breadth of expertise underpins our particular strength in creating multidisciplinary teams to solve health and safety problems.
3. Our services include:
 - Training
 - Assessment of levels of risk and investigation of their control
 - Forensic investigation into the causes of accidents
 - Research and development
 - Specialist advice and consultancy
 - Environmental and biological monitoring
 - Establishing requirements for standards, and processes for meeting those standards
 - Validation and certification
4. HSL currently has formal collaborative agreements with 18 scientific organisations in the UK and overseas. We also have extensive informal networks throughout the world. HSL is designated as a WHO Collaborating Centre for Occupational Health and Safety Research. In particular, this status greatly increases our networking capability and provides reassurance on the quality of HSL's services.

3 Evidence Base

²²² Locus of control refers to the degree of control an individual perceives themselves as having over their environment. Individuals with an internal degree of control consider events to be within their control. The reverse applies to individuals with an external locus of control (Rotter, 1954).

3.1 Research and Development

5. What is known about how behaviour can be influenced?

6. This submission is intended to supplement contemporary research on optimal approaches to behaviour change derived from public health research (Abraham et al, 2008; Michie et al, 2005; Michie et al, 2009; McEachan et al, 2005), that for example, may have been provided by the British Psychological Society's Division of Health Psychology. As way of creating greater consistency and therefore clarity in understanding how to engender behaviour change, the latter may encompass: the importance of theory driven research and production of meta-models of behaviour change (e.g. Michie et al, 2005,), standardising the behaviour change content and implementation of interventions, and progression towards a nomenclature (Michie et al, 2010). We would add to this the following learning points for changing behaviour in occupational contexts. Abstracts from research undertaken by HSL that supports each of these observations are provided as an appendix.

3.1.1 Learning point 1: Behaviour change in an occupational setting requires a work and organisational environment that facilitates healthier or safer behaviour.

7. Attempts to change employee behaviour are likely to flounder if employee's work environment leaves them little choice but to behave in a way that is either unsafe or unhealthy (Lunt et al, 2008). As part of a large scale study of Behaviour Change and Worker Engagement Practices in the UK construction sector, industry practitioners repeatedly told us that a work environment that supports safer behaviour is one in which "[operatives] don't have to behave unsafely" (Lunt et al, 2008). In the work context, environment based behavioural barriers and enablers fall under two main categories, (a) physical and (b) social that stem from either the immediate work environment or organisational layers. Common examples of physical barriers in the immediate work surroundings include the accessibility and usability of controls such as Personal Protective Equipment (PPE). Social examples would include workmate's attitudes and behaviour. Physical barriers operating at an organisational level could include access to occupational health provision, or the availability and usability of procedures. Corresponding social barriers could include leadership style and the occupational health climate (collective perceptions of how seriously an organisation views occupational health) (Bell et al, 2008; Bell et al, 2009a & 2009b; Lunt et al, 2007; Lunt et al, 2005;). Targeting individual behaviour without addressing such barriers and enablers would mean that the root causes of unsafe work practices are overlooked. In our view this is a key limitation of traditional approaches to behavioural safety (Hopkins, 2006). Based on behaviour modification principles, traditional behavioural safety interventions typically involve an operative being observed, and followed by feedback from the observer who may, if necessary suggest corrective action. We regard this approach as too symptomatic, and having the potential of being perceived as a vehicle of blame by the employee. As denoted by Figure 1, integrated approaches to behaviour change need to be applied to the workplace.

3.1.2 Learning point 2: The 'active ingredients' in the social and physical environment that facilitate behaviour change need further unpacking

8. Current 'meta-models' for behaviour change (e.g. Michie et al, 2005) include social and physical environment domains, but do not as yet specify the active ingredients of the environment that can help lever change. Recent work on developing behavioural change taxonomies (Abraham et al, 2008) appears to focus on the individual and less so on the environment. Based on: a recent systematic review on behavioural change interventions for dermal and respiratory hazards; developing a safety climate tool; and piloting an occupational health climate tool, we feel we have some understanding of what this taxonomy might include. For example, our safety climate tool consists of 8 factors, namely: organisational commitment, health and safety orientated behaviours, health and safety trust, useability procedures, peer group attitudes, engagement in health and safety; resources in health and safety and accidents and near misses.

3.1.3 Learning point 3: Work-based behaviour change interventions need to take into account the organisation's level of cultural maturity.

9. Drawing on learning point 1, in our experience behavioural change interventions as applied to health and safety needs to take into account an organisation's level of cultural maturity²²³ (Lunt et al, 2009; 2008). In this context maturity means the extent to which health and safety systems are in place for supporting good practice, and attitudes are favourably disposed to health and safety. Therefore, only when suitable safety management systems are in place would we recommend any kind of 'psychosocial intervention'. Subsequently, targeting individual employee's behaviour should not be done until leadership attitudes and competencies reflect a positive predisposition to health and safety . To this end, we have developed a health and safety culture maturity measure (due to be released early 2011) that small and medium-sized enterprises can use as a guide for selecting interventions most suitable to their current maturity level.

3.1.4 Learning point 4: Work-based behaviour change interventions need to include worker involvement

10. From our experience interventions will have greater chance of success if worker involvement is built into the intervention from the outset. Workers can be involved in: developing policies and guidance that assimilate behaviour change and worker involvement principles; conducting risk assessments; determining appropriate actions for managing risks, and feeding back on their effectiveness (Lunt et al, 2008). Worker involvement has two key benefits. It motivates, particularly where employees get feedback demonstrating their input into decision making. Secondly, it means any solutions that are identified are more likely to work because they capture first hand experiences.

3.1.5 Learning point 5: Raising awareness is not enough for changing behaviour

²²³ The term cultural maturity refers to the important safety culture measurements (e.g. management commitment, trust, communication) that determine an organisation's readiness to implement a behavioural safety programme (Flemming & Lardner, 2002).

11. We are accumulating a body of evidence that repeatedly demonstrates that knowledge of risk and controls is insufficient for changing behaviour (Bell et al, 2009; Bell & Webster, 2009; Bell, Vaughan et al, 2009; Hopkinson et al 2008; Lunt et al, 2006 (updated 2010)). Employees need to know how to implement changes, in terms of who to involve, when, where, what tasks to undertake, and what to do when an unplanned event arises. This draws on implementation intention research (Gollwitzer et al, 1997; Webb et al, 2006). Consequently, to have optimal impact campaigns need to be followed up by other strategies that covers all facets of behaviour change. We have produced a toolkit for supporting behaviour change and worker engagement in small and medium sized construction companies that we hope strikes a balance between being straight forward and ensuring all behaviour change bases are duly addressed.

3.1.6 Learning point 6: Behaviour change interventions need to include strategies for sustaining improvements

12. We find that the initial enthusiasm and momentum that immediately follows the launch of an intervention can tail off if not followed up by reminders, prompts, and feedback that reminds employees and employers of the issues involved. For employers, this may manifest as failure to maintain equipment or controls, or failure to provide employees with refresher health and safety training as well as keeping their own knowledge up-to-date (e.g. Bell, Vaughan & Hopkinson, 2009).

3.1.7 Learning point 7: Use the potential impact upon workmates/significant others to communicate risk

13. We have found that where employees do not seriously regard risks to themselves, framing risk in terms of its potential impact upon colleagues or family can have persuasive power. For example, construction workers may view asbestos more seriously when made aware of the amount of exposure the person washing their overalls can receive (Hopkinson et al, 2008).

3.1.8 Learning point 8: Behaviour change interventions are becoming even more important in the current economic context, but employers need help to achieve this.

14. Emerging research findings suggest that employers, particularly those in small companies, are not always in a financial position to implement 'ideal' controls to protect their employees against potential health hazards, such as industrial deafness. Rather than promoting the use of engineering and organisational-level controls, it therefore seems more pertinent in the current economic context to promote and assist employers with encouraging behaviour change (i.e. correct use of controls such as PPE) amongst their workers.

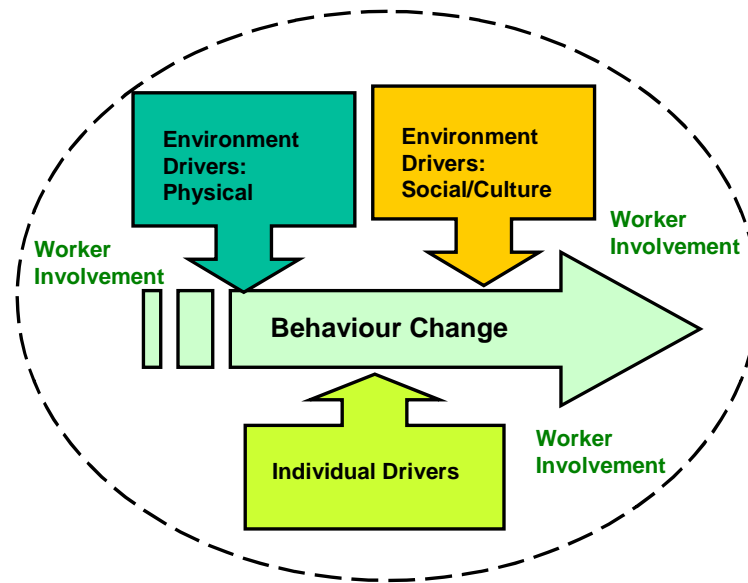


Figure 1: An integrated approach to behaviour change

3.2 What are the policy implications of recent developments in research on behaviour change?

3.2.1 Observation 1: Potential challenges in applying behavioural economics in a deregulated environment

15. Behavioural economics and in particular 'nudge' (Thaler & Sustein, 2010) as a facet of behavioural economics currently appears to be attracting the Government's attention, as reflected in the setting up of a Behavioural Insights Team. Our understanding of nudge is that it relates to using external prompts to make desirable behaviour more attractive than less desirable options. Against a backdrop of potential deregulation, this may mean increased reliance on techniques that guide employees into taking greater responsibility for health and safety, without being able to utilise one of the key incentives for driving compliance, namely avoiding the threat of enforcement. Consequent challenges of a switch in emphasis away from control to 'nudging' and in reducing the legal case for health and safety compliance we believe could be threefold:

- Firstly, identifying novel 'nudges' over and above current techniques for encouraging safer or healthier behaviour, such as signage, may not be that straightforward.
- Secondly, other types of incentives, relating the moral and, in particular, the business case will need to be considerably improved.
- Thirdly, promoting preferred behaviour as a desirable option will require positive framing of the consequences. In the health and safety context onus is placed on avoiding harm. The 'positive consequence' equates to maintaining status quo. In general, positive benefits, over and above staying healthy, generally, becomes more difficult to identify than, for example, smoking cessation. For the latter, improvement in taste, and reduced breathlessness can be pitched as short term gains. Framing reduced breathlessness as a benefit for a healthy adult working with asthmagens will have limited potency.

3.2.2 Observation 2: Knowledge gaps in third party influencing

16. Nationwide health and safety campaigns for changing behaviour can often rely on a third party, such as local authorities, for implementing initiatives. This creates an additional layer of influencing and persuasion. In effect, behaviour change principles almost have to be applied to the third party in order to persuade and equip them with the skills for affecting change in the target audience. From our understanding, the evidence base on 'third-party' influencing is relatively undefined.

3.2.3 Observation 3: Producing protocols for large scale interventions and campaigns

17. Within health psychology, momentum appears to be building for increasing transparency and developing protocols (Dombrowski, 2009) of behavioural interventions so that greater detail on intervention content, process and fidelity are reported (Abraham et al, 2008, Dombrowski, 2009). Again, this expectation presents a particular challenge for health and safety behaviour change interventions. Even if accompanied by a highly specified procedure, researchers coordinating large scale multi-organisation initiatives are unlikely to have control over day-to-day implementation of a programme within the different organisations due to the scale of numbers, practical distances and intermediaries involved. The business burden on small business employers, in particular, in not just providing outcomes but also precise details on process could also be construed as an untenable expectation.

3.3 Policy Design and Evaluation

3.3.1 What should be classified as a behaviour change intervention?

18. We regard behaviour as any overt action that may be volitional or an automatic, sub-consciously driven act. In a health and safety context behaviour can either be risk taking or health promoting. We regard behaviour as being shaped by multi-level latent and immediate antecedents and consequences. Consequently we believe that a behaviour change intervention can simply be viewed as altering the type or frequency of behaviour through affecting either the antecedents and or consequences.

3.4 How should different levels of interventions and different types of intervention interact in order to achieve policy goals?

19. See para 9.

Summary of our main learning points and observation as applied to addictive behaviour:

- Many people with addictions will inevitably work for an employer.
- For optimal impact, continuity between interventions carried out in the public health arena and those experienced at work is necessary. Messages and experiences at work concerning addiction should not contradict those received outside of work.
- The social and physical characteristics of employees' work environment could be one that enables the healthier alternative to the addictive behaviour, and, within reason, makes addictive behaviour the more difficult option.
- Interventions need to take into account the organisation's level of cultural maturity for optimal chances of success.
- To promote ongoing success, interventions need to involve individuals in solving problems, and extend from raised awareness through to maintenance of change.
- Risk communication messages may have greater impact if framed according to the consequences for significant others and colleagues rather than individual consequences.

More generally:

- In a political context of potential deregulation, instilling individual responsibility will become all the more important to ensuring safe work practices. Developing more innovative ways of incentivising individuals to work in more safe and healthy ways will help workers to take greater personal responsibility. While worker involvement in decision making may help encourage individual responsibility, so too may positively framing the benefits of risk control and finding more personally meaningful ways of pitching the moral and business case.
- 'Nudging' desirable behaviour in a health and safety context, and positively framing consequences may not be straightforward.
- Adhering to protocols could be untenable for large scale interventions involving multiple organisation. Using a third party as an intermediary may compound this challenge.

October 2010

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Memorandum by Health and Well-Being Alliance (BC 4)

Background Briefing re Project to add Brief Intervention training into under graduate nursing curricula across Cheshire & Merseyside

Every health contact should be a health promoting contact but clinical practitioners, in particular, often lack the skills to make this happen.

That is now changing thanks to a collaborative approach to planning and delivery of training led by ChaMPs Public Health Network and four higher education institutions (HEIs) which will ensure health messages delivered by our newly qualified nurses will be standardised and consistent.

Brief interventions are strongly linked to individuals reducing health risks by choosing more positive lifestyle choices, particularly around smoking, weight management, physical activity and alcohol use. Brief intervention training has now been added to the under graduate nursing curricula.

The initiative involved close working partnerships with HEIs, who put aside intellectual property claims in order to produce a comprehensive standardised course.

The course is designed to train nurses to intuitively incorporate brief intervention in their interaction with patients. Although in its infancy, the initiative has already received supportive testimonials including;

“I think it has been helpful to network with colleagues working in the same field and been able to share good practice. We have been able to lay aside any competition between the HEIs to work together to improve student nurse training and hopefully local public health. We will have standardised our training to some extent which should lead to improved patient outcomes as everyone will be promoting the same message.” **Nurse lecturer, University of Liverpool**

Nationally, we believe this is the first time this type of training has been added to the undergraduate curricula of health professionals.

From September 2009, student nurses at the universities of Chester, Liverpool, Liverpool John Moores and Edge Hill will for the first time be taught brief intervention training as part of their three-year pre-registration undergraduate course.

All student nurses across all disciplines will be trained so that by 2012 newly-qualified nurses will take up posts fully equipped to make every health contact a health promoting contact, and ultimately play their part in reducing the burden and cost of illness.

A longitudinal evaluation of the project is currently in place and early indications are that student nurses at the end of their first year of training do feel confident to undertake health promotion interventions on a range of lifestyle issues.

Participation in the evaluation has been high and just under 500 students responded to the year one student questionnaire.

Memorandum by Health and Well-Being Alliance (BC 4)

Student's reported most confidence regarding physical activity messages and least confidence with sexual health messages. More mature students demonstrate more confidence, not surprisingly, than their younger counterparts.

Encouragingly, the evaluation also indicates that the students feel that training content and timing have been right and surprisingly 50% stated that a formal assessment should also be included. These findings really support the collaborative approach used regarding developing a common curricula and set of resources. Students will be followed at the end of each year of their period of study from 2009 – 2012.

Ideally, further research could be conducted in order to assess clinical impact of this training once the sample cohort have qualified, though funding would need to be secured to achieve this.

The work has been well received at an International nurse education conference this year in Sydney, Australia and there are already plans to expand the work across other universities in the Northwest.

All four participating universities continue to work collaboratively and agree that this has been a valuable contribution to developing the health improvement role of the nursing workforce of the future.

August 2010

Memorandum by Health, Exercise, Nutrition for the Really Young (HENRY) (BC 62)

HENRY is a charity and company limited by guarantee that provides training and support for a wide range of practitioners (health visitors, nurses, Children's Centre staff, social workers, etc.) working with young families, principally though not exclusively in areas of deprivation. Its particular focus is on obesity prevention through behaviour change towards a healthier lifestyle in families with children aged 0 to 5 years. HENRY was set up with support from grants by the Department of Health and the (then) Department of Children, Schools and Families.

HENRY has delivered over 170 courses for practitioners, covering 40 areas, with over 2300 practitioners attending. Some 70 Let's Get Healthy with HENRY courses have also run to date involving over 400 parents. Details are available on the HENRY website www.henry.org.uk.

1 The evidence base

The HENRY approach reflects the evidence base reported in *Tackling Obesity through the Healthy Child Programme*, commissioned from Professor Mary Rudolf by the Department of Health – please refer to separate submission from Professor Rudolf.

An evaluation of the effectiveness of HENRY in Leeds has been undertaken; the report is included with this submission.²²⁴

A paper on the pilot phase of HENRY has been published; it is included with this submission.²²⁵

The Let's Get Healthy with HENRY course for parents is currently being evaluated by Leeds University; the evaluation will be completed in 2011.

2 Agents of change

For the target age group (0-5s) addressed by HENRY, the most important agents are the parents and carers who care for babies and young children, and the practitioners who support them.

Many practitioners report – as the wider evidence also suggests – a lack of confidence in tackling the sensitive issue of weight and lifestyle with young families. This reflects their awareness that it is a delicate subject to raise, uncertainty about what might be helpful and what is unhelpful, lack of knowledge about the evidence for the impact of infant obesity on longer-term weight status, recognition that advice-giving is sometimes counter-productive.

The weight status and lifestyle habits of practitioners are also relevant. Those who are themselves overweight often regard with discomfort the hypocrisy of advising families when

²²⁴ HENRY in Leeds Eval Full Report

²²⁵ HENRY Paper in CHILD

they have so obviously not tackled the problem successfully in their own lives; others are less self-conscious but it can mean that their support is less well regarded by some parents.

There is plenty of evidence to indicate that a correctional/medical/expert model is not always effective in promoting the motivation to change. Interventions that take a partnership approach (as recommended in the Healthy Child Programme) or work from a therapeutic base may be more promising. HENRY has anecdotal evidence from overweight practitioners and parents that being made to feel guilty about their weight by, for example, a GP is likely simply to distress them – rather than spur them on to greater efforts to reduce their weight.

A family with complex needs may not see lifestyle change as the most urgent priority in their lives. A supportive practitioner who has the time and skill to support the family over a period of time, and address the issues of most importance to the family itself, will be more likely to build a trusting relationship that promotes behaviour change than a practitioner who insists on addressing their own lifestyle change agenda – and may then be frustrated by the “non-compliance” of the family. Many practitioners who attend HENRY training courses report their frustration – and by the end of the course are able to reflect that they may be able to influence a family more helpfully if they first change their own attitudes (see below).

Social marketing campaigns such as the “5 a day” campaign seem to promote awareness without necessarily promoting behaviour change. As part of regular talks given at local and national conferences attended by health professionals and community practitioners, HENRY representatives ask the audience two questions: first, whether they know how many daily portions of fruit and vegetables are recommended (everyone knows), and second, whether they actually eat 5 or more portions each day. Between a quarter and a third of hands are raised in answer to the second question...and this among the very professionals who are advising families to eat more healthily! The low uptake matches the findings of the National Diet and Nutrition Survey 2008-9.

3 Where does change need to take place?

There is no doubt that lifestyle habits are principally the responsibility of individuals. Change in eating habits and physical activity can, however, be supported or undermined by family, community and societal structures. We live in an obesogenic environment, and policy changes to reduce this may also be helpful (as legislation has proved in smoking cessation). These include: safe and attractive open spaces, reducing the availability of energy-dense foods at checkouts, subsidised fruit and veg schemes, cycle paths and safe school walking routes, reduction in “BOGOF” offers of unhealthy foods, subsidised access to local swimming pools/active leisure facilities, housing being designed to allow space for family eating around a table.

Obesity is a multi-factorial problem; a holistic approach to tackling it is needed.

4 The HENRY approach

HENRY was devised in the belief that *the messenger is as important as the message*, and that while much attention is paid to information on the key elements of a healthy lifestyle – what we eat and how active we are – much less notice is given to other equally important elements and to the kind of support that is provided.

The key lifestyle messages included in HENRY are:

- parenting skills
- healthy eating habits
- healthy nutrition
- physical activity
- emotional well-being

HENRY also incorporates the ethos and key principles inherent in two groundbreaking approaches established in the early 1980s: the Family Partnership Model devised by Professor Hilton Davis and colleagues at King's College, London (see www.cpcs.org.uk) and Solution-Focused Brief Therapy established by Steve de Shazer, Insoo Kim Berg and colleagues in Milwaukee. These challenge the efficacy of the “expert” model, in which the practitioner leads the interaction by giving information and advice without fully taking into account the knowledge, skills, challenges and aspirations of the client, and offer instead a more respectful way of working that proves more satisfying and more effective to both clients and practitioners.

Behaviour change is influenced by a combination of two key factors: how IMPORTANT a change is deemed to be, and how CONFIDENT is the person that they can effect change. Information (e.g. that being a healthy weight brings long-term health benefits) may increase recognition of the need for change; on its own, it does not influence an individual's sense of self-efficacy – their belief in their capacity to effect change. For those who are already confident, information alone may prove an adequate catalyst. For those who are not, further support is required.

The HENRY approach highlights the following key qualities and skills that practitioners need in order to provide support that will boost the confidence and self-belief of clients:

- warmth, genuineness, empathy
- the ability to establish a genuine partnership between the client and the practitioner
- highlighting clients' strengths rather than weaknesses, and focusing on solutions rather than problems
- the ability to help clients set their own agenda for change, rather than imposing that of the practitioner
- looking to the future, not to the past

5 Evaluation

Evaluation of all HENRY training courses includes self-assessment by practitioners of their confidence in their knowledge, skills and sensitivity in tackling obesity prevention and lifestyle change with client families pre- and post-training. Parents who attend the Let's Get Healthy with HENRY course are also invited to self-assess – in this instance, the healthiness of their family's lifestyle.

The HENRY in Leeds report was an independent report funded by DH Priority and Needs funding and carried out by the University of Leeds. It demonstrated that practitioners find all aspects of the HENRY training useful or very useful. The report also noted that many practitioners commented on the value of the approach to other aspects of their work, as

well as triggering healthy changes in their own lives. A further evaluation of the parent courses is currently underway.

Typical results for the increase in confidence resulting from attendance at HENRY courses are as follows:

Core Training (2-day course)

Average (scale 1 to 10) across 12 recent courses: from 5.0 at start of course to 8.0 at end of course – average increase 3.0 ($p < 0.001$)

Let's Get Healthy with HENRY (8 weekly sessions)

Average (scale 1 to 10) across 10 recent courses: from 4.5 in Week One to 8.0 by Week Eight – average increase 3.5 ($p < 0.01$)

We believe that the considerable shift in confidence among practitioners reflects the fact that the same key qualities and skills listed above are modelled by the trainers who lead HENRY training courses. Their experience encourages them to adopt the same approach, and leads to the parallel shift taking place in families. Supporting evidence is also provided by analysing training courses that do not go so well, as well as those that do. Where a course is less successful, it is generally because the trainers are inexperienced or lack the range of skills needed to model the HENRY approach when working with practitioners – further proof that the qualities and skills of the messenger are essential if change is to take place.

6 Conclusion

HENRY offers one promising way to tackling obesity prevention and lifestyle change in individuals and in families. The popularity of its training courses convinces us that the approach deserves its growing reputation as a helpful catalyst for change.

4 October 2010

Memorandum by HERD Consulting, Mark Earls and Dr Alex Bentley, Durham University (BC 104)

Introduction

In the 1970s and 1980s, the “Protein Man”, Stanley Green, marched up and down Oxford Street, armed only with a placard and a handful of hand-printed pamphlets. He was trying to persuade Londoners to improve their diets, increase exercise, and refrain from promiscuous sex. Green was singularly unsuccessful, despite his persistence and a sound message, managing only to embed his rantings and ravings in the popular memory and the Museum of London.

Green was not alone in failing as an agent of behavioural change: most other attempts also fail. Most change management programmes struggle to leave a lasting mark on the organization. Mergers and acquisitions rarely achieve the promised “synergies” of the deal. In the world of marketing, while there are noted success stories, few campaigns demonstrate any lasting change in the behaviour of the target audience. Changing behaviour is just much harder than is generally considered.

This is why this committee’s current enquiry is appropriate and timely. Policy makers must evaluate the current evidence base to find the best practice regarding behaviour change.

Our firm conviction, based on decades of research and professional practice, is that changing behaviour, while never easy, has to start with a good map of human behaviour. If the committee is to advance social policy thinking and practice, it needs to improve its map to **include humanity’s most important – social – nature.**

Towards a better map

The recent interest shown in policy circles in Behavioural Economics (e.g. in the Cabinet Office’s Mindspace or the COI’s Common Good 2009 Report) is a welcome corrective to the working assumptions embedded in much previous policy thinking. Far from being rational creatures that calculate utilities and maximize them independently, we humans are curiously poor independent thinkers, beset by all those quirks and cognitive biases that Behavioural Economics dwells on. Nobel Laureate Professor Daniel Kahnemann, the psychologist whose work with Amos Tversky lies at the heart of Behavioural Economics, compares thinking for humans to swimming for cats – we can do it but only if we really have to.

That said, the behavioural economics map for policymakers goes only half way: it still misses our *fundamentally social nature*²²⁶.

From “me” to “we”

A broader consensus is emerging across the human sciences – from primatology to anthropology, from neuroscience to network economics – that we are fundamentally social creatures, evolved for a world of others like ourselves. As the psychologist Nicholas

²²⁶ Both reports cited make passing reference to “social proof” or “social norms” being powerful sources of influence in behavior change programmes but both are more interested in cognitive quirks of individuals than in exploring the social perspective more fully: neither consider the significance of what these phenomena might be or how they might be established

Humphrey puts it in his landmark essay²²⁷ after studying mountain gorilla life with Diane Fossey and hominid fossils with Richard Leakey:

I have yet to hear of any example from the field of a chimpanzee [or for that matter a Bushman] using his full capacity for inferential reasoning in the solution of a biologically relevant practical problem. Someone may retort that if an ethologist had kept watch on Einstein through a pair of field glasses he might well have come to the conclusion that Einstein too had a humdrum mind. But that is just the point: Einstein, like the chimpanzees, displayed his genius at rare times in “artificial” situations— he did not use it, for he did not need to use it, in the common world of practical affairs.

Similarly, anthropologist Robin Dunbar²²⁸ has demonstrated, by comparing brain size to group size across all primate species, ancient and modern, that the size of our brains has evolved directly in proportion to the complexity and size of the social world we live in.

Why is this important to acknowledge?

For behaviour change discussions, the social side is more than just a wrinkle on rationality - it is the essence of humanity and the engine of much behaviour. One can “never escape the Other,” as Sigmund Freud wrote in *Mass Psychology*. Most human life consists of individuals responding to a context of other individuals’ responses to the individuals who were there in the first place, in the words of Nobel Laureate economist Thomas Schelling.²²⁹ More recently our associate, economist Paul Ormerod²³⁰, underlined the crucial importance of social networks:

“To be effective, ...[our thinking] must not only draw on the new insights that behavioural economics gives us, but also needs to be underpinned by an understanding between this and how networks influence our choices and how these change over time. Indeed, the impact of networks is potentially considerably greater than that of ‘Nudge’”

Much current behaviour change practice still follows traditional social science in assuming that individual opinions (gathered in market research surveys or focus groups) can simply be averaged to describe what happens in a population. This neglects how individuals interact in the (increasingly) social contexts of our lives.

Consider the apparent assumptions behind a recent campaign to combat binge drinking in England & Wales. One thrust of the programme was to inform individuals about the number of units in each type of drink to help them adjust their own individual behaviour. This might have helped, if only heavy drinking were a rational, independent choice. As an Advertising Association report²³¹ published at the same time suggested, however, binge drinking spreads through clustered social networks. Giving individuals information – however “persuasive” or shocking – is unlikely to unpick them from the group. Intervention that takes the social cluster into account is almost certain to achieve greater impact.

²²⁷ N.K. Humphrey (1976) The Social Function of Intellect in “Growing Points in Ethology” ed. P.P.G. Bateson & R.A. Hinde pp. 303-317 CUP

²²⁸ R. Dunbar. 1997. *Grooming, Gossip and the Evolution of Language*. Harvard University Press.

²²⁹ T.C. Schelling [1968] *Micromotives and Macrobehavior* WW Norton & Co.

²³⁰ P. Ormerod [2010] *N Squared: Public Policy and the power of networks* RSA 21st Century Enlightenment pamphlet online at <http://www.thersa.org/about-us/rsa-pamphlets/n-squared>

²³¹ P. Ormerod & G. Wiltshire [2008] ‘Binge’ drinking in the UK: a social network phenomenon prepared for the Advertising Association

Equally, rather than surveying the population strictly for individual perspectives on health and diet, it is far more useful to understand the role social context plays in spreading obesity through a population, as Christakis and Fowler²³² demonstrate. Their widely-cited original paper²³³ suggested that each of us is 71% more likely to become obese if someone in our close network is obese.

Once we accept that behaviour spreads socially, we still need to catch up on how this 'social' is quickly changing. Our prehistoric ancestors evolved to manage within small kinship groups of no more than 150 -- the so-called 'Dunbar Number'. Modern life, of course, involves interacting with many more people -- order of magnitude more people. Our phones, laptops, Facebooks, Twitters and Foursquares multiply our social world by many times again.

In summary, ours is a hugely social world and much behaviour in it shaped by social forces. Any programme of behaviour change that considers otherwise is likely to miss some important clues to bring about the outcomes it seeks.

A social diagnostic toolkit

So what kinds of tools are available to populate the maps of those planning behaviour change interventions?

First, we can examine the network context of the behaviour. However, this needs methodological care: as Borgotti²³⁴ points out, social science applications of network theory can be too "nodal" -- they look too closely at a particular part of the network, assuming that the sub network contains all there is to say of network effects and thus often missing the emergent "network effects" that physical scientists focus on. More really is different in a social network.

In addition, such analyses often mistake the tangible aspects of the "network" metaphor for reality: while our ancestors may have lived in relatively fixed social groupings, virtually no modern humans live in such narrow confines -- people come and go all the time. This means that by the time a social network is measured and described it will almost certainly have changed, rendering the effort worthless. This is the case both on and offline.

Instead, the approach described by Ormerod (see above), which seeks to understand the underlying structure (rather than the fluid surface detail) of the network seems more appropriate to policy makers. It gives them a firm handle on how the network exerts its effect on individual behaviour (rather than assuming, as too many change programmes do, that certain influential individuals -- the "hubs" - shape the lives of those nearby).

Second, one can seek to characterize the behaviour we seek to change at a population level (rather than that of the individual) and to build interventions based on knowing what kind of behaviour is to be changed (rather than assuming independent choice as a default).

²³² N.A. Christakis & J.H. Fowler (2009) *Connected: The Surprising Power of Our Social Networks and How They Shape Our Lives*, Little Brown

²³³ N.A. Christakis & J.H. Fowler (2007) The Spread of Obesity in a Large Social network over 32 Years *New England Journal of Medicine* 2007;357:370-9.

²³⁴ S.P. Borgotti et al (2009) Network analysis in the social sciences *Science* 323, 892 (2009); DOI: 10.1126/science.1165821

Our approach – developed following more than a decade of study and twice as long in marketing practice – uses tools and techniques developed from advanced evolutionary modelling

Rational choice, like evolutionary selection, is predictable (in theory), whereas herd-like copying, like random evolutionary drift, can be inherently unpredictable, with constant turnover through time. Public behaviour can be characterized as to where they sit between these extremes, using case-specific data companies or government bodies often have in abundance, especially concerning online behaviour (e.g. Google Trends tools, popularity rankings, blogs, etc.).

Characterizing behaviour along the social-independent spectrum thus enables more appropriate intervention strategies. In the herd-like scenario, it's mainly about who is doing the thing, rather than what the thing is and its the inherent value, as assumed in more traditional marketing models. For the Department of Health, for example, we characterized (from population-level data) the strong social component of sexual health behaviours, which diagnosis helped the DH to devise a communication strategy that made sexual health socially mediated, rather than simply an individual decision. Other organizations we have worked with on this basis include the Bill & Melinda Gates Foundation, Unilever PLC, The Edrington Group & Sony (Europe). In concert with this, more qualitative and ethnographic study reveals what it feels like to be an individual at the heart of the social context. This is essential to help policy makers develop empathy for their audiences. At the same time, the quantitative, population-scale methodology identifies opportunities for influencing the interaction between the agents in that social context. The result is a specific, socially mediated intervention with a greater chance of success.

Developing more effective interventions

A large part of our work is more practical: developing more effective interventions for different organizations that harness these insights (or giving them the tools to do so for themselves). At the heart of this is recognizing first that exogenous levers (such as policy interventions) are likely to be play only secondary (at best) roles in creating the outcome sought; by contrast it is likely to be endogenous factors (specifically what individuals within the social system do in response to each other) that contribute the most to the desired [or otherwise] outcome.

Put another way, we design interventions on the assumption that - more often than not for modern human populations - the heavy lifting of the diffusion of both “good” and “bad” behaviours or ideas is done more by how the individuals in that population interact with each other, than from by the “desirability” or otherwise of the behaviour itself or the supposed transformational power of the intervention. If you want to shift the behaviour, you have to get the people to do the work on each other for you. We focus much activity on the “space between”.

Summary

Businesses, government bodies and NGOs are currently seeking to understand rapidly changing behavioural trends in an increasingly social market. Before even beginning to formulate government engagement strategy, it is crucial to understand how mass behaviours change. This is especially relevant in our increasingly socially networked world, where many organizations are continually befuddled by sudden change in popularity (as described by Malcolm Gladwell in *The Tipping Point* or Grant McCracken in *Chief Cultural Officer*).

The problem for policy makers lies in the make-up of their maps. In traditional social science and government policy, it is often assumed that individual opinions (in surveys, for example) predict population-level trends. While this may be good practice, it neglects the fundamentally social

nature of human beings. Furthermore as knowledge and opinions are more and more shared online, decisions are becoming even more socially mediated, rather than objectively 'rational', as traditional models assume. In other words, rather than react rationally to available information and incentives that governments might supply, people frequently just copy what others are doing. For such highly social markets or constituencies, the best approach is not traditional, rational agent social science.

We have pioneered a number of applications of analytic techniques and approaches to go beyond this: from network structure analysis to population-level behaviour categorization (the latter of which re-uses existing quantitative datasets). When used together with more qualitative & ethnographic tools, these approaches have helped build much better maps of the behaviour of our social species.

Short Biographies

Mark Earls is an award-winning writer and independent consultant who has previously held senior strategy positions in UK and Global communications businesses (St Luke's and Ogilvy). He is a Business Leader of the Marketing Society and a fellow of the RSA. He is also part of the COI's Big Thinker programme.

Alex Bentley. Ph.D., is Reader in Anthropology at Durham University, where he is P.I. on the 5-year Leverhulme 'Tipping Points' programme and co-founder of the Centre for the Co evolution of Biology and Culture.

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October 2010

Letter from the Home Office (BC 144)

Thank you for your letter of 20 December 2010 regarding the Inquiry into Behaviour Change of the House of Lords Science and Technology Sub-Committee. I welcome the work of the Sub-Committee and the opportunity to support the Inquiry through providing information on Home Office policy.

I have set out below our answers to the questions posed in your letter.

I. Central Government Policy

I.1. You asked about the Government's current policies to reduce and prevent knife crime. Violence is a key priority for the Government and is wholly unacceptable. Too many young lives are blighted by violent crime and we are committed to making our communities safer places for everyone.

Reducing police bureaucracy will give officers greater opportunities to be out on the streets detecting and deterring crime. **Improved information exchange** between hospitals and the police on gun and knife incidents will help police and local councils focus on hot spot areas. **New civil powers** to enable local police to target gang activity and violence will also be introduced in January. Details of other current activity are set out below:

- **£4m to local areas to target youth violence**

In June 2010 the Government approved a further £4m funding to local Community Safety Partnerships in 2010/11 to support their work in tackling serious violence committed by young people and against young people. This was previously referred to as the Tackling Knives and Serious Youth Violence Programme (TKAP). The Programme empowers local partners to create bespoke responses to the particular youth violence problems associated with young people aged 13-24 years old in their area. Each area is asked to produce a local problem profile and delivery plan supported by the analysis of local crime statistics. The current third phase of TKAP began in April 2010 and involves 52 Community Safety Partnerships plus British Transport Police. This funding is for eight core strands of delivery including: enforcement activity; integrated offender management; education, prevention and diversion work; A&E data sharing; alcohol and the night-time economy; domestic violence; the Knife Crime Prevention Programme (KCPP); better communication with affected communities, and if appropriate, work to tackle gangs. Of these delivery strands, the Knife Crime Prevention Programme, Integrated Offender Management and gang injunctions are key programmes addressing behaviour and facilitating behaviour change.

- **Knife Crime Prevention Programme**

The Knife Crime Prevention Programme is a Youth Justice Board programme aimed at teaching all young knife offenders about the dangers of knife carrying. The programme commenced in October 2009 and now operates in 97 Youth Offending Team areas. All young people aged 10-18, convicted of any offence where a knife or the threat of a knife is a feature, and receiving a community based first tier penalty or Youth Rehabilitation order, are eligible. Young people receiving a warning for these offences can access the programme voluntarily. The

modular course was developed with experts in Youth Offending Teams and service providers. It includes a module where a family member of a young person killed or injured with a knife provides their testimony, which anecdotally has been reported to make a significant impact on those participating in the programme. Other modules are delivered by Emergency Department staff – on the physical consequences of a knife attack – and by police and ex-gang members on the legal consequences of knife crime.

The Knife Crime Prevention Programme (KCPP) aims to deliver KCPP schemes to all young people convicted and meeting the offence and disposal criteria; to reduce the prevalence of knife carrying and use by young people aged 10-18 in your area, and to offer a credible community option to sentencers. The Youth Justice Board is in the early stages of evaluating this approach to behaviour change in young offenders.

- **Integrated Offender Management**

Integrated Offender Management approaches are developing in local areas as a partnership approach to the management and rehabilitation of offenders who cause the greatest harm in those areas. The approach builds on existing offender based approaches such as local Prolific and other Priority Offender schemes and the Drug Interventions Programme, which have demonstrated indicative evidence of an impact on reducing re-offending.

Local Integrated Offender Management models across England and Wales will be different, reflecting different priorities. However, the principle that no single organisation working alone can impact sufficiently on crime and re-offending is common. The Integrated Offender Management approach recognises that it is increasingly important to make better use of resources by employing a co-ordinated and targeted approach.

In many areas, the focus has been on persistent offenders, often involved in acquisitive crime, and with a history of drugs misuse. However, increasingly, areas are extending the approach to other high priority groups of offenders, such as those with a history of violent or sexual offences. For example, the 'Spotlight' approach in the City of Manchester and Trafford uses an Integrated Offender Management approach in managing offenders involved in gang membership.

- **Gang injunctions**

Injunctions to prevent gang-related violence (gang injunctions) were introduced in the Policing and Crime Act 2009 to give police and local councils effective legal tools with which to tackle gang-related violence and protect their communities. Gang injunctions aim to prevent serious violence from occurring, break down gang culture and provide opportunities to help gang members leave the gang. They are a civil tool that will allow the police or a local authority to apply to a county court or the High Court for an injunction against an individual aged 18 or above who has been involved in gang-related violence. They will allow courts to place a range of prohibitions and requirements on the behaviour and activities of an individual. These conditions could include: prohibiting the individual from being in a particular place (the gang or rival territory); prohibiting the individual from meeting with other named gang members, or requiring them to participate in

rehabilitative activities. They will be a valuable tool for local partners to use to tackle gang-related violence and criminality, alongside a range of other prevention, detection and enforcement measures. Gang injunctions for adults will commence on 31 January 2011. We are planning a pilot of gang injunctions for those aged 14-17 to run from spring 2011.

- **Brooke Kinsella report**

In June 2010, the Prime Minister and Home Secretary asked Brooke Kinsella, whose brother Ben was murdered two years ago, to undertake a fact-finding mission to examine schemes working in local communities to stop young people from committing violence including using weapons. Ms Kinsella's findings are due to be published shortly and will further inform our thinking about prevention of violent youth crime.

- **Funding for the Voluntary and Community Sector**

The Home Office Community Fund provides 144 small local community based organisations with £10,000 each to run mentoring schemes and other projects to stop young people from starting to commit violence, or to help them out of it. The activities being delivered focus on mentoring and outreach or education work with young people involved or at risk of involvement in gun/knife crime or gang activity. The Fund also supports schemes for siblings, families and parents of young people involved or at risk of involvement in gang or knife violence. To date, there have been over 26,500 beneficiaries of work by projects supported by the fund. In addition, in July 2010 the Home Office extended funding to the Be Safe Programme – with 200,000 young people educated about the dangers of using weapons since April 2009. In November 2010 the Home Office announced £250,000 support through the Ben Kinsella Fund at The Prince's Trust. This will allocate small grants to approximately 50 young people or groups of young people to fund projects across the country that work to stop young people from being drawn into violence: in particular, schemes trying to stop teenagers from carrying and using knives.

- **Tackling Knives Action Programme, Tackling Violence Action Plan and Youth Crime Action Plan**

You asked: "Which, if any, of the previous Government's policies such as the Tackling Knives Action Programme, the Tackling Violence Action Plan, and Youth Crime Action Plan, does the present Government intend to continue?" The Home Office is currently developing its response to serious youth violence and knife crime for 2011/12 and 2012/13 in advance of the introduction of Police and Crime Commissioners, who will take responsibility for local tactical responses to violent crime in their areas. The Tackling Violence Action Plan had already been subsumed into the previous administration's Violence Against Women and Girls Strategy and the Tackling Knives and Serious Youth Violence Programme. The Youth Crime Action Plan (YCAP) was a 3-year programme, implemented under the previous administration. We are no longer using the YCAP banner for youth crime work but have continued to provide funding in 2010/11. Our proposals on future youth crime funding will be announced in due course. The Department for Education has already announced allocations from a £2.2bn early intervention grant.

1.2. The Government is exploring the Institute for Government's MINDSPACE approach and its potential application to wider Government policies, for example areas such as health and charitable giving. The Home Office is already aware of the importance of behavioural insights for interventions designed to change young people's behaviour in relation to knife, gun and gang related violent crime. Through the TKAP programme, we have supported local areas as they have worked to develop bespoke local responses to youth violence problems. Examples such as the Knife Crime Prevention Programme (details above) and gang call-ins (whereby the community calls in gang members to tell them that they must stop the violence and to offer help for those who seek to change) use the power of victim testimony to confront young people with the impact of their offending behaviours on others and their wider communities. In addition, through the Community Fund, the Home Office has funded over 140 voluntary and community based organisations, many of which work with participating young people about the impact and likely consequences of their behaviour.

1.3. You asked: "On what evidence were previous and current policy approaches based". We have drawn on a wide range of evidence in formulating our approach to serious youth violence including detailed local problem profiles drawn up by each target area.

The overall package of policies and interventions put forward in the **Youth Crime Action Plan (YCAP)** drew on an evidence base including the nature, extent and costs of youth crime and an appraisal of policies and interventions on the themes of prevention, enforcement, victimisation and justice.

The **Tackling Knives Action Programme (TKAP)** was initially developed in response to a number of high-profile knife related murders among young people, and increased public concern about knife crime. The initial 10 police force areas that took part were selected because of the rates of stabbings in those areas combined with willingness to take part. TKAP comprised a range of initiatives, many enforcement led, but others aimed at preventing knife crime and educating young people about the risks associated with knife carrying. Evidence for these initiatives is varied:

- Many of the enforcement based components of the programme, for example stop and searches and intelligence-led policing, were strongly influenced by the anti-knife crime tactics used by the Metropolitan Police Service in Operation Blunt and drew on their experiences and knowledge of problem-solving and deterrence.
- TKAP Phase I worked to improve information sharing between health professionals and local Community Safety Partnerships. The sharing of anonymised information on the nature, time and location of incidents resulting in admission to Emergency Departments, as part of a more comprehensive approach to tackling violent crime, has been found to lead to improved targeting of police enforcement and reductions in violence, especially night-time economy-related assaults, for example Warburton & Shepherd, 2006.
- Some other components of TKAP, such as the Knife Crime Prevention Programme and 'Be Safe' weapons awareness programmes sought to address specific concerns about the causes of knife crime, including educating young people about the impact of knife crime and providing young people with diversionary activities to reduce

the opportunity for involvement in knife crime.

Home Office researchers and other officials regularly review and keep up to date with developments in academic research into knife and gun crime, including research conducted in other countries. For example, we are aware of strategies used in other countries to reduce knife and gun crime, such as the Boston Ceasefire project. In terms of specific behaviour change theory, we are familiar with the Institute for Government's MINDSPACE report about influencing behaviour, including gang violence, which describes strategies used by Scotland's Violence Reduction Unit. In addition, a key part of this process is engaging with academic researchers about their work. Examples of this engagement include:

- Professor Jonathan Shepherd's (Cardiff University) work in developing a data sharing model for violence prevention has informed policy initiatives to promote data sharing nationwide. He has advised the Home Office on violence reduction policies.
- Researchers in the Research and Analysis Unit, an embedded research team in the Home Office Crime and Policing Group, contributed to the World Health Organisation 2010 publication *European report on preventing violence and knife crime among young people* and invited one of the paper's editors, Professor Mark Bellis of Liverpool John Moores University, to present findings from the report to Home Office officials to inform thinking around policy development.

1.4. You also asked: "How has the success of current and previous national level policies been evaluated and by whom?" During YCAP, the Department for Education collected monitoring data on the levels of activity and engagement in the 69 'intensive' areas. Progress was monitored on two measures of youth offending, namely first time entrants to the Criminal Justice System, and juvenile re-offending rates. An evaluation of some aspects of YCAP is currently being undertaken by the Institute for Criminal Policy Research at Birkbeck College, University of London, funded jointly by the Home Office, Ministry of Justice and Department for Education. The evaluation is focussing on the set up, delivery and impact of triage in custody suites.

The success of TKAP has been evaluated in two ways:

1. Operational monitoring: to inform operational decision-making, unpublished data on violent offences and offences involving sharp instruments that involved young people in the target age-group were collected during each phase of TKAP from the individual police forces involved in the programme on a monthly and, more recently, weekly basis.²³⁵ These data were used alongside published NHS data on hospital admissions for assaults and assaults by sharp object to assess ongoing trends in youth violence in the targeted areas.
2. Published reports: the Home Office Research and Analysis Unit published a report assessing the impact of TKAP Phase 1 in July 2009. A report assessing the impact of TKAP Phase 2 is currently being prepared by the Home Office Research and Analysis Unit. Both reports draw on a range of measures of serious youth violence and knife crime to inform their assessment of the programme.

²³⁵ Note that National Statistics on violent crime, published by the Home Office, do not include data broken down by age for violent crime offences, necessitating a separate collection.

2. Social Marketing

2.1. You asked the question: "On what evidence or theory was the 2008-10 national marketing campaign 'It Doesn't Have To Happen' based? How effective was that campaign; and how was its success measured?" In order to establish whether and how social marketing could be deployed as a lever for reducing knife crime, the Home Office commissioned a qualitative segmentation research study in 2007. The sample consisted of 100 10-16 year olds from across England and Wales, 26 of whom had been excluded from school, nine of whom claimed to be in a gang, and 21 of whom had been victims of knife crime. Recruitment methodology varied by location, but all participants were screened via a series of questions establishing their attitudes towards knife ownership and carriage (based on acceptability/necessity), but placed within a range of questions around attitudes to crime generally (as victim and offender).

The study revealed eight key segments within the sample, three who were pro-knife (possession and/or usage), four were anti-knife, and one segment was situation-dependent. Each segment was described in terms of: who they were; what they thought about knives; why they did or did not carry knives, and which communications levers (messages, activity and strategies) best retained or created knife-distance. The insight revealed in the segmentation study was enriched through ethnographic research. A representative of each segment was contacted again and asked to give a verbal account of their day and previous week, providing a tour of their neighbourhood and explaining their experiences in the context of knives.

Based on this research and established theories of behaviour change, it was agreed that communications needed to simultaneously educate young people about the consequences of knife possession and give them the confidence not to carry by mobilising a peer-led anti-knife community. This would make the audience think twice before deciding to carry knives, which would reduce the number of knives in conflict situations, and impact on the number of teen knife woundings.

The campaign to tackle this aim was called 'It Doesn't Have to Happen' (IDHTH), and the brand and initial range of adverts, which included viral films, cinema and radio ads, were developed by 18 young people from across England and Wales who had themselves moved on from knife carrying, and who worked with specialist creative and media agencies to develop the campaign.

The campaign, which included the Home Office's first use of social networking through a campaign profile on Bebo, ran from May 2008 to February 2010.

IDHTH played an important part in challenging social norms around knife possession and educating young people about the consequences. The principle success indicator was an Ipsos MORI survey of 1000 10-16s, which measured attitude change, awareness and response to the advertising before and throughout the course of the campaign. Unpublished data from the last survey, conducted in November 2009, indicated the following:

- The campaign was fulfilling an educational role, with 85% agreeing that the campaign materials made them more aware of the risks of carrying knives;

Letter from the Home Office (BC 144)

- The campaign generated peer debate, with 26% saying that they has shown an advert to a friend, and
- On being shown the advertising, the majority agreed that the adverts made them less likely to carry knives.

Further analysis showed that the campaign had the strongest impact among those who had shared the advertising or carried or considered carrying a knife, with 77% of this group agreeing that the adverts made them less likely to carry a knife. The Home Office does not publish campaign tracking research.

2.2. You also asked: "What plans does the Government have to use social marketing as a tool to tackle gun and knife crime in the future?" The IDHTH Bebo profile is still live, and still continues to attract friends and comments. Plans for future social marketing activity are still under consideration.

3. Local Level Action

3.1. You asked: "On what basis does the Government allocate money to local level initiatives to tackle knife and gun crime?" Phases 1 and 2 of the TKAP programme focused at police force level on those forces that wanted to take part which had the highest rates of serious violence, including knife related violence. However, this left a small number of Community Safety Partnerships with high volumes of violence which were located in police force areas with lower overall rates of violence. In the third phase of the TKAP programme the Home Office has begun to work at Community Safety Partnership level. To identify the target Community Safety Partnerships we analysed rates of serious violence, looking both at absolute numbers and rates of assault per head of population. We focused particularly on areas where both the rate and risk is high, although there appeared to be a small number of Community Safety Partnerships where the risk by itself appeared disproportionate and we therefore included those as well.

In addition to central government funding provided to local areas to tackle serious youth violence, including knife and gun crime, the Home Office Community Fund is continuing to provide 144 small local community based organisations with £10,000 each to run mentoring schemes and other projects to stop young people from starting to commit violence, or to help them out of it.

3.2. Ultimately, the success of local initiatives and local policing strategies is measured by the reduction in levels of serious youth violence; improved outcomes for young people, and increased confidence of people in their local areas. The TKAP Programme uses unpublished management information and proxy measures to monitor in-year trends and the success of local policing strategies. These data are used alongside published NHS data on hospital admissions for assaults and assaults by sharp object to assess ongoing trends in youth violence in the targeted areas.

3.3. You sought information about the guidance or advice provided by the Government to those working in local areas on how best to tackle knife and gun crime. In relation to the TKAP Programme, a network of local advisors (based in the Home Office) has been established to support local areas. These have been critical to the Home Office's ability to identify and share best practice nationally and to deliver an ongoing legacy for the

programme. Advisors have highlighted local examples of good practice that have been shared with other areas and implemented more widely in response to local need. These individuals bring very specific frontline experience and expertise in tackling youth, domestic and alcohol-related violence, and are able to apply their own experience to support Community Safety Partnerships to develop problem profiles and strategic plans in response to very localised problems. In addition, the following support has also been provided to participants in phase 3 of the TKAP programme:

- Access to specific expertise to assist problem solving such as gangs and A&E information sharing;
- National performance monitoring of the programme;
- National and regional co-ordination of the programme;
- Links and access into national policy work to ensure that local experiences inform national policy and simplify local delivery, and
- Support for nationally co-ordinated programmes of activity, e.g. joint operations and days of action.

Within the framework of the TKAP Programme, the Home Office has also provided guidance, advice and shared of good practice through 3 national conferences for participating forces and Community Safety Partnerships' single points of contact. In addition a monthly bulletin is widely circulated, which highlights related work that the Home Office is engaged in as well as providing the chance for Community Safety Partnerships and police forces to highlight activities taking place locally to tackle serious youth violence issues. Fortnightly conference calls are also held, enabling a two-way flow of information between the Home Office and the participating areas and providing a regular forum for issues to be discussed, questions raised and guidance given on a range of related issues including: the introduction of gang injunctions; sharing ideas on what works and lessons learned from operational tactics, and forthcoming legislative changes in alcohol licensing.

The Home Office disseminates the results of successful local strategies to tackle knife and gun crime within the TKAP Programme. Operation Portcullis, for example, was a multi-agency enforcement operation run by South Yorkshire Police in Sheffield, where a range of partners worked to ensure that young people were safe then cracked down on all forms of violence and anti-social behaviour in a single evening. This began in the early evening with street-based teams working out on the streets to engage young people and signpost them, both in person and via Bluetooth, to positive activities. Where young people were found not to be safe, they were taken either home, to a designated place of safety or into custody where appropriate. Later in the evening, the operation focused on alcohol-related crime and violence bringing together police with a range of the most advanced search and drug testing equipment; local authority licensing officers, and UKBA staff to tackle weapon carrying, drug use, irresponsible licensed premises and those committing violence who are also subject to immigration control. The first South Yorkshire operation led to 38 arrests and no incidents of violence, including alcohol-related violence, being reported on a Saturday night in Sheffield when the police would usually expect 6-8 serious violent incidents. Following the operation there was significantly increased public confidence in the police reported via social network sites. The operation in Sheffield achieved some very impressive results.

Following this successful operation the TKAP Programme shared the details, including the outcomes, with other participating forces; 10 further operations were carried out in England during the following 3 months. Members of the team from South Yorkshire Police who led the operation in Sheffield delivered training to officers from TKAP areas proposing to undertake similar operations. In addition, the officers from South Yorkshire Police were also available to other forces to provide guidance and advice on running the operations following this training day. Operation Portcullis operations have now been embedded as a sustainable tactic in a number of forces, including Merseyside and Greater Manchester Police.

Partnership Working

The voluntary and community sector plays an important role by providing links to and acting as an advocate for individuals and communities who are experiencing crime. It can respond flexibly and innovatively to local problems that start with the diverse needs of individuals and communities most affected by crime. They often have the ability to engage with people and communities in a different way to the statutory sector and can improve public understanding of relevant policies and operations. Effective community safety solutions boost community confidence and respond to locally identified needs. The Home Office is committed to working with the voluntary and community sector as an effective partner in delivering crime prevention activities through local commissioning; providing funding; seeking the expertise of experienced practitioners; and sharing effective practice and ideas. Our wide range of voluntary sector partners includes: Neighbourhood Watch, Age UK, and voluntary and community sector organisations based in local communities and working on issues as diverse as knife crime and burglary. This approach has played a significant role in broadening our engagement with hard to reach communities to help prevent crime.

In the recent Office for Civil Society strategy *Building a Stronger Civil Society: A strategy for voluntary and community groups, charities and social enterprises*, we recognise and value the special ability of voluntary and community organisations to mobilise and support people, particularly those who sometimes struggle to find a voice. We envisage the sector as a resilient and independent partner, playing an even more influential role in shaping a stronger sense of society and improving people's lives. The reforms we set out represent a real opportunity for the voluntary and community sector to empower communities, open up public services and promote social action. However, the Government recognises that these opportunities will not emerge overnight and that to take advantage of them the sector will need some support.

In relation to gun and knife crime, the Home Office holds a bi-annual Roundtable on Guns, Gangs and Knives with partners working across the spectrum of serious youth violence, including: voluntary and community sector organisations, young people, ACPO leads for guns and gangs, policy officials and Ministers, to further develop our strategic approach to serious youth violence. The roundtable is valued by partners who do not otherwise have the same access to Ministers as the senior police leads who attend the meeting. It has proven a useful means of reaching a large number of key partners in a single meeting, and has produced useful advice to Government on new policy proposals and emerging problems.

20 January 2011

Memorandum by Institute for Government (BC 100)

Introduction

1. The Institute for Government is an independent charity helping to improve government effectiveness. We work with all the main political parties in Westminster and with senior civil servants in Whitehall, providing evidence based advice that draws on best practice from around the world.
2. In March 2010, the Institute published *MINDSPACE: Influencing behaviour through public policy*.²³⁶ This report showed how behavioural theory could be applied to tackle public policy challenges, and it deals with many of the questions raised by the Committee. This evidence submission complements the report and brings out points of particular relevance; it also highlights areas where the Institute's thinking has advanced since publication. *MINDSPACE* was published jointly with the Cabinet Office, but this submission reflects the Institute's views alone.

Terminology and framing the debate

3. The nomenclature of the "behaviour change" field is confusing and often imprecise. There are two main points to note when designating government activities as "behaviour change" interventions. The first relates to the "change" component, the second to the "behaviour" component.
4. First, it is important to recognise that governments do not always wish to change behaviour. Governments may also wish to maintain and reinforce existing behaviours that they consider desirable. Furthermore, the term "change" represents a great array of different aims and activities: the aim may be to start, increase, decrease or stop a behaviour; the behaviour may be familiar or unfamiliar to the actor concerned; and there are various timescales for the change: for one time only, over a defined period, or indefinitely.²³⁷
5. Second, when discussing "behaviour", it is important to realise that the vast majority of what government does is intended to influence our behaviour in some way, from murder laws to child trust funds. It is therefore difficult to identify "behaviour change interventions" as a distinct subset of government policy. Indeed, Margaret Thatcher once remarked of her government's approach that 'economics are the method; the object is to change the soul'.²³⁸
6. Nevertheless, in popular discourse "behaviour change" has come to mean something relatively specific: a set of approaches that draw on social psychology to explain and influence human behaviour. They are usually set in opposition to models of behaviour drawn from neoclassical economics, which predict that individuals act on certain precepts of rationality.²³⁹ "Behavioural economics" is an attempt to enhance economic

²³⁶ Dolan, Hallsworth, Halpern, King, Vlaev (2010) *MINDSPACE: Influencing behaviour through public policy*. Available at: <http://www.instituteforgovernment.org.uk/content/133/mindspace-influencing-behaviour-through-public-policy>

²³⁷ A useful way of conceptualising these different dimensions is BJ Fogg's Behavior Grid, developed at Stanford University: <http://www.behaviorgrid.org/>

²³⁸ Cited in Gray (2010) 'Thatcher, Thatcher, Thatcher', *London Review of Books* 32:8, 22 April, p.19.

²³⁹ Begg, Fischer, Dornbusch (2005) *Economics*. McGraw-Hill.

thinking by introducing empirical evidence of how human behaviour deviates from these precepts of rationality.²⁴⁰

7. Behavioural economics is therefore one aspect of behaviour change as a whole. For example, NHS Tayside recently launched a scheme which gave smokers £12.50 to spend on groceries if they did not smoke for a week.²⁴¹ The scheme is clearly an attempt to change behaviour, but it does not draw the principles of behavioural economics: for example, the incentives are not structured to take account of hyperbolic discounting or loss aversion.²⁴²
8. In other words, approaches that draw on social psychology should be seen as part of a spectrum of methods that influence behaviour: they complement and enhance coercive or rational approaches, rather than replacing them. Behavioural economics does not mean giving up on conventional policy tools such as regulation, price signals or better information. It means using them more effectively. In the *MINDSPACE* report we attempt to show how this can be done.
9. But the *MINDSPACE* report also noted that the implications extend beyond simply improving government's tools for influencing behaviour. Civil servants also need to reassess the behavioural impact of their current actions: in other words, the new approaches allow them understand how they may be influencing people's behaviour unintentionally. There is, therefore, a need to start thinking more about the *behavioural dimension* of government, rather than just seeing "behaviour change" as a new tool to bolt onto existing processes. In other words, behaviour needs to be used as a lens through which government activity is perceived. Have policies been designed to reflect the way we actually respond to incentives? Are the efforts of employment advisers aided or undermined by the way their JobCentre Plus is designed?

The use of evidence

10. There is a great deal of evidence to support the principles of behavioural economics. Nevertheless, new effects and influences are emerging from the field all the time. The challenge is to help policy makers make good use of the most robust effects. But many of these findings are intrinsically interesting; they make good stories, as their frequent inclusion in bestselling books indicates. The danger is that policy makers will fall victim to the "availability heuristic": particularly interesting or salient studies will stick in their minds, even though these studies are controversial or their results have not been replicated regularly.²⁴³
11. For example, economic theory suggests that expanding the choices available to decision makers cannot make them worse off.²⁴⁴ Yet, starting in 2000, a set of studies have suggested that an abundance of options may make people less likely to make a choice, and less satisfied with the choice they do make.²⁴⁵ The most famous of these

²⁴⁰ Camerer, Loewenstein, Rabin (eds.) (2004) *Advances in Behavioural Economics*. Sage.

²⁴¹ http://news.bbc.co.uk/1/hi/scotland/tayside_and_central/7465908.stm

²⁴² Dolan, Hallsworth, Halpern, King, Vlaev (2010), pp.19-21.

²⁴³ There is a good discussion of the availability heuristic in Sutherland (2007) *Irrationality*. Pinter and Martin, 2nd edition (1st ed. 1992), pp.11-24.

²⁴⁴ Arrow (1963) *Social choice and individual values*. John Wiley.

²⁴⁵ Chernev (2003) 'When more is less and less is more: The role of ideal point availability and assortment in consumer choice' *Journal of Consumer Research* 30:2, 170-183; Schwartz (2000) 'Self-determination: The tyranny of freedom' *American*

experiments found that people were much more likely to buy jam from a stand when six flavours were on offer than when 24 flavours were displayed.²⁴⁶ The obvious inference for public policy is that increasing a choice set beyond a certain point may actually discourage the act of making a choice.

12. Perhaps owing to their intuitive appeal, these studies are often included to support the notion of “choice overload” in popular books relating to influence and persuasion.²⁴⁷ However, a recent meta-analysis of all the available studies found that the mean effect of choice overload was ‘virtually zero’.²⁴⁸ But, crucially, the analysis found that the variation between studies was very great: in some, there was a strong choice overload effect. The conclusion is not that choice overload is fictitious, it just occurs in some conditions and not others: and we do not yet know what those conditions are.²⁴⁹
13. Our intention in giving this example is to emphasise two points. First, the need for caution in deriving general rules about behaviour from a single study or set of studies, regardless of their fame or salience. As with all policy areas, policy makers should be able to make a sound judgment on the reliability of the evidence on which they are basing their actions. There is no objective threshold for reliability that can be specified, but policy makers should note any meta-analyses, systematic reviews, and the extent to which results have been replicated. The Institute for Government has set out the factors that it considers to have the most robust influence on behaviour.²⁵⁰
14. Second, the need to obtain feedback and evaluation when applying behavioural principles in policy making. Behaviour is complex: it is influenced by many different factors at any one time. Given this complexity, it can never be *guaranteed* that a general principle about behaviour will hold in a particular instance (although the likelihood is greater if the principle is backed by robust evidence). Indeed, it can be argued that no policy intervention is guaranteed to produce a certain effect. Thus, rather than simply accepting principles about behaviour as inviolable rules, policy makers should always be testing them and sharing the results. Doing so points towards what we have termed ‘evidence-based innovation’: ‘tak[ing] what we know to be robust phenomena across a range of contexts and give them the best shot of success where the evidence base does not exist.’²⁵¹
15. The need to obtain empirical evidence on behaviour is the same whether we are using rational economic models or the precepts of behavioural economics. It can be argued that over-reliance on a theoretical understanding of behaviour (or, at worse, assumptions about behaviour), and a concomitant failure to collect evidence about how people

Psychologist 55:1, 79-88; Iyengar, Huberman and Jiang (2004) ‘How much choice is too much? Contributions to 401(k) retirement plans’, in *Pension Design and Structure: New Lessons from Behavioral Finance*, ed. Mitchell and Utkus, Oxford University Press.

²⁴⁶ Iyengar and Lepper (2000) ‘When choice is demotivating: Can one desire too much of a good thing?’ *Journal of Personality and Social Psychology* 79:6, 995-1006.

²⁴⁷ For example: Levine (2003) *The power of persuasion: how we’re bought and sold*, John Wiley, pp.138-139; Hallward (2004) *Gimme! The human nature of successful marketing*, John Wiley, pp.38-39; Schwartz (2004) *The paradox of choice: Why more is less*, HarperCollins.

²⁴⁸ Scheibehenne, Greifender and Todd (2010) ‘Can there ever be too many options? A meta-analytic review of choice overload’, *Journal of Consumer Research* 37, 409-425.

²⁴⁹ For a short summary of the debate, see Harford (2009) ‘Given the choice, how much choice would you like?’, *Financial Times Weekend*, November 13th.

²⁵⁰ Dolan, Hallsworth, Halpern, King, Vlaev (2010).

²⁵¹ Dolan, Hallsworth, Halpern, King, Vlaev (2010), p.56.

behave, has contributed to major policy disasters in the past. The Child Support Act and the introduction of single farm payments are obvious examples.²⁵²

16. We believe that behavioural economics offers a more accurate understanding of how people behave, but its principles must always be subjected to empirical testing. As we have previously argued, the same rigour that is used to evaluate the effectiveness and cost-effectiveness of health technologies must be applied to behaviour change interventions. There is, therefore, a case for establishing an institutional centre that can evaluate behaviour change. While this does not need to be a new body, it does need scientific competence and a degree of independence. The centre would be tasked with determining which methods were most effective and cost-effective for changing specific behaviours.²⁵³

The need for government to change its own behaviour

17. Public managers can use behavioural theory to analyse their employees' behaviour and trigger organisational change. It seems very likely that the ways budgets are constructed and policy options selected are subject to the influences, mental shortcuts and biases found in behavioural economics. Of course, the basic point here is not a new one; Herbert Simon's *Administrative Behaviour*, with its discussion of "bounded rationality", was published some sixty years ago.²⁵⁴ But new research has elaborated on bounded rationality, giving managers practical ways of analysing behaviour consistently and effectively.
18. The forthcoming spending review will trigger major changes to government's scope and operating practices. The changes will require significant changes in behaviour as well as budgets. When implementing cuts, public managers need to consider how people behave, as well as the raw numbers. Yet the vast majority of research and commentary about cuts has focused on the numbers only. The Institute is moving the debate on and asking how behaviour change could change government's behaviour.²⁵⁵ There is a need to bring behaviour change out of a narrow application to policymaking and recognise its potential applications to public administration as a whole.

October 2010

²⁵² See Lewis (2002) 'The problem of fathers: policy and behaviour in Britain', in Hodson (ed.) *Making men into fathers: Men, masculinities and the social politics of fatherhood*, pp.125-149. Cambridge: Cambridge University Press; the National Audit Office noted the lack of understanding of 'likely consumer behaviours' in its 2006 report on *The delays in administering the 2005 Single Payment Scheme in England*.

²⁵³ Dolan, Hallsworth, Halpern, King, Vlaev (2010), pp.56-7.

²⁵⁴ Simon (1947) *Administrative Behavior*. Macmillan.

²⁵⁵ See: Hallsworth (2010) 'Under the Influence', *Civil Service World*, 19 May 2010 (Issue 148), pp.10-11. Available at: <http://www.instituteforgovernment.org.uk/news/article/123/why-cutting-the-deficit-is-about-people-as-well-as-numbers>

Memorandum by Interaction (BC 40)

REPORT SUMMARY

This paper addresses Questions 1, 6 and 14 from the Select Committee's call to evidence based on Interaction's experience of changing behaviour in diverse organisations for nearly two decades. In summary, it:

- emphasizes attitude as the driving force of behaviour while making important distinctions between attitude, emotion and behaviour;
- highlights the problem of attitudinal and behavioural change skills being in the hands of a few professionals instead of being available for use by the general public;
- proposes the need for Attitudinal Intelligence™ to be developed in the fabric of society – primarily, but not exclusively, through educational interventions;
- describes how Interaction has applied its methodology, *Reality Centred Learning*™, to successful behaviour and culture change in diverse organisations;
- recommends maximizing educative behaviour change interventions that empower individuals while aligning and enhancing these with other types and levels of intervention;
- positions attitude as the integrating force between all levels and most types of behaviour change intervention;
- underlines the importance of consulting and engaging the public in behaviour change interventions in order to generate ownership, commitment and sustainability along with some examples of how this can be done;
- concludes with a page of recommendations about identifying attitudinal blocks to behaviour change and building 'attitudinal intelligence' methodologies into different professions, policy interventions and areas of society;
- includes three short case studies relevant to this enquiry – creating change in a bank during the financial crisis, developing environmentally sustainable behaviours in transition communities and exploring the impact of limiting attitudes on child protection with a group of child care workers in the aftermath of the Baby P case.

As someone with a long-standing passion for and commitment to enabling behaviour change in society, I appreciate the opportunity to give evidence on this subject and am available to provide further information or support the Committee in any way I can with this enquiry.

INTRODUCTION

1. I am the Managing Director of Interaction, a UK consultancy with global reach and a strong track record of improving results by changing behaviour in diverse organisations in the private and public sectors. We recognize attitudes as the driving force behind all human behaviour and specialise in enabling clients to transform attitudes through a methodology called *Reality Centred Learning*™.

2. This methodology was the life's work of our Chairman, Dr K Bradford Brown PhD, (clinical psychologist, psychotherapist, behavioural educator, theologian), who died in 2007. He was my mentor for many years and became my business partner when I pioneered the effective use of *Reality Centred Learning*[™] in organisations. Since 1994 my company has applied it successfully to personal, interpersonal and corporate challenges and enabled our clients to improve performance, embody their values and create sustainable behaviour change.
3. Interaction's commercial clients have included Tesco, Unilever, HBOS, British Airways, Hyundai, Danone, FMG, Accenture, Thomas Sanderson and lastminute.com. We've delivered behaviour change to these clients in leadership, customer service, sales, employee engagement, performance management and living brand values.
4. Interaction Social Action has also served organisations in the public sector such as The Norfolk Constabulary, Harrow LEA, Fairbridge (a charity for socially excluded young people), The Idea Store (pioneering public libraries to support adult learning), The Furniture Resource Centre (social business supporting the homeless and long-term unemployed in Liverpool) and The Mandela Rhodes Foundation in South Africa.
5. We have various case studies and numerous testimonials if the Committee wishes to see more examples of our work, but I've selected three as an appendix to this paper which seem most relevant to this enquiry.

PURPOSE

6. I believe our experience of changing behaviour in commercial contexts will be relevant and valuable to the House Of Lords Science and Technology Select Committee. In this paper I will respond to the following questions from your call to evidence:
 - What is known about how behaviour can be influenced? (*Research & Development, Question 1*)
 - How should different levels of intervention (individual, organisational, community and national) and different types of intervention (legislative, fiscal, educative) interact in order to achieve policy goals more effectively? (*Policy Design and Evaluation, Question 6*)
 - Should the public be involved in the design and implementation of behaviour change policy interventions and, if so, how? Should proposed methods for securing behaviour change be subject to public engagement exercises or consultation? Should they be piloted? (*Ethical Considerations, Question 14*)

NB: I have omitted the parts about special considerations for addictive behaviour in questions 1 and 14 because, while I can offer a view having coached clients with addictions, I'm not an expert on addiction and refer you (as I do clients with addictions) to the Twelve Step Programme (Alcoholics, Overeaters, Narcotics Anonymous etc) for evidence of success in this area.

7. I will also make recommendations based on my experience of changing behaviour in a wide range of organisations, but not on research into previous policy interventions or government practices. I would want to do this thoroughly and apply the attitudinal methodology I recommend in this report, which would be a significant undertaking. If this

paper is helpful I would be very willing to conduct such research and submit another report with more specific insight into government systems, mechanisms and lessons from previous behaviour change policy interventions.

Q1: What is known about how behaviour can be influenced?

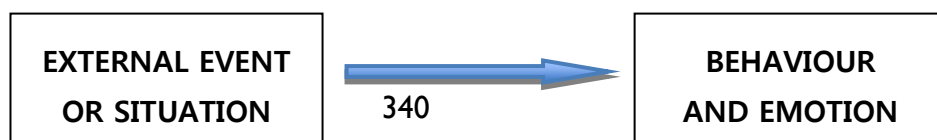
8. Attitude is increasingly, but not always, recognised as the driving force of human behaviour. For example, attitude is emphasised in the GSR Behaviour Change Knowledge Review, but is only occasionally referred to in the MINDSPACE report and doesn't feature in its 'checklist of influences on behaviour'. David Knott's Cabinet Office discussion paper, 'Achieving Culture Change: a policy framework' (July 2007), accurately acknowledges that "attitudes, values, aspirations and sense of self-efficacy are important because they form the intentions we have in relation to the different action or behaviour that we choose in life". The same paper defines attitude as "the position held toward a fact or action comprising of knowledge, emotional and motivational elements". While supporting these statements, I would go further by:

- Defining attitude as "beliefs, expectations, judgements, perceptions, assumptions, purposes and interpretations (i.e. thoughts) as distinct from emotions and behaviour";
- Emphasising attitude not just as an important influence on behaviour, but as the direct cause of behaviour and emotion, (except for clinical mental conditions);
- Adding that all attitudes/thoughts are rational or irrational, reactive or responsive, connecting or separating and, most importantly, subject to verification.

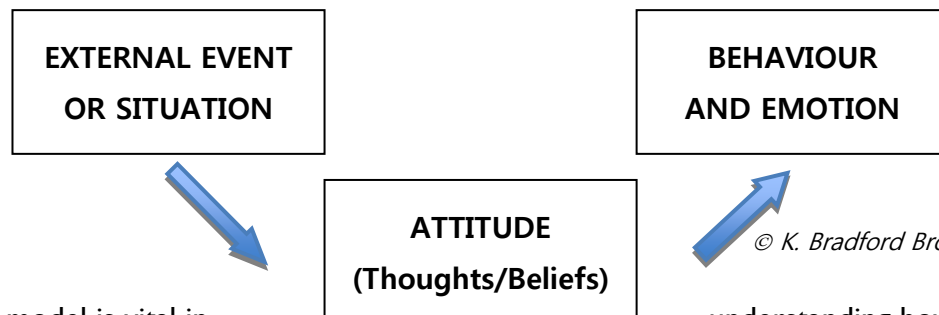
9. To expand on the above points, it is very important to distinguish between events/situations, thoughts/attitudes, emotions and behaviour. All too often thoughts and feelings are confused. For example, "I feel I can't lose weight" really means, "I believe I can't lose weight". Emotions (feelings) are experienced physically (e.g. fear, anger, excitement, love, resentment, envy, numbness, joy, anxiety, calmness) and are verifiably true. They must not be confused with thoughts because thoughts cause emotions and are often verifiably false. If you think, "I can't lose weight" you're likely to feel anxiety, despair or depression and continue overeating. By verifying this belief as false your feelings will change and new behaviour becomes possible. To feel and behave differently you need to think differently. This is the heart of what we call 'attitudinal intelligence'.

10. Similarly, it's a common misunderstanding that external events cause our feelings and actions. (E.g. 'my parents made me unhappy', 'you made me angry', 'my mates made me steal the money', 'she asked for it', 'the alcohol was too cheap to resist' etc.) External factors do influence our actions, but only because they trigger the thoughts/attitudes that drive our actions. Why does one person walk past a plate of chips and someone else buy it? Not because the plate of chips is there, but because their attitude to the plate is different. In other words, thoughts (attitudes), not external events, cause behaviour. This is a simple, but vitally important insight into behaviour change.

False cause of behaviour:



True cause of behaviour:



11. This simple model is vital in understanding how to influence behaviour in the most direct, effective and sustainable ways. Many approaches to behaviour change omit attitude as the fundamental cause, partly because it's invisible, so interventions tend to be aimed at what can be seen – the external situation or the behaviour. For example:

- External interventions such as providing healthy school lunches can support healthy eating, but internal interventions such as building healthy self-esteem and overcoming attitudes that cause overeating will produce much more significant and sustainable results. Giving advice about the negative health consequences of obesity, smoking or excessive drinking may influence some people, but it won't change those who believe "I'm nobody, my life is worthless, I can't cope" etc. Indeed, health warnings on cigarette packets will be unconsciously appealing to someone who doesn't value their life. Changing addictive behaviour means overcoming these attitudes.
- CCTV is an external intervention for reducing crime, yet crimes are frequently committed in full view of cameras. When our Chairman, Brad Brown, trained prisoners in the USA he worked with someone who had knowingly robbed a bank on camera and discovered he believed he was "invisible" since childhood. This attitude drove his behaviour as an adult and security cameras became an incentive to become visible instead of the deterrent they were meant to be. Similarly, the false and damning belief that "I am a criminal" (i.e. always will be) versus the true and responsible recognition that "I committed a crime" is a significant cause of repeat offending.

12. While attitude is increasingly recognized as a key influence or cause of people's behaviour knowing how to change people's attitudes is rare. This knowledge tends to be reserved by academics or experts such as psychologists and psychotherapists. It becomes accessible only to extreme cases whose behaviour leads them into therapy and, even then, attitudinal skills remain in the 'magical' hands of and dependent on the experts. They are rarely taught, let alone made accessible to the general public. This is a major block to behaviour change in society. Dr Brown, who worked as a psychotherapist and clinical psychologist for many years, recognized this block and was determined to make his knowledge applicable by anyone wanting to change their behaviour or improve the quality of their life. His methodology, *Reality Centred Learning*[™] was the result. It is a comprehensive practical toolkit for:

- uncovering unconscious attitudes that limit behaviour and cause emotional distress

- disarming self-deception by verifying false perceptions of self, others and situations
- motivating change through creative purposes instead of fearful purposes*
- generating courage, resilience and realism in response to unexpected events
- replacing blame and victimization with ownership and responsibility
- releasing resentment towards self, others, institutions and life
- radically enhancing people's quality of life and the results they accomplish

** A fundamental part of 'attitude' is purpose. There is a purpose for all behaviour (motivation = motive for action), but some purposes are rooted in fear while others are rooted in reality. Most behaviour change requires a major change of purpose so this is integral to our methodology.*

13. Educating our clients to use this methodology has enabled ordinary working people to change their behaviour and thus improve both personal and corporate performance. As a small company (with seven employees and thirty self-employed associates) Interaction has achieved large-scale change by training trainers, coaches and change agents to deliver *Reality Centred Learning*[™] within their organisations. In Tesco this became a new role in the business with over a hundred 'Living Service Coaches' delivering the change programme to over 800 UK stores as well as Head Office departments and, ultimately, international Tesco businesses. This is an educative intervention whereby we transfer attitudinal expertise and skills to clients in a rigorous and ethical way, thus empowering them to sustain change without relying on us as consultants. Not being needed anymore is one of our measures of success.

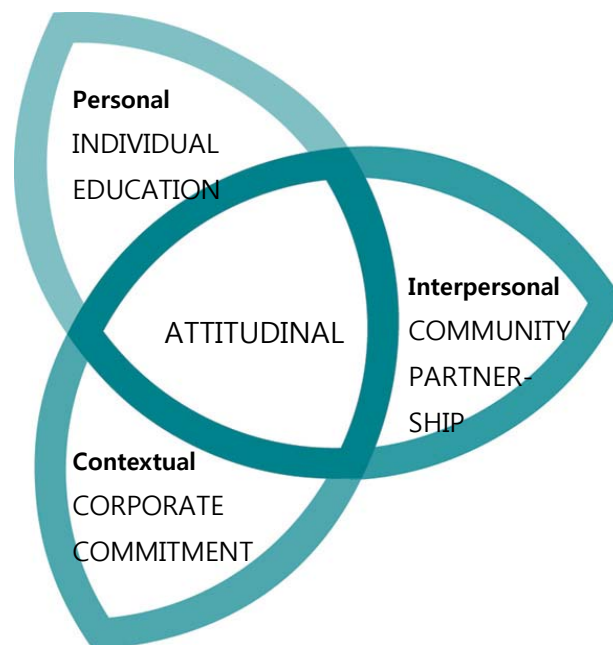
Q6: How should different levels of intervention (individual, organisational, community and national) and different types of intervention (legislative, fiscal, educative) interact in order to achieve policy goals more effectively?

14. In our experience the most effective type of intervention for behaviour change is educative because behaviour change needs to be an individual choice and education empowers choice. With the exception of criminal behaviour that harms others, imposing behaviour change invites rebellion, defiance or obligation as well as being ethically questionable. For example, companies whose customers say their service is 'professional, but cold' often hire us to address this problem. Invariably we find employees have been told how to behave, even given scripts to follow, and this breeds resentment in intelligent adults who are capable of behaving respectfully without being told how. Being treated this way also triggers an upstairs-downstairs 'I'm subservient' attitude, which is particularly prevalent in British culture. Their service behaviour then becomes mechanical, dutiful and consequently cold. By changing negative attitudes and educating employees to make their own choices service standards rise. With the right attitude the right behaviour happens.

15. Interventions aimed at individuals are vital when changing behaviour, but need to be supported by the group/community and the corporate context/system. Behaviour change in organisations can be dismissed as 'soft' or 'touchy-feely' if the programme isn't upheld by processes, measures and strong leadership. For example, the impact of behaviour change on the bottom line needs to be clear for people to see the fiscal benefits, to them and the company, of making these changes. This incentivizes people without making financial incentives the only intervention – which is unlikely to work for many people in the absence of educative interventions that teach them to change their attitudes. (E.g: KPI's tracked for 30 trial stores in Tesco showed an increased

performance over other stores by 20% in all key categories, at which point Tesco substantially increased investment and other stores asked for the change programme instead of resisting and dismissing it.)

16. The more that levels and types of intervention interact the greater the chance of changing people's behaviour. In a sense this is obvious. Firstly, multiple interventions create multiple influences on behaviour (e.g. banning smoking in public places + NHS support to quit smoking + government health warnings + high cigarette taxes + nicotine products = major decrease in smokers). Secondly, personal, interpersonal and contextual levels interact naturally – the simplest interventions leverage this natural interaction with maximum impact at all levels (separating them creates unnecessary complexity). Thirdly, there is one thing that changes everything – attitude. There is no action, system, structure, law, process, policy, relationship, strategy, community or institution that isn't driven by, built on or influenced by human attitudes. So our service to corporate clients involves multiple interventions designed to change attitudes at every level of an interactive system:



Q14: Should the public be involved in the design and implementation of behaviour change policy interventions and, if so, how? Should proposed methods for securing behaviour change be subject to public engagement exercises or consultation? Should they be piloted?

17. Interaction has never delivered a behaviour change programme without thorough consultative research, engagement exercises and pilots. When you deal with people's behaviour you deal with their values, attitudes, emotions, aspirations and life experiences. These are not to be dealt with lightly, mechanically or from a distance. Consulting participants and designing interventions in response to what they need is respectful, enrolling and empowering – basic platforms for successful behaviour change. They need to own the process and participate as willingly as possible. Even on mandatory courses we spend the first session enrolling people into choosing and finding their own purpose for what their employer is making them do. Instead of training begrudging participants we train willing partners – this is key to success. We also work with the pilot group to evaluate the process rather than review it in their absence. They

help us design improvements, which creates further ownership, so their colleagues experience a programme developed in-house instead of by external consultants 'who don't know us or our business'.

18. Designing behaviour change policy interventions must involve experts in the field, but involving the public in the process will make a real difference to building ownership and bottom-up as well as top-down solutions. Involving the public in implementation is essential for grass roots ownership and large-scale educational interventions. We train our clients to deliver change programmes and engage people at every level of the organization to do so. We choose people with a passion for our methodology, a vision for transformation and the willingness to act as role model ambassadors for the change. This approach makes the difference between one-off, 'wow'-factor interventions and deep-rooted, long-lasting culture change.
19. Depending on the behaviour the government is aiming to change, there needs to be a consultative process with the target group as well as experts who work with that group. For example:
 - Socially excluded young people enacting anti-social behaviour along with mentors from youth councils or charities such as Fairbridge who specialize in working with young people;
 - Transition communities working to improve environmentally sustainable behaviour along with local councilors from that community who can influence changes within local government;
 - Child protection trainers, care workers, parents and local authority teachers of parenting courses
20. Interaction Social Action is currently working with these groups. We are delivering leadership training to Fairbridge managers and intend to train their mentors to use *Reality Centred Learning*[™] in their work with young people. The appendix includes ongoing case studies of projects we're piloting with the other two groups. In all these cases we're testing the effect of attitudinal change on behaviour change in these areas and are happy to share further results as they emerge.
21. In 2007 I travelled to New Orleans to assess attitudinal causes of what the US Select Committee called "a failure of initiative in the preparation for and response to Hurricane Katrina that cost lives, prolonged suffering and should disturb all Americans." The passivity that did so much damage was rooted in self-deception. Warning signs were ignored because "it won't happen to us"; many died in St. Bernard's Parish and the Ninth Ward because it was assumed all residents had televisions to hear the warnings; people weren't protected because vital information was withheld in the name of 'homeland security'. Such attitudes turned a natural disaster into a man-made catastrophe and show how destructive unchecked, untrue attitudes can be. In response, the Interaction Leadership Academy LLC was proposed as an executive leadership development entity offering *Reality Centred Learning*[™] services to academia, public sector government agencies, not-for-profit associations and for-profit companies engaged in public-private partnerships. This has been delayed by the serious illness of our consulting partner in the US, but Saint Joseph's University in Philadelphia has agreed to let us use its campus and facilities for this entity. This is another example of how the public can respond and be engaged to implement behaviour change interventions.

CONCLUSIONS & RECOMMENDATIONS

- 22. Our primary recommendation is to build Attitudinal Intelligence in society through educative interventions that empower the public to change their own behaviour and act as responsible citizens (in line with the government's Big Society agenda). The absence of this ability in the fabric of society makes behaviour change very challenging and increases the need for fiscal incentives, prohibitive legislation, social marketing etc. These interventions are entirely valid if they support those recommended in David Knott's 'Achieving Culture Change' paper: parenting interventions, mentoring, peer and role model interventions, improving the quality of the built environment and improving the quality and scope of schooling and the curriculum.**
- 23. The three main steps recommended in that paper align with our approach to culture change: identifying and segmenting target populations; assessing the drivers of attitudes and behaviour for each of these target populations; mapping policy interventions onto this assessment of the relationship between attitudes and behaviour. However, these issues and aims need to be addressed when implementing those steps:**
- **Be rigorously clear about the relationship between attitudes, behaviour and emotions - attitudes drive behaviour and emotions, not the other way round;**
 - **Build capability for “assessing the drivers of attitudes and behaviour” or, more accurately, for assessing attitudinal drivers of behaviour and attitudinal blocks and levers for behaviour change, so this can be owned and implemented at every level of society;**
 - **Ensure interventions such as incentives and marketing aim to undermine limiting attitudes instead of compounding, avoiding or compensating for them while underpinning accurate attitudes that empower responsible behaviour;**
 - **Build Attitudinal Intelligence into parenting, mentoring, peer and role model interventions; and integrate it into other policies (Question 7) like supporting the Justice Department's plans by building it in prisons and charities/agencies working to reduce repeat offending;**
 - **Go further than shaping attitudes and values by “personalising schooling to the needs of individual learners” – make attitudinal intelligence (which includes emotional intelligence) part of the school curriculum and integral to teacher training programmes though tried and tested methodologies like Reality Centred Learning™;**
 - **Pilot interventions with the public and ensure sustainability by empowering social workers, health workers, charities, local government authorities, probation officers, prisons, police services etc to apply attitudinal intelligence methodologies in their jobs;**

- **Develop behaviour change practitioners in all government departments and consider creating a Behaviour/Culture Change government department to lead this agenda.**

24. These recommendations are for long-term, sustainable behaviour change. They would require significant investment, expertise, creativity and commitment, but I believe they would make a major difference to the behavioural issues we're currently facing in society. These issues exist, in part, because expertise in this area is limited to so few instead of being widely available to many. We need practical and innovative solutions that leverage current trends and modern technology (e.g. we're planning to develop behaviour change computer games for our clients to add to our face-to-face educational services). There are few behavioural problems in society that cannot be traced to limiting attitudes, self-deception and deficient self-esteem. Addressing them calls for vision, boldness, compassion and an educational revolution that makes attitudinal intelligence and effective behaviour change methods as accessible, practical and mainstream as maths, English and technology.

7 October 2010

Memorandum by the International Association for the Study of Obesity (IASO) (BC 91)

Evidence submission (paragraphs numbered as per Call for Evidence)

1. Influences on behaviour: In terms of health promoting behaviours, there is good evidence that behaviour change can be influenced strongly if the healthier choice is the default choice. It is important to recognise how often the healthier activity has to be chosen *against* a prevailing, unhealthier default. Organ donation rates are far higher in countries where the individual must carry a card to opt out of donating, rather than one to opt in. Stairways are used much more frequently if they are more available than a lift or escalator. In the case of an obesogenic environment, the defaults encourage body weight gain. The more the environment can be changed the more the behaviour will change.

1a. Addictive behaviour: There is increasing evidence that food contains addictive elements, and that the presentation of food can encourage addiction-like responses from the consumer. This is an emerging science. We have contributed to the scientific development of this area in a forthcoming book being produced from Yale University, USA.

2. The policy implications of recent research: The need to tackle health promotion through focussing on the upstream drivers of behaviour has been recognised for several years. Our diagrammatic 'causal pathway' showing the various categories of influence on weight gain (see Annex 1) identifies the need for many government departments and many levels of society to be involved, from international agencies regulating marketing through to local communities and individual families. This model has been operationalised by the work of Swinburn et al in the development of the Angelo framework, a matrix which shows the various components in the local environment and population-wide environment that need to be tackled (see *Dissecting obesogenic environments: the development and application of a framework for identifying and prioritizing environmental interventions for obesity*. Swinburn B, Egger G, Raza F (1999) *Prev Med*. 29 (6 Pt 1):563-70).

The need for health promotion to be included in the policies of non-health departments of government has become more widely recognised recently, with the Finnish EU Presidency leading on 'Health in All Policies' and the World Health Organization's development of tools for multi-sectoral health promotion. Our organisation is working with WHO on this topic, and we have presented proposals at their recent conference on the issue held in Helsinki, September 2010.

3. Research capability: We are currently undertaking a European Commission-funded project on research into food and health at national and EU level across the region. We have noted a 'settings bias' in the research, which has led to a focus on collecting evidence from those environments where some degree of controlled intervention can be made, such as school and clinics. This has led to the neglect of research into other settings for interventions which cannot be easily controlled, such as families and public spaces at the local level, and food marketing and pricing policies at the population-wide level. Further details will be available in the project report, due in early 2011.

4. Translation capacity: This capacity has been improved in recent years but we are concerned that the present Coalition policies may not ensure that the capacity continues

and is sufficiently well-funded to perform adequately. For a discussion of the principles underlying the translation of obesity and related public health research into policy priorities, see Obesity prevention: a proposed framework for translating evidence into action. Swinburn B, Gill T, Kumanyika S (2005) *Obes Rev.* 6(1):23-33.

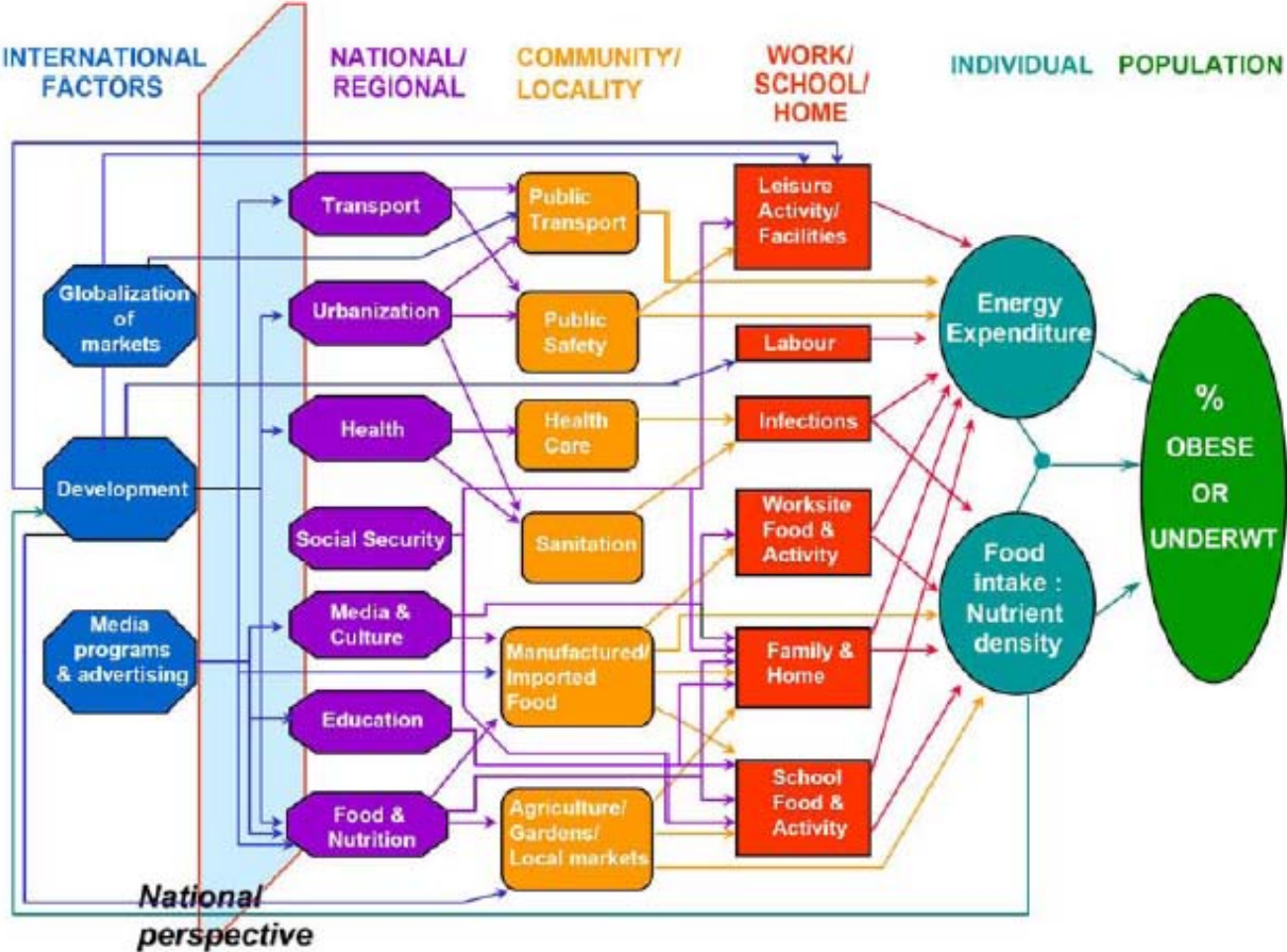
5. Classification of behaviour change: We urge the Select Committee to include a wide range of interventions to be considered as behaviour change interventions, from the availability of school playing fields to the regulation of advertising on children's television. Many aspects of the environment set the 'default' option for health behaviour and need to be examined for the potential to make successful interventions.

6. Intervention levels and types: There has been some work done on the setting of priorities for interventions and the estimation of cost-benefits of different types of intervention. The setting of priorities can be cast as an *investment* decision: looking for a combination of, on the one hand, those that offer high returns (greatest impact on most people) but with some risk (e.g. less evidence to ensure success) and on the other hand interventions with a lower risk but lower returns. For background on this see Preserving innovation under increasing accountability pressures: The health promotion investment portfolio approach. Hawe, P. & Shiell, A. (1995). *Health Prom Aust.* 5:4–9. For an example of an analysis of cost-effectiveness of different interventions to tackle child obesity, see A new approach to assessing the health benefit from obesity interventions in children and adolescents: The assessing cost-effectiveness in obesity project. Haby, M.M., Vos, T., Carter, R., Moodie, M., Markwick, A., Magnus, A., Tay-Teo, K.S. & Swinburn, B. (2006). *Int J Obes.* 30:1463–1475. See also the original work on this topic (the ACE-Obesity study) undertaken for the government of the State of Victoria, Australia, at www.health.vic.gov.au/healthpromotion/downloads/ace_obesity.pdf

8 October 2010

Annex I

IOTF Causal Web



Memorandum by Professor Peter John, University of Manchester (BC 8)

The views expressed are those of Peter John's, but they draw on a body of work commissioned by the ESRC and Communities and Local Government, *Rediscovering the Civic*, carried out by colleagues from the Universities of Manchester and Southampton (www.civicbehaviour.org.uk)

Research and Development

1. What is known about how behaviour can be influenced? What special considerations apply to addictive behaviour?

The best evidence comes from randomized controlled trials done in the field with sufficient sample sizes. Trials in political science and policy show that direct contact with the citizen can affect behaviour change, such as voting in elections, recycling household and food waste, making donations and a whole range of civic acts. Contact can be personal or impersonal. Effect sizes are moderate, however. See: www.civicbehaviour.org.uk Addictive behaviours are much harder to change than toward pro-social behaviour. If the message is applied with social pressure and visibility the effects are much stronger.

2. What are the policy implications of recent developments in research on behaviour change?

Greater interdisciplinary work, the influence of behavioural economics, more research based on experimental evidence.

3. Is there adequate research capability within the United Kingdom to support the current pace of developments in behaviour change policy interventions? Is there sufficient funding for the evaluation of behaviour change interventions?

There is growing research capacity and some funding, but more integrated research would meet the need, especially when based on RCTs evidence.

Translation

4. Are there adequate structures and expertise across government and the public services more generally to support the translation of research developments in behaviour change into policy interventions?

Those that exist are mainly in government departments through their research divisions

Policy design and evaluation

General

5. What should be classified as a behaviour change intervention?

Anything designed to change citizen behaviour directly through information, framing messages, persuading, setting choice mechanisms, treatment or more indirect mechanisms designed to change behaviour such as design of choices open to citizens. It is very broad class of actions.

6. How should different *levels* of intervention (individual, organisational, community and national) and different *types* of intervention (legislative, fiscal, educative) interact in order to achieve policy goals more effectively?

More freedom needs to be given to local authorities to do behaviour change interventions as evaluated by trials. There is too much caution in the system. The devolution of power from the centre could come with incentives to do more behaviour change interventions. The main type of intervention is about design and education than in law and finance, achieving aims by thinking through the way the citizen get offered choices.

7. Should behaviour change interventions be used in isolation or in combination with other policy interventions?

The way to think about it is to wrap in behaviour change alongside other interventions and in policy more generally. The state needs to have a rethink about the way in which the citizen interacts with a wide range of interfaces, each of which can be coordinated and thought through to relate to the citizen more directly. The perspective needs to be from the citizen and minded to integrate the services of the state so they encourage behavioural change.

Practical application

8. Have publicly funded behaviour change interventions been both evidence-based and subject to effective evaluation? How successful have such interventions been?

We do not have detailed insight into those interventions. We (in the Institute for Political and Economic Governance at the University of Manchester) have evaluated civic interventions at the Department for Communities and Local Government), which were based on sound research.

9. Within government, how are the lessons learnt from the success or lack of success of behaviour change interventions fed back into the design of future interventions? Are lessons learned from industry and voluntary sector behaviour change activities also taken into account?

I am not qualified to speak to this

10. What mechanisms exist, at national and local government level, to provide advice and support during the design, piloting, implementation and evaluation of behaviour change interventions in order to ensure that they achieve intended policy goals and also cultural changes within government and public services more generally?

It is very patchy as our experience of working with local councils attest, as much depends on the research element being carried out effectively and many local councils cut back on their intelligence activities a long while ago and prefer doing things on the basis of intuition or quick desk reviews.

Cross-government coordination

11. What mechanisms exist within government to coordinate and implement cross-departmental behaviour change policy interventions?

I am not qualified to say anything about this

12. What mechanisms exist within government to cascade learning and best practice on behaviour change policy interventions?

As above

Ethical considerations

13. When is it appropriate for the state to intervene to influence the behaviour of members of the public and how does this differ from when it is appropriate for the commercial or voluntary sector to intervene? In particular, when should this be done by outright prohibition and when by measures to encourage behaviour change? Are some methods of producing behaviour change unacceptable? Which and why?

Provided the measures have been democratically decided and there is citizen involvement (see below) I do not think there are many particular limits other than those that represent a major loss of liberty and welfare. In general what is sensible and practicable useful dovetail with ethical considerations. We agree with Sunstein and Thaler in *Nudge* that the state can respect the autonomy of citizens but also nudge them to the right kind of civic behaviour.

14. Should the public be involved in the design and implementation of behaviour change policy interventions and, if so, how? Should proposed measures for securing behaviour change be subject to public engagement exercises or consultation? Should they be piloted? Do considerations differ in the case of interventions aimed at changing addictive behaviour?

We agree the public should be involved through consultation where this works. As part of the *Rediscovering the Civic* project, working with MORI, we pioneered an online method of consultation, with citizens debating deeply controversial matters online. This worked very well and could be used to consult on behaviour change matters.

International comparisons

15. What lessons can be learnt from previous successful or unsuccessful behaviour change interventions in other countries? Which countries provide the most helpful examples of best practice? Are behavioural change interventions generally transferable between different societies?

The main examples come from the US, which has more experience of using randomised controlled trials to evaluate policies.

Tackling Obesity

16. The Committee would particularly welcome submissions on behaviour change interventions, whether in the public sector, the private sector or by voluntary organisations, designed to tackle obesity, in the United Kingdom or internationally, in order to examine:
 - a) the latest developments in the evidence-base in relation to changing eating and physical activity behaviour;

This is not our area of expertise

- b) who are the most effective agents for the delivery of behaviour interventions to tackle obesity;

As above

- c) how current behaviour change interventions tackle obesity and what use is made of available scientific evidence;

As above

- d) whether such interventions are appropriately designed and evaluated; and

As above

- e) what lessons have been learnt and applied as a result of the evaluation process

As above

18 September 2010

Memorandum by Dr Rhys Jones, Dr Jessica Pykett and Dr Mark Whitehead, Aberystwyth University (BC 65)

This evidence is submitted on an individual basis and does not reflect the views of Aberystwyth University or the Leverhulme Trust.

The research has considered the ethical and political implications of promoting soft or libertarian paternalist policies in the UK political context. This has included critical analysis of behaviour change policy initiatives used in the health, personal finance and environmental sectors, and is published in international peer-reviewed academic journals.

Our research has asked how behaviour change policies problematise the threshold between the UK state and its citizens. As such, we are able to provide research evidence which addresses the social and ethical considerations of this Inquiry (relating to questions 13 and 14).

I. When is it appropriate for the state to intervene to influence the behaviour of members of the public and how does this differ from when it is appropriate for the commercial and voluntary sector to intervene?

I.1 Our research has examined behaviour change interventions in different policy sectors and we have found that there exists a wide range of initiatives categorized under the rubric of ‘behaviour change’, but which give rise to quite different social and ethical questions, depending on their nature – whether they are aimed at conscious or sub-conscious behaviours, addictive or one-off choices, whether they require or presume consent²⁵⁶. It has been noted that to some extent, all government action is oriented towards changing behaviour and that a recent enthusiasm for behaviour change does not signify anything new.

I.2 However, where we do see apparently radical departures from traditional forms of governing is in ideas about human irrationality underpinning the principles and practices of behaviour change policies. These ideas draw on insights in neurosciences, behavioural economics and social psychology, and are being enthusiastically embraced by policy strategists in the UK²⁵⁷.

I.3 We are concerned about the limited conceptions of personhood which are promoted in these new insights (e.g. that brain imaging technologies can be used as the definitive explanation of human behaviours, that humans are driven by hormonal, neurochemical, genetic or biological factors, that behaviour is determined by habits and social norms).

I.4 In consequence, policy initiatives need to be designed in light of the uncertainties, fallibilities and limitations of behavioural scientific explanations, which are subject to ongoing debate and contestation from within and beyond particular academic disciplines. Questions need to be asked about which disciplines and forms of evidence are valued above others and why.

²⁵⁶ Jones, R., Pykett, J. and Whitehead, M. In Press. “Governing Temptation: changing behaviour in an age of libertarian paternalism” *Progress in Human Geography*

²⁵⁷ Pykett, J. In Press. “The New Maternal State: the Gendered Politics of Governing through Behaviour Change” *Antipode*

- I.5 Behaviour change policies therefore require sophisticated frameworks to ethically evaluate the nature of their interventions, and wider unintended consequences (see I.6). This should go further than evaluating the ‘return on investment’ or value for money of particular campaigns, although these are important considerations in the spending of public funds.
- I.6 We suggest that the design of behaviour change policies should include initial exercises to categorise ethical and social issues raised. Interventions need to be justified in terms of how open and deliberative they are (are diverse publics able to debate the interventions?), whether they target pre-cognitive, subconscious, or conscious behaviours (do people know their behaviour is being changed?), what kind of consent needs to be secured and how. Policy interventions which are found to be at the closed, subconscious, presumed consent end of the spectrum will require greater public and parliamentary scrutiny. Recent debates around presumed consent in organ donation offer a good example here²⁵⁸.
- I.7 Moreover, the increasing popularity of behaviour change policy initiatives amounts to a ‘behaviour change agenda’ in public policy, and this raises further social, ethical and political issues around their wide-spread use. This is because it creates a “circularity problem” in government intervention: the government is aiming to change the attitudes, identities and behaviours of those same citizens who must then hold the government to account²⁵⁹. The wide-spread use of behaviour change initiatives necessitates analytical research which interrogates government interventions, and requires institutions which assist citizens in holding their government to account.
- I.8 Behaviour change interventions need to be audited in ethical, political and social terms: what types of behaviour, identities and attitudes are being promoted, and in what ways can these be said to be beyond political contestation? What kind of behaviours and identities are being demonised or marginalised in these interventions and what are the potential side-effects of so doing? What types of behaviours/identities are absent from the intervention and why? Who gets to decide which behaviours are to be encouraged and which prohibited, and how are these decisions arrived at?
- I.9 Questions about the appropriateness of commercial and voluntary sector interventions differ from those of government interventions, because it is the government’s role to regulate, govern and arbitrate the behaviour change initiatives of non-state organisations. Where the boundaries between state and non-state organisations have been historically blurred (e.g. in the commissioning of advertising agencies for social marketing campaigns, partnerships with lobbying and campaigning organisations), there needs to be strong chains of accountability in order to ensure that all behaviour change measures are justified and open to public scrutiny. Recent announcements about changes to the Change4Life campaign and narrowing the regulatory remit of the Food Standards Agency bring problems of accountability to light, giving rise to a peculiar situation in which the food and drinks industry itself will be funding behaviour change messages both for and against healthy diets.

²⁵⁸ Jones, R., Pykett, J. and Whitehead, M. In Press. “The Geographies of Soft Paternalism in the UK: the rise of the avuncular state and changing behaviour after neoliberalism” *Geography Compass*

²⁵⁹ Weiss, J.A. and Tschirhart, M. 1994. “Public information campaigns as policy instruments” *Journal of Policy Analysis and Management* 13 (1): 82-119.

2. When should this [intervention] be done by outright prohibition and when by measures to encourage behaviour change? Are some methods of producing behaviour change unacceptable? Which and why?

- 2.1 These are highly political questions for which straightforwardly technical or procedural answers will not suffice. Government intervention is always to some degree aimed at changing behaviour (e.g. through taxation, incentives, regulation), but the question of which kind of interventions are legitimate in particular situations requires political debate.
- 2.2 One key aspect of this debate is the relation between individual behaviour change and changing the environments in which people make decisions. These relate to fundamental political questions about fairness: who gets what, where and why? The risk of behavioural models of government intervention is that they 'responsibilise' individuals for the spatially and socially unequal contexts into which they are born.
- 2.3 Furthermore, focussing on individual behaviour change does not address the root inequalities facing people who make decisions – for instance, imposing conditional benefits sanctions on claimants who are competing with highly skilled graduates in a limited labour market may be an unfair use of behaviour change mechanisms. Another example is where supporting people to calculate their carbon footprints portrays the issue of climate change in terms of individual consumer choices, and plays down the role of difficult political decisions concerning investment in public transport, energy saving schemes and reliance on carbon-dependent economic sectors.
- 2.4 In this context, there remains an important role to be played by public institutions in ensuring that behaviour change interventions are met with strong governmental responsibility and action for the programmes being promoted.
- 2.5 Another consideration is the matter of the public acceptability of the behavioural norms being promoted. There is a danger that social groups with high levels of cultural capital will have a louder voice in the shaping of these norms and there may be important unintended side-effects to behaviour change interventions, including the marginalisation of certain 'other' norms or alternative behaviours.
- 2.6 This problem arises where the underlying social, cultural, political and economic context of norm-formation are not given due attention. In this scenario, behavioural norms are promoted as if the moral and ethical values they entail are universal, rather than historically and geographically specific. Behaviour change policy-makers therefore need to ask questions about how notions of the common good are arrived at, and who has been excluded from the processes by which norms are set.
- 2.7 Prohibition may be justified where there are strong democratic procedures to ensure that such interventions are publically acceptable, and where the potential side-effects and outcomes of prohibition have been adequately evaluated from a range of perspectives, including by socially marginalised groups.
- 2.8 Where interventions are aimed at 'by-passing' people's tendency to make irrational (e.g. short term, spontaneous) decisions, policy-makers need to ask how certain behaviours have been constructed pejoratively as irrational, whether some forms of 'more-than-

rational' behaviour have desirable outcomes, and whether compensatory behavioural measures will create more problems in the long run²⁶⁰. Will the behaviour-change intervention support citizens in developing their capacity to make self-directed and other-regarding decisions in the future? Or does it promote a pessimistic view of citizens' abilities to learn and change? Do the interventions reinforce a hierarchical and gendered division between emotions and rationality, based on partial readings of the neuroscientific literature?

2.9 Valuing 'more-than-rational' behaviour means giving space to 'inexpert' forms of evidence in behaviour change interventions – for instance, in the sphere of traffic safety and sustainable transport planning, by supporting residents to retrofit or redesign their own streets from the perspective of everyday, embodied and emotional experiences of road use rather than only from a rational planning and highways engineering perspective. The 'DIY Streets' approach from sustainable transport charity, [Sustrans](#) is a good example here of a behaviour change approach which values personal experience and builds the capacity of individuals and communities to act in the future.

3. Should the public be involved in the design and implementation of behaviour change policy interventions, and, if so, how? Should proposed measures for securing behaviour change be subject to public engagement exercises or consultation?

3.1 The question of how publics should be engaged in the design and implementation of behaviour change policy interventions is an important one, particularly given the sophistication of many such interventions, and interventions in spheres which have historically been regarded as private or personal.

3.2 It is important to separate out ethical and social issues around the mechanisms of behaviour change from the desired outcomes, or public goods being promoted, and public engagement activities should consider both means and ends.

3.3 New trends in participatory governance, new localism and public engagement and deliberation experiments offer innovative and exciting ways to engage the public. However, they also have limitations. Firstly, it is important to recognise that diverse publics exist, and that the government plays a role in constructing what counts as public or private action and responsibility. Secondly, public engagement activities cannot be seen as an alternative to democratically-accountably policy-making, and effective parliamentary debate on issues as important as how citizens should behave.

3.4 The issue of public engagement also rehearses significant debates around the appropriate balance between public opinion and expertise. 'Citizen's Juries' have experimented with public encounters with expert evidence. However, established medical ethicists and new working groups on neuroethics and behaviour change may not provide a complete picture of the social and ethical issues surrounding behaviour change interventions, and non-scientific perspectives should also be sought, building on centuries of research and deliberation on the more philosophical aspects of ethics, fairness and justice

²⁶⁰ Whitehead, M., Jones, R. and Pykett, J. "Governing irrationality, or a more than rational government? Reflections on the re-scientisation of decision-making in British Public Policy." *Working Paper, Aberystwyth University*

- 3.5 Our research has shown that the new scientific insights underpinning behaviour change interventions are highly contested, and in many cases, highly speculative ways of knowing human behaviour. The scientific evidence does not provide unambiguous answers to the political and ethical question of how we should live and what ought to be done. Arts, humanities and critical social scientific research contribute to these concerns and are currently marginalised in terms of both funding and visibility in debates on behaviour.
- 3.6 Given that the evidence behind behaviour change interventions is sophisticated and technical, the wide-spread use of behaviour change by governments needs to also be met with support for diverse citizens to understand, discuss, reflect and critique those knowledges mobilised in justifying behaviour change.
- 3.7 Related to this sense of an equitably educated citizenry, is the need for the public regulation of what has become a veritable ‘behaviour change industry’. Due consideration is required of the mechanisms and institutions which will be required to hold such an industry to account democratically, through governmental organisations which have public mandate to govern. Checks and balances will be required on the use of marketing, advertising and other commercial principles and agencies in the promotion of behaviour change interventions.

4. Do considerations differ in the case of interventions aimed at changing addictive behaviours?

- 4.1 Addictive behaviours may appear to provide a special case in terms of behaviour change interventions, and organisations supporting those with addictions will be best placed to respond to this issue. However, the analytical approach forwarded by our research gives some indication as to the contested nature of the social and ethical issues raised.
- 4.2 If we as a society, to give credence to psycho-dynamic and bio-physical explanations of human behaviour, then we must surely see a wider range of actions and decisions as habitual, in some senses addictive, and at the least, driven by embodied desires – for instance, an addiction to consumption, carbon, oil, sugary and salty foods, each other.
- 4.3 Planning interventions for specifically addictive behaviours must therefore be understood not only in terms of medical accounts of addiction but also in light of sociological, historical and political accounts of which particular bodily desires are constructed as socially and publically acceptable at certain times and in certain places, including how they are construed as “diseases of the will”²⁶¹.
- 4.4 Decisions to prohibit and govern these ‘consuming passions’²⁶² are ethical and political judgements specific to particular contexts, and not universal values which can be held beyond political contestation – the moral virtues associated with abstinence and willpower evoked in debates around civic character – whilst apparently common sense and commendable – are culturally-specific constructions, with damaging side-effects for those citizens seen as falling short of such virtues.

²⁶¹ Valverde, M. 1998. *Diseases of the Will. Alcohol and the Dilemmas of Freedom*. Cambridge: Cambridge University Press

²⁶² Hunt, A. 1996. *Governance of the Consuming Passions: History of Sumptuary Law*. Basingstoke: PalgraveMacMillan.

- 4.5 As such, whilst issues of legalisation may appear to be publically unpopular, equal credit must also be given to the social harms of policies on addiction, for instance in terms of fairness to individuals in the unequal contexts in which they make decisions and develop habitual behaviours, fairness to the collective society, and consideration of the international impact of prohibitive policies such as the so-called 'war on illegal drugs'.
- 4.6 Broadly speaking, the behaviour change agenda seeks to redefine our notion of 'harm to others', strengthening the legitimacy of state action which arbitrates between competing and conflicting personal preferences. Consequently, behaviour change interventions (including those relating to prohibition and addiction) need to be evaluated in more extensive terms, according not only to the effectiveness of changing an individual's behaviour, but also in light of the possible harms to and impacts on others. This means taking issues of intergenerational and international fairness into account in the measurement of behaviour change outcomes.

8 October 2010

Memorandum by Keep Britain Tidy (BC 70)

Keep Britain Tidy is passionate about cleaner, greener places.

Our vision is for a cleaner, greener England respected and enjoyed by all.

We campaign **AGAINST** litter and neglect for better cared for and more attractive places.

We **HELP** by providing knowledge, advice and support.

We **LEAD** by inspiring policy and practical action.

Research and Development

1. What is known about how behaviour can be influenced? What special considerations apply to addictive behaviour?

1 Keep Britain Tidy undertook a detailed literature review of the evidence base regarding local environmental quality in the production of its Manifesto paper in March 2010 'This is our home'. The four supporting evidence papers considered the role of leadership, cross cutting policy links and behaviour change to build personal responsibility, inspirational and decisive leadership and partnerships with a shared vision to deliver a cleaner, greener England.

2 The evidence regarding behaviour change in relation to littering and environmental anti-social behaviour highlights the importance of injunctive and descriptive norms in causing littering behaviour. Injunctive norms reflect that which is perceived to be appropriate behaviour within a particular context. However, it is argued that descriptive norms influence behaviour by providing information about which behaviour is most common in a given situation. For example, a littered setting shows that it is common to litter and is therefore likely to encourage further littering. Therefore, there is a higher probability of someone littering in a littered setting when a lot of litter is present or when someone watches someone else littering²⁶³

3 However, more recent research from the Netherlands²⁶⁴ suggests that two other additional drivers for littering and environmental anti social behaviour are people's pursuit of a hedonic goal directed at feeling better right now or a gain goal directed at guarding and improving one's resources. In summary all three drivers can be in conflict, and the weakening of one is likely to bring another goal to the fore. For example, when people observe that others have graffitied they are observing an inappropriate behaviour. It is suggested that this weakens people's concern for appropriateness and strengthens the goal to do what makes them feel good (for example, by being lazy and dropping litter) or the goal to gain resources (say by stealing). Therefore, people do not necessarily copy the inappropriate behaviour they observe, but let concerns other than appropriateness take lead behaviour.

4 The timescales of behaviour change also rely on underlying psychological and sociological barriers such as habit, norms and agency. Habit concerns changing mental shortcuts which are not subject to rational thought (a good example is the action of turning off a light or placing litter into a bin). Norms concern an individuals sense of appropriateness

²⁶³ Cialdini R, Reno, R and Kallgren, C (1990) A Focus Theory of Normative Conduct: Recycling the Concept of Norms to Reduce Littering in Public Places, *Journal of Personality and Social Psychology*, **58** (6), pp1015-1026

²⁶⁴ Keizer, K, Lindenberg, S and Steg, L (2008) The Spreading of Disorder, *Science*, **322**, 12 December 2008, pp1681-1685

of undertaking a behaviour and their perception of how society would expect them to act (an example of this is recycling which has moved from being outside the social norm to an accepted societal norm). Agency relates to an individual's sense that their behaviour can make a difference to a wider problem (for example clean environments ensures that individuals feel that by not dropping litter they are making a difference to their local environment).

3. Is there adequate research capability within the United Kingdom to support the current pace of developments in behaviour change policy interventions? Is there sufficient funding for the evaluation of behaviour change interventions?

5 Keep Britain Tidy believes that there are a number of challenges regarding the mechanisms for long term evaluations of behaviour change interventions. In the course of our work to improve local environments evaluations are crucial in demonstrating the success of our behaviour change campaigns. However, Keep Britain Tidy recommends in *'This is our home'* that long-term evaluations of environmental education programmes are required in order to empirically assess their long-term impact on pro environmental behaviours (particularly around littering). This is due to a lack of long term behavioural studies on the effectiveness of behaviour change campaigns in terms of their impact on underlying values and norms which drive behaviour. Whilst there is circumstantial evidence to show that environmental education works in schools through schemes such as Eco Schools which Keep Britain Tidy is now running in 66% of all schools in England. There is a lack of long assessment of the impact of environmental behaviour change programmes on underlying values and norms once those young people move into their twenties and thirties.

Practical application

8. Have publicly funded behaviour change interventions been both evidence-based and subject to effective evaluation? How successful have such interventions been?

6 Keep Britain Tidy has campaigned for a cleaner England since it was established in the 1950s by the Women's Institute and Central Office for Information. Over this time Keep Britain Tidy has used a variety of behaviour change approaches from the propaganda campaign approach used to deter littering in the 1930s through the celebrity endorsed campaigns of the seventies with celebrities such as Morecambe and Wise to Marc Bolan to a personalisation of litter onto the individual to take responsibility through targeted campaigns used today

7 Since 2001 Keep Britain has used a market segmentation approach to campaigning based on segmentation research to divide the population into five distinct segments according to their attitudes and behaviour in order to target anti-litter campaigns at a particular segment. This is a radically different approach to the celebrity led approach of the seventies which was aimed at everyone regardless of their values, behaviour or norms. It is also the only example of such an approach to targeting behaviour change globally for local environmental quality issues such as littering. The segmentation was reevaluated in 2006 and except for a few amendments still held true for the majority of the population.

8 The five segments are outlined below with their littering behaviour and background

Beautifully Behaved

Littering behaviour - They dropped apple cores and small pieces of paper, but little else, and quite often did not see this as a problem.

Background - People in this group were brought up not to drop litter and saw poor parenting as one of the biggest causes of littering. They took pride in where they lived and were almost 'smug' about their seemingly perfect behaviour. They would be extremely embarrassed if someone caught them littering and offer to pick it up immediately. They regarded others who littered as thoughtless. Members of this group were more likely to be female, non-smokers, aged 25 and under.

Justifier

Littering behaviour - They justified their behaviour by saying that 'everyone else is doing it' and also blamed the lack of bins for their littering, particularly of cigarette butts and chewing gum. Some members of this group also failed to clean up after their dogs had fouled.

Background – Justifiers would be embarrassed if someone caught them littering and would pick up the item. They thought that people who littered were lazy. Justifiers were a predominantly male segment. They tended to be smokers and were aged 34 and under.

Life's Too Short and 'Am I Bothered'

Littering behaviour - They have been combined because they had a complete disregard for the consequences of littering and therefore the marketing strategies used with them are likely to be similar. There was, however, a subtle difference between them. Life's Too Short were aware that dropping litter was 'wrong' but had more important things to worry about, whereas Am I Bothered? were completely unaware of the consequences of dropping litter and, even if they were, would not care.

Background – Both groups would not feel guilty if someone caught them littering and would not offer to pick the item up. In some cases, they might be considerably more verbose, aggressive even. They would, however, consider it rude if someone dropped litter in front of them. This group was more likely to contain young male smokers.

Guilty

Littering behaviour - They knew that dropping litter was 'wrong' and felt guilty when doing so, but carrying it was inconvenient and so they went about littering in a furtive manner. Members of this segment will litter when others are not around to watch them, in the car or at public gatherings. Much the same as the Beautifully Behaved segment, they would feel extremely guilty if someone caught them littering and offer to pick the item up immediately. They regarded people who litter as lazy and inconsiderate.

Background – The Guilty segment was similar in some respects to the Beautifully Behaved. It was a predominantly female segment, was more likely to be non-smoking and aged 25 and under.

Blamer

Littering behaviour - They blamed their littering on the council for their inadequate bin provision. They also blamed fast food operators, teenagers and manufacturers for over packaging food and other goods. Members of this group would be embarrassed if someone caught them littering and pick it up while making excuses about their behaviour. They thought that people who littered were lazy, but if there weren't any bins, or if the bins were overflowing or full then it was okay.

Background - This was a predominantly young, male, smoking segment.

9 The market segmentation research undertaken in 2006 revealed that the population comprised of the following segments

'Beautifully behaved' – 43% of the population

'Justifier' – 25% of the population

'Life's Too Short' – 12% of the population

'Am I Bothered?' – 12% of the population

'Guilty' - 10% of the population

'Blamer' – 9% of the population

10 Since 2001 Keep Britain Tidy has undertaken over twenty behaviour change campaigns utilising the market segmentation approach across a range of local environmental quality problems achieving reductions in littering of between 20-30% and changes in littering behaviour in over 70% of respondents questioned following a campaign. A full list of campaigns is attached in Appendix One.

11 One of Keep Britain Tidy's most successful behaviour change campaigns was its 2002 dog fouling campaign. In 2002 dog fouling was one of biggest sources of complaints by the public to MPs, local councillors and local authorities. Estimates put the UK dog population at 6.5 million producing up to 1,000 tonnes of faeces every day. Research revealed that the target audience understood that not cleaning up after your dog was against the law but they felt that the chances of being caught and fined were very slim.

12 With this in mind, it was decided that the best approach would be to shock them into change and three posters of dog excrement with the slogan 'No', 'Tough' and 'Bull' were developed. The campaign message highlighted the dangers of dog fouling to encourage dog owners to be more responsible and promoted an easy solution to the problem of clearing up dog mess.

13 Key partnerships were formed with the Kennel Club, the National Canine Defence League (now the Dogs Trust), local veterinary surgeries, the Public Health Laboratory and Battersea Dogs Home to take the lead in encouraging irresponsible dog owners to clean up their dog's mess. Perhaps the most important partnership was with Pets at Home, who promoted the campaign in store. As a result, sales for poop scoops increased by 50%, dog bags went up by 13% and freeze sprays by 36% on the previous year. The campaign was launched on Clapham Common in central London, with Ricky Tomlinson sat on a toilet to illustrate the point that 'you wouldn't do that, so don't let your dog!'. Keep Britain Tidy planned the launch and campaign materials so that they appealed to our target audience who we knew were most likely to read the Sun and the Daily Mirror. The dog fouling campaign

Memorandum by Keep Britain Tidy (BC 70)

was successfully covered across a range of different media and achieved £1.5m pounds equivalent to bought advertising space.

14 In order to measure the success of the campaign, 10 locations across England were monitored to assess whether or not the campaign had changed public behaviour. The results showed that dog fouling had reduced by 40% in these locations. An attitude and awareness study carried out alongside the on the ground survey also revealed that 38% of those questioned were likely to change their behaviour in the future.

October 2010

Memorandum by Mr Robert Langford, Telford and Wrekin Community Health Services (BC 35)

Whilst I currently work for NHS Telford and Wrekin leading the adult weight management programme this is a personal submission. My background includes many years working in the food industry before becoming involved in the public health agenda working for the Health Development Agency and NICE.

In Telford and Wrekin we have a wide range of long established successful services for both adults and children that support weight loss under the umbrella name of Why Weight? The interventions are evidence based and promote healthier lifestyles through behavioural change. In the last 6 years over 5000 clients have been helped to lose an estimated 45000 kg. In the last year with the addition of cognitive behavioural therapy tools and skills (CBT) individual weight loss has improved by c. 3% at 12 weeks with 60% of clients continuing to lose weight after discharge.

At Why Weight? we have a robust understanding of the influences that create a behaviour change climate both from the perspective of the support needs of clients and the reasons they make unhealthy choices in the first place.

On an individual level we use motivational interviewing skills to help clients set goals, in groups we use CBT to help clients challenge their relationship with food and throughout we educate clients to empower them to make healthier lifestyle choices. Most significant to all clients is the impact of advertising and marketing in influencing behaviour that has impacted so negatively on their health. Added to this is the issue of not understanding what is in packaged foods and which ones are healthy and which ones not.

They buy Kellogg's Special K thinking it a diet food (17% sugar), drink lucozade because it has the England football team on (17 teaspoons of sugar), eat Mc Donald's garlic and herb chicken snack wrap as the healthy option (17 grammes of fat, 6 saturated and 2 grammes of salt) whilst their children devour something even worse including a milkshake with 30 teaspoons of sugar in and fall for 2 for 1 offers that only seem to apply to the least healthy foods.

The food industry is only interested in one thing, profit. The main players are accountable to shareholders and that requires a dividend. Whilst the food industry cannot be tarnished with the same brush as the tobacco industry that actually killed people for profit, they are culpable in the obesity epidemic.

For example, at the National Obesity Conference this year Kellogg's were a co-sponsor. Their head of nutrition, a dietician, expounded that there was no link between sugar and being overweight. It reminded me of doctors employed by the tobacco industry stating there was no link between second hand smoke and lung cancer. Not only are Kellogg's cereals some of the highest sugar cereals on the market they also clearly believe that it is a good idea to give children chocolate for breakfast. Moreover, through successful marketing and advertising they have convinced parents that it is acceptable as well.

Whilst evidence shows that people who eat breakfast are less likely to be overweight this does not mean that Kellogg's cereals are a healthy option yet they use such evidence to their

advantage. Appallingly Nestle, who have been producing very healthy cereals, are now adding chocolate as well.

Our clients at Why Weight? try hard to make healthy choices and are tripped up time and time again by the food industry. They chose Birds Eye Simply the Best Salmon cooked in a pouch in the microwave advertised to appear a healthy option not realising it has more saturated fat than a plate of fish and chips from the chippy. Advertising makes Mars Bars sound like a health food and cereal bars sold as a healthy snack are loaded with sugar and fat. Consumers have halved the sugar they buy over recent years and this surplus has been picked up by the food industry and fed to us by the ton in ready made foods including those where there is no reason to have sugar at all – cottage pie!

Evidence shows that where the public is well informed they make healthier choices. Sainsbury's recently put simple traffic lights on the front of Hawaiian pizzas and the sales of the healthier pizza rose by 50% to the detriment of the other and this is the key to reversing the obesity trend.

NICE evidence states clearly that a front of packaging simple traffic light system is the way forward. The food industry wants Guidelines for Daily Allowances (GDA) as this is the most confusing and the public do not understand the information. Remember back when the tobacco industry put forward their ideas on change to avoid the Government banning smoking in public places. We did not trust them and no more should we trust the food industry. Three traffic lights covering fat, sugar and salt on the front of foods and using the evidence above of Sainsbury's experience will make a massive difference. I do not believe that you need a lot of intelligence not to buy a sausage roll from Greggs with three red lights on as a snack for your already pudgy two year old.

There has to be legislation as well as healthy marketing messages (Change 4 Life was fantastic) to influence behaviour change. The current apathy and inertia by Government in addressing the irresponsible conduct of the food industry has to stop. Legislation is not being a nanny state, as the cry so often goes up. This is about ensuring people are able to make choices based on having simple reliable factual information and the evidence is that they do.

4 October 2010

Memorandum by Leeds Metropolitan University, Centre for Food Nutrition and Health (BC 79)

The Centre aims to promote public health through its involvement in research, consultancy and training in the area of Food, Nutrition and health www.leedsmet.ac.uk/health/cfnh There are 4 areas of focus within the Centre:-

- Nutrition and Public Health
- Childhood Obesity
- Clinical Nutrition
- Food Microbiology and Health

The response focuses on the specific questions on childhood obesity behaviour change interventions. In addition to this submission, we are happy to provide any further written or oral information that the committee may require. Members of the Centre have expertise in behaviour change issues for the prevention and management of childhood obesity.

General comments

For obesity is to be effectively addressed within the UK, an understanding of effective behaviour change strategies and techniques aimed at both individual and groups within the context of the obesogenic environment is required. A range of policies and interventions that promote healthy lifestyle behaviours and which make the healthier choices the easier choices for individuals and communities need to be implemented by a range of stakeholders including government, local authority, industry and the third sector. The role of media and social marketing techniques also have a role in addressing perceptions and attitudes to obesity and thereby form an integral part of this multi-faceted, multi-pronged approach to facilitating behaviour change. Due to the scale of the problem it is evident that this approach is the logical way forward in order to have maximum reach .i.e. target those already obese and those at potential risk of developing obesity.

I. What should be classified as a behaviour change intervention?

A behavioural change intervention is defined as any action/s that is/are aimed at changing thinking patterns and actions, especially in relation to dietary intake and eating, physical activity and sedentary behaviours, and the family's food and physical environment (Oude-Luttikhuis et al. 2009).

Research and Development

The evidence we are presenting is related to effectiveness of behaviour change strategies and techniques for childhood obesity treatment programmes which are aimed at individual and family level. The evidence review was commissioned by NHS Health Scotland in March 2010 and was undertaken by researchers in the Centre of Food, Nutrition and Health at Leeds Metropolitan University.

The aim was to review the health behaviour change models and approaches for families, children and young people to support the development and delivery of effective child healthy weight programmes.

The detailed findings from the review and interviews, methods, and discussion of the implications for applying the evidence to practice and further research recommendations can be found in the main

report and will be available on the NHS Health Scotland website shortly. However the authors would be happy to discuss sharing the pre-published report in confidence if required.

Reference;- Pinki Sahota, Janet Wordley and Jenny Woodward , Literature Review: Health behaviour change models and approaches for families and young people to support HEAT 3: Child Healthy Weight Programmes Edinburgh, NHS Health Scotland 2010 (in press)

How was this evidence briefing produced?

This evidence briefing summarises the results of a literature review on effective behavioural components in CWM programmes drawn from 74 papers consisting of 12 reviews, 7 qualitative studies and 55 interventions. In addition it reports on findings from the interviews undertaken with seven providers of CWM programmes, six of which are currently delivered within the UK.

What is known about how behaviour can be influenced?

Despite the consistent recommendations to include behavioural approaches in childhood obesity programmes by NICE (2006) and SIGN 69 (2003 and more recently SIGN (2010) there is currently no evidence of which components of behavioural treatment are most effective in the management of childhood and adolescent obesity. Specifically it is not known which behaviour change models, strategies, techniques and approaches are effective.

Furthermore, NICE guidance (2006) also recommends services should be delivered by healthcare professionals who possess relevant competencies and have received specific training. However it is unclear whether health professionals working in the area have the necessary knowledge and skills to be able to deliver obesity treatment interventions including the behavioural components effectively; whether they are able to assess needs and deliver programmes in a flexible manner; whether they have specific training needs and which tools and resources including training opportunities currently exist.

The aim was:-

- through published literature to provide information on which specific behavioural treatment components, behaviour change models and approaches should underpin clinical guidelines and childhood obesity treatment programmes;
- through stakeholder interviews to identify the behavioural components employed by those who are currently involved in the delivery of child weight management (CWM) programmes; explore the skills and competencies required and identify available resources and training that may facilitate effective delivery.

A summary of the evidence review is presented below.

Behaviour change strategies such as Behavioural Therapy (BT) and Cognitive behavioural therapy (CBT) are accepted approaches included in weight management programmes however it is not known which are effective in achieving behaviour change in child weight management (CWM) programmes..

Definitions

Behavioural Therapy (BT)

Behavioural therapy (BT) consists of a series of techniques which can be utilised to achieve changes in behaviours relating to diet and exercise. NICE (2006) guidance states that for a child-focused obesity treatment programme to be considered a behavioural intervention, it must incorporate the following aspects: **self monitoring, stimulus control, goal setting, reward for reaching goals and problem solving**. Self monitoring is used to observe, record and monitor existing behaviours and assists in recognising the factors that influence specific behaviours. Stimulus control can then be used which involves limiting exposure to the triggering factors of such behaviours. Another characteristic technique is that of **behaviour contracts** where individuals set themselves goals. This process assists with recognising and reinforcing desirable behaviours.

Cognitive Behavioural Therapy (CBT)

Cognitive behavioural therapy (CBT) incorporates many aspects of BT but its primary focus is on **addressing faulty cognitive processes and beliefs** which perpetuate the problem in question (in this case obesity). It therefore aims to encourage individuals to identify, evaluate and then restructure their faulty reasoning using strategies including **cognitive restructuring, self-instructional training and problem solving** (Herrera et al. 2004). Patients learn to reduce their focus on weight loss and food with the help of discussions about self-esteem, body image and ways of coping with societal pressures to lose weight.

Quality of the evidence-base

Despite limitations in the quality of the evidence base due to methodological issues (sampling, lack of standardised definitions and misapplication of BT and CBT, the range of outcome measures) which limits generalisability of findings, the evidence has highlighted that interventions that included BT and to an extent CBT components were effective in short-term child weight-management. Therefore the review findings together with the evidence from the interviews have generated the following evidence to be considered for practice.

Which behavioural techniques are effective?

Behavioural Therapy

BT techniques in effective CWM programmes are included as a 'package: self monitoring, stimulus control, goal setting, reward for reaching goals and problem solving. Programme providers also indicated that a range of BT techniques were used and considered it important in order to select appropriate techniques that could be matched to individual needs. Interview findings indicated that practitioners considered effective techniques to be monitoring and stimulus control. They also relied greatly on goal-setting as a BT technique but had discovered that families found it challenging to set effective (SMART) goals.

Cognitive behavioural therapy

Too few studies utilising CBT in children and the lack of description and evaluation of specific CBT techniques prevents conclusions on its effectiveness to be drawn. CBT techniques adequately described in the few successful studies were: monitoring of negative thoughts, cognitive restructuring, problem solving and self-reinforcement. Practitioners interviewed stated that almost half included CBT aspects in their programmes such as tools for cognitive restructuring and felt that these were integral to programme delivery, however they considered that more use should be made of these in the future. It was noted that the majority of programmes delivering CBT aspects did so via experienced or trained staff.

At what age is behavioural therapy effective?

Younger children (8-12 years)

It is more effective for this age-group to teach behavioural techniques to parents through teaching parental management skills. Effective techniques include: monitoring child's intake and activity, identifying child's problem behaviours, goal-setting, rewarding appropriate behaviours, praise, role modelling, positive social reinforcement, strategies to cope with resistance and contracting. However it was identified that parents required to be taught goal-setting and self-monitoring skills. Very few studies existed that utilised CBT techniques in younger children.

Adolescents (over 12 years)

Whilst programmes focussed on encouraging autonomy in the adolescent, it is clear that adolescents benefited from structured support from a trained professional rather than one which uses a self-help format. Tentative results suggest that coping skills training for adolescents was beneficial. Additionally adolescents benefited from parental involvement in programmes however it is unclear as to what level of involvement is more effective.

The parental behavioural components incorporated into successful adolescent focused programmes are similar to those utilised with younger children: coping skills training, emphasizing importance of parents as role models, stimulus control and reward that promoted improvements in health. It was shown that targeting adolescents with CBT was effective in the short-term but the lack of evaluation makes it unclear which components were responsible for the impact.

The role of parents in behavioural programmes

The evidence is unclear regarding whether children / adolescents should be seen together or separately in programme sessions. Nevertheless parental involvement appeared to be key for all ages and the evidence indicated that teaching parents problem-solving skills appeared beneficial.

Interview findings showed programmes were utilising a mixture of approaches for different reasons. For exercise sessions some felt that separate sessions for parents and children should be offered because it was perceived that the child felt better able on his/her own and therefore it was more enjoyable. On the other hand practitioners felt that when parents and child exercised together, the parent was perceived as a role model. Therefore from the evidence review and interviews a flexible approach is needed in terms of parental involvement. It is highly likely that the level of parental involvement will vary with age and developmental stage as well as with the personality of the child.

The role of parenting programmes

There was some evidence showing the potential for including general parenting skills e.g. child management skills in CWM programmes. However it is currently unclear whether it is beneficial to teach general parenting skills (i.e. becoming more authoritative parents) that can be generalised to other areas of parenting or whether it is more effective to teach parenting skills tailored to specific lifestyle factors of diet and physical activity.

Group vs one- to- one sessions?

No studies have compared group-based sessions to individual counselling sessions. However the interview findings indicated that in practice both approaches were used. It was felt the advantage of groups was that it provided support from participants who were experiencing

similar situations together. However the advantage of one to one sessions was that it provided another layer of individualised support which was particularly helpful in addressing more complex issues.

Settings

It is possible to deliver behavioural interventions across a range of settings and therefore the recent growth in community-based interventions should allow for improved access to a wider target group than the existing in-patient and out-patient hospital or university-based programmes.

Skills and qualities of staff

The interviews highlighted a common list of essential core skills and personal qualities for those delivering CWM programmes that practitioners felt were often innate:-

Communication skills, empathy, able to establish a rapport, friendly, able to engage, able to work with people, charismatic, non-judgemental, have a non-pathological view of obesity, enthusiasm for the field of obesity and obesity management

Type of staff

Those delivering CWM programmes needed to be appropriately trained in behaviour change techniques whether professional or lay personnel. Although there was support for the involvement of lay personnel in programme delivery, due to the complexity of obesity and dealing with often complex cases, it was felt that in such circumstances trained professionals with counselling or therapy experience should be involved. The evidence from the literature also showed that BT and CBT components were often delivered by appropriately trained and motivated staff.

Training needs

The interviews suggested that other areas related to effective CWM delivery could be addressed through training and with the aid of appropriate resources.

- Knowledge about obesity management;
- Experience of working with families and with groups was helpful but could be developed through training;
- Training in behaviour change models and processes so that potential for behaviour change is maximised;
- Training in BT and CBT techniques
- Ability to be flexible in programme delivery (content.) in order to meet individual needs;
- Identifying the appropriate pace of delivery so that sufficient time is given to embed new behaviours before introducing further change.
- Trained professionals with counselling or therapy experience should be involved in dealing with complex cases.

Issues for delivery of effective programmes

a) Appropriately trained staff

There appears to be a skills gap in people who can deliver behavioural programmes. The interviews indicated that health professionals often were not very well equipped or lacked basic skills in addressing behaviour change including the social and emotional skills required to engage with families in this sensitive area..

A major issue is therefore around development of a skilled workforce for delivery of CWM programmes. It is apparent that training is key and particularly so for engaging with the

families and then identifying and using appropriate behavioural approaches. The interview findings highlighted that staff training and support was offered by all programmes however the length, content and resources used were varied. There appears a lack of knowledge about the best people to deliver CWM services and the best training packages including resources available. One particular issue is if more lay people are going to be delivering CWM programmes, it is important to identify the best training and support which includes development of good interpersonal skills and setting clear boundaries for safe practice. It is also key that in order to develop and retain an appropriately trained workforce then training, on-going support and continued professional development are considered.

b) A range of programmes is required

It is clear from the wider evidence-base that a variety of programmes are needed to address childhood obesity and both practitioners and researchers agree that “one size will not fit all” and due to the different needs based on the level of obesity, complexity of circumstances, disadvantage, ethnicity and behavioural and learning disabilities, to choose one programme does not make sense. The interview findings suggested that planners/commissioners of CWM services want to deliver one service whereas a range of options is required if we are to be successful in addressing childhood obesity.

One example suggested by practitioners is a tiered approach. For more obese and or those with more complex needs, a more intense programme run by more highly trained staff with counselling and therapy experience is offered. For less obese cases to offer a “brief intervention” style programme which maybe run largely by lay community workers. Although this model has potential it still requires skilled people to make a judgement about the appropriate level of intervention in first place.

Weight re-gain

The review indicated that most programmes showed effectiveness in child weight outcomes in the short-term however weight was often re-gained over the follow-up period. One of the barriers to effectiveness of behaviour change components highlighted in the interviews was the issue of relapse of behaviour resulting in re-gain of weight. To address this there appeared a tendency to move towards development and delivery of short courses to supplement the initial programmes. However to deal with relapse it was felt important it was identified and addressed immediately.

Quality Assurance

The interviews indicated that to maintain positive outcomes staff must ensure attendance and adherence to the programme and this was found to be key as studies have shown that when this reduces, weight is re-gained in the child. However from a delivery aspect, the practitioners felt that the behavioural techniques included in the programmes were known to work however it was recognised that the quality of delivery was variable and in addition to offering appropriate training and support for staff, quality assurance processes were also required to ensure that the components were delivered as intended.

8 October 2010

Memorandum by Carolyn Lester, Public Health Wales (BC 10)

Theories of Behaviour Change

Theories and models of behaviour change can provide a useful framework upon which to base health and social policy related campaigns. Theoretically based interventions tailored to the target audience are associated with longer term change than those without a theoretical basis: advice from the National Institute for Health and Clinical Excellence (NICE) tends to support theory based interventions (Health Development Agency 2005).

Health Belief Model

This theory focuses on the factors that are necessary to change health related behaviour (Stretcher and Rosentock 1997). The following six perceptions optimise the potential for positive change:

Susceptibility – What are the individual's beliefs regarding personal risk of acquiring the disease/condition (factors such as perceived ease of transmission, family history, prevalence/incidence)?

Severity - What are the individual's beliefs regarding the possible effects on, for example, quality of life, potential for disability, life expectancy?

Benefits – Does the individual believe that changing behaviour will decrease the risk of ill health and by how much?

Barriers – What may prevent the individual from making a beneficial change in behaviour?

Cues – A cue or trigger may be needed to initiate behaviour change.

Self efficacy – The individual needs to believe in his/her personal capacity to initiate and sustain behaviour change.

Relevance to health and social policy

The first three perceptions can be addressed to some extent by an information based campaign, but knowledge does not necessarily lead to behaviour change. Physical barriers can be addressed by locating the supporting services in centres that are accessible by public transport and open outside normal working hours. Cues, such as becoming aware of someone who is affected by the condition could possibly be activated by using 'stories' involving personalities in entertainment and sport, who have benefited from making the desired behaviour change. The most effective cue, however, is thought to be knowing someone personally who had an adverse outcome due to the behaviour in question. Self efficacy is difficult to address in a population based campaign and it is known that disadvantaged people need more support to initiate and sustain behaviour change.

Theory of Planned Behaviour

This theory states that behavioural intention is the most important determinant of actual behaviour (Ajzen, 1991) and that intention is influenced by the following factors:

Attitude – Behaviour is shaped by beliefs concerning the likely positive or negative impacts of the behaviour and their relative importance.

Subjective norms - The individual's views on what 'significant others' may think and what he/she believes to be the usual patterns of behaviour in their community.

Perceived control – The strength of barriers to or promoters of the planned behaviour.

Relevance to health and social policy

Knowledge and, to some extent, attitude can be addressed by a well informed mass media campaign. An important point to note here is that the question of relative importance. When health and social behaviour changes are concerned with future risks rather than the present, they may appeal more to the future-orientated middle classes and less to the most materially disadvantaged, who naturally prioritise the problems of daily life. This may tend to increase health inequalities.

Subjective norms vary throughout different social, ethnic and age groups in society, and it is usually considered that long-term community development work is necessary to change community norms. In many disadvantaged communities ill health is the norm and people do not expect to avoid it.

Members of disadvantaged communities are the people most likely to lack self-efficacy or perceived control. Barriers to change may include awareness of damaging behaviour (for example smoking or overeating) which may be valued as a way of coping with the harsh realities of every day life.

Social Cognitive Learning Theory

Behaviour is influenced not only by factors within the individual, but also the external environment. This theory (Bandura, 1986) states that the desired behaviour is more likely to be performed if the following conditions are met:

Reward - There is an observable reward for the behaviour

Self efficacy – The individual is confident in their ability to perform

Positive/negative balance – The positive outcomes are perceived as outweighing the negative.

Observed behaviour – The individual can observe the behaviour in valued others.

Relevance to health and social policy

Health and social rewards of behaviour change can be more apparent in population terms and less obvious to the individual. Various give-aways and incentives have been tried to

persuade people to attempt positive change. These have had some success in getting people started, but their effect on longer term behaviour is uncertain. Self-efficacy and the positive/negative balance have been discussed above.

Observed behaviour relates to population norms but is slightly different in that the focus is on valued others rather than the community as a whole. The ASSIST programme for smoking prevention (Campbell *et al* 2008) uses social/buzz marketing based on respected individual pupils chosen by classmates, who are then trained to talk informally to peers about the benefits of not smoking. Pharmacists have also experimented with buzz marketing using non-media opinion leaders (Holford 2004) to lessen public demand for antibiotics. This method links closely with the following section on diffusion.

Diffusion of Innovations

This theory describes behaviour change moving through a population over time, categorising individuals as ***innovators, early adopters, early majority adopters, late majority adopters and laggards***. (Gladwell 2000). The most effective dissemination channels are ***opinion leaders and peer to peer networks***, with individual acceptance based on the following:

Improvement – Is it better than what the individual is currently doing/using?

Ease – Is it easy to understand and adopt?

Peers – Has it been adopted by others in the peer group and what is their opinion?

Personal values – Does it fit with the individual's values and self-image?

Trial – Is it possible to try without committing/ how much commitment is necessary?

Risk – How much risk is involved?

Relevance to health and social policy

The individual must decide whether knowing one's risk status is better than not knowing and many people prefer to avoid this knowledge. As discussed relative to preceding theories, the individual needs easy access and belief in his/her own capacity to change (self efficacy). Peer influence can be maximised via buzz marketing (see previous section). Personal values and self image are an important emphasis in this theory and frequently used to link personal identity to the product in marketing (for example L'Oreal's "because I'm worth it" or Marks & Spencer seeking to identify with the environmentally concerned).

The question of trying without committing may be questioned, as one must consider whether it wastes scarce resources to encourage attendance at programme activities if positive change is unlikely to follow. Totake an extreme example, pregnant women are sometimes discouraged from taking part in antenatal screening for congenital abnormality if it is known that they would not consider abortion. Risk is the final component and the individual may prefer not to know that they have or are at high risk of a life threatening disease, even though the result may be reduced life expectancy. The perceived risk for those

reluctant to engage in a behaviour change programme could be the psychological disturbance of the ensuing knowledge and the imperative to change a valued lifestyle.

Gladwell's work describes how trends emerge and gain momentum until they reach a "tipping point" where high proportions of the population are involved. Many of his examples concern more tangible 'products' such as shoes or TV programmes, but the principles could be applied in social marketing.

Stages of Change Model

This model is based on the concept of readiness to change (Prochaska & DiClemente, 1983), resulting from the value ascribed by the individual to the change and their confidence to achieve it. This model is widely used in health promotion when workers attempt to intervene 'where people are' in their readiness for change.

The stages are:

Precontemplation – Subject may be unaware of the option of change or may not wish to change as costs are perceived as outweighing benefits.

Contemplation – Cognitive dissonance may occur, as subject sees the benefits of action but has not yet reached the point of attempting to act.

Preparation – Subject appreciates that the benefits of acting outweigh the costs, leading to commitment and preparation for action.

Action – Behaviour change is initiated.

Maintenance - Behaviour change is sustained by perceived benefits and relapse is prevented.

It should be understood that the stages are often not a one way journey; for example an individual may seriously contemplate action and be unable to progress due to dealing with more immediate problems, or may take action and then relapse because the change proves too difficult. This is clearly seen in interventions such as those for smoking cessation, physical activity and dietary change.

Relevance to health and social policy

The relevance of this model to health promotion has been questioned by Margaret Whitehead (1997) both on the grounds of lack of evidence of effectiveness and of the implied tendency toward taking the easy route by working only with those who are most likely to change.

Targeting those who are ready to change could benefit cost effectiveness and health improvement for the whole population. The obvious drawback to this approach is that concentrating efforts on those who are already receptive to the idea of behaviour change could fail to include the most disadvantaged, who are also at greatest risk of an adverse outcome, thus increasing health inequalities.

Common factors in behaviour change theories

Weinreich (1999) provides a useful synthesis of the main behaviour change theories in which he lists elements that must be addressed. The following conditions should be present in the target group:

- Belief in the risk and severity of the problem addressed
- Belief that the proposed behaviour will lower or prevent the risk
- Belief that the benefits of the behaviour outweigh the costs
- Intention to perform the behaviour
- Skills necessary to perform the behaviour
- Self efficacy
- Belief in consistency of behaviour performance with self image
- Perception of consistency with social norms
- Experience fewer barriers to perform than not to perform.

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September 2010

Memorandum by Dr Alan Lewis MA, PhD: Director, Transport & Travel Research Ltd and Mr John Porter MSc: Director, Interactions Ltd (BC 126)

- a) what are the most influential drivers of behaviour affecting an individual's choice of mode of travel?

A1. This question can be answered on several levels. Modes must function to an acceptable standard to be perceived as credible, with what is acceptable varying from person to person. It has been found that many psychological processes and constructs are used by individuals to evaluate the various modes of travelling available to them and, of these, the most important characteristics are:

- reliability,
- availability,
- comfort,
- control over one's journey,
- affordability,
- safety
- and cleanliness

These factors act as the motivational factors for modal choice. Strangely Cleanliness and bus condition correlate strongly with perception of **safety** which has risen over the past 5 years to be a very important criterion of decision making. Issues relating to control and freedom were recognised as being particularly important.

A2. If these basic functional requirements are met in an acceptable manner then other psychological factors are found to be important, but are often overlooked, particularly when it comes to commercial marketing and travel mode choice campaigns. The perceptions of transport brands can have an important influence on travel mode choice and can help encourage mode shift if they are developed to reflect important personality characteristics that people value such as friendly and open, bright and cheerful, reliable, punctual, family orientated and young at heart.

A3. This should not be a surprise as these techniques and characteristics are commonplace in mainstream marketing, yet are not common in either commercial or public sector approaches to generating use of sustainable transport modes.

- b) what is the role of infrastructure in encouraging and facilitating changes in travel mode choice?

B1. Infrastructure is an enabling factor in that it can help improve the coverage or functionality of certain modes. For example, for many people outside London the use of rail as a mode for urban journeys is not a credible option due to lack of network coverage. Similarly many non or occasional cyclists frequently emphasise the importance of improved cycle infrastructure to give them the confidence to overcome safety fears, which are not felt by those who are more frequent cyclists.

- c) What are the latest developments in the evidence base in relation to changing travel mode choice and the implications of those developments for policy?

C1. From our research it appears that there is a combination of personality and socio-economic factors that lead to a segmentation of the market, with some people being more receptive to active travel modes whilst others are more open to motorised modes. There is also clear evidence that some people in lower socio-economic groups who aspire to car use are trapped on low quality public transport services in certain areas, whereas among higher end socio-economic groups there are people who are open to using motorised modes but for who have expectations that are not met by 'standard' services; in such cases, if differentiated services, for example high quality, limited stop commuter services are not available, this leads them to feeling that car is the only credible choice.

- d) What are the most appropriate type and level of interventions to change travel mode choice?

D1. The answer to this question depends on what you are trying to achieve. The overall aim of this call for evidence is to address CO₂ emissions from the transport sector. Although short car trips in urban areas are in many ways an easy target for change, their CO₂ emissions form a much smaller proportion of the total than might be expected with medium-length trips contributing a disproportionate amount. The key challenge here is that medium-length trips have become more common and people have come to consider this level of mobility as the norm or a right, whereas in fact it is a relatively modern phenomenon. To influence this will require a significant change in the provision of alternative transport services that is credible for such journeys.

D2. There needs to be a clear framework and identity within which travel mode choice programmes can fit into so that they are coherent, rather than running the risk that sustainable modes compete with each other leaving car use unscathed.

- e) Who are the most effective agents for the delivery of behaviour interventions to change travel mode choice?

E1. There is no single organisation or agent. This issue needs to be addressed as a partnership with input from both public and private sector organisations. The type of arrangement that is in place in Merseyside through TravelWise Merseyside is one of the more effective examples.

E2. There are some excellent, but all too few, recent examples where a well known personality or possibly just an ordinary individual that the target group can relate to, have been used as a 'message giver' in order to improve the recognition of communication campaigns.

- f) How do current policy interventions seek to change travel mode choice and what use is made of available scientific evidence?

F1. There is a wide mix from the provision of basic information about alternative modes and journey options, through persuasion to financial incentives such as the use of taster tickets or loan bicycles. (But none of these tackle the fundamental issue of congruence between personal psychological needs and the service on offer, as for instance when free tickets lead

to overcrowding on vehicles.) Interventions are sometimes implemented at an individual level through personal journey planning whereas others may be based on broader initiatives for example through school, workplace of destination travel plans, where a focus can be provided to the travel options and a local impact. The latter group of focused actions are actually often found to be most cost-effective in terms of impact.

- g) Are current policy interventions addressing both psychological and environmental barriers to change?

G1. Psychological factors are generally overlooked in favour of more routine and generally less effective interventions. Our recent work in this area is still quite unusual.

G2. Environmental barriers to change in the form of social disadvantage and the impact it can have on perception, access and affordability are much more widely acknowledged and addressed.

- h) Are policy interventions appropriately designed and evaluated?

H1. There is such a huge range of approaches that some interventions are indeed well designed whereas others are lacking. This is often not for the lack of will, but rather due to lack of available resource or lack of knowledge about more effective approaches and the need to target interventions according to journey purpose, personal perception and socio-economic factors.

H2. Evaluation is often overlooked and has not been valued to date by many project sponsors. In part this is because to properly evaluate an intervention (i.e. with an appropriate level of accuracy) requires significant resource and hence cost, which has generally been felt to be better employed on the actual travel behaviour intervention. (Quite the opposite of how the car industry operates!) This effect is becoming increasingly felt as public sector funding in this area is being cut. This has led to a lack of credibility in relation to the much of the evaluation evidence about the effectiveness of travel behaviour interventions (due to small sample sizes, inadequate timescales etc) to the point that it is often not considered reliable enough to justify investment by many decision makers. This has not been helped in that cost effectiveness or cost benefit analysis, even on a rudimentary basis, has not been a constituent element of many project evaluations, leading to a lack of justification in a form that can be compared with standard techniques used in other elements of transport planning – for example infrastructure provision. This is beginning to change; however, a travel mode choice intervention will never provide a decision maker with a lasting, visible legacy.

- i) What lessons have been learnt and applied as a result of the evaluation of policy?

Not enough due to the above point.

- j) What lessons can be learnt from interventions employed in other countries?

In Dublin significant investment in bus deep-cleaning and overnight bus cleaning plus attention to brand details and service delivery criteria has led to a strong well used public bus network. In the past few years bus patronage has suffered a downturn due to de-population; however, taking a longer term view, the meteoric growth of Quality Bus

Memorandum by Dr Alan Lewis MA, PhD: Director, Transport & Travel Research Ltd and Mr John Porter MSc: Director, Interactions Ltd (BC 126)

Corridors and the supply of buses 'fit for men in suits' has secured a real reduction in the number of cars entering the city. This is in spite of over 100% growth in car ownership which is greatest in the most wealthy areas where bus use and modal shift is the highest.

Dublin Bus has undertaken repeated analyses of customer needs and priorities, and monitors service delivery *from a customer perspective* seven days a week.

19 January 2011

Memorandum by Lifestyle service, South Staffordshire PCT (BC 20)

Case Study

On my initial appointment with Mrs W it was clear as we carried out her assessment that she felt her weight was preventing her from doing the things she wanted to in life. She highlighted that she suffered with arthritis in her knees and had asthma and she felt this limited her from being able to exercise and take control of her weight. She was also aware that because of her weight she felt depressed and was isolating herself from friends and family. Her confidence was low and she felt that the Lifestyle Service was a last resort as she had tried many diets in the past and these had all failed.

By making small but significant changes and by looking at behaviour change we were able to create a personal health plan for Mrs W which reflected her personal needs. We looked initially at keeping a food diary and increasing her fruit and vegetables. We also looked at exercise and felt it may be beneficial for Mrs W to be referred to our Physical Activity Team. They would work on a one to one basis with Mrs W helping her to exercise safely and increase her fitness levels, overall helping her to lose weight.

From week to week through support and encouragement Mrs W achieved her goals. She had started to exercise with the Physical Activity Team within their gym and was really enjoying it and was becoming more confident with what she could physically do. Her weight also decreased and her shape began to change too, helping her gain more confidence and motivation to achieve her overall goal.

However at session 5 we encountered unforeseen problems. Mrs W had problems within her family that had caused her to lose focus and motivation. She felt unwell and was unable to exercise. By working in partnership with Mrs W we were able to look at the barriers the client was facing and Mrs W then came up with her own solutions to these problems. By the end of the session Mrs W was much more positive and felt she was able to use the solutions to help her through this difficult time.

Eventually after 7 sessions over a period of 3 months Mrs W had become her own health trainer and it was time to sign her off from the service. At this appointment it was evident to see how much Mrs W had changed. She was a confident, energetic, motivated individual. Mrs W felt proud of herself as she had lost weight, she had gone from weighing 69.60kg on her initial appointment to 63.00kg. Her BMI had reduced from 27.5 to 24.9 and her waist measurement had decreased from 39 inches to 31.5 inches.

However the biggest change was that Mrs W was no longer in constant pain from her arthritis. She actually felt that exercise had helped her mobility and she was now able to walk further than she had done before. She also no longer needed her 2 inhalers which she used to use daily for her asthma, she was now able to run around with her grandchildren without getting out of breath and felt she now had a new lease of life.

Mrs W felt that she had experienced a very positive process from being referred from the district nurse to the Lifestyle Service. She felt that now because of the groups she was attending and the new friends she had made, along with the acknowledgement and support

from her family, she would be able to maintain her weight and the healthier lifestyle she had acquired.

She felt she had learned a lot from the service and myself and was now equipped with the right information, knowledge and contacts to keep maintaining her goal. She also was very interested in becoming an aerobics instructor as she really enjoyed physical activity and wanted to motivate others to make changes. She was getting guidance and advice from the Physical Activity Team in order to achieve this goal.

27 September 2010

Memorandum by LighterLife (BC 50)

Executive summary

- **LighterLife offers a range of multi-component weight-management programmes for overweight and obese individuals in the UK, delivered in small groups by specially trained weight-management counsellors.**
- **A key feature of these programmes is the focus on individuals identifying and finding new, more appropriate ways of responding to their underlying psychological reasons for overeating. This will enable the individual, once they have achieved a healthier weight, to maintain this in the long term. Dieting alone is unlikely to support sustainable behavioural change.**
- **LighterLife weight-management counsellors work with individuals in single-sex, weekly groups to support behavioural change, informed by approaches such as transactional analysis (TA) and cognitive behavioural therapy (CBT).**
- **The work individuals have the opportunity to do in the group aims to help them understand their relationship with food and develop new skills and coping strategies to support healthier eating and lifestyle behaviours, including being more physically active.**
- **Government policy-makers as well as primary-care professionals need to be made aware of the role the private sector can play in offering specialised behavioural change to individuals as part of a broader package to tackle obesity.**

Introduction

35. LighterLife is an industry leader in clinical obesity management. In this submission we wish to set out how our programmes use behavioural change as part of a wider package of treatment that can help tackle the growing obesity crisis in the UK.
36. Obesity consumes large amounts of NHS resources and is likely to consume even more if obesity trends are not reversed. Foresight's 2007 report estimates that, by 2015, the NHS will have to spend £6.3bn a year on treating overweight or obese people²⁶⁵.
37. LighterLife offers a range of weight-management options, primarily for those who are obese (BMI 30+), but also for the overweight (BMI 25-29.9). These programmes use nutritionally balanced and regulatory-compliant fortified food replacements, provided in conjunction with education and practical techniques informed by cognitive behavioural therapy (CBT) and transactional analysis (TA) that are tailored for the obese and overweight. These techniques, facilitated by trained counsellors in small, single-sex groups, help individuals to understand and gain insight into their relationship with food and to develop new skills to support healthier eating and lifestyle behaviours, including being more physically active.

²⁶⁵ Tackling Obesity: Future Choice, <http://www.bis.gov.uk/assets/bispartners/foresight/docs/obesity/17.pdf>

38. LighterLife's weight-management programmes are designed to allow individuals to identify and understand the complex interplay between the physical, practical and psychological reasons they have overeaten in the past that has resulted in excessive weight gain, enabling them to develop a range of skills that support and promote healthier ways of living and eating in the future.
39. LighterLife's behaviour-modification programme is underpinned by Prochaska and diClemente's cycle of change²⁶⁶ – a generic, transtheoretical model offering an integrative framework for understanding and intervening with the aim of intentional behaviour change, applied in this context to supporting long-term weight management.
40. LighterLife's behaviour-modification programme gives the individual the opportunity and support to understand and interrupt habitual behaviour leading to excessive weight gain, by providing a reflective space to allow 'thinking' before automatically following unhelpful, ingrained habits or responses.
41. Techniques from cognitive behavioural therapy, such as visualisations, identifying thinking distortions, the use of thought records and food and mood diaries, help the individual become aware of the links between thoughts, feelings (emotional and physical) and behaviour. With new understanding, the individual can begin to develop and practise balanced thinking, leading to balanced behavioural responses. Individuals have repeated opportunities to learn and practise skills such as challenging negative automatic beliefs, effective goal setting and planning skills.
42. Ideas from transactional analysis help the individual recognise when their current behaviour is an unhelpful response to outdated messages from the past and enable them to move into a more 'Adult' place (from the Parent, Adult, Child model) where they can make realistic choices based on all available evidence relevant to the current situation. This leads to balanced and assertive behaviour consistent with the ideas from cognitive behavioural therapy.
43. During the weekly group meetings, ideas from transactional analysis inform individuals of basic human psychological hungers, such as the need for meaningful and balanced ways of structuring their time. Often food is used to compensate for a lack of balance in this area. When individuals can recognise this is the case, they have the opportunity to develop healthier habits, such as a greater balance between rest and stimulation.

Answers to Specific Questions

Research and Development

44. **What is known about how behaviour can be influenced? What special considerations apply to addictive behaviour?**
45. LighterLife encourages long-term weight management by focusing on a programme of change that is based on a continuum of habitual to addictive behaviour around food and drink. If overeating is treated merely as a matter of calories in/out, with no reference to its

²⁶⁶ Prochaska, J.O. and Di Clemente, C.C. (1992) Stages of change and the modification of problem behaviours, in M. Hersen, R.M. Eisler and P.M. Miller (eds), *Progress in behaviour modification*. Sycamore: Sycamore Press.

underlying psychological reasons people engage in such behaviour, then long-term weight management after weight loss is unlikely to be achieved.

Policy design and evaluation

46. What should be classified as a behaviour-change intervention?

47. LighterLife's programmes are a carefully structured series of focused discussion and educational opportunities designed to support the individual through their cycle of change, leading to sustained behavioural change. Each week the group focuses on a specific idea or area of their lives with the aim of developing more effective coping strategies that do not involve over-consuming behaviour. The individual has the opportunity to begin to integrate these new strategies during weight loss and continue to receive support and education while applying and mastering these strategies in weight management. An example of such a behaviour-change intervention is the practice of using thought records from CBT to support balanced thinking.

48. Should behaviour change interventions be used in isolation or in combination with other policy interventions?

49. Behavioural change in weight management cannot be used in isolation; LighterLife's effective weight-management programmes use behaviour-change techniques along with nutritionally balanced food replacements and advice on physical activity to help individuals lose weight and maintain that weight loss. Government should also take steps to ensure that GPs have the tools to advise patients on the options for weight management that suit their individual needs. In addition, GPs should have the tools available to help them manage patients' health after effective weight loss.

50. Another way that Government can contribute is by providing information to consumers, including ensuring that foods are properly labelled so individuals are aware of what they consume, and continuing with successful marketing campaigns that seek to give consumers tools to make informed choices, such as Change4Life.

Practical Application

51. Within government, how are the lessons learnt from the success or lack of success of behaviour change interventions fed back into the design of future interventions? Are lessons learned from industry and voluntary sector behaviour change activities also taken into account?

Government needs to more fully incorporate the latest research into behaviour-change techniques when setting policy, and also take into account research emerging from industry and the private sector. Weight-management programmes in particular have undertaken a number of randomised controlled trials in recent years, the results of which have recently been published or are in the process of being published, that show the essential role of behaviour-change techniques when individuals lose weight and afterwards seek to maintain that weight loss.

Cross-government coordination

52. What mechanisms exist within government to coordinate and implement cross-departmental behaviour change policy interventions?

53. We strongly believe that behaviour-change policy interventions should be coordinated and implemented across Government. This is particularly the case when it comes to a problem such as obesity, which is covered by various departments, including health and education, governmental agencies such as the Food Standards Agency, and self-regulating bodies such as the Committee of Advertising Practice.
54. The aim of Government should be a joined-up approach across all bodies to ensure uniform and consistent application of policy and legislation.

Ethical considerations

55. When is it appropriate for the state to intervene to influence the behaviour of members of the public and how does this differ from when it is appropriate for the commercial or voluntary sector to intervene? In particular, when should this be done by outright prohibition and when by measures to encourage behaviour change? Are some methods of producing behaviour change unacceptable? Which and why?

56. Private providers are able to help individuals change their behaviour given their experience in providing the sort of specialised help in small groups that meet the needs of obese and overweight people. The current NHS approach does not provide this specialist support needed, especially for those individuals with a BMI over 35. For example, private providers are able to offer a more flexible and accessible operational support system that dramatically increases the long-term success rate of weight-management programmes.
57. Individuals on weight-management programmes commit themselves to these programmes for a length of time. As weight-management programmes are also commercial operations, participants also have a financial incentive to change their behaviour. As the *Healthy Weight, Healthy Lives* report from 2008 states, financial incentives, as part of a broader package to tackle obesity, have proven particularly effective in helping individuals lose weight and maintain weight loss²⁶⁷.
58. This evidence of the effectiveness of financial incentives is an additional reason why Government should not hesitate in considering private providers as part of the solution to this country's obesity problem.
- 59. Should the public be involved in the design and implementation of behaviour change policy interventions and, if so, how? Should proposed measures for securing behaviour change be subject to public engagement exercises or consultation? Should they be piloted? Do considerations differ in the case of interventions aimed at changing addictive behaviour?**
60. Informal dialogue, as well as consultation exercises, should take place between private providers and the Government to ensure the Government is aware of the latest research

²⁶⁷ Healthy Weight Healthy Lives, p.42.

into the successful use of behaviour-change techniques and can implement policy changes where appropriate.

Tackling Obesity

The Committee would particularly welcome submissions on behaviour change interventions, whether in the public sector, the private sector or by voluntary organisations, designed to tackle obesity, in the United Kingdom or internationally, in order to examine:

- 61. Who are the most effective agents for the delivery of behaviour interventions to tackle obesity;**
- 62.** Due to their expertise, experience and capacity, private providers of weight-management programmes are excellently placed to deliver the type of specialised behaviour-change techniques that obese and overweight people require in order to lose weight and maintain their weight loss.
- 63. How current behaviour change interventions tackle obesity and what use is made of available scientific evidence.**
- 64.** Programmes such as those offered by LighterLife use techniques that have been specifically designed for behavioural modification in weight-management. LighterLife's weight-management counsellors work with individuals in single-sex, weekly groups (maximum 12) to facilitate techniques from transactional analysis (TA) and cognitive behavioural therapy (CBT). Developed for behavioural modification in weight-management, these techniques aim to help people understand their relationship with food and develop new skills to support healthier eating and lifestyle behaviours, including being more active.

Following weight loss, LighterLife's Management programme focuses on establishing a healthier lifestyle through the continued development and application of behavioural changes. This enables the opportunity for sustainable weight management and a reduction in the risk of weight-associated co-morbidities. The Management programme progresses individuals to a healthy, balanced and varied diet, consistent with current advice on healthy eating, and a range of support resources is available to weight-maintaining patients, including continued TCBT work and regular weight checks which are free for life.

Conclusion and Recommendation

- 65.** Behaviour-change techniques are an integral part of effective weight-management programmes, as they help individuals to learn why they are consuming too much food and to tackle their habitual/addictive behaviours around food. Working in small, single-sex groups, a private weight-management company such as LighterLife has the capacity and experience to deliver these techniques in a way that primary-care professionals do not.
- 66.** Government must ensure that primary-care professionals are aware that commercial organisations can deliver behavioural change, which enables people to not only lose weight but maintain their weight loss in the long term, so that they can refer patients where appropriate.

Memorandum by LighterLife (BC 50)

October 2010

Memorandum by Living Streets (BC 128)

Living Streets is pleased to be able to contribute to this inquiry. We are the national charity that stands up for pedestrians. With our supporters we work to create safe, attractive and enjoyable streets, where people want to walk. We work with professionals and politicians to make sure every community can enjoy vibrant streets and public spaces.

We started life in 1929 as the Pedestrians Association and have been the national voice for pedestrians throughout our history. In the early years, our campaigning led to the introduction of the driving test, pedestrian crossings and 30mph speed limits. Since then our ambition has grown. Today we influence decision makers nationally and locally, run successful projects to encourage people to walk and provide specialist consultancy services to help reduce congestion and carbon emissions, improve public health, and make sure every community can enjoy vibrant streets and public spaces.

Living Streets' very brief response focuses on our experience in coordinating the national Walk to School campaign, and the external evaluation of this programme's results in achieving modal shift, which highlights a number of success factors.

d. what are the most appropriate type and level of interventions to change travel-mode choice;

e. who are the most effective agents for the delivery of behaviour interventions to change travel-mode choice;

f. how do current behaviour change interventions seek to change travel-mode choice and what use is made of available scientific evidence

1. Walk to School (WtS) is a national campaign which has existed since 1995 and aims to encourage all parents and children to make walking to school part of their daily routine, emphasising the benefits to physical and mental health and wellbeing, the social aspects and the potential to address congestion, improve air quality and reduce carbon emissions. WtS reaches over 1.3 million children throughout the UK.
2. The Walk Once a Week (WoW) programme is at the heart of the Walk to School campaign, with nearly 2000 primary schools and 250,000 children now taking part across the UK. WoW sees children record how they travel to school, on a class wall chart or individual postcards. If they walk at least four times a month, they receive a highly collectable badge for that month, designed in a national art competition which receives thousands of entries from children across the UK each year. These resources are obtained either by the local authority or directly by the school.
3. The success of WoW has led to Living Streets receiving funding from the Department of Health to roll out WoW in areas which experience both deprivation across a range of indicators and high rates of child obesity. In addition, new interventions to increase walking to school beyond once a week will be trialled with three Hackney schools.

Any successful interventions will then become part of WoW or the wider Walk to School campaign.

4. In 2009, the WoW scheme was independently evaluated by Wavehill Consulting through analysis of responses from over 20,000 UK school pupils and a range of interviews with relevant stakeholders. The evaluation, a copy of which is appended to this submission, found that:
 - there was a strong appetite for walking to school among children surveyed;
 - 19 per cent of children surveyed reported that they started walking to school because of WoW;
 - the proportion of children walking to school in schools running WoW was over nine per cent higher than the national average as determined by the National Travel Survey; and
 - that there were indications of an associated positive effect on the number of walking trips made by adults.

The report extrapolates figures on the number of trips by car and other modes that are replaced by this higher rate of walking.

5. A number of factors can be identified as contributing to these results:
 - **Simplicity:** schools and teachers do not find it difficult to find the time and resources to commission and administrate WoW, whilst children are simply asked to walk to school and log their walk, or in some cases get involved in administrating the scheme as WoW Monitors
 - **Administration:** WoW is run at the closest possible level to its participants – their class at school – whilst Living Streets' independence as a charity and national reach helps build trust and provides a platform to share best practice across the country
 - **Incentives:** the badges are highly sought after and eagerly collected, whilst not being so large an incentive as to be unaffordable to local authorities or schools, or mask the behavioural change objectives of the scheme
 - **Participation:** the art competition to design the badges attracts thousands of entries each year and raises awareness of the aims of WoW
 - **The scope to create a culture where walking to school, at least once a week, becomes the norm**

h. are policy interventions appropriately designed and evaluated

7. In addition to the evaluation summarised above, Living Streets will be carrying out further evaluation of WTS and WoW as part of its contractual arrangement with the Department of Health. This evaluation will be looking at the impact that walking to school has on the physical activity of children, and will also be used an opportunity to make improvements to the scheme and get feedback from purchasers and participants.

Additional background

Living Streets also works with secondary schools through our Step Up programme, which supports students and teachers to create student-led campaigns, focused on improving the local walking environment as well as promoting walking directly. In addition to our WTS and WOW activities, our Walking Works campaign engages with adults in employment to encourage more walking to, from and at work. Funded by BIG Lottery's Health and Wellbeing Fund as part of the Travel Actively consortium, we have raised awareness of the benefits of walking more with over 28,000 individuals through walking pledges, regular digital campaigns and our annual Walk to Work Week event. Ongoing follow-up research with beneficiaries indicates that over 25% of Walk to Work Week participants report walking more for work-related reasons three months after the event. Of those making a pledge to walk more, 60% of respondents achieved the recommended physical activity levels (5 X 30 minutes per week). In addition 31% of respondents said they had increased their levels of walking to work, 42% increased their levels of walking from work, 50% increased their walking at lunchtime and 39% stated that they had increased their walking at other times of the working day as a result of the pledge.

As well as behavioural change, Living Streets would also highlight the role of infrastructure and safe, attractive public realm in achieving modal shift. Transport for London research²⁶⁸ on attitudes to walking found that two thirds of Londoners surveyed were receptive to walking more, as compared to 1 in 4 receptive to cycling more, and that the top three potential motivators for walking more included new and improved public spaces with new seating, new and improved crossing facilities at junctions alongside new and improved walks for pleasure. Involving the community and auditing the quality of streets is crucial to getting the quality of the built environment right.

Living Streets is currently in the process of commissioning a wide-ranging review of secondary research into the economic and social benefits of investment in the walking environment. We are particularly interested in experience where 'soft' behavioural change interventions have been explicitly associated with improved infrastructure, such as in our national 'Fitter for Walking' project. Living Streets would be delighted to share this study when it is complete, to provide further evidence and information to the Select Committee or to discuss these issues more informally.

20 January 2011

²⁶⁸ Synovate / Transport for London. 2008. Attitudes to Walking 2008 Research Report

Memorandum by Dr. Karen Lucas, Transport Studies Unit, University of Oxford (BC 11)

Much of my knowledge in this field originates from my involvement from 2 specific evidence reviews: the first was a 2006 study for Defra and considered theories and methods for encouraging pro-environmental behaviours (see attached journal article), the second was for the Government Social Research Unit's *Behaviour Change Knowledge Review* (2008) as referred to in the HoL Call for Evidence briefing note.

Research and Development

1. What is known about how behaviour can be influenced? What special considerations apply to addictive behaviour?

There is a huge body of academic material on influencing behaviours, reporting on theories, models and demonstration projects for behaviour change across very many different types of behaviour. Many of these are cited in the two above studies or can be easily referenced elsewhere. The general conclusion of such material can be summarised as follows:

- Behaviours are complex and non-linear – changing them beyond the margins is an equally complex task;
- Each behaviour is different, with different trigger points and underlying motivations and so change instruments are non-generic and often non-transferrable between different behaviours – context is important;
- People behave differently in response to the same stimuli and respond differently to change interventions – one size does not fit all;
- Habits need to be first unlocked and then changes in behaviour reinforced and supported through price, infrastructural and institutional signals – changed behaviours are rarely maintained where they break with the wider social norms of society;
- Interventions usually need to be simultaneously reinforced at every level of the behaviour – individual, community, national

It is unclear whether given the proposed focus of the 2 case studies described below use of the term 'addictive' is rather referring to 'habitual' behaviours. If the former, then I have no evidence on this, if the latter then there is a good deal of evidence in relation to habit forming and habit breaking interventions (as above). As I understand it there is also a distinction within the medical literature between clinically and social addictive behaviours, but I am not sufficiently knowledgeable in this field to be able to describe these.

2. What are the policy implications of recent developments in research on behaviour change?

See my comments above, but also that changing attitudes does not necessarily lead to changes in behaviour and vice versa. Sometimes it is easier and more effective to change people's behaviours through infrastructural measures (such as providing recycling facilities) than to try to their attitudes through information campaigns. Individualised social marketing campaigns can make a contribution but only marginally unless they are

supported by improvements to services, alternative opportunities and clear pricing mechanisms.

3. Is there adequate research capability within the United Kingdom to support the current pace of developments in behaviour change policy interventions? Is there sufficient funding for the evaluation of behaviour change interventions?

There is sufficient research expertise, but insufficient research funding and not enough interdisciplinary interaction on this subject, leading to 'siloed' knowledge. Some behaviour change interventions (e.g. medically focused) have massive funds other areas don't (e.g. community-based initiatives).

Translation

1. Are there adequate structures and expertise across government and the public services more generally to support the translation of research developments in behaviour change into policy interventions?

No – as soon as a body of reasonable evidence and the expertise to translate it into policy is built up, the individuals within government move on and the knowledge gets lost. There is also poor transference of knowledge between Departments and academics and consultants get commissioned over and over again to do the same work for different departments, which reduces their capacity for innovation.

Policy design and evaluation

General

1. What should be classified as a behaviour change intervention?

Anything that can be seen to work in terms of changing behaviours in the direction that policy indicates they wish them to go

2. How should different *levels* of intervention (individual, organisational, community and national) and different *types* of intervention (legislative, fiscal, educative) interact in order to achieve policy goals more effectively?

Seamlessly, and with built in opportunity for creating feedback loops between the target population, intervention providers, different levels of government and the politicians and the media, whose are often responsible for undermining the effectiveness of policies through mixed messages.

3. Should behaviour change interventions be used in isolation or in combination with other policy interventions?

In combination and with consistency. Often policies are pulling in different directions, which confuses the public and gives them the excuse to do nothing.

Practical application

1. Have publicly funded behaviour change interventions been both evidence-based and subject to effective evaluation? How successful have such interventions been?

No, there has been too much monitoring of outputs and insufficient evidence of the outcome from these. Also, there has been insufficient evaluation of perverse effects, such as inequities, systematic exclusions from schemes, etc.

2. Within government, how are the lessons learnt from the success or lack of success of behaviour change interventions fed back into the design of future interventions? Are lessons learned from industry and voluntary sector behaviour change activities also taken into account?

I am not sure that they are with any deal of consistency and if they are it is certainly not made more widely evident that this is the case outside of the circle of government.

3. What mechanisms exist, at national and local government level, to provide advice and support during the design, piloting, implementation and evaluation of behaviour change interventions in order to ensure that they achieve intended policy goals and also cultural changes within government and public services more generally?

Very little unless projects hire consultants or other experts to get them through this process. Where there is expertise on the ground either within local government or community organisations, this is largely down to chance and largely due to the past experiences and expertise of individuals with delivering such initiatives, rather than any systematic training or policy guidance in this area.

Cross-government coordination

1. What mechanisms exist within government to coordinate and implement cross-departmental behaviour change policy interventions?

There are all sorts of inter-departmental committees that have been set up for doing this at various points in time e.g. Social Exclusion Task Force, Inter-Governmental Panel for Climate Change. How successful they are/have been is unclear.

2. What mechanisms exist within government to cascade learning and best practice on behaviour change policy interventions?

The best way, in my view is through central/local partnerships which encourage circle servants out of Whitehall and get them to engage with 'real world' situations – and example of this would be the Policy Action Groups that were set up by the Social Exclusion Unit in 1999-2001 when it was developing its Neighbourhood Renewal Strategy.

Ethical considerations

1. When is it appropriate for the state to intervene to influence the behaviour of members of the public and how does this differ from when it is appropriate for the commercial or voluntary sector to intervene? In particular, when should this be done by outright prohibition and when by measures to encourage behaviour change? Are some methods of producing behaviour change unacceptable? Which and why?

When the behaviours of one group (or the mechanisms which support those actions) are directly or indirectly disproportionately adversely affecting the human rights, health or well-being of another group (whether within that society or elsewhere).

- 2a. Should the public be involved in the design and implementation of behaviour change policy interventions and, if so, how?

The best way is to do this through some demonstration pilot projects, which can be tested with the public and then rolled out more widely to other areas.

- 2b. Should proposed measures for securing behaviour change be subject to public engagement exercises or consultation?

Not always, it depends if there are serious ethical considerations. Many of them have already been the subject of widespread consultations and we broadly know that the public chooses not to be taxed further and wants as much freedom of choice to determine their own behaviours. The question here is how far they should be able to have a free say in this within the context of socially damaging behaviours and this may need to be handled in quite a different way in terms of public engagement. There is a big difference between general engagement around a given issue and very specific consultation with key stakeholders about the shape, nature, delivery style, content and design of a given intervention.

- 2c. Should they be piloted?

Yes, always at the developmental stage – in order to pick up on to any difficulties with take-up, specific barriers to delivery and perverse outcomes.

- 2d. Do considerations differ in the case of interventions aimed at changing addictive behaviour?

I would have thought that with addictive behaviours there is an even greater need to ensure that the target audience (and other key stakeholders) is included in the design of any proposed intervention and its evaluation, as their cooperation is the key to its success.

I am unable to offer responses to the remaining questions as they fall outside of my direct area of expertise.

October 2010

Memorandum by Professor Roger Mackett, University College London (BC 124)

I am submitting this evidence on my own behalf, in my professional capacity as Professor of Transport Studies at University College London

Background

1. Car use in Britain has grown significantly over the past sixty years, causing the well-recognised problems of greenhouse gas emissions, pollutants, congestion and social inequity. However, it is important to acknowledge that cars provide many benefits to their users including door-to-door travel, flexible timing, relatively low travel times, low marginal costs, and comfort. They also bestow perceived status on their owners and allow households to maintain social networks with family and friends. Any intervention to reduce car use must take into account the advantages that the car offers and any alternative must meet at least some of these criteria if it is to be successful.

Are there alternatives to the car for trips in towns and cities?

2. In 1998 I was invited by the Department for Transport to carry out a two-year project entitled 'Potential for mode transfer of short trips'^{269,270,271}. Short trips were defined as those of less than five miles. The project involved carrying out surveys of households in five areas to establish the trips that they made over a two-day period, and identifying those who had made short trips by car. They were interviewed about their short trips to see why they had used the car, what alternatives they perceived for each trip and why they had not used them.
3. It was found that the short car trips were not spread evenly through the sample. Most people made very few of them, while some people made many. These were mainly parents with young children who had adopted a lifestyle which required them, usually the mothers, to take children to and from many activities including school, after-school activities, friends and relations. This was partly because of the shift from free play by children to organised activities, partly because of the perceived risks to children of allowing them to go out unaccompanied by an adult, and partly because of the greater spread of urban areas. Many of these trips were by car.
4. Table I shows the main reasons people gave for driving the car on short trips. 'Carrying heavy goods', usually shopping, was the main reason, followed by 'Giving lifts to family members', usually children. The next three most popular reasons 'Shortage of time', 'Distance involved' and 'Convenience' all revolve around the flexibility that the car offers to make fast journeys over a distance at a time to suit the user. The next two reasons reflect the nature of many trips involving more than one destination, which the car can make relatively easily.

²⁶⁹ Mackett R L (2001) Policies to attract drivers out of their cars for short trips, *Transport Policy*, 8, 295-306.

²⁷⁰ Mackett R L (2003) Why do people use their cars for short trips? *Transportation*, 30, 329-349.

²⁷¹ Potential for mode transfer of short trips, available from <http://www2.cege.ucl.ac.uk/cts/shtrp.asp>.

Carrying heavy goods	19
Giving lifts to family members	17
Shortage of time	13
Distance involved	11
Convenience	10
Further trip to make	9
Needed at work	5
Bad weather	5
Dark out	5
Social	4
Other	4
Total	100

No alternative	22
Walk	31
Bus	31
Cycle	7
Taxi	3
Train or Tube	2
Somebody else make the trip	2
Would not make the trip	2
Total	100

5. Table 2 shows the alternatives that were identified for making these trips. For 22% of the trips there were no alternatives. The most popular reasons that there were no alternatives was the need to carry heavy goods, to make further trips and because the car was needed at work. Walk and bus were the largest alternatives at 31% of trips each, followed by cycling with 7%.
6. The actions required to induce a change to the alternatives are shown in Table 3. Overall, the action which the drivers said would cause the biggest switch is improving bus services. This is followed by 'No specific action' which is particularly important for walking trips. It implies that the drivers could have walked, but chose not to, and that no action by outside agencies would have had a significant impact. For 11% of the trips, the drivers recognised that it was in their own hands to make a change. Whilst nothing can be done to improve the weather in this country, it is possible to mitigate some of the effects, for example, by providing more bus shelters. Only 2% of the car trips would shift as a result of improvements to cycling facilities.
7. It should be recognised that these findings are based on what drivers say that they would do, and, they might, in reality, behave rather differently. It is possible to draw some conclusions:
 - There are good reasons why many short trips are made by car;
 - However, there are alternatives for most of them;
 - There is much greater potential for walking and buses than cycling as alternatives to the car;
 - Improving local bus services would probably help, but this would be difficult, particularly outside London with deregulated bus services and local authorities short of funds.

Table 3 The effectiveness of various actions in producing a shift to the alternative modes for short trips by car drivers (%)

	Walk	Bus	Cycle	Total
No alternative	0	0	0	22
Improve bus services	0	69	1	22
No specific action	39	15	28	21
Take personal action	26	3	16	11
Improve the weather	17	1	19	7
Improve cycling facilities	0	0	24	2
Other	18	12	14	15
Total	100	100	100	100

Interventions to reduce car use

8. The study discussed above is interesting, but it does not demonstrate reductions in car use as a result of an intervention. Such studies are rare because they are difficult and expensive to carry out since they need extensive surveys and careful timing to collect before and after data.

9. A systematic study of the literature on the impact of transport interventions was carried as part of the NICE study on 'Promoting and creating built or natural environments that encourage and support physical activity'²⁷² in which I was part of the team assessing the evidence and drafting the report. The team assembling the evidence examined 19,414 articles on transport and concluded that 26 of them contained relevant evidence on interventions. They concluded that traffic calming could lead to small increases in walking and cycling, closing or restricting the use of roads could lead to long term increases in levels of walking or cycling, the introduction of road user charges could lead to increases in levels of walking and cycling, and that the introduction of cycle infrastructure can lead to increases in levels of cycling. All these could imply a reduction in car use. Car use was not examined explicitly in the study.

10. Another NICE study, on 'Promoting physical activity for children'²⁷³, which I was not involved in, examined, amongst other things, our work on walking buses to school²⁷⁴, and concluded that walking buses were the most effective form of intervention in terms of physical activity for children. This supported our findings that walking buses can induce shifts from car to walking. We studied five walking buses over a period of a year and concluded that almost half the trips being made on them were previously made by car. However, because many of the trips to school by car were part of a longer trip, usually to work by a parent, there would not be an equivalent reduction in car use following the introduction of a walking bus. It should, also, be recognised that, even though walking buses do not require high levels of funding, they do take large amounts of time to organize, and typically only last about three years because the children who are enthusiastic about them at age five lose interest by the time they are eight and so wish to

²⁷² National Institute for Health and Clinical Excellence (NICE) Promoting and creating built or natural environments that encourage and support physical activity, available from <http://guidance.nice.org.uk/PH8>.

²⁷³ National Institute for Health and Clinical Excellence (NICE) Promoting physical activity for children, available from <http://guidance.nice.org.uk/PH17>.

²⁷⁴ Mackett R L, Lucas L, Paskins J and Turbin J (2005) Walking buses in Hertfordshire: Impacts and lessons, Report, Centre for Transport Studies, University College London, available from <http://www2.cege.ucl.ac.uk/cts/research/chcaruse/Walking%20bus%20report%20-%20UCL.pdf>.

drop out, and so their mothers, who are acting as escorts, also drop out. There is rarely any continuity because of the lack of a champion to maintain the momentum.

11. There have been few studies of the impacts of transport interventions in this country. The opportunity to carry out a systematic study of the impacts of the London Congestion Charge was missed, although there is a monitoring study of the impacts. The Department for Transport is carrying out studies of the effects of Smarter Choice Programmes in the Sustainable Travel Towns (Darlington, Peterborough and Worcester), of changes in the 'Cycling City' (Bristol) and in the 17 'Cycling Towns'. Other people are in a better position than me to provide information on these studies. However, I am involved in a major study to examine the impacts of a piece of transport infrastructure on walking and cycling, namely the Cambridgeshire Guided Busway. The study involves the use of questionnaires, interviews, accelerometers, and GPS (Global Positioning Satellite) monitors on travel patterns around Cambridge²⁷⁵. The 'before' data have been collected. Once the infrastructure has been implemented the 'after' data will be collected.

Why is it so difficult to reduce car use?

12. In recent years, I have examined the issues that make it difficult to reduce car use²⁷⁶. The main problem is that many households have adopted a car-oriented lifestyle because they can afford enough cars to meet most of their travel needs, and the range and location of their activities require the use of the car. Equivalent trips by earlier generations would have been walked, cycled or been taken by bus. This gradual transition towards a car-oriented society has been part of a two-way interaction with the decentralisation process: as cars have become more widely available, suppliers, such as retailing chains, have chosen locations best served by cars, and households have felt an increasing need for a car (or two) to help them reach the opportunities offered.
13. There is a further dimension, which makes it particularly difficult to reduce car use. Many households have chosen to live in places where car is the only way to reach the desired range of destinations, reducing the opportunity to use the alternatives.
14. This all means that it is difficult to encourage more people to use alternatives to the car. It is not simply a matter of reversing the shift from walking, cycling or the bus to the car. Many people have grown up in an environment where society is largely geared up to using the car. For them, it is the easy choice, offering fast journeys and opening up opportunities unreachable by any other means. It allows people to continue the comfortable lifestyles that they have created. It also enables them to project an image of success to their friends and neighbours.
15. The problems caused by greater dispersal of urban activities, which have led to increased distances from home to shops, schools and leisure facilities, can be addressed by planning policies. However, this is difficult because the trend has been towards larger, more

²⁷⁵ Ogilvie D, Griffin S, Jones A, Mackett R, Guell C, Panter J, Jones N, Cohn S, Yang L and Chapman C (2010) Commuting and health in Cambridge: a study of a 'natural experiment' in the provision of new infrastructure, BMC Public Health, 10: 703, doi:10.1186/1471-2458-10-703, available from <http://www.biomedcentral.com/content/pdf/1471-2458-10-703.pdf>.

²⁷⁶ Mackett R L (2009) Why is it so difficult to reduce car use? Proceedings of the European Transport Conference, held at Leeuwenhorst Conference Centre, Noordwijkerhout, near Leiden, Netherlands, 5-7 October 2009, available from <http://www.etcproceedings.org/paper/why-is-it-so-difficult-to-reduce-car-use>.

centralised facilities and many of the facilities are owned and operated by the private sector, and the financial interests of the company are likely to be given precedence over the public interest.

16. Another approach to reducing the distance people need to travel is to increase residential densities. Densities fell with the suburbanization process, which led to longer trips, which, in turn, led some people to use cars rather than the alternatives. The increase in the forecast population has led to pressure to build on 'brown-field' sites largely within existing urban areas. This may cause densities to increase, but will not reduce the distance of existing residents from shops, schools and so on, unless new shops and schools are built to meet the increasing demand, and they are within walking distance of existing residents.
17. Even if these planning policies of increasing densities and providing local shops and services are implemented further, they will do little to reduce the problems caused by people who have moved to areas where they can only maintain their lifestyles by using one or more cars for all their trips. It is unlikely that many of them are going to return to high density urban living. However, it should be borne in mind that the population is dynamic: new households are being formed all the time, while others dissolve. This means that, whilst the existing households who have moved right out of the city may not move back, the equivalent households going through the stage in the life cycle when households in the recent past chose to move out, might come to a different conclusion and choose a more urbanised lifestyle. This suggests that it is important to target households before they move to rural areas. It also requires the provision of suitable housing to meet their needs.

The forecasting and appraisal system

18. The development of the road system in Britain is partly the result of the forecasting and appraisal system used (see WebTAG²⁷⁷ for further details). These methods were developed in the 1960s and 1970s. Whilst there have been a number of methodological improvements, the basic methodology has remained the same. It can be argued that the emphasis put upon economic efficiency in the appraisal of road schemes tends to favour schemes which encourage high levels of transfer from the slow modes of walking, cycling and bus to the faster mode of the car. This trend is exacerbated by the use of models which are based on assumptions of rationality that say that spending less time travelling is better than spending more time. This may be true for some forms of travel, but for walking and cycling, from the health perspective, the more time spent the better. This suggests that, if car use is to be reduced, there needs to be a fundamental rethink about the way that transport schemes are modelled and appraised to make environmental, health and social issues more central, perhaps, by replacing economic efficiency by quality of life as the over-riding criterion for determining the best scheme. The NATA (New Approach to Appraisal) system needs to be completely revised, involving a wide range of experts, not just economists.

The future

²⁷⁷ Department for Transport (2010) Transport Analysis Guidance – WebTAG, available from <http://www.dft.gov.uk/webtag/>.

19. I have indicated how difficult it is to reduce car use. However, given the problems that the car causes, something needs to be done. These issues are currently being considered in a project funded by the Department for Transport which I am leading. In the project, we are examining the evidence on the links between transport and physical activity which means mainly walking and cycling. The main conclusion from the review is that there needs to be new forms of access to the car to replace the current norm of individual households owning one or more cars. One of the most promising is 'car clubs', which are commercial organizations which households join by paying a subscription, and rent cars at fairly modest rates. This means that motoring costs move from a large fixed cost and low marginal costs towards a very low fixed cost and moderate marginal costs: this means that drivers would pay for each trip and could compare the costs with those of public transport on a more equitable basis than at present. There is evidence that because members of car clubs do not have instant access to a car and have to pay a more realistic cost for each trip, they make fewer car trips. They can use the car only for journeys that really need a car. 'Pay as you go' insurance is a step towards this for those who retain their cars.
20. The report from this project should be available in the next few months. A project to examine the potential of car clubs in Southwark came out of this project.
21. I am able to provide further information about all the projects in this area in which I have been involved and look forward to reading the evidence presented by others.

18 January 2011

Memorandum By Professor Gregory Maio, Professor Geoff Haddock, Cardiff University and Dr Katy Tapper, Swansea University (BC 2)

In 2007, one of the authors led the lifestyle change report for the Foresight Tackling Obesity Project, which was later published in the Journal of Social Issues and Policy Review (Maio et al., 2007). This report outlined several important principles that need to be considered in large-scale behavioural intervention and noted how these principles are common to different areas that attempt to alter behaviour. This report and a subsequent research project funded by the ESRC are highly germane to several questions raised in this call for evidence.

Research and Development

- What are the policy implications of recent developments in research on behaviour change?

*The Lifestyle Change Report emphasized that **the environment and the person interact to determine behaviour**. Consideration of one factor without the other may be disastrous, and the importance of both has been evident in interventions targeting a range of behaviours from speeding and intoxicated driving to eating an unhealthy diet and energy conservation. This basic principle continues to retain strong empirical support.*

- Is there adequate research capability within the United Kingdom to support the current pace of developments in behaviour change policy interventions? Is there sufficient funding for the evaluation of behaviour change interventions?

***Many strong grant applications are turned back because of lack of funds.** Without increased funding, it is difficult for creative, novel approaches to receive attention, while also examining traditional approaches thoroughly. Additionally, **it is vital that sufficient budget is set aside for the evaluation of new policy interventions.** Frequently this does not happen. However, without rigorous evaluation we do not know what works and what does not. As such we cannot learn from our mistakes or our successes and have no basis for moving forward. Although rigorous evaluation can be quite costly, such figures pale into insignificance compared with the costs of rolling out new policy interventions and with the potential savings if they prove effective.*

Cross-Government Coordination

- What mechanisms exist within government to coordinate and implement cross-departmental behaviour change policy interventions?

*Some behaviours are related to multiple aims. For example, increased use of active public transportation would help to reduce carbon emissions, decrease infrastructure strain, and improve health. Similarly, reductions in alcohol misuse would promote health, reduce child abuse and neglect, improve workplace performance, and increase life satisfaction. **Links between a behaviour and multiple departments signal the importance of the behaviour for concerted action. Yet, there is a lack of integrative cross-department units designed to tackle particular problem behaviours.***

Policy design and evaluation

- Should behaviour change interventions be used in isolation or in combination with other policy interventions?

The answer to this question depends on how behaviour change interventions are distinguished from other policy interventions. Our legislative system is in place to regulate behaviour by individuals and collectives, and the public accepts the necessity of this aim. The real question is whether policies aimed to promote public health should be labelled “behaviour change interventions” or called “public health interventions.” The latter term is more appropriate, because the intention of these policies is not to change behaviour *per se*, but to recognize that some behaviours are conducive to public health and others are not. **As noted above, this aim may require a combination of policy interventions.**

- Have publicly funded behaviour change interventions been both evidence-based and subject to effective evaluation? How successful have such interventions been?

Interventions since the Lifestyle Change Report have addressed the recommendations in some ways, but not in others. The most extensive work has taken place through the Change4Life campaign. This campaign is a good example of a “downstream” intervention, which attempts to modify the context around problematic behaviour, rather than deal with its earlier origins. The Lifestyle Change Report recommended that intervention also include a variety of “upstream” initiatives, which involve restructuring the environment to make it less necessary to persuade people through information campaigns. One of the reasons for this recommendation was that there is a high degree of psychological ambivalence toward healthy lifestyle choices. People must grapple with the temptation presented from unhealthy options on a daily basis; they will sometimes win and sometimes will not. As long as the environment makes unhealthy options easily accessible, the downstream approach faces an uphill battle. **To our knowledge, significant upstream policy interventions were not taken by the prior government.** The Lifestyle Change Report describes how such intervention can occur. Indeed, the UK government has implemented such interventions against smoking, but not considered similar steps for alcohol abuse and other behaviours that contribute to unhealthy lifestyles. Toothless policy forces people to swim upstream, and people are often happier with their options limited to some degree (Schwartz, 2004).

As noted earlier, it is important that publicly funded public health interventions are rigorously evaluated. Unfortunately this is often not the case. Many new policy interventions rely on evaluations that are primarily qualitative in nature and fail to include an appropriate comparison group. Whilst such evaluations can be informative in terms of public perceptions, when used in isolation they tell us little about real behaviour change and fail to meet the scientific standards required for publication in peer-reviewed journals. The **gold standard** for the evaluation of behaviour change interventions is a randomized controlled trial (Campbell et al., 2000). In order to conduct such an evaluation policy makers need to work with researchers during the early planning stages of an intervention to ensure that it is rolled out in a way that allows for the use of such methods (e.g., see Tapper et al., 2007).

Ethical considerations

- When is it appropriate for the state to intervene to influence the behaviour of members of the public and how does this differ from when it is appropriate for the commercial or voluntary sector to intervene? In particular, when should this be done by outright prohibition and when by measures to encourage behaviour change? Are some methods of producing behaviour change unacceptable? Which and why?

Industry and the voluntary sector don't face the same direct obligations unless government binds them to public concerns. It would be unethical for government to implement behaviour change programs without implicit approval from the public for very specific aims. Government routinely

*implements structural interventions (e.g., taxes) that function in this way for specific ends promoting public health (e.g., fines for speeding and failure to use seat belts). **When the end is democratically valued, people expect leadership to take legitimate action in support of those aims.***

- Should the public be involved in the design and implementation of behaviour change policy interventions and, if so, how? Should proposed measures for securing behaviour change be subject to public engagement exercises or consultation? Should they be piloted? Do considerations differ in the case of interventions aimed at changing addictive behaviour?

Accountability can involve public debate, and there is evidence that public debate can actually help to introduce strong interventions. *For example, research in Japan has found that public debate was a useful tool for introducing a system of charging for waste disposal – a charge that was not popular before the debates (Ohnuma, 2010). Universities possess expertise that can be an independent and trusted source of testimony, but are often underutilized in the public consultation exercise.*

International Comparisons

- What lessons can be learnt from previous successful or unsuccessful behaviour change interventions in other countries? Which countries provide the most helpful examples of best practice? Are behavioural change interventions generally transferable between different societies?

It may be useful to consider tax credits or grants for parents who enroll their children in active recreational activities, similar to a program instituted in Canada during recent years.

Tackling Obesity

- The Committee would particularly welcome submissions on behaviour change interventions, whether in the public sector, the private sector or by voluntary organisations, designed to tackle obesity, in the United Kingdom or internationally, in order to examine:
 - a. the latest developments in the evidence-base in relation to changing eating and physical activity behaviour;

*Most prior interventions have neglected the role of values in behavior. **A recent ESRC-funded research project has found support for the hypothesis that people who value health often lack a coherent understanding of why they value health, and this may help to explain some of the difficulties that people encounter trying to sustain healthy behavior (Tapper, Maio, Haddock, & Lewis, 2009-2012).** These data suggest that values play a more important role in behaviour change than has been appreciated thus far.*

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Memorandum By Professor Gregory Maio, Professor Geoff Haddock, Cardiff University and Dr Katy Tapper, Swansea University (BC 2)

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October 2010

Memorandum by Matrix Evidence (BC 95)

Questions

Research and Development

I. What is known about how behaviour can be influenced?

The issue of behaviour change is of particular interest to governments both here and the US. Richard Thaler and Cass Sunstein, Chicago University academics, are co-authors of a book called *Nudge*, published in 2008, which has been influential in this sphere. Richard Thaler is currently advising a behavioural insight team at the Cabinet Office. A central premise of the book is that because humans don't always make rational choices, markets sometimes operate inefficiently. Consequently government, using the principles of behavioural economics, can gently persuade people to act in their own and the wider community's interests rather than using legislation to influence change. The Cabinet Office, in collaboration with the Institute for Government, has explored ideas from *Nudge* in the context of UK public policy in a report entitled *MindSPACE: Influencing behaviour through public policy*.

Both *Nudge* and *MindSPACE* provide several examples of how behavioural economics might be effective in changing attitudes and behaviours to environmental issues. However, as yet very little has been done to systematically review the evidence for what works in this area. A review should look at the quality of the evidence base in this field, supplementing findings by identifying studies on interventions to change behaviour and attitudes across a wide range of areas and sectors including health, public health, education and crime.

When it comes to evaluating the extent to which policy can be effective in this domain, it is important to consider both attitudes and behaviours as outcomes. One meta-analysis concluded that a medium-to-large change in intention leads to only a small-to-medium change in behaviour²⁷⁸. The challenge of a review of this area would be to identify approaches and interventions that have consistently been found to be effective at changing behaviour and its underlying attitudes and beliefs across a range of behaviour types, which can therefore be implemented in specific policy areas with a reasonable degree of confidence. A review should also seek to identify those key interventions that have been shown to be effective in certain specific scenarios, which may be less generalisable, but still inform thinking on what might or might not work in climate change. For example, **behavioural therapies** have been found to be ineffective at reducing recidivism in youth crime²⁷⁹, but have been shown to be effective at helping obese children lose weight²⁸⁰, or to improve glycaemic control in people with type I diabetes²⁸¹.

²⁷⁸ Webb, T.L., & Sheeran, P. (2006). Does changing behavioral intentions engender behavior change? A meta-analysis of the experimental evidence. *Psychol Bull*;132(2):249-268.

²⁷⁹ McMurran, M. (2007). What works in substance misuse treatments for offenders. *Criminal Behavioural Mental Health*;13: 59–76.

²⁸⁰ Oude Luttikhuis, H., Baur, L., Jansen, H., et al.(2009). Interventions for treating obesity in children. *Cochrane Database Syst Rev*;1:CD001872.

²⁸¹ Conn, V.S., Hafdahl, A.R., Lemaster, J.W. et al. (2008). Meta-analysis of health behaviour change interventions in type I diabetes. *Am J Health Behav*;32(3):315-329.

The health sector, in particular, is likely to be a fruitful source of information on behaviour and attitude change. There is an extensive evidence base on interventions to change deleterious behaviour such as smoking, overeating, alcohol and drug abuse and risky sexual behaviour. Although these traits may, superficially, seem to have little in common with behaviour in other domains, there are some similarities. In each case, social groups of friends and family are likely to have an impact on the behaviour. The behaviours themselves are increasingly becoming socially unacceptable, but the individual is likely to resist attempts to change, regardless of knowing that they (and people around them, such as in the case of alcohol abuse) may be directly harmed from their behaviour.

The key to the interventions for review is that they should seek to change behaviour that society wants to change, but the individual themselves may well *not* want to change. In order to maintain this focus, certain areas may not be included, for example, studies looking at strategies to increase compliance with medication.

In contrast, there is a range of other interventions that are more transferable to environmental issues. Some examples are as follows:

Cognitive behavioural therapy is widely used for a range of health and mental health problems, and has been found to be effective in treating antisocial behaviour in adolescents and adults²⁸². It has been used as treatment for physically abusive men convicted of domestic violence, although there is not enough evidence to determine whether it is effective²⁸³.

Motivational interviewing, a directive, patient-centred form of counselling that is designed to help people explore and resolve ambivalence about behaviour change, has been shown to be effective at increasing smoking quit rates²⁸⁴, and improving HIV viral load in US adolescents with at least one risk behaviour²⁸⁵.

Dissonance-based interventions encourage participants to act in a way that is contradictory to their original attitude in the hope that they may shift their attitude to reduce the dissonance. Dissonance-based interventions have been used to tackle eating disorders, obesity, phobias, smoking, substance abuse, unsafe sexual behaviours and dating aggression, and have been shown to have the ability to produce lasting behavioural change.²⁸⁶

Group therapy has been found to be more effective than individual therapy at reducing weight in obese participants, with psychologist-led interventions particularly effective.²⁸⁷

²⁸² Armelius, B.A., & Andreassen, T.H. (2007). Cognitive-behavioral treatment for antisocial behavior in youth in residential treatment. *Cochrane Database Syst Rev*;17(4):CD005650.

²⁸³ Smedslund, G., Dalsbo, T.K., Steiro, A.K., et al. (2007). Cognitive behavioural therapy for men who physically abuse their female partner. *Cochrane Database Syst Rev*;3:CD006048.

²⁸⁴ Lai, D.T., Cahill, K., Quin, Y. et al. (2010). Motivational interviewing for smoking cessation. *Cochrane Database Syst Rev*;1:CD006936.

²⁸⁵ Naar-King, S., Parsons, J.T., Murphy, D.A., et al. (2009). Improving health outcomes for youth living with the human immunodeficiency virus: a multisite randomized trial of a motivational intervention targeting multiple risk factors. *Arch Pediatr Adolesc Med*;163(12):1092-1098.

²⁸⁶ Stice, E., Shaw, H., Becker, C.B., et al. (2008). Dissonance-based interventions for the prevention of eating disorders: using persuasion principles to promote health. *Prev Sci*;9(2):114-128.

²⁸⁷ Paul-Ebhohimhen, V., & Aveness, A. (2009). A systematic review of the effectiveness of group versus individual treatments for adult obesity. *Obes Facts*;2(1):17-24.

Financial rewards were found to be effective at encouraging obese patients to lose weight²⁸⁸, but have been shown to have at best a short term effect on smoking quit rates, with success dissipating once the incentive is withdrawn.²⁸⁹

Brief intervention therapies have been investigated as interventions to reduce alcohol consumption in heavy drinkers, with varied effect sizes across studies and subpopulations^{290, 291}.

Important factors in the battle to change attitudes and behaviour of individuals are the attitudes and behaviour of those key practitioners seeking to influence them – the doctors and nurses who aim to persuade patients to stop smoking or lose weight, the teachers who want their pupils to attend classes and allow others to learn, and the probation officers and community police whose aim is to reduce participation in crime or violent street gangs. Systematic reviews are required to identify successful strategies to educate, motivate and support these key professionals, and recognise the barriers they experience in effectively targeting deleterious behaviour in their clients.

8 October 2010

²⁸⁸ Paul-Ebhohimhen, V., & Aveness, A. (2009). A systematic review of the effectiveness of group versus individual treatments for adult obesity. *Obes Facts*;2(1):17-24.

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²⁹⁰ Jenkins, R.J., AcAlaney, J., & McCambridge, J. (2009). Change over time in alcohol consumption in control groups in brief intervention studies: systematic review and meta-regression study. *Drug Alcohol Depend*;100(1-2):107-114.

²⁹¹ McQueen, J., Howe, T.E., Allan, L., et al. (2009). Brief interventions for heavy alcohol users admitted to general hospital wards. *Cochrane Database Syst Rev*;3:CD005191.

Memorandum by Dr Peter Mathews, Pedagogic Consultant (BC 14)

Behaviour Change Interventions and Achieving Government Policy Goals

I: INQUIRY SCOPE

The inquiry will examine our current state of knowledge about what interventions can effectively influence behaviour, how behaviour change interventions which have been designed on the basis of that knowledge can be used to achieve policy goals, and what factors should be taken into account by government in determining whether a particular behaviour change intervention is appropriate. It will look at the evidence base that supports current behaviour change interventions and at the effectiveness of those interventions. In particular, the inquiry seeks to examine:

- a) the policy implications of recent developments in research on behaviour change;
- b) whether current government behaviour change interventions are evidence-based, whether such interventions are appropriately evaluated, and if lessons have been learnt from the process and then applied to further interventions;
- c) whether there is sufficient expertise within public services (for example, local authorities and the NHS) to ensure that interventions are evidence-based, and implemented and evaluated effectively;
- d) the extent to which behaviour change interventions require a mixture of different tools to succeed;
- e) how behaviour change interventions and activities are coordinated across government and beyond;
- f) the extent to which, and ways in which, government should be accountable to, or engage with, the wider public about the use of behaviour change policy interventions;
- g) the role of industry and the voluntary sector in shaping behaviour patterns;
- h) the relationship between government, industry and the voluntary sector in promoting behaviour change to achieve policy goals; finally,
- i) the social and ethical issues surrounding the use of behaviour change interventions by government.

2: PREFACE

The task of presenting evidence to this inquiry involves a number of interlocking issues that are not easily resolved by answering, in a one-to-one manner, the inquiry's general or detailed questions.

The form and content of the presentation of the evidence has been dictated by:

- a) the nature of a proposal about a behaviour change intervention based on a body-mind phenomenon which is acknowledged by solicitors, crown court judges, employment tribunal panels, educational tribunal panels, civil courts (for RTA litigation), parents of evaluated children, and adults but critically not by critical regulatory bodies (e.g. British Psychological Society, the Health Professionals Council), or expertise certifying authorities (e.g. Bond Solon Cardiff University Expert Witness Accreditation),
- b) recent personal history in trying to disseminate the required behaviour change intervention systemically within:
 - i. the Department of Children Education and Families and the Ministry of Justice
 - ii. the British Psychological Society, the Health Professionals Council and Universities' Council for the Education of Teachers,
 - iii. the Bond-Solon Cardiff University Expert Witness Certification Scheme,
 - iv. Warrington Borough Council
- c) the use of Pepper's *World-Hypotheses: A Study in Evidence* as a policy maker's and practitioner's tool,

3: CORE PHENOMENON: LATENT / CONVERTED HANDEDNESS

The phenomenon referred to here as latent / converted handedness has little to do with *laterality*, brain function and human conduct - performance. Laterality is measured by quantitative tools such as the Edinburgh Handedness Inventory. By way of fundamental contrast, *latent / converted handedness* is defined qualitatively as *writing with the non-adept hand*: in short there is a mis-match between the writing and the adept hand. This is, however, merely shorthand for saying that the brain is having to function in a non-efficient manner. It arises from a variety of tacit family and explicit cultural imperatives. It forms the basis for a policy implementation proposal under 4:1 below. Difficulties in disseminating information about, and implementing this behaviour change intervention has been presented as a case study evidence in Annex V.

The manner in which the phenomenon has been either ignored or treated by a variety of professional and academic institutions confirms the enduring validity of Lourie & Lourie's critique of child help agencies. Set against the difficulties trying to implement this 'simple' behaviour change intervention this case hints at the complexity of the government's task in trying to implement a more 'complex' behaviour change intervention.

The mis-match between the writing and the adept hand, labelled latent / converted handedness, is remarkable in at least four respects:

3:1 it is an identifiable co-factor in a wide variety of childhood and adulthood presenting problems,

3:2 because it is an unacknowledged core body-mind condition in the UK, no provision is made for identifying or treating it,

3:3 it is, however, an acknowledged and treated condition in at least one other European country, Germany, through the work of Dr Johanna Barbara Sattler, with whom I have been working,

3:4 it has been accepted, on a case-by-case basis, as a factor in a variety of presenting problems by a variety of institutional agents and individuals [see ANNEX Cases]

4: POLICY PROPOSAL: LATENT HANDEDNESS AND PEPPER'S RIDDLE

This proposal for a governmental behaviour change intervention policy has two strands: latent / converted handedness - with three facets: practical, conceptual and legislative and Stephen Pepper's World Hypotheses: A Study in Evidence, which I have characterised as Pepper's Riddle.

4:1 Latent / converted handedness

4:1:1 **Practical:** Establish a Working Party - Unit - Centre for Latent / Converted Handedness in the UK. The model for such provision existed long ago with the MRC's Speech & Communication Unit in Edinburgh, under the direction of Professor Oldfield and currently at the Consulting Center for Left-Handers and Converted Left-Handers under the direction of Dr Sattler in Munich, Germany.

4:1: 2 **Conceptual:** Use Stephen Pepper's six world-views / mind-sets /explanatory schemes as a 'riddle' to sift facts, knowledge and evidence with respect to policy proposals and,

4:3 **Legislative:** Amend SEN Statementing legislation re-the role of educational psychologists, OR the British Psychological Society has to alter its stance on latent / converted handedness OR the Health Professionals Council has to assume responsibility for such assessments.

4:2 Pepper's Riddle: Pepper's riddle, consisting of six different world hypotheses, acts as a policy maker's and practitioner's tool since:

4:2:1 it reduces the infinity of presented facts to six evidential explanatory schemas / epistemological footings,

4:2:2 used as an ontological hierarchy, it frames the transition of 'novice' to 'expert' status, where expert status is defined in terms of desired behaviour changes.

29 September 2010

Letter from the Max-Planck Institute for Evolutionary Biology (BC 7)

In collaboration with the Max-Planck-Institute for Meteorology at Hamburg we have performed an experiment with volunteer students using techniques from experimental economy to study whether humans are likely to prevent simulated dangerous climate change. The results of the study **The collective risk social dilemma and the prevention of simulated dangerous climate change** have been published in the Proceedings of the National Academy of Sciences USA 105, 2291-2294, in 2008. The study lead to discussion in the media, e.g. in Nature Reports Climate change (attached).

In our paper we analyze a previously unstudied type of social dilemma, which we call the “collective risk social dilemma”. Despite its importance, the collective risk social dilemma has not previously been investigated either theoretically or in a controlled experiment. We describe a general approach, with wide application and need for mathematical modelling.

We describe a general social dilemma, of which avoiding dangerous climate change is but one though important example. The dilemma is, will a group of people reach a collective target when everybody would lose her savings upon missing the goal? This dilemma cannot be studied with the well-known public goods game. A new experimental approach has to be designed. This “collective risk social dilemma” exists in various social scenarios, of which we list several in the introduction. The problem of how to prevent dangerous climate change was no doubt our first incentive to design this experiment. Our analysis depicts a rich toolbox of strategies that individuals use as test of, incentive for, or signal of motivation to reach the collective goal, describing the social window that humankind has to successfully avoid dangerous climate change.

We have written the paper, emphasizing strongly the general aspect of the “collective risk social dilemma”, which we explain in detail in the introduction and take up in the discussion. We simulated the inherent problem of this social dilemma in an experiment with groups of six students each at the Universities of Cologne and Bonn. The students were provided with an endowment of €40 each and knew that they would be asked in each of 10 rounds whether they wanted to invest anonymously €0, €2 or €4 in the ‘climate account’. The students knew that if they succeeded as a group to invest at least €120 during the 10 rounds, i.e. €2 per person per round on average, everybody in the group would receive what she had not spent during the game in cash, e.g., €20 if everybody had invested €2 per round. If the group failed to reach this collective goal, the computer “threw dice” with a probability of 90% that every group member would lose all his savings. In two other treatments, also with 10 groups of 6 students each, this probability was 50% or 10%, respectively.

When the risk of simulated dangerous climate change was high, half of the groups succeeded in avoiding it and the other half came close (i.e. almost reached the target sum). But serious problems were found when the risk of dangerous climate change was perceived to be unrealistically low. Then the efforts toward reaching the collective target failed. We conclude that the majority of “players in the real game” (all humans on earth) need to be convinced that the risk of dangerous climate change is real and will occur with a high probability if humankind is not able to reduce global CO₂ output dramatically until 2050.

Letter from the Max-Planck Institute for Evolutionary Biology
(BC 7)

We have continued this research including larger group sizes and inequality in wealth to simulate problems at climate conferences when poor and rich countries could not agree on respective contributions. Results are to be published soon.

17 September 2010

Memorandum by Professor Alan Maynard, University of York (BC 109)

Alan Maynard is a Professor of Health Economics in the Department of Health Sciences and the Hull-York Medical School, University of York. He was Founding Director of the Centre for Health Economics (1983-95) and was involved in NHS management for 27 years, retiring earlier this year after twelve years as Chair of York Hospitals NHS Foundation Trust. He has worked as a consultant for the World Bank, the WHO and the UK-DFID in over two dozen countries. He is a Fellow of the Academy of Medical Sciences and was awarded to OBE in 2009 for services to the NHS.

Introduction

The purposes of this paper are to note:

- i) Investment in the prevention of obesity has been poorly evaluated, and to the extent that there is an evidence base this demonstrates a lack of long term effects for some interventions and a failure to measure the cost of most interventions targeted at altering people's behaviour. Measuring effect and ignoring cost, does not produce pertinent information to inform investment decisions in a world of scarce economic resources. Focus on effectiveness (does it work?) rather than efficiency (i.e. the relationship between the value of the effect or benefit and the value of what is given up, opportunity cost) can waste society's scarce resources.
- ii) investment in the treatment of obesity, in particular with bariatric surgery, appears to be relatively cost effective (e.g. Office of Health Economics (2010)) but raises the nice issue of its opportunity cost i.e. if the NHS budget is relatively static for the next five years, which existing services will be cut to free up funding for increased investment in this type of surgery?
- iii) The use of taxation and advertising controls has been an effective way of altering behaviour in the markets for alcohol and tobacco. The use of taxation to alter sugar, salt and fat consumption would also raise revenue in a fiscally difficult period and "nudge" providers to develop the development and marketing of less harmful products. This is particularly pertinent in the market for sugary drinks which are a major cause of childhood obesity.

Investing "upstream" i.e. in prevention

It is attractive in principle to prevent illness "upstream" and prevent ill health rather than invest in the treatment of citizens "downstream" when the effects of their behaviours lead to diabetes, renal and heart disease and cancer and the need to use expensive NHS interventions.

This ideal is extolled by the public health lobby. Whilst their incantations are logical and may be superficially attractive, all too often their advocacy is "evidence lite". In part this is a reflection of well meaning enthusiasm in public health and government circles and reminiscent of what is known to the Civil Service as the "Politicians' Syllogism":

Step one: We must do something

Step two: This is something

Step three: Therefore we must do it.

(Yes Prime Minister, volume 2 (1987))

Whilst ensuring an appropriate dose of “scepticaemia” to such policy making processes, there are important issues to be borne in mind. Evaluation of the costs and benefits of public health investments is inherently complex and difficult. Often the evaluation methods used are poor.

Prevention enthusiasts tend to focus on measures of effects, and fail to identify the value of what is given up, cost, in achieving these results. Whilst it is accepted that randomised controlled trails (RCTs) and quasi-experimental methods are the best methods for evaluating social experiments, quite often trail designs are descriptive rather than quantitative (Cook and Campbell (1979)).

Even when good evaluation designs are used, there is the problem of duration of effect. Thus recent enthusiasm for paying people to diet seem to have effects similar to well know programmes such as Weight Watchers i.e. attrition is usually high and accelerates considerably after the removal of the financial and non financial stimulus. A recent American study reported an attrition rate of 76 per cent by the end of a year when patients were incentivised to lose weight (Cawley and Price (2009))

In the last decades emphasis on prevention has shifted from mere health messages and education to efforts to reward behaviour change with financial rewards. There is now a substantial literature on these prevention interventions. However a systematic review of the literature found “no significant effect of financial incentives on weight loss maintenance at 12 and 18 months” (Paul-Ebhohimhen and Avenall (2007))

An additional consideration is that investment in education usually has a differential effect on different social groups with the middle classes changing behaviour more than the lower social classes thereby creating increases in health inequality. Targeted interventions with social marketing have potential but need careful evaluation.

As a consequence of these problems, guideline setting organisations such as the National Institute for Health and Clinical Excellence (NICE) find the evidence base even more barren that that produced by a pharmaceutical industry anxious to sell if often marginally cost effective wares! As ever the problem may not be inadequate investment in evaluation but poor design and reporting of trials.

Investing “downstream” i.e. in treatment

A significant growth industry within all affluent health care systems is bariatric surgery, which involves banding the stomach to reduce its capacity and thereby inducing weight loss. The Royal College of Surgeons and manufactures of bariatric device sponsored a recent study by the Office of Health Economics (Office of Health Economics consulting, “Shedding the Pounds” (2010)). This study demonstrated that bariatric surgery was a cost effective intervention for the NHS to fund and this is supported by National Institute for Health and Clinical Excellence (NICE) guidance. The evidence also shows that patients benefit from

subsequent cosmetic surgery and counselling support as they deal with the excess surplus “skin droop” and psychiatric challenges of weight change.

The nice issue about this study is the opportunity cost of expanding bariatric surgery. With the NHS budget “protected” by a ring fence and patient demand rising with the ageing of the population, technological change and rising expectations, what existing services will be cut to fund the expansion of bariatric services?

Service expansion in the NHS was easier during the noughties, but the teens will again bring health care rationing sharply into focus. Rationing involves depriving patients of care from which they could benefit and which they would like to have. Society rewards doctors to be social rationers i.e. decide who will live and who will die in what degree of pain and discomfort.

The politics of the medical profession are usually such that “shroud waving” leaders in medicine and surgery attract funding and this often leads to deprivation of funding of public health and end of life care.

Ignoring the NHS challenges created by the problem of opportunity cost of bariatric surgery by muddling through may be politically attractive but economically inefficient. The temptation for health professions and politicians to increase investment in bariatric surgery may not only have a significant opportunity cost but also enable decision makers to ignore the use of fiscal policy and interventions such as advertising controls.

Changing the flow of the stream

The British Heart Foundation point out that a packet of crisps each day in a school pack-up is equivalent of swallowing nearly 5 litres of cooking oil. The one in five children who consume two packets of crisps each day consume over 9 litres of cooking oil per year. Crisps are intensively advertised with sports personalities such as the former footballer Gary Lineker fronting the “reasonable face” of this unhealthy behaviour.

When **advertising** controls were discussed in past decades as means of altering tobacco and alcohol consumption, industry proved to be a powerful opponent. The use of such controls and regulations such as smoke free public places has had significant effects on the use of tobacco in particular.

Restriction of advertising of sugary drinks and fatty foods such as crisps would be opposed by industry as it would affect profits and market share. These industry losses have to be set off against the health benefits, to children in particular, of such controls.

Similar considerations arise in regulation to restrict **access** to sugary products. It is ironic that increasing numbers of obese children are presenting for bariatric surgery in NHS facilities that are selling products which create their weight gain! Attempts to ban such sales of sugary drinks and fatty foods such as crisps in the NHS are greeted with incredulity, fear of loss of revenues and increased emphasis on fruit juices, which are equally fattening!

The price of food impacts on consumption e.g. Lakwala and Phillipson (2002) attribute half the growth in US weight since the 1970s to food price reduction. In the USA a considerable number of jurisdictions have introduced local **taxes** on sugary drinks. The impact of these taxes is modest but it is argued that they have accelerated industry innovation in introducing

less sugary products. The revenue from such taxes could also be used in part or in whole to fund demonstrably efficient public health advertising.

Debates about tobacco taxes have shown that like health promotion, they may have differential effects on social classes. “Weaning” infants on sugary drinks and confectionary rots their teeth and increases the probability of obesity. Such extreme behaviours by poorly educated families living in or near poverty if confronted by tax hikes might distort family budgets and possibly have limited effects on behaviour. Responses such as these have to be tested and the trade-offs between future health and current freedoms confronted.

The use of advertising controls and taxation policy will be opposed by industry but as with tobacco and alcohol interventions, they are likely to alter behaviour. They have the merit that they signal both to producers and consumers that behaviour should alter.

Conclusions

Despite a pay freeze for two years and promised funding growth of 1.3 per cent for the NHS for the next five years, the service faces severe budgetary challenges as the population ages and chronic diseases increase as, for instance obesity affects people’s health

When the late Sir Richard Doll published his research identifying clearly the link between tobacco and cancer, its impact was limited initially and had to be reinforced by investments in “healthy messages”, advertising controls and taxation increases.

The parallels with reducing the harmful effects of obesity are worthy of careful consideration. Using advertising controls and levies could generate finance for carefully crafted and targeted anti-advertising or “health messages” which could support media income flows, thereby reducing their opposition. Similarly taxation of sugary drinks and high fat products could be used to press home the risks of high consumption of these products. This could be facilitated by clear systems of “traffic lights” on products whose potential harm is high i.e. “red” products get taxed.

Given the likely opposition of industry to such regulations, a gradual approach would be prudent. Gradualism could be used to signal intention clearly and incentivise entrepreneurs to invest in safer products so as to protect profits and shareholders.

October 2010

Memorandum by Dr David Metz, visiting professor, Centre for Transport Studies, University College London, formerly Chief Scientist, Department for Transport (BC 122)

Summary

There is evidence that some people can be persuaded to give up car use through behavioural interventions, but little evidence that such measures in isolation can reduce traffic levels. It is, however, possible to reduce the relative share of journeys made by car through a comprehensive approach to transport planning, as demonstrated in London, where car use has been in decline since the early 1990s.

Context

1. The scope for effecting behavioural change to reduce car use in towns and cities needs to be seen in the context of the development of demand for personal travel.
2. Personal daily travel, as measured in the National Travel Survey, has been steady since 1995 at 7000 miles and 1000 journeys per person per year (excluding international aviation), and there is no reason to expect this to increase in the future.²⁹² It follows that future traffic growth will be driven largely by population growth, given that the present population of Great Britain of 60m is projected to increase to 70m by 2035. However, much will depend on whether the additional population is housed on greenfield or brownfield developments.
3. Greenfield housing is associated with car use and will require more and better managed road capacity. The travel implications of brownfield development can be seen in London, where the population has increased by nearly a million over the past two decades, within existing boundaries. Car use, as a proportion of total journeys, has declined and public transport use has risen, as population density has increased.²⁹³ This decline in car use in an economically vibrant world city is remarkable, given that, historically and globally, car use has risen as incomes have grown.
4. In recent years, 80% of new dwellings in Britain have been on brownfield sites.²⁹⁴ Were this proportion to be maintained in the future, the impact of population growth on car use would be modest.
5. The population of Britain is not only growing. In common with other developed countries, it is ageing. The proportion of older people is increasing, as life expectancy increases and as the baby boom cohort moves into later life. Mobility is important for quality of life, and loss of mobility in later life is detrimental, not just in respect of access to desired destinations, but also loss of the incidental benefits – getting out and about, exercise and social engagement.

²⁹² D Metz (2010) 'Saturation of demand for daily travel', *Transport Reviews* 30(5), 659-674

²⁹³ http://www.tfl.gov.uk/assets/downloads/corporate/Travel_in_London_Report_2.pdf

²⁹⁴ <http://www.communities.gov.uk/publications/corporate/statistics/housingplanningstatistics2010>

6. Population ageing has implications for travel demand and for transport provision. A key issue is the timing of giving up driving, usually prompted by the cumulative impact of a number of minor disabilities – visual, hearing, musculo-skeletal, and cognitive. Alternative means of mobility and access are then needed, the demand for which will increase as the population ages. One response has been the provision of free off-peak travel on buses for older people. Another is the growing use of pavement-running mobility scooters, well suited to preserving personal mobility in dense urban areas for those with ambulatory disabilities.
7. A further noteworthy demographic trend in Britain is the decline in driving licence holding by men in their twenties, from a peak of over 80% to 67% currently. The most common reasons given by this group for not driving are the cost of learning to drive, of car ownership and insurance. Possible further factors are the larger proportion of the age group entering higher education, where the car is not central to the student life style, and the increasing reliance on mobile phone and internet technology for keeping in touch.

Behavioural change: possibilities

8. In recent years, there has been a growing interest in a range of transport policy initiatives which are designed to influence people's travel behaviour away from single-occupancy car use and towards more benign and efficient options, through a combination of marketing, information, incentives and tailored new services – often described as 'Smarter Choice' measures. Such measures include workplace and school travel plans, personalised travel planning, information and awareness campaigns, car clubs and car sharing schemes, and tele-working, -conferencing and –shopping. It has been claimed that Smarter Choice measures have the potential to reduce national traffic levels by about 11%.²⁹⁵
9. Both older people and younger people could be new target groups for Smarter Choice campaigns. Older people may be persuaded to give up the car earlier, and younger people to defer car ownership for longer, if the needs for access and mobility of both groups could be met adequately in other ways. The crucial requirement is to reside in an environment of sufficient population density that easy access to frequent destinations is possible using modes other than car.
10. Particularly relevant to young adults is the trend of increasing urban density in inner city areas, first seen in London, which has spread to other economically buoyant British cities over the past decade, including Manchester, Nottingham, Bristol and Sheffield, as employment in finance, creative and business services has grown. This reflects a break from the previous long term trend of declining inner city populations and shift of employment to low density residential areas in the urban periphery and beyond. The phenomenon is at its most intense at Canary Wharf where 100,000 people work in a dense urban complex that has grown up over the past twenty years, relying on rail access, and with only 3000 parking spaces.

²⁹⁵ Cairns S, et al 2008, Smarter Choices: assessing the potential to achieve traffic reduction using 'soft measures', *Transport Reviews*, 28(5) 593-618.

11. Dense inner cities are not attractive to most older people. Nevertheless, living in conveniently located districts of seaside and market towns and in mature suburbs will offer readier access to facilities than living in more remote areas.

Behavioural change: constraints

12. Although there is good evidence that some people can be persuaded to make less use of their cars, we lack evidence that this results in significantly lower levels of traffic. For instance, in the three pilot Sustainable Travel Towns, in which Smarter Choice measures were promoted, household surveys indicated a reduction of car trips per person of 9% on average, whereas the observed reduction in traffic was estimated at only around 2%.²⁹⁶ In part this may be due to traffic uninfluenced by the intervention, such as through traffic and commercial vehicles.
13. A further reason is that the success of Smarter Choice measures depends on the reduction in car use by some people *not* being offset by greater car use by others, who take advantage of reduced congestion to make more and/or longer car trips – known as ‘induced traffic’. Hence there is a need to ‘lock in’ the benefits of the ‘soft’ behavioural interventions by complementary ‘hard’ measures that result in, for instance, reallocation of road capacity to buses, cyclists or pedestrians and parking controls. Such complementary measures were not adopted in the Sustainable Travel Towns.
14. If, as seems to be generally agreed, complementary hard measures are needed to lock in the benefits of soft measures, the question is then which kind is the more important. Arguably, it is the hard measures that really matter – these have teeth. The soft measures would be seen as facilitating – helpful but not essential since people would learn to adapt to the hard measures in any event. From this perspective, it is the interventions which *oblige* behavioural change that can be relied upon to reduce traffic and carbon emissions. The interventions that only *incentivise* behavioural change persuade some people but not all, thus allowing a ‘rebound’ in the forms of more and/or longer car journeys by those not persuaded.
15. A further constraint on behavioural measures to reduce car use is that access is thereby reduced for those for whom the car provides the quickest door-to-door journeys. It is likely that those who are persuaded to give up the car are those for whom this is practicable at the time, on account for instance of living conveniently close to work, or not having children to escort. If circumstances change – a new job or a new child – these people could be back in their cars, although there would be others for whom circumstances changed the other way who could be targeted for the Smarter Choice treatment.

Governance

16. The evidence suggests that behavioural change to reduce car use can have a modest but significant role as part of a comprehensive approach to transport provision. This in turn requires governance arrangements that foster such an approach. In London, the Mayor has responsibilities in respect of economic development, housing, land use and transport. Car use in London has been declining, from a peak in the early 1990s when 50% of all

²⁹⁶ <http://www.dft.gov.uk/pgr/sustainable/smarterchoices/smarterchoiceprogrammes/pdf/summaryreport.pdf>

journeys were by private transport, to 41% currently, with a corresponding increase in public transport's share.²⁹⁷ This trend is expected to persist as the population continues to grow, with car mode share projected to be 37% in 2031.²⁹⁸ The Mayor wishes to promote walking and cycling, seeking a 4-fold increase in cycle trips and a 5% mode share by 2016, in part through the cycle hire scheme and the cycle superhighway routes.

17. What London demonstrates is that a steady reduction in the share of car trips can be achieved over many years through a comprehensive approach involving hard measures such as parking constraints and congestion charging in the context of a non-enlargeable road network; substantial investment in public transport; planning policies that encourage high density living and the revival of the inner city; as well as the promotion of cycling and walking. Behavioural change measures alone cannot be expected to have a comparable impact.
18. Regrettably, the governance arrangements for transport in other parts of England do not at present facilitate the comprehensive approach possible in London. Perhaps the most useful means to reduce car use in other cities would be to instigate City Region governance of transport, regeneration and economic development, as recently announced for Manchester.²⁹⁹

January 2011

²⁹⁷ <http://www.tfl.gov.uk/assets/downloads/corporate/travel-in-london-report-3.pdf>

²⁹⁸ http://www.london.gov.uk/sites/default/files/MTS_part_one_0.pdf

²⁹⁹ <http://insidethem60.journallocal.co.uk/2010/12/03/whitehall-grants-new-powers-for-proposed-manchester-city-region/>

Memorandum by the National Obesity Observatory (NOO) (BC 42)

I. Background

- I.1 The National Obesity Observatory (NOO) provides a single point of contact for wide-ranging authoritative information on data, evaluation and evidence related to weight status and its determinants.
- I.2 NOO is a specialist observatory and a member of the [Association of Public Health Observatories](#), and is sited alongside the [South East Public Health Observatory](#). The National Obesity Observatory works closely with a wide range of organisations and provides support to policy makers and practitioners involved in obesity and related issues.
- I.3 NOO was established in December 2007 and received core funding from the Department of Health in April 2008. The main functions of the Obesity Observatory are to:
- Analyse, signpost and report on obesity and related surveillance data
 - Produce evidence and data briefings
 - Develop innovative analytical and data presentation tools
 - Describe and map data on weight status and associated indicators
 - Develop guidance and tools to support the evaluation of interventions targeted at obesity
 - Provide guidance and support to policy makers and practitioners working to tackle obesity
 - Communicate relevant developments and information on obesity and its determinants.
- I.4 In this submission we address our attention to question 16 which focuses on obesity and asks for “...submissions on behaviour change interventions, whether in the public sector, the private sector or by voluntary organisations, designed to tackle obesity, in the United Kingdom or internationally, in order to examine:
- a. the latest developments in the evidence-base in relation to changing eating and physical activity behaviour;
 - b. who are the most effective agents for the delivery of behaviour interventions to tackle obesity;
 - c. how current behaviour change interventions tackle obesity and what use is made of available scientific evidence;
 - d. whether such interventions are appropriately designed and evaluated; and
 - e. what lessons have been learnt and applied as a result of the evaluation process.

2. The background context

2.1 The challenge of obesity: a complex adaptive system

Obesity is the result of a large number of interacting influences, working at individual, family, group and societal levels. Behaviour change is an important element in tackling this complex adaptive system, but it must not be treated in isolation. We think it is essential to consider the nature of the environment in which these behaviour change interventions take place.

- 2.2 The NOO Director was closely involved with the drafting of the influential Foresight report on obesity (Butland et al., 2007) which focused on taking a systems approach to obesity. The report stated:

“...energy balance (or imbalance) is determined by a complex multifaceted system of determinants (causes) where no single influence dominates. Altering this complex system to tackle obesity will be far from straightforward. Currently, the evidence for effective preventative measures is weak. There are few international examples of success on which the UK can draw, although a growing number of demonstrator projects offer some promise.” (Butland et al., 2007, page 7).

- 2.3 We think the Committee would benefit from considering the Foresight report in some detail, to provide important context to consideration of the challenge of behaviour change. The critical point is that behaviour change interventions on obesity (or indeed on any other public health issue) do not operate in a vacuum. They are part of a complex system of determinants of behaviour – both positive and negative. Such a system-wide problem requires system-wide solutions, rather than a raft of small and unconnected behaviour change interventions.

2.4 **The lack of evidence of effectiveness**

Another critical point raised by Foresight is that there is a relatively poor evidence base for the effectiveness of interventions to tackle obesity. This is particularly true of the ‘upstream’ of system-wide approaches, where there are very few examples of successful approaches to date. We therefore think it is absolutely critical to invest in evaluation of ongoing initiatives, to help expand our knowledge of the most effective and cost-effective approaches. NOO’s approach to evaluation is described later in this submission.

3. **Detailed comments**

3.1 **a. The latest developments in the evidence-base in relation to changing eating and physical activity behaviour**

We have recently summarised the evidence base for the effectiveness of interventions in the following briefing papers. These are short summary papers, so rather than reproduce them here we have attached them in full as appendices.

3.2 **Treating adult obesity through lifestyle change interventions: a briefing paper for commissioners** [Download document](#)

This briefing paper aims to support commissioners by providing a brief guide to current best available evidence on the effective treatment of obesity through lifestyle change interventions for adults who are overweight or obese. Published March 2010. Covers topics such as:

- The importance of multi-component tailored interventions

- Physical activity component of interventions
- Dietary component of interventions
- Behavioural component of interventions
- Commercial and community-based weight management programmes
- Specific issues and population groups
- Outcome measures

3.3 **Preventing childhood obesity through lifestyle change interventions. A briefing paper for commissioners** [Download document](#)

This paper focuses on best available evidence on effective obesity prevention interventions for children and young people. Published November 2009. Topics include:

- Intervention content: tackling diet and physical activity together; the role of family and peer support
- Outcome measures; goal setting; long-term outcomes
- Additional NOO recommendations; evaluation; links to government programmes

3.4 **Treating childhood obesity through lifestyle change interventions. A briefing paper for commissioners** [Download document](#)

As above, with a focus on the best available evidence for treating obesity in children and young people. Published November 2009. Topics include:

- Intervention content: tackling diet and physical activity together; the role of family and peer support
- Outcome measures; goal setting; long-term outcomes
- Additional NOO recommendations; evaluation; links to government programmes

3.5 There are also a number of key data briefings available on adult weight; child weight; adult diet; child diet; adult physical activity; child physical activity. See http://www.noo.org.uk/NOO_pub/Key_data

3.6 **b. Who are the most effective agents for the delivery of behaviour interventions to tackle obesity?**

As obesity is a complex system problem, it cannot be tackled effectively by individual agents, but needs a system approach. Few studies have compared the effectiveness of different delivery agents. However, there are some indications from the available evidence:

- Health professionals have an extremely important role in delivering behavioural interventions. These include GPs; practice nurses; dietitians; health visitors; community nurses.
- Health professionals can: identify at risk patients; refer to appropriate services; provide counseling and support; ensure appropriate follow-up; link to other statutory and non-statutory agencies (such as leisure services or commercial weight loss companies).
- Other key delivery agents include: local authority staff such as leisure services officers; school nurses and physical education staff (for children); commercial weight loss services.

3.7 c. How current behaviour change interventions tackle obesity and what use is made of available scientific evidence

One of the drivers behind the establishment of NOO was concern that current obesity interventions may not be based on the best available evidence. In many cases, NHS commissioners are uncertain which interventions to commission, and do not have easy access to evidence of effectiveness and cost-effectiveness. This is compounded by the lack of effectiveness studies, and insufficient priority being given to evaluation of new initiatives.

3.8 d. Whether such interventions are appropriately designed and evaluated

We have significant concerns about the lack of emphasis being given to evaluation of weight management interventions. Although quantitative data are lacking, indications are that very few interventions are evaluated to an adequate degree. Problems include: lack of skilled staff; confusion over appropriate evaluation methods; lack of validated measurement tools; insufficient emphasis in the commissioning process; insufficient budgets being allocated to the evaluation component of a programme/project.

3.9 To attempt to address this issue we have:

- Developed the Standard Evaluation Framework (SEF) for weight management interventions. www.noo.org.uk/SEF. This aims to support high quality, consistent evaluation of weight management interventions in order to increase the evidence base. The SEF provides introductory guidance on the principles of evaluation, and lists 'essential' and 'desirable' criteria. Essential criteria are presented as the minimum recommended data for evaluating a weight management intervention. Desirable criteria are additional data that would enhance the evaluation. The supporting guidance describes why particular criteria have been categorised as essential or desirable, and gives further information on collecting data. A summary of SEF Core Criteria is available to [download](#). The SEF is supported by a review of dietary assessment methods exploring the application, reliability and validity of available tools to measure dietary intake and dietary behaviours; and a review of physical activity measurement tools, which can be used to assess energy expenditure from physical activity. The SEF has been very well accepted, and is used increasingly in the field. It is recognised nationally and internationally as a leading example of the development of a tool for generating practice-based evidence.
- Run training workshops on evaluation and the SEF
- Launched a Collection of Resources on Evaluation http://www.noo.org.uk/evaluation_portal. This aims to provide information and resources to support practitioners with an interest in the evaluation of interventions related to obesity, overweight, underweight and their determinants. It covers evaluation guidance; reports from evaluation of nationally-initiated schemes; and evaluation websites.

3.10.1 e. What lessons have been learnt and applied as a result of the evaluation process

As outlined above, we do not think that lessons have been learnt and applied properly as a result of any evaluations. For this reason the priority should be to ensure that there is proper emphasis given to the evaluation of all new initiatives, to ensure that learning is fed back into practice.

4. **References**

Butland B, Jebb S, Kopelman P, McPherson K, Thomas S, Mardell J and Parry V, 2007. Tackling obesity: future choices – project report. London

7 October 2010

Memorandum by the National Social Marketing Centre (BC 5)

Research and Development

1. *What is known about how behaviour can be influenced?*

There are a number of different disciplines which provide insight into why people behave in a certain way; in particular psychology, behavioural economics, sociology and anthropology. Social marketing is a discipline in its own right, however it draws on, and is influenced by, all of the social sciences listed above, as well as neuroscience. Therefore, social marketing can provide clear insights into why people adopt problematic behaviours.

By taking a holistic approach to a problem, social marketing tries to identify and replace the seeming benefits that people currently receive from their problem behaviour. For example, research conducted by the NSMC showed that drinking alcohol gives young people a sense of confidence, makes them feel sexy and part of the gang. If you want them to stop drinking, or reduce the amount they drink, your intervention must look to replace the current benefits they receive from drinking alcohol.

Since the National Social Marketing Centre (NSMC) was set up in 2006, they have conducted research into understanding how people behave and what influences their behaviour. Government departments, such as the Department of Health, as well as regional and local bodies, have worked with the NSMC to develop truly consumer-centred behaviour change programmes. As opposed to a group of subject experts determining what the interventions should be, research has been conducted with the target audiences to understand what they would value as an exchange, how to replace the benefits they currently receive from the problematic behaviour. The interventions developed have been based on these insights. Details of the NSMC's projects, which have demonstrated successful behaviour change, can be found at: www.nsmcentre.org.uk/showcase-case-studies.html.

2. What are the policy implications of recent developments in research on behaviour change?

Behaviour change is key to all areas of government policy and a range of government departments are working with the NSMC to draw on the best available evidence of what works. A recent social marketing project conducted by the Department of Health, *Healthy Foundations*, has statistically proved what anecdotal evidence had previously suggested: that there are clear cross-overs between problematic health behaviours.

Problematic behaviours should no longer be seen in isolation; a cross-cutting approach is needed. For example, evidence shows that young people who try cigarettes, are more likely to go on to smoke Class C drugs, such as marijuana, binge drink and have unsafe sex.

Health should also not be seen in isolation. To tackle the most entrenched problems in health, a holistic view has to be taken, including issues such as social housing and educational outcomes.

3. Is there adequate research capability within the United Kingdom to support the current pace of developments in behaviour change policy interventions? Is there sufficient funding for the evaluation of behaviour change interventions?

Clear and robust evaluations need to take place, however financial resources are finite, and history shows us that in times of leaner government spending, monitoring and evaluation budgets are often the first to be reduced or axed completely.

The NSMC advocates that every behaviour change programme, nationally and locally, should be evaluated fully and that evaluation should include hard data around behavioural objectives (i.e. solely showing impact on awareness, knowledge and attitudes is not sufficient). Research capacity is limited and employing external companies to do this work is often costly. Therefore, in an effort to reduce costs and enable national departments, as well as local bodies, to evaluate their programmes, the NSMC has developed, and are developing further, a number of useful tools:

- *Value for Money/cost-benefit tool*. An on-line tool which calculates the value for money/cost-benefit of behaviour change projects. This tool, which is simple for the commissioner or practitioner to use, helps in the decision making on whether to:
 - To continue funding a programme; or
 - To allocate a set budget into the programme at all; or
 - Look for a better ROI somewhere else

Currently this tool is being developed for health, however it can be tailored to address a whole range of behaviour change issues, such as recycling, problem gambling, etc.

- A *Quality Improvement Framework tool*, developed based on the successful framework tried and tested by New Zealand's Health Sponsorship Council. The Quality Improvement Framework is designed to provide an organisation with independent and practical recommendations for improving the way it delivers initiatives.
- The *One-Stop-Research-Shop* has been developed in conjunction with the Department of Health and COI. It holds a wealth of research conducted nationally and locally on a range of issues, such as tobacco, unsafe sex, etc. This tool is freely available for those working within government and the NHS. By accessing this data, money can be saved as duplication of research will be reduced.

Translation

1. *Are there adequate structures and expertise across government, and public services, to support the translation of research developments in behaviour change into policy interventions?*

It is often difficult to move from the research phase of a project, into developing an intervention based on the key actionable insights – sometimes it is difficult to identify what the key insight is and where the tipping point might be.

Social marketing is as much an art as it is a science, and deals with complex and often deep-rooted behaviours. The research may identify a number of themes which could be insights and turned into policy, however pre-testing is needed to identify which ones will actually result in the desired behavioural shift. That is why monitoring and evaluation is crucial; if something does not work, it needs to be stopped immediately to save funds. This is what occurs in the commercial marketing world; mistakes are still made, but through monitoring and evaluation, they are stopped immediately if they do not result in the desired behaviour change, thereby reducing financial loss.

Policy design and evaluation

1. *What should be classified as a behaviour change intervention?*
2. *Should behaviour change interventions be used in isolation or in combination with other policy interventions?*

Social marketing is a planning process which can successfully bring about behaviour change. Therefore it should be classed as a tool for achieving behaviour change as opposed to being a behavioural change intervention in its own right.

Social marketing, with its influence coming from behavioural economics, develops multi-pronged interventions which address both supply and demand (it is detrimental to increase demand for a service if the supply chain is not in place). For example, one of the NSMC's demonstration site projects looking to increase the number of GP screens for chlamydia included the following interventions to achieve their behavioural goal:

- Training for GPs to how on broach the subject of chlamydia screening with a young person who has come in for an unrelated health issue
- DIY kits which the young people can take home and post away to find out the results
- Health education in schools with school counsellors so they encourage young people to present for screening
- Using Facebook and word-of-mouth to promote DIY kits and GP screening opportunities
- Developing a Service Level Agreement to pay GPs per screen.

As the example shows, structural changes and the way health professionals operate are often key to achieving a positive behaviour change. Therefore, a suite of interventions to meet the different segments' needs, supported by policy (in particular to support the supply side) is preferable.

3. *How should different levels of intervention (individual, organisational, community and national) and different types of intervention (legislative, fiscal, educative) interact in order to achieve policy goals more effectively?*

How the types of interventions interact and what mix you use, should be based on research to understand the target audience, and the key factors which determine their current problematic behaviour. For example, we know that simply educating people about smoking does not change behaviour (all adult smokers know that smoking is bad for them - although they may not believe it; tweens when they start smoking know that it is harmful to their health, however they smoke for different reasons, such as looking 'cool', rebellion, feeling part of their peer group, etc). Nor will solely increasing taxes stop people from smoking, as cigarettes are inelastic goods.

Social marketing advocates the use of legislative, fiscal and educative interventions, however it also recognises that these alone will not always bring about the desired behaviour change. By conducting research with the target audience to understand their values, beliefs, what moves and motivates them, a mix of interventions can be developed. Much work in social marketing is around '*facilitation*'. Social marketing develops a suite of interventions which offers people an exchange they will value i.e. If I do X, you will do Y. Therefore, social marketing helps governments move away from the controlling 'nanny state', to one where

voluntary behaviour change occurs as the exchange offered to the target audience is one that they value.

Practical application

1. Have publicly funded behaviour change interventions been both evidence-based and subject to effective evaluation? How successful have such interventions been?

There have been some notable successes in publicly-funded interventions, in particular at a local level. Examples of such projects are part of the award-winning National Demonstration Site Scheme and the Beacon Partnership Projects, both set-up by the NSMC.

The National Demonstration Site Scheme consisted of ten locally-run social marketing projects, which looked at a variety of health issues ranging from tobacco control and breastfeeding to sexual health screening and kerbside binge drinking. The scheme, and the projects involved, were evaluated by PHAST (who conducted the process evaluation) and London School of Hygiene and Tropical Medicine (who conducted the outcome evaluations).

Some of the key outcomes, included:

- **North Tyneside** demonstration project:
 - A 30% decrease in anti-social behaviour and alcohol-related incidents in the pilot area, compared to the same months in the previous year
 - Reduced binge drinking reported by young people, especially amongst females
- **NHS Lewisham** demonstration project:
 - A notable increase in the number of residents entering the NHS Stop Smoking Service in the two pilot wards (21.3% and 115%).
- **NHS Norfolk and Great Yarmouth and Waveney** demonstration project:
 - 300% increase in chlamydia screens taking place in pharmacies
 - After a training programme was implemented as well as various other interventions aimed at GPs, such as monetary payment for screening. General practice was the venue in which the biggest increase in the number of completed chlamydia screens was seen.

Other projects have also demonstrated success. The NSMC's case study database, *ShowCase*, includes over 60 case studies which have been successful. International, national, regional and local case examples are included on the site.

2. Within government, how are the lessons learnt from the success, or lack of success, of behaviour change interventions fed back into the design of future interventions? Are lessons learned from industry and voluntary sector behaviour change activities also taken into account?

More work in this area is needed; no behaviour change project is 100% effective or a 100% failure. Negative findings are rarely published or reported, however these findings are as valuable as the successes, so not to duplicate costly mistakes. The NSMC are working to address this issue through their programme of work funded by the Department of Health. The NSMC's *ShowCase* is being developed further to highlight what worked, and what did not work as well, what the barriers encountered were to implementation, and how these were overcome.

3. *What mechanisms exist, at national and local government level, to provide advice and support during the design, piloting, implementation and evaluation of behaviour change interventions in order to ensure that they achieve intended policy goals and also cultural changes within government and public services more generally?*

The NSMC has developed an on-line planning guide for the Department of Health which helps national departments as well as those working at local level. The guide is aimed at those working to achieve beneficial behaviour change by taking them through the six key stages of the social marketing planning process and includes tools, guides and case studies. A generic version is available on the NSMC website at: <http://www.socialmarketing-toolbox.com/>. Bespoke versions have also been created for NHS Scotland, the Department of Health's Cancer Team and more recently, for the British Council.

A guide explicitly for policy makers is currently being produced. This will be a practical step-by-step guide that will enable policy teams to use social marketing principles to design more customer-centered policies which will influence the behaviour of specific targeted audiences. The resource will also provide a number of case studies on how customer centred policy has been developed, implemented and evaluated.

Cross-government coordination

1. *What mechanisms exist within government to cascade learning and best practice on behaviour change policy interventions?*

The NSMC is a strategic partnership between DH and Consumer Focus. It works with both public and private sector organisations nationally and internationally to develop best practice behavioural change tools and resources to improve efficiency and reduce costs associated with preventative behavioural interventions. The NSMC is currently working collaboratively to support a range of UK government bodies including DH, NAO, DFID, DEFRA, and the DCLG. This year, the NSMC's work programme focuses on the development of programmes and tools for dissemination across government which will further improve efficiency and reduce costs.

International comparisons

1. *What lessons can be learnt from previous successful or unsuccessful behaviour change interventions in other countries? Which countries provide the most helpful examples of best practice? Are behavioural change interventions generally transferable between different societies?*

The NSMC works with both public and private sector organisations nationally and internationally to develop best practice behaviour change tools and resources. These help to improve efficiency and reduce the costs associated with preventative behavioural interventions.

The NSMC is now a recognised world leader in the field and functions as an international linchpin, drawing on learning from the UK, USA, Europe, Asia and the Pacific and adapting the knowledge gained to meet the needs of UK audiences across the public sector. The NSMC has strong working relationships with the World Health Organisation (WHO), Academy of Educational Development (AED), the European Commission (EC), the Centre for Disease Control and Prevention (CDC) and the Pan-American Health Organisation (PAHO) and the Department of Health in Hong Kong and China.

Relevant and useful lessons can be taken from the Academy of Educational Development (AED) which has an extensive behaviour change programme. At the AED *Center for Social Marketing and Behavior Change (CSMBC)*, they examine not only what people think, but also what they do and why they do it. They then put those insights to work in innovative, multifaceted programmes that shape attitudes and motivate people to act. AED have a vast wealth of practical experience from the USA and developing countries and work closely with the NSMC to transfer those learnings.

Tackling Obesity

16. The Committee would particularly welcome submissions on behaviour change interventions, whether in the public sector, the private sector or by voluntary organisations, designed to tackle obesity, in the United Kingdom or internationally, in order to examine:
- a. the latest developments in the evidence-base in relation to changing eating and physical activity behaviour;
 - b. who are the most effective agents for the delivery of behaviour interventions to tackle obesity;
 - c. how current behaviour change interventions tackle obesity and what use is made of available scientific evidence;
 - d. whether such interventions are appropriately designed and evaluated; and
 - e. what lessons have been learnt and applied as a result of the evaluation process.

The NSMC has worked on a number of projects addressing obesity, working in partnership with organisations such as Tesco. Each of the projects conducted research with the target audience at the start of the process. They then looked at the following areas:

- Exploring the link between obesity and food purchasing behaviour in the West Midlands – working with the University of Kent and using Tesco Clubcard data to analyse consumer behaviour and develop their intervention based on this information
- Motivating men with poor health to improve their diet, increase their activity levels and quit smoking – working with Newcastle United Football Foundation, the local NHS, and the local voluntary sector/Health Trainer programme
- ‘Naturally Active’ provides and promotes activities for people in Dartford and Gravesham, using urban green spaces and adjacent countryside to improve both physical activity levels and mental well-being
- Changing behaviour within the takeaway industry in the East Midlands – working with the local government office, Food Standards Agency, Consumer Direct and Trading standards in a bid to ensure takeaways provide healthier food options for consumers.
- Increasing the adoption and duration of breastfeeding in Cornwall and Isles of Silly – working in partnership with the PCT, local Council and the social enterprise, Real Baby Milk.

October 2010

Memorandum by the National Trust and we will if you will (BC 84)

Summary

The National Trust is a charity that looks after special places for ever, for everyone, throughout England, Wales and Northern Ireland. Through ownership and management National Trust protects and welcomes the public to explore 709 miles of coastline, 254,000 hectares of land of outstanding natural beauty, and more than 300 historic houses. We engage people in a range of ways, through practical conservation, learning and discovery, and encouraging everyone to visit and enjoy their national heritage. Much of this is done by working in partnership with others.

As part of our core purpose to promote special places for ever for everyone we need to be sustainable for the long term: financially and environmentally. We want to tell the story of how the National Trust as an organisation is becoming more sustainable and reducing its environmental impact from the way we heat our properties, to the way we farm land, and the food we serve in our cafés and restaurants. Through telling the story of our work we want to inspire our member and supporters to become more sustainable too. This work can be seen as behaviour change.

This response is on behalf of the National Trust and *we will if you will* – an initiative delivering a series of new and unique collaborative efforts between business and civil society to encourage and enable people to live more sustainable lifestyles.. The response is focused on case studies that share experience from recent National Trust and *we will if you will* behaviour change projects to inform the following areas raised in the call for evidence. We would be happy to contribute further analysis if that would be helpful to the Committee:

- the extent to which behaviour change interventions require a mixture of different tools to succeed;
- how behaviour change interventions and activities are coordinated across government and beyond;
- the extent to which, and ways in which, government should be accountable to, or engage with, the wider public about the use of behaviour change policy interventions;
- the role of industry and the voluntary sector in shaping behaviour patterns;
- the relationship between government, industry and the voluntary sector in promoting behaviour change to achieve policy goals;
- what should be classified as a behaviour change intervention?
- the enquiry seeks to examine the extent to which behaviour change interventions require a mixture of different tools to succeed
- how should different levels of intervention (individual, organisational, community and national) and different types of intervention (legislative, fiscal, educative) interact in order to achieve policy goals more effectively?
- should behaviour change interventions be used in isolation or in combination with other policy interventions?

Key Learnings from delivering behaviour change campaigns

Campaign strategy

- Government, business and civil society have complementary roles to play in changing behaviours and the most powerful results are achieved when all three sectors work together with a coherent and shared strategy.
- Securing mass behaviour change is usually limited to small shifts in behaviour
- Research, insight and testing campaign materials is essential to develop effective strategy

Getting people involved

- Experiential and fun events is most effective in influencing peoples' behaviours
- Desired behaviours need to be illustrated to people and their benefits highlighted

Collaboration works

- Partnerships between businesses and civil society bodies have an impact greater than the sum of their parts
- Forward planning is important to create truly joined up activity when working with many partner organisations

Shared campaign strategy

- 'Open source' materials that can be tailored by different partner organisations are very effective
- Behaviour change campaigns benefit from the message being delivered through different communications channels at the same time

Government's role

- Perceived independence from government is important to guarantee effective involvement from leading businesses and ngos in publicly visible campaigns.
- Government often underestimates its key role in building a supportive policy framework to enable business and individual action.

Case Study - Social Marketing Campaign, Food Glorious Food

In 2009, the National Trust initiated social marketing activities as a new approach to engaging supporters in specific causes, central to its work and survival. This approach aims to inspire, influence and empower individuals to make lifestyle choices and change behaviour in line with our own long-term organisational objectives, to promote both The National Trust and a wider care and engagement with for the environment.

Practiced by many other organisations in the public and private sector, this emerging form of marketing places the individual's current activity or lifestyle at the centre of its thinking and creates communications to enable positive, voluntary change.

Developing an Approach

One of the keys to the success of any behaviour change campaign is focusing on an area that you have a relevant voice on and that has resonance with the intended audience. The National Trust is involved in every part of the food chain and as a major landowner, plays a vital role in British food production. With research showing that an estimated 40% of the UK's carbon footprint is generated through food production processes and waste, the National Trust identified that shifting consumer demand for sustainable produce is one of the ways in which it can mitigate the impact of climate change on special places, and raise awareness of its role in this context.

Using focus group research the Trust identified that many of its supporters are already concerned about climate change, however their needs from the National Trust revolve around having positive leisure experiences. They were significantly more likely to be attracted to food or nature based family experiences than activities about 'environmental issues or green living'. This research influenced the decision to create social marketing around food and to engage supporters in green behaviours through positive, fun and enjoyable leisure experiences. The social marketing campaign that was delivered was Food Glorious Food.

Campaign Objectives:

- To inspire supporters to eat more local and seasonal food, and to grow food at home.
- To shift perceptions of the brand towards an increasingly inclusive, informal and relevant part of supporter's everyday lives.

Key barriers:

- Local & seasonal food is perceived as more expensive and less easily available.
- The National Trust is not known as a food organisation or authority

Key messages:

To overcome these barriers the campaign focused on a small number of simple messages that could be effectively conveyed across a wide variety of channels. This enabled visitors and supporters to see National Trust linked with a local and seasonal food message consistently and developed National Trust's reputation as a food organisation.

- Growing and eating local and seasonal food is easy, tasty and fun – and makes for a better life
- The Trust is passionate about food and we're involved in every stage of the food chain
- We're committed to growing, cooking and promoting local and seasonal food
- We're on a journey with our local food work – we're not there yet, but you can join in and come with us

The campaign was viewed as a success and utilised a wide variety of communication channels available to the National Trust to reach the widest number of people. As an organisation we have a broad supporter base of 3.7 million members who each engage with us differently: some only visit properties, some want to take part in events, and others are more engaged with online channels and sign up to regular email newsletters. We also reached out to non-members through above the line advertising. We believe this diversity of channels is key to the success as it reached the widest number of supporters and potential supporters and helped create a 'surround sound' so the messages were reinforced through repetition.

Channels utilised in the campaign:

- Above the line advertising – e.g. print media, national and local press
- Events at National Trust sites – e.g. Learn to Grow events
- At home activity ideas and collateral – e.g. seed giveaway
- Articles on National Trust website and print magazine – e.g. 'My Patch' interactive game
- Emails to supporters

Memorandum by the National Trust and we will if you will (BC 84)

By showing people how to grow their own food and highlighting what food is in season when the key barrier of local & seasonal food being perceived as more expensive and less easily available was countered in a creative and engaging way.

The social marketing campaign was also firmly embedded in substantial contextual activity on our part to change the way in which we related to food as an organisation e.g. the creation of allotment space on our land.

This social marketing campaign can be viewed as a change intervention as it delivered key behaviour change messages using a variety of communications channels to inspire and enable change around seasonal food and grow your own. Visitor surveys carried out at properties illustrate the successes:

- 78% of visitors said that it was 'likely' or 'very likely' that the event had inspired them to eat more local and seasonal food – the primary behavioural objective of the campaign
- 86% of visitors said that it was 'likely' or 'very likely' that the event had inspired them to grow their own food (with 97% intending to grow their free seed or seedling).

Food Glorious Food was successful as it reached a lot of people and it managed to shift perception on food. The most effective form of engagement was through events where visitors to National Trust properties could see and try growing and eating seasonal food. Events that involved the whole family were also effective as behaviour change in groups has a greater chance to stick as people can support each other. In contrast to this press coverage of the events for promotion yielded the least return on time and money and so this has been less a feature of future campaigns.

Learning from the first Food Glorious Food campaign especially around the success of face to face events informed the design of the Eat into Greener Living project and the focus on training National Trust staff on communicating food and behaviour change messages.

Case Study - Eat into Greener Living

'Eat into Greener Living' is a current National Trust project, funded through the Defra Greener Living Fund, designed to build on the Food Glorious Food campaign for 2010, providing visitors and communities with a deeper, more participative experience of food.

The project aims to inspire National Trust visitors, staff, volunteers, and tenant farmers to buy, eat and grow more sustainably produced, local food. It is also designed to help us to improve the visitor experience of our food story, contributing to our drive towards improved visitor enjoyment and behaviour change.

The project provides tangible, inspiring food experiences at our properties, where people gain first hand information, ideas, support and practical experience to enable them to eat sustainable food and grow it at home. The key target audience is families. Working through 30 target properties and through the National Trust as a whole, this project aims to influence 400,000 people to make more sustainable food choices as a way into a more sustainable lifestyle.

The project consists of three complementary elements

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- Family engagement;
- Community growing spaces; and,
- Improving engagement skills of staff and volunteers.

This is only one approach that can be taken but for the National Trust an organisation that interacts with our supporters in their leisure time it is the most effective as it is fun and inspiring as well as educational.

This project is still in progress but already the money has been used to deliver training for 210 staff and volunteers trained directly who have in turn passed on their learning to a further 240 colleagues so far. With word of mouth one of the most effective and trusted modes of communication, this training should inspire and aid effective behaviour change. The initial feedback from visitors to participating properties illustrates this:

- 81% of participants have a greater knowledge of sustainable food
- 88% understand the National Trust's position on sustainable food

The project has also shown food growing is a very effective way to build a lasting relationship with visitors and members. These deeper relationships are more effective in bringing about long term change as the positive behaviour is reinforced over time and inspiration and enthusiasm can be developed into skills and commitment. Defra money was used to develop and deliver this training.

Feedback has also been very positive around group activity as people feel they are part of a movement and can learn from each other as well as group leaders and so are reassured that the new behaviour is being taken up on a wider scale.

The money from Defra was essential to getting these projects up and running as it was used for set up infrastructure such as water supply and raised beds for allotment sites.

Food is just area The National Trust could engage its supporters and members around behaviour change. Future funding from across government could be used effectively for further behaviour change work. For example there is a lot of scope to communicate messages around energy efficiency in the home through our properties.

We will if you will

We will if you will is an innovative 5-year project, to make sustainable living appealing and accessible to the mainstream UK population, through unprecedented collaboration between business, civil society and government.

The project is led by Fiona Reynolds (Director General, National Trust) and Ian Cheshire (CEO, Kingfisher). Now in its second year, *we will if you will* is being taken forward by Behaviour Change, a not-for-profit social enterprise with the aim of working with government, business and civil society to make it easier, cheaper and more appealing for people to lead greener lives.

The *we will if you will* objective is to normalise green behaviour for mainstream, hard working UK families. This is being done by building a powerful coalition of influential organisations, co-ordinating a series of campaigns designed to target specific environmental behaviours, and lobbying government to overcome policy barriers.

The campaigns harness the existing relationships of trust that businesses and charities have with their stakeholders to bring positive and practical solutions to their customers, supporters, communities and employees. A centrally managed programme is delivering a series of separate campaigns focused on specific behaviours. Each involves:

- Aligned activity from a large group of relevant corporate and civil society partners, delivering mass reach and credibility to achieve tipping points on iconic environmental behaviours.
- Active promotion of collaboration between organisations to help unlock challenging behaviours.
- An emphasis on making it easier for the public to act (e.g. through making it cheaper for people to do so) rather than just telling them what to do.
- Centrally developed 'open source' materials that can be used by partners to promote the campaign and present a consistent voice to the public.
- An accompanying policy discussion with government to help remove barriers to the behaviours.

Eat Seasonably Pilot Campaign

Eat Seasonably is the pilot campaign of the *we will if you will* initiative. Launched in spring 2009, the campaign set out to create a movement to reconnect people with their food and the seasons in which it grows. Eating locally in-season food is one of Defra's pro-environmental behaviours.

The campaign was designed to inspire and enable people to eat more locally in-season fruit and vegetables, and assist them to grow their own. It launched with *Grow Your Own* activity, focusing on aligning existing practical help, information and expertise, and launching easy products and services to encourage first-timers. The seasonal eating phase followed, with the launch of a new label and calendar designed to highlight what's in season when and to raise awareness of the benefits of eating seasonal food.

An unprecedented coalition was built to support the campaign: 35 organisations from across the business and civil society sectors gave it their active support, launching new products and services, entering into new collaborations, using the campaign's 'open source' materials and communicating its central messages to their customers and supporters. In addition over 100 smaller partners have made contact through the campaign website and are now promoting *Eat Seasonably* to the public.

A website was launched pulling together partner activities and promoting the campaign's core messages. Along side this was a PR campaign and a multi-media marketing push.

Consumers responded well to the campaign, its messages, its materials and the activities of its partner organisations. The campaign succeeded in hitting the zeitgeist in helping create a *Grow Your Own* movement, and also in starting to shift public awareness and attitudes to seasonal eating. The research evidence to date shows that *Eat Seasonably* messages resonate with the public and that behaviour has started to shift; positive partner sales results add

weight to this. Central campaign communications achieved high levels of reach and consumer engagement.

Partners were generally positive about their experiences, feeding back that the strategy was pitched correctly and was timely. There is also high regard for the resources and materials that were made available. Eat Seasonably has great long term potential and most partners expressed interest in being involved in the future, should Eat Seasonably continue. By working together companies and civil society groups can feel that they are not putting themselves out on a limb or coming across as 'radical' but rather as being part of a movement.

The campaign used intervention by community groups, businesses and charities and included fiscal incentives from some partners and education from others e.g. special offers on seasonal food and collateral with information of what was in season during the year. A combination of approaches will have created a sound argument that appealed to different peoples needs. There is no one size fits all approach for behaviour change work.

Core open source resources funded by Defra worked effectively as a model and encouraged participation. Partners found these resources such as a list of 'hero' fruit and veg in season across the year useful as it was both credible and easily accessible.

Beyond providing seed funding and support in collateral development Defra and wider Government were not visibly involved in this campaign. Many of the partners felt this independence was a key condition to their participation.

Partners also liked having collateral provided but without overly prescriptive rules on their usage. This allowed them to pick and choose the most apt collateral for their supporters and customers and tailor them as they saw fit. The messages struck the right tone at the right time. Grow Your Own particularly hit the zeitgeist with a feeling among partners that the campaign had begun to shift the 'old man/Good Life' image of growing your own fruit and veg and made it aspirational to younger and family audiences.

Stakeholder events and follow up support by campaign organisers brought like-minded organisations together and encouraged collaboration between them. Without this role many of the collaborations between businesses and NGOs that sent a powerful message to consumers would not have happened.

The campaign was also successful as the partner activity was backed with a strong media presence. This brought the issues into the mainstream and widened the appeal. However greater transparency and communication would have motivated the partners even more.

As a pilot, Eat Seasonably also identified how similar campaigns could be run more successfully in the future. Longer term planning timescales was the biggest improvement identified by partners to increase the effectiveness of the campaign as it would have allowed, for example, businesses to integrate the campaign logo/materials more with their own brand. The same is true for NGO's and community organisations some of which have a year-out planning cycles which are hard to influence once in motion.

Partners felt that the campaign would have benefitted from closer and earlier collaboration on planning with partners. For NGO's there were also financial barriers and had additional

funding been available to them they would have been able to better support the campaign as they could have produced more collateral and put on more events.

Some partners reiterated that encouraging people to eat less meat and dairy is the biggest issue in terms of sustainability and food. However to be effective behaviour change need to nudge rather than dramatically change behaviours and so this message would not be a palatable mass consumer facing campaign at the moment. This is a recurring limitation of behaviour change work.

Eat Seasonably is continuing in 2010/2011 informed by the lessons from the pilot year and this year is focussing on seasonal eating, working closely with the food service industry to help them celebrate seasonable fruit and vegetables with their customers.

We will if you will set out to engage the public with pro-environmental behaviours and at the same time to get requisite support from government. The support being asked of government came in two forms: firstly monetary support to facilitate the initiative (partner organisations paid for their own contributions), and secondly policy change to enable and encourage people to take up the area of behaviour being focused on, to deliver long lasting change.

The experience of developing and delivering the Eat Seasonably campaign informed the development of the policy asks of Government. Initial research was undertaken into the consumption and production of UK in-season produce, followed by consultation with a number of the business and NGO partners involved in Eat Seasonably and other representatives of the UK fruit and vegetable production industry. This work isolated enabling actions that are needed from government to support individual behaviour change, as follows:

- introducing mandatory public procurement of sustainable food,
- defining what constitutes a sustainable diet; plus necessary government intervention in three broad areas:
 - helping growers increase the production of seasonal fruit and vegetables in the UK,
 - enabling more land provision for food growing, for individuals, communities and market gardening,
 - increasing skills, so that people know how to grow, cook and procure seasonal UK fruit and vegetables.

Then Secretary of State for Environment, Food and Rural Affairs Hilary Benn chaired a Fruit and Veg Roundtable on 20 July 09. The objectives of the meeting were to consider barriers to increasing production and consumption of fruit and vegetables in England, and to consider what solutions might be available and how to take them forward. The policy recommendations from Eat Seasonably were used as the basis for this meeting and the results fed into the Government's food strategy.

However, the policy change to enable more sustainable eating was limited. The behaviour change campaign could have stimulated a wider, more coherent and longer lasting policy response that would have led to greater behaviour change in the short and longer term.

8 October 2010

Memorandum by NHS Leeds (BC 90)

Authors: Candia Allen MSc. PH. Health Improvement Principal, NHS Leeds; Laura Elwell, MSc health Psych. Research Practitioner.; Lucy Jackson, Consultant in Public Health, NHS Leeds.

Questions

Research and Development

What is known about how behaviour can be influenced?

There is considerable evidence linking personality and health behaviours (see Vollrath, 2006) which would indicate that interventions to positively influence health related lifestyle behaviours need to be tailored to the individual. Individuals may recognise their personal responsibility for their own health, however, confidence (self-efficacy) to change a behaviour such as smoking can be a stronger predictor of intention and resulting behaviour change (Rodgers, Conner, & Murray, 2008). This indicates that support mechanisms to build self-confidence are imperative in policy and practice around behaviour change.

Fishbein et al., (2001) set down eight determinants needed for successful behaviour change:

- strong intentions
- the necessary skills to perform the behaviour
- absence of environmental constraints on the behaviour.
- seeing that the advantages of performing the behaviour outweigh the disadvantages
- perceiving the social (normative) pressure to perform the behaviour to be greater than not performing the behaviour
- believing that the behaviour is consistent with his or her self-image
- anticipating the emotional reaction to performing the behaviour to be more positive than negative
- high levels of self-efficacy.

The above should be considered when designing policy, interventions and services to support behaviour change.

What are the policy implications of recent developments in research on behaviour change?

There is a strong body of evidence to indicate that behaviour is affected by interpersonal processes and social or moral normative beliefs. Parental models are important in instilling health behaviours early in life (Connor & Norman 2005). Peer influences are important, in the initiation of smoking (e.g., McNeil et al., 1988). Viner and Macfarlane (2005) found that during adolescence young people begin to explore adult health behaviours and new health behaviours are laid down which follow into adulthood, these can influence health throughout life. Cultural values influence the exercise behaviour of women across cultural groups (e.g., Wardle & Steptoe, 1991). The evidence suggests that an individual's very self-identity is contextualised by the society and local culture in which they live and that self-identity is reflected in one's own actions. Thus, a cultural change in attitudes is needed. Research and

initiatives based on changing or influencing social norms are few in the UK and warrants further consideration. Changing social norms away from binge drinking or an acceptance that most of us are 'carrying extra weight' has policy implications across education, media, the food/drink industry, the built environment, taxation, legislation etc. Tangibly supporting people to live healthier lives needs to be embedded into living, working and learning environments.

Policy implications of this research are that we need to take forward a co-ordinated life path approach to behaviour change which requires cross governmental support from children to older people from health to city development. It requires value to be placed on supporting people to achieve their own goals in relation to behaviour change within the context in which they live.

Translation

Are there adequate structures and expertise across government and the public services more generally to support the translation of research developments in behaviour change into policy interventions?

Structures and expertise within NHS Leeds to support the translation of research development into behaviour change interventions are quite strong and growing:

1. NHS Leeds and the Institute of Psychological Sciences (University of Leeds) are collaborating on a 2 year Knowledge Transfer Partnership (KTP) supported by funding from the Department of Health, the Technology Strategy Board, ERSC and NHS Leeds. The partnership is driven by the need for development of comprehensive, practical and empirically-based strategies for primary care in changing key health behaviours (smoking, physical activity, diet) amongst deprived and vulnerable communities residing across the city of Leeds. The project has been following guidance consistent with the Medical Research Council Framework for the design and evaluation of complex interventions. A substantial part of the initial phase of the project has involved systematically reviewing evidence in order to establish not only what the most effective behaviour change techniques are to tackle unhealthy behaviours, but also what are the determining factors underpinning behaviour that mediate such change. Through conducting a series of meta-regression analyses we will be able to pinpoint the most effective techniques upon which a 'behaviour change toolkit' can be designed. The 'behaviour change toolkit' will be a computer-backed, tailored, evidenced based intervention that will be tested initially in primary care settings.

The perspective of the associate who is project managing the KTP, a trainee Health Psychologist is that within the NHS more awareness is needed around health psychology theories and behaviour change and the role that Health Psychologists can play in supporting the research, design and implementation of such interventions. Expertise exists, but often within academic institutions. With regards to the KTP there has been two-way translation of expertise in reference to behaviour change. Specifically, the academic partners have gained from having access to deprived populations to test and develop interventions with, (much existing evidence is based on student populations). This has helped bridge the gap in Leeds between evidence and practice. NHS Leeds has also gained from collaborative working with experts in the field of health psychology as this has helped broaden the use of behaviour change theory in the design of a range of interventions.

Other relevant research within NHS Leeds

1. NHS is also a partner in a CLARHC (Collaborative Leadership in Applied Health Research and Care) theme focussing on Improving the prevention of vascular events in primary care . The aim here will be to translate the research findings into practical applications.
2. NHS Leeds also has a partnership with York University with a NRPB programme to evaluate the NHS Health Check and its outcome of reducing the risk of vascular disease. This also has relevance for future policy in relation to behaviour change

Communication skills and competences to promote behaviour change in the public are patchy amongst front line staff in health services and good practice is often based on intuition and life experience rather than learned knowledge and skills. In accordance with NICE guidance (2007), NHS Leeds is seeking to invest time and resources in training front-line health and social care staff in behaviour change theory and techniques with a particular focus on developing generic behaviour change skills and competences with an emphasis on effective communication. We are using a competency framework for prevention and lifestyle change developed by the regional Strategic Public Health Workforce Action Group (PHWAG) in partnership with Sheffield Hallam University.

In NHS Leeds we have a successful approach to smoking cessation, benefitting from colleagues working with the NCSCT. We are currently in the process of building on the successes of this evidence based systematic approach, broadening it to other unhealthy behaviour prevention strategies and spreading the systematic approach across our health economy.

NHS Leeds and the Local City Council are also collaborating to support healthy lifestyle behaviours amongst LCC staff, based in part on evidence from pilots funded by Local Government Innovation and Development (formerly the IDeA). In Leeds, lessons learned from industry tend to concentrate on advertising and marketing techniques such as insight and translated into social marketing approaches.

Ethical considerations

When is it appropriate for the state to intervene to influence the behaviour of members of the public and how does this differ from when it is appropriate for the commercial or voluntary sector to intervene? In particular, when should this be done by outright prohibition and when by measures to encourage behaviour change? Are some methods of producing behaviour change unacceptable? Which and why?

There is a strong correlation between unhealthy lifestyles and inequalities in health; smoking remains one of the biggest causes of the substantial and growing inequality in health between higher- and lower-income groups (Information Centre for Health and Social Care 2007); obesity is strongly linked to social class and gender; people with low incomes eat less fruit and vegetables and take less exercise than those with higher incomes; women in manual social classes are more likely to be obese (28 per cent) than those in non-manual social classes (19 per cent), although the reverse is true for men, with those in the non-manual social classes more likely to be obese (Zaninotto *et al* 2006). Private industry has a profit

motive and is happy to support people who can afford to pay, as exemplified by the growing diet and fitness industry. The State and tax payers have to pick up the long term consequences of wide spread unhealthy lifestyles of the rich and poor alike, therefore affordable interventions have to be targeted to those in greatest need, this may be done by charitable organisations or needs to be undertaken or at least influenced by Statutory organisations. Whether legal enforcement or supportive measures are used to effect behaviour change requires debate according to the behaviour and measure proposed. Looking back at the seat belt campaign of the 70s and 80s – all the campaigning did not change behaviour but created an environment where the public accepted legislation which then had a dramatic effect on behaviour and positive health impact.

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6 October 2010

Memorandum by the NHS Stop-Smoking Services and the NHS Centre for Smoking Cessation and Training (NCSCT) (BC 27)

A publicly funded evidence-based behaviour change intervention, its evaluation and the development of evidence base and training to advance its success

This submission summarises what we believe to be the UK's most highly developed, evidence-based national behaviour change provision, the NHS Stop Smoking Services (SSSs) in England and the NHS Centre for Smoking Cessation and Training (NCSCT, www.ncsct.co.uk). It is most relevant to the call's section on 'Policy design and evaluation – Practical application'. The NCSCT is a model for behavioural interventions in the UK, being based on good scientific evidence, with training and robust assessment of knowledge and skills at its heart. The partnership of academics and practitioners in leading the programme has ensured that feasibility, implementation, cost considerations and scientific evaluation have been built in from the start.

The SSSs provide publicly funded, evidence-based and cost-effective behaviour change interventions to help smokers stop smoking. This programme was a pioneer internationally and has overall been a significant success, currently 'treating' some 700,000 smokers each year, with each SSS yielding an estimated gain of 481.9 life years at a cost of £684 per life year gained [1, 2]. However, throughput and success rates vary considerably as does the way that the services are configured and the level of training of staff. In order to improve the quality of the services and their success rates and reduce variation over Primary Care Trusts, the NCSCT was launched by the Department of Health in 2009. Its aims are to establish for the first time in any country a formal, evidence-based set of competences for Stop Smoking Practitioners (SSPs), a corresponding set of assessments and a system of certification. It provides and commissions training and continuing professional development to ensure that all SSPs operate to a minimum standard of competence. This is underpinned by a continuing scientific research programme designed to establish best practice in this area. The NCSCT therefore is a unique Government initiative, developing evidence-based training and building in, and learning from, high quality scientific evaluation from the start.

The key generalisable conclusion from the experience of the SSSs and the NCSCT thus far is that when establishing a national programme for supporting behaviour change that is based on strong epidemiological and clinical evidence, it is important to establish alongside it a body to ensure that practice follows the evidence base, that experience of implementation is shared and that research continues to be undertaken and collated to support improvements in the service.

This submission will summarise activities of and evidence accumulated by the NCSCT to date.

Smoking cessation - Evidence background

Currently, about a fifth of adults in the UK smoke [3]. Smoking leads to increased morbidity and premature mortality and is the leading cause of preventable death and health inequalities in England [4]. Stopping smoking improves current and future health and reduces the risk of premature death [5, 6].

There is strong evidence that the best chance of success at stopping smoking is obtained by using medication (nicotine replacement therapy, bupropion or varenicline) together with what has come to be termed 'behavioural support' (advice, encouragement and monitoring) by a trained health professional [7, 8]. When implemented well, a package of medication and behavioural support can be expected to increase permanent cessation rates by 300%, saving lives very cheaply.

Practical application - strengths and weaknesses

Due to the detrimental effect of smoking on morbidity, mortality and health inequalities, smoking cessation has been identified as one of the top priorities by the Department of Health in the UK in several policy and strategy papers (e.g.[4, 9, 10]). Following the publication of the DH's White Paper on Tobacco in 1998, NHS stop smoking services (SSSs) were introduced across England in 1999. Using SSSs significantly increases smokers' chances of quitting successfully and the introduction of SSSs is a highly cost effective initiative [8]. Since 1999, smoking prevalence among adults has decreased by a quarter partly as a result of this [11]. In 2009/10, 256,713 smokers in England reported at four-week follow-up that they had quit successfully with the help of the SSSs and this was confirmed by measuring the concentration of the gas carbon monoxide (CO) in their expired air. From what is known about the rate of relapse after this [12], we can project that 64,178 (25%) will still be abstinent after 12 months compared with 10,269 (4%) if they had tried to stop without help [12, 13]. However, CO-verified success rates vary widely across services, from 58.3% to 2.7% [2]. This variation in success is partly due to variations in the delivery of the SSSs. Service delivery will vary in three important aspects: *how* the intervention is delivered, i.e. the style, mode and context, *who* delivers it, e.g. nurses, pharmacists, psychologists and *what* is delivered, i.e the content of the programme, which includes the medication used and the behaviour change techniques (BCTs) employed by the practitioner [14]. A lack of intervention standards e.g. in the form of standardised treatment manuals and a lack of training standards for practitioners probably contribute to large variations on all three aspects.

Need for the NCSCT

Despite the success of the SSSs to date, the variation in success rates indicates a need to lift success rates across many services to a higher level. Evidence is required on factors associated with higher and lower success rates to inform approaches to improve the provision of stop smoking support. Evidence-based development of treatment and training standards is needed and cost-effective, continuous professional development of SSPs needs to be initiated to ensure provision of high quality behavioural support to smokers based on the most up-to-date evidence available. The Department of Health funded the NHS Centre for Smoking Cessation and Training (NCSCT) for a period of three years initially to achieve these aims. The NCSCT is a consortium combining expertise from different sectors; it is based at and led by an academic team of smoking researchers and health psychologists at University College London (UCL) and includes partners NHS Leeds and the charity Quit (www.quit.org.uk). It was established in 2009 to assess training needs, develop training standards, pilot and evaluate training programmes, develop a certification system for smoking cessation practitioners, deliver the training across England and continuously evaluate it, develop an accreditation system for trainers and courses and contribute to national policy development.

Development of evidence base to underpin the work

Assessment of success rates needs a standard for the recording of successful quit attempts at each SSS; otherwise results cannot be compared across services and poor practice cannot be reliably differentiated from good practice, thus undermining motivation to engage in good practice. Therefore the NCSCT trains SSSs to use the clinical Russell Standard of data recording, which has been developed by the UCL-based research team [15].

To provide an evidence base for the competences in which to train SSPs, an expert panel identified relevant behaviour change techniques (BCTs) from evidence-based reviews [16, 17] and guidance documents describing recommended practice for one-to-one and group behavioural support for smoking cessation. These were analysed using a coding manual [18] based on a reliable taxonomy developed for other behavioural interventions [19]. The taxonomy was refined by asking all 144 SSSs in England (at the time of the study) to send the local service protocols (sometimes referred to as treatment manuals). Of 98 services that responded, 43 had treatment manuals (the NCSCT will work to achieve 100% adoption of local service protocols). A reliable taxonomy of 43 BCTs specific to smoking cessation with accompanying labels and detailed definitions was developed. BCTs were theoretically categorised according to their main function in behaviour change: addressing motivation, maximising self-regulation, promoting adjuvant activities and providing general support for other BCTs [18]. Type and number of BCTs across treatment manuals varied widely, from 9 to 37 (median 23, mean 22.1) [14]. A subsequent NCSCT study found that nine BCTs were associated with self-reported and CO-verified four-week quit outcomes and a further four were associated with CO-verified but not self-reported quit rates [14]. The number of sessions in the manuals showed a wide range; services that used more sessions had higher quit rates.

These results from NCSCT research [14, 18] show that many SSSs do not have treatment manuals and that existing manuals vary widely in the extent to which they follow recommended practice. The results provide a starting point for establishing best practice by providing evidence of associations of better outcomes with certain BCTs and number of intervention sessions.

The development of the taxonomy of BCTs made it possible to establish the core competences (knowledge and skills) required by SSPs to deliver one-to-one and group behavioural support [20]. Existing guidance documents and treatment manuals (source documents) were analysed by extracting competences that were either specifically mentioned or derivable from a BCT in the form of statements such as 'a specialist should be able to undertake this activity.' Competences were compared and matched across source documents to arrive at a single list of 71 one-to-one and 23 additional group behavioural support competences for which there was broad agreement as to their necessity. An evidence-based sub-set was created of those mentioned in at least two source documents and supported by good evidence of effectiveness in at least two randomised controlled trials within Cochrane systematic reviews [16, 17] (risk ratio ≥ 1.5 and difference statistically significant compared to control condition). A single merged list of 14 one-to-one and three additional group behavioural support competences that are recommended and evidence-based was thus obtained [20]. Four of the competences for individual behavioural support were also found to be effective when deriving competences from the BCTs associated with higher success rates in SSSs [14]. No data on group-based support were available from the SSSs study.

The list of competences [20] was the basis for developing standardised learning outcomes by the NCSCT. The identified competences were classified as being based on skills or on knowledge and categorised according to one of the behaviour change functions (addressing motivation, maximising self-regulation, promoting adjuvant activities and providing general support). This list of competences will be reviewed and amended as necessary as new evidence emerges. To arrive at standardised learning outcomes for training of SSPs, the full list of competences was translated into a learning outcome format, separated into one-to-one and group behavioural support [21]. These outcomes represent a recommended and evidence-based set of skills and knowledge which practitioners who deliver smoking cessation interventions should possess. They can be used to identify services and specialists where competences fall below an acceptable level and where training is needed.

In a process similar to that used to identify BCTs in smoking cessation in general, BCTs that occur in effective behaviour change interventions for smoking cessation in pregnancy have been identified [22] and will provide a foundation to develop recommendations and training to optimise smoking cessation interventions in pregnancy. A similar process is underway to identify BCTs in effective smoking cessation interventions for smokers with mental health problems.

The NCSCT has developed a training needs assessment and a two-stage training programme for SSPs, which covers both knowledge and skills central to the delivery of stop smoking interventions. The first stage, an online training and assessment programme, covers provision and assessment of knowledge in core areas such as statistics on smoking in the population, the process of smoking cessation and the effectiveness of various interventions. This can be viewed at <http://ncsct-training.co.uk>. The second stage of training is a two-day face-to-face group training in behaviour change and communication skills. This skills training has been piloted and will be rolled out across England from October 2010. The NCSCT training is set up in two stages to achieve most efficiently the objectives of improving both knowledge and skills. The internet-based delivery of knowledge assessment and training ensures that the face-to-face training courses can focus on skills and rely on a pre-existing minimum level of knowledge. Practitioners who pass the first stage and successfully complete the second stage assessment achieve full NCSCT certification.

Translating the work on identification of BCTs and competences associated with successful interventions for practical use, the NCSCT has also developed a standard treatment programme for smoking cessation. The standard treatment programme was also informed by the practical experience of SSPs currently working for and running SSSs, reviews of research evidence and existing training programmes and consultation with an expert panel comprised of clinicians, service managers, commissioners, academics and policy advisers. The programme provides guidelines for an assessment session, a quit date session and four weekly post-quit sessions and includes descriptions of BCTs and competences for each session. Standard treatment programmes for specific populations such as pregnant smokers and those with mental health problems will be modified according to research currently underway at the NCSCT.

Assessment and training are continually monitored and revised as necessary in order to learn from experience and to take account of scientific advances, new evidence and contextual changes. This ensures that services and practitioners benefit from advances in the field of smoking cessation via the continuing professional development provided by the

NCSCT. The training is evaluated by its impact on stop smoking success rates, using comparisons of success rates of practitioners prior to and following the training and of success rates of practitioners who have participated and those who have not. Participants' feedback on the training as well as their self-reported confidence in their competences are also assessed and used to evaluate training.

Several research studies are currently underway to underpin the work of the NCSCT and improve the success of the SSSs. Data sets from 23 SSSs with a total of over 130,000 clients are currently being used to assess associations between service characteristics and success while controlling for client characteristics. Other studies include the tracking of service throughput and success rates of SSSs and an annual survey of commissioners, managers and practitioners. Further studies focus on the development of a reliable method for characterising smoking cessation behavioural support in practice, the assessment of fidelity of behavioural support to treatment manuals, factors associated with smoking cessation behavioural support in practice, the association between behavioural support and outcome and the validation of the theoretical grouping of smoking cessation BCTs. The research findings of the NCSCT are regularly disseminated both at scientific conferences and in academic journals, and in meetings of practitioners, commissioners and policy makers.

Conclusion and outlook

The NHS stop smoking services are an example of a publicly funded, evidence-based behaviour change intervention which successfully supports the achievement of the Government's policy goal to reduce mortality, morbidity and health inequalities due to smoking. With the inception of the NCSCT and its research initiatives, the evidence base for their performance is broadened and deepened. Assessment, constantly evaluated training and development of guidelines by the NCSCT support further improvement in success of the intervention by ensuring that practice is based on latest available evidence and subject to effective evaluation. The NCSCT is a partnership of the academic sector, the voluntary sector and the NHS, thus ensuring that lessons learnt from each sector are taken into account. Its support by and cooperation with the Department of Health ensures that results of its work are directly fed back into the development of future interventions as well as to policy makers. The work of the NCSCT provides advice and support during the design, piloting, implementation and evaluation of behaviour change interventions in smoking cessation. The extent to which its results are transferable to behaviour change interventions in other areas of health is being investigated by the academics associated with the NCSCT. Following the three years of its initial funding, the NCSCT aims to become self-financing through providing assessment, training, continuous professional development and consultancy services to stop smoking services in England and comparable initiatives in other countries. The role of the NCSCT is already recognised internationally, with many international invitations to talk at meetings and provide training from Dubai to China. We consider that the model presented here is not only a flagship for smoking cessation but a model for the development, evaluation and implementation of all behaviour change interventions aimed at improving health.

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October 2010

Memorandum by the Nuffield Council on Bioethics (BC 75)

Ethical considerations

When is it appropriate for the state to intervene to influence the behaviour of members of the public and how does this differ from when it is appropriate for the commercial or voluntary sector to intervene? In particular, when should this be done by outright prohibition and when by measures to encourage behaviour change? Are some methods of producing behaviour change unacceptable? Which and why?

- 1 Chapter 2 of the Council's report *Public health: ethical issues* reviews the role of the state in public health and then outlines a framework for a public health policy, based on a classical liberal conception of the state's role. While this framework is suitable to address some of the principal issues arising in the context of public health, it also has certain limitations. We therefore propose a revised and extended version of the initial framework, which we call the **stewardship model**.
- 2 The report concludes that the state has a duty to help everyone lead a healthy life and reduce inequalities in health. Our 'stewardship model' sets out guiding principles for making decisions about public health policies.

The stewardship model

Concerning goals, public health programmes should:

- aim to reduce the risks of ill health that people might impose on each other;
- aim to reduce causes of ill health by regulations that ensure environmental conditions that sustain good health, such as the provision of clean air and water, safe food and decent housing;
- pay special attention to the health of children and other vulnerable people;
- promote health not only by providing information and advice, but also with programmes to help people to overcome addictions and other unhealthy behaviours;
- aim to ensure that it is easy for people to lead a healthy life, for example by providing convenient and safe opportunities for exercise;
- ensure that people have appropriate access to medical services; and
- aim to reduce unfair health inequalities.

In terms of constraints, such programmes should:

- not attempt to coerce adults to lead healthy lives;
- minimise interventions that are introduced without the individual consent of those affected, or without procedural justice arrangements (such as democratic decision-making procedures) which provide adequate mandate; and seek to minimise interventions that are perceived as unduly intrusive and in conflict with important personal values [para 2.44]

- 3 The stewardship model and the principles that underpin it do not provide a fixed set of rules, but elaborate factors to be taken into account when developing policy (paragraphs 2.44, 2.52, 8.3–8.12).

Role of third parties

- 4 Although the state should be guided in its public health policies by the concept of stewardship, this does not absolve other parties, in particular the corporate sector, from their responsibilities. We discuss the concept of corporate social responsibility, and note that while companies may have different motivations for pursuing social responsibility strategies, they increasingly recognise that they have obligations beyond simply complying with relevant laws and regulations. If industry fails to meet these obligations and the health of the population is significantly at risk, the market fails to act responsibly. In such cases, we argue, it is acceptable for the state to intervene (paragraphs 2.47–2.50, 5.26, 5.16–5.25, 6.18–6.31, 8.24).

Proportionality

- 5 The ‘precautionary principle’ is often invoked where there is some evidence of a serious threat to health, safety or the environment. The precise meaning of the principle has been the subject of much debate and it would be wrong to see it as a simple rule. This is why we prefer the term precautionary *approach*, rather than precautionary *principle* (paragraphs 3.15–3.16).
- 6 A Communication by the European Commission on the matter helpfully suggests that five main elements can be distinguished: (a) scientific assessment of risk, acknowledging uncertainties and updated in light of new evidence; (b) fairness and consistency; (c) consideration of costs and benefits of actions; (d) transparency; and (e) proportionality.
- 7 Whether an intervention is proportionate depends largely on: whether the public health objectives are sufficiently important to warrant particular laws, policies or interventions; how likely the intervention is to achieve certain ends; and whether the means chosen are the least intrusive and costly whilst still achieving their aims (paragraphs 3.16–3.19). The concept of proportionality is closely linked to what we call the ‘intervention ladder’.

The intervention ladder

- 8 Our ‘intervention ladder’ (attached) is a method of thinking about the acceptability and justification of different public health policies. In general, the higher the rung on the ladder at which the policy maker intervenes, the stronger the justification and the stronger the evidence has to be. A more intrusive policy initiative is likely to be publicly acceptable only if there is a clear indication that it will produce the desired effect, and that this can be weighed favourably against any loss of liberty that may result [para 3.37].

The intervention ladder

<p>Eliminate choice. Regulate in such a way as to entirely eliminate choice, for example through compulsory isolation of patients with infectious diseases.</p>
<p>Restrict choice. Regulate in such a way as to restrict the options available to people with the aim of protecting them, for example removing unhealthy ingredients from foods, or unhealthy foods from shops or restaurants.</p>
<p>Guide choice through disincentives. Fiscal and other disincentives can be put in place to influence people not to pursue certain activities, for example through taxes on cigarettes, or by discouraging the use of cars in inner cities through charging schemes or limitations of parking spaces.</p>
<p>Guide choices through incentives. Regulations can be offered that guide choices by fiscal and other incentives, for example offering tax-breaks for the purchase of bicycles that are used as a means of travelling to work.</p>
<p>Guide choices through changing the default policy. For example, in a restaurant, instead of providing chips as a standard side dish (with healthier options available), menus could be changed to provide a more healthy option as standard (with chips as an option available).</p>
<p>Enable choice. Enable individuals to change their behaviours, for example by offering participation in a NHS ‘stop smoking’ programme, building cycle lanes, or providing free fruit in schools.</p>
<p>Provide information. Inform and educate the public, for example as part of campaigns to encourage people to walk more or eat five portions of fruit and vegetables per day.</p>
<p>Do nothing or simply monitor the current situation</p>

October 2010

Memorandum by Foteini Papadopoulou, PhD Candidate, University of Loughborough (BC 15)

Brief Summary of the Doctoral/Research Study

Youth disaffection within the school context has been a major concern in the UK and elsewhere in the World (i.e. 21st Century Schools Paper, 2009; VISTA, 2006). In parallel, investment on Physical Education & School Sport (PESS) programmes as a way to tackle youth disaffection has seen a great expansion (i.e. PESSYP, 2008; Sport for a Culture of Peace/UNESCO, 2001). Furthermore, evidence suggests that PE teachers – as role models and significant adults - may have a powerful impact on these young people (Sandford et al, 2008). It is, therefore, essential to ensure that the PE teachers are appropriately prepared – through Initial training and Continuing Professional Development (CPD) programmes – in order to re-engage effectively these young people into the education context. Briefly, the purpose of this study was to address and explore issues of: a. Disaffected behaviour during Physical Education & School Sport (PESS); b. the role of PESS in re-engaging these young people in education and further, in society; c. the relevant CPD training, which PE teachers possibly had undertaken throughout their careers and any future training they need to make them effective in this field. In order to understand teacher learning, principles of the theories of ‘social constructivism’ and ‘situated learning’ were employed (Vygotsky, 1978; Lave & Wenger, 1991). Data collection incorporated an open-ended survey and a two-tier case study approach (11 single interviews & 3 school-visits). Data were analysed using main points of constructivist grounded theory (Charmaz, 2006) and thematic analysis (Bryman, 2008). Main results indicated that the majority of the PE teachers had experienced disaffected/disruptive behaviour in their classes; PE was perceived to play a positive role in managing disaffected/disruptive behaviour; almost all PE teachers reported that they had received no specific training on the role of PE in addressing youth disaffection, both in past and recent CPD activities; their CPD needs appeared to be the content of the CPD programmes and the expertise of the CPD trainers.

1. Introduction

This paper will focus on one of the three areas of interest of this research study: Disaffected Youth in Physical Education & Education-Definition & Reasons. In particular, it will consist of: background; rationale; research design - theoretical framework, research methods (data collection; data analysis techniques) and relevant results along with their discussion.

2. Background

The British government’s concern about youth disaffection and disengagement from education has been expressed through official government policies, such as Every Child Matters (2005) and documents, such as the 21st Young People Paper (2009) that among other aims, target disaffected young people in terms of their re-engagement in the contexts of education and society. In parallel, the use of Physical Education and School Sport (PESS) as a powerful ‘tool’ to re-engage young people and positively influence their physical, psychological and social development (Sandford et al., 2006) has led to the establishment of the Physical Education and School Sport for Young People (PESSYP, 2008 formerly called PESSCL, 2003) strategy. Further, in the Report ‘Child Poverty in Perspective: An overview of child well-being in economically advanced countries’ published by UNICEF (2007), the UK

ranked 21st out of the 21 economically advanced countries that participated in the section related to behaviours and risks among adolescence. Thus, Youth disaffection and disruptive behaviours, especially within the school context have been and continue to be a major concern for the UK government (Elton Report, 1989; Green Paper, 2002; White Paper, 2009). Tackling disaffection and re-engaging these young people into education and more broadly in society have been at the core of numerous government funded school based projects, i.e. Sky Sports: Living for Sport, which is now accessible to all secondary schools in the UK (2009).

As a term 'disaffection' is 'a complex and multidimensional phenomenon, which is influenced by numerous, interrelating factors' (Sandford et al., 2006, p.251). In particular, disaffection in relation to the school context and according to research evidence is used to mean: disengagement from education (Huskins, 1998), lack of affection for school and lack of participation in school (Hayden & Blaya, 2002; 2005), disobedience and physical aggression (Charlton et al, 2004), non attendance (Shumer, 2005) and engagement in disruptive behaviours (Brown & Fletcher, 2002). In addition, the distinction between being actively and passively disaffected is highlighted by Sandford et al. (2008), where active disaffection is defined as 'disruptive behaviour, truancy and exclusion' and passive as the one that involves 'low academic achievement, non-participation and alienation (p.97). In the context of Physical Education and School Sport (PESS), disaffected/disruptive behaviours can be defined from a similar point of view, i.e. active and passive. Therefore, there could be disruptive behaviours in the form of 'misusing' school equipment, obstructing their own learning and that of their own classmates, disrupting the PE teacher from appropriately delivering the lesson, and exhibiting aggressive behaviours towards their teacher and classmates (Education and Inspections Act, 2006; Ntoumanis et al., 2004, Evans et al. 2002). It is important to note that the main focus of the particular research study was disaffected youth who engage in disruptive behaviours. However, does disaffection among youth and within education and physical education hold a precise definition ; do we know why pupils may possibly exhibit such behaviours?

3. Rationale

In fact, evidence shows that we know very little on disaffection within PE. This research study attempted to address issues surrounding these questions and to fill 'gaps' in **our** (i.e. researchers, PE teachers, policy makers) knowledge. It was therefore, important to establish definitions of disaffected/disruptive pupils in schools, in physical education as well as in this research. For once more, it should be noted that for the needs of this study disaffected young people were defined as the ones, who mainly exhibit disruptive behaviours within a PE class.

4. Research Design

4a. Theoretical Framework

The learning theories of social constructivism and elements of situated learning informed the choice of the research methodology and provided an appropriate framework for this study. In brief, 'constructivism' emerges as 'a guiding light for the implementation of successful changes in teaching practice' (Light, 2008, p.22 & 26). Social Constructivist theory (Vygotsky, 1978) and the theory of Situated learning (Lave and Wenger, 1991) put the learner at the heart of the educational process as an individual actively engaged in the environment constructing knowledge while at the same time acknowledge the learners'

previous experiences. As Lave and Wenger (1991) argued, learning is an activity related to the social world and it is inseparable from the socio-cultural environment and social practice. To sum up, learning is active, teacher is the facilitator and the learning occurs through participating in the community of practice. In relation to PE, Kirk and Kinchin, (2003) supported the role of situated learning by arguing that 'it is useful to think in relation to school PE, because it allows us to explore the complex between forms and cultures, on the one hand and forms of consciousness on the other (p.224).

4b. Data collection

Data collection was divided into two phases. The first phase involved the administration of open-ended questionnaires to both Partnership Development Managers and Heads of the PE departments of all types of secondary schools in Middle England. The second phase involved the implementation of two – tier case study approach. The first part included eleven (11) single cases and the second part, three (3) schools as multiple cases. In regard to the first phase of the data collection, the survey was administered via email and post to both PDMs and Heads of PE of all kinds of secondary schools in the area of Midlands in England. In total, 275 questionnaires were sent out and 80 were returned. The first part of the second Phase of the data collection involved in – depth, semi-structural interviews with two (2) Partnership Development Managers (PDMs) and nine (9) Head teachers of PE (four (4) in mainstream and five (5) in Emotional Behavioural Difficulties (EBD) schools]. The second part of the second phase of the data collection involved three (3) schools, which were examined as multiple Case Studies. The three (3) secondary schools were a Mainstream secondary school, a School Sport Specialist College and an EBD school. Research tools that were used to acquire data were: policy documents from each school, single, semi – structured interviews with members of the PE department, observations of PE lessons and focus group interviews with four (4) disaffected pupils after each lesson. Qualitative research methods were used for the collection and analysis of data, as they can provide an opportunity to understand and explain social complex phenomena in context (Merriam, 1998).

4c. Data Analysis

Data analysis took place using a Constructivist approach to Grounded Theory (Charmaz, 2006, 2009) as well as Thematic Analysis (Bryman, 2008). In general, Grounded Theory allows the generation of theory from data and concepts are systematically constructed from data (Glaser and Strauss, 1969). In particular and in relation to the Constructivist approach, Charmaz advocated (2006; 2009) that knowledge is perceived to be socially constructed, acknowledging multiple standpoints.

5. Results & Discussion→Disaffection in PE

In relation to youth disaffection in secondary schools and in particular in PE, results after data analysis of the survey, the individual and school case studies majorly indicated that:

- Almost all the PE teachers reported that they had experienced behaviour problems from disaffected young people in their PE classes; furthermore, they referred to its definition, to possible reasons for its exhibition and ways to cope with such behaviours and attitudes within the lessons and the school.

Disaffection among young people is widely recognised as rising worldwide (i.e. European Commission White Paper, 2001; Australia - Savelsberg et al. 2008) and in the UK (Every Child Matters, 2003). Generally and in line with research conducted by Stinchcomb et al. (2006), disaffection/disruption here appeared to challenge 'the longstanding image of schools as tranquil sanctuaries' (p.123) In this project, the majority of the participants (66 respondents out of 75 in the survey and every participant in the 14 case studies) replied that they had encountered incidents of disaffected/disruptive behaviours throughout their careers, in their school and their PE lessons. Their views illustrated the broadness of the phenomenon in today's schools and justified relevant concerns as expressed by policy makers in significant policy documents (i.e. White Paper [England] 2005; Youth Crime Statistical Release [England], 2009).

→ *Definitions*

Vagueness about the meaning of the term 'disaffection in PESS' is understandable since there is no 'official' definition for the term in the literature of PESS and policy documents and consequently a shared understanding of 'disaffection in PESS' may be shadowed with uncertainty. However, disaffection is a term widely used in relation to policies and practices in education (i.e. TDA, 2007) and currently in physical education and school sport (PESSYP, 2008; Sandford et al., 2006; Sandford et al.2008). In education, 'disaffection' is often interchanged with 'disruption, disengagement, or marginalisation' (i.e. Hayden and Blaya, 2005). In this study definitions for disaffected/disruptive attitudes and behaviours in PESS varied among participants both in the survey and the case studies. In the survey, examples of given answers were: 'disaffection' (i.e.Q22), 'disruption' (i.e.Q3); 'bad behaviour' (i.e.:Q65); 'they disrupt PE through non-attendance, no KIT and low level input - same small number' (Q50); 'behaviour attempts to distract from their deficiencies' (Q44); 'bad behaviour as a way to distract the teachers from the real them' (Q65); 'deploy and annoy teachers' tactics' (Q1); 'disagree with decisions' (Q68). Overall, the majority of the PE teachers identified the term 'disaffection' as a synonym to 'disruption' and in the course of their answers they provided details for how these attitudes and behaviours tend to be exhibited within a PE lesson. 'In addition, 'disaffection' was noted to be synonymous with the misuse of the lesson's equipment, i.e. 'disruption in PE is throwing equipment and running away' (Q68) as well as – in more extreme manner - through personal assaults to PE staff and other pupils. i.e. 'have experienced death threats to staff and pupils; physical and verbal assaults to staff and pupils & destruction of property' (Q31). Throughout these findings, there were important similarities with existing research as well as differences. Indeed and similarly to this study's results, the term disaffection was identified as 'extreme disruptive behaviour' by Gutteridge (2002) and as 'disobedience and physical aggression' by Charlton et al (2004). Moreover, Cooper (2005) talked about 'Emotional difficulties and Social Isolation within the School'. As a term and dissimilarly to current policy documents, past policy documents such as the Underwood Committee (1981) children, who exhibited disaffected and disruptive behaviours and attitudes in the school context were defined as 'maladjusted' and recently, as 'Hardest to Help Young People' (RR366DFCS/Golden et al. 2002).

From the perspective of the Case Studies and according to some examples, PDMI defined disaffected pupils as: the 'ones, who really are not going to get involved' whereas Craig argued that they are the ones,

'who do not do what they've been told [...] & disaffection tends to be very much aligned to disruption; it's not just not taking part, but spoiling the opportunities

of others as well; so, the key definition for me of disaffection would be the effect they have on other pupils, not just themselves.

These answers were in line with research conducted by Brown & Fletcher (2002), who identified disaffection as 'engagement in disruptive behaviours' and with Huskin (1998), who argued about disaffection within school to be disengagement from education. Overall, the diversity of the opinions of the PE teachers may explain first, why Pearce and Hillman (1998) referred to disaffection as:

an umbrella term to cover young people in compulsory education, whether they are non-attendants or exhibit behavioural difficulties and/or anti-social behaviour

and second, what Zionts et al (2002) argued in relation to the term; 'there is 'no difference in exhibited behaviour and attitudes, but in the labels given by the personnel'. Concluding, nearly all of them agreed about the behaviour and the element of disruption within disaffection and overall on disengagement from learning within the PESS and generally the education context.

→Reasons

The majority of the respondents provided answers for possible reasons, which could explain why incidents of disaffection/disruption could happen in PESS. The reasons mentioned more often included: **Gender, PE KIT & Changing, family; PE teachers; socioeconomic background.**

Gender:

As a starting point, the factor of gender seemed to play a significant role in the answers of the PE teachers, since every participant referred to gender as an important factor that leads to disaffected behaviours within PESS. Therefore, they referred to both girls and boys being disaffected/disruptive, however with an emphasis on girls. Specific examples were: 'mainly 11-14 years old/both girls and boys' (Q11); 'girls never bringing PE KIT, poor attitudes, lots of jewellery - girls are often disaffected/not interested in taking part and doing any activity; boys are often deliberately disruptive, loud, aggressive, No KIT, consistently removed from the lesson' (Q22). In line with research conducted by Flintoff and Scraton (2001) found that young girls felt 'uncomfortable' in PE when their bodies were 'showing' such as when swimming or when wearing short games' skirts. Additionally, research conducted by Evans (2006] highlighted the complexities and contradictory experiences in a negative way of girls' bodies and school sport.

Drawing on the findings from the case studies, Andy (EBD) particularly said '**the** differences are between the boys and the girls. Girls for example could be turned off by team sports rather than individual sports' and similarly Digby stated: 'Yes, in boys [...] Ok, let's say that at the moment in this school are 3 to 1 and is getting bigger and bigger all the time'. Research conducted by Clark and Paechter (2007) examined the reactions of girls in participating in a sport like 'football'; the consequences were disruptive behaviours and not equal participation. The research suggested that that happened because of boys' power and 'automatic rights and girls' 'marginal tenancy'. From the Mainstream sector Peter and Craig argued: Peter: 'I think that it is more in boys, but, I personally find girls hard to deal with'; **Craig:** 'I think more girls than boys kick back at the idea of doing their PE lesson [...] as a

more general comment – girls are more disaffected than boys'. To sum up and in a similar vein, research conducted by Grossbard et al 2009 showed that girls reported greater levels of anxiety than boys, whereas boys reported higher disruption of their concentration during sport.

PE KIT & Changing

Issues surrounding the PE KIT & Changing were highlighted and illustrated through the answers provided by the participants. Examples included: 'not bringing PE KIT and refuse to borrow it' along with 'slow changing' (Q1); 'disruptive because of not bringing PE KIT and having a conflict of borrowing (Q18); misbehaviour because they decide not to take part, therefore not have brought PE KIT -possibly, due to inadequate/dirty KIT (from seeing previous KIT) (Q44). This study suggested that the PE KIT and the process of Changing play a topical role in the young people's exhibited behaviours during PESS and appeared to be consistent with research conducted by O' Donovan and Kirk (2007), who stated that the process of 'changing' (i.e. changing rooms) holds a prominent role in the course of a PE lesson (i.e. the element of 'how does a pupil look after changing'). Further, all interviewees/case studies referred to PE KIT as a reason for a child to exhibit disaffection/disruption in PESS. In particular, Dawn linked girls' disaffection with the PE KIT:

I think really for Girls' PE in particular, disaffection starts by not bringing the PE KIT; refusing to bring the KIT, refusing to tie their hair back, refusing to bring trainers, they don't want to go outside – you are torn one way or another really.

Similarly, Sandra argued

[...] the whole changing thing can be very negative for some pupils; well, it can be very frustrating; yeah, because they have to get changed in public – we have to ask 40 girls to go into a large changing area and you know they don't want to get changed publically, so this is an issue. Some of them don't want to wear shorts; they don't want to show their legs.

Moreover, body image appeared here as prominent along with the PE KIT and gender– it's not only the process of changing but also how a pupil will look like after changing – 'it's about Image'. Azzarito (2009) suggested that there is a need for a comprehension of the construction of girls' and boys' body image in regard to gender and race and that it's necessary to create 'pedagogical spaces in schools to destabilize and subvert the gendered, racialized social norms of the ideal body' (p.19).

Other Social Factors

Family: What may cause a pupil to become disaffected/disruptive in PE and school was the family support along with family problems: i.e. 'those, who have an unstable home life' (Q35). Within the case studies, family support also emerged as prominent for a pupil being disaffected/disruptive. For example, Ian illustrated his point as follows:

Oh, gosh – neglect. I think is the first – neglected from their families; also, some of their parents have died for whatever reason; or they have also been removed

from their families because of abuse and extreme neglect; I do not know the exact reasons for these people being neglected.

Report by Desforge & Abouchar (2003/RR433) highlighted the importance of the family in the adolescent's life as well as research conducted in EBD schools by McCrystal et al. (2007) also supported the role of the family and parental support in the exhibition of disaffected/disruptive behaviours during the period of adolescence.

PE teachers as significant others: Hilton (2006) supported the notion of key adults in influencing positively disaffected pupils in mainstream schools. 'PE staff and problems' was a reason that was mentioned as crucial for a child to become disaffected in PE from PDM2 as well: She argued:

some of our city schools have got huge staffing problems, where they have continual changes in staff; staff on long-term sickness. Staff, who unfortunately the kids don't trust them, because the teaching staff, either they aren't there or they are running late/out of time and I think in PE, more than in any other subject the teacher must be able to trust you and believe in you and see the bad side of things as well, yes.

Hagger et al. (2009) also suggested that the influence of PE teachers in affecting positively pupils to take part is even more important than the influence of their own family during adolescence

Socioeconomic background: In regard to disaffection in PESS and social class research by Sandford et al (2006) also mentioned socioeconomic background as a reason for the exhibition of disaffection within PESS. Issues of socioeconomic background reported as significant for affecting negatively these young people, especially concerning the area of residence, i.e. 'working in a school in an economically deprived area - lots of social issues influencing students' attitudes and behaviours (Q2). In the same vein, Neil from the EBD sector stated:

I have also worked in other schools in xyz city, where there is a high percentage with low socioeconomic background pupils <...>. Straight away, I was working with disaffected young people, who were coming from poor socioeconomic backgrounds.

Socioeconomic background and its' effect on PESS – either positive or negative - has been examined and discussed by numerous researchers all around the world (i.e. Green et al. 2005; Azzarito & Solomon, 2005). Findings of this research also indicated that not all the times the 'blame' goes to the socioeconomic background; for example, Craig from the mainstream sector argued that: 'I have seen children from excellent, upper class families to behave inappropriately'.

6. Conclusion

Overall, data indicated strongly that more could be done to support physical education teachers to maximise the potential of the PESS environment in re-engaging disaffected/disengaged/disruptive youth in education. Definitions of disaffection in PE and

their 'roots' were presented, explored and discussed in order knowledge to be enhanced and policies to be inspired by them.

October 2010

Memorandum by Peterborough City Council (BC 152)

This memorandum describes Peterborough's experience of being a Sustainable Travel Town.

Success of devolving responsibility for sustainable transport to local authorities:

- The approach we took in our original funding proposal, agreed by the Department for Transport, was specifically tailored to focus on the needs of the local area. We feel this approach and the flexibility granted to us on behalf of the DfT strongly contributed to the success of Travelchoice. We were able to devise locally driven programmes to suit the needs of Peterborough and our residents, delivering tailored solutions that have proved to be viable in the longer term. This approach worked well in Peterborough because of several different factors including:
 - High level support – the scheme received good support from Senior Council Officers and several members
 - Governance – from the outset a strong governing group were established. This ensured projects were scrutinized and progress consistently monitored and therefore driven forward
 - Cohesive delivery – the project successfully brought together different aspects of work and areas of local authority influence to deliver joined up schemes
- Conversely, we were required to report to the DfT on a monthly basis however we received very little feedback to guide the programme. Whilst from one perspective we feel this may have aided the programme, i.e. it ensured we were able to continue to develop tailored solutions for the city, we also feel that we may have missed out on opportunities to learn from others.
- Travelchoice has been adopted into main council business following completion of the original programme, albeit on a smaller scale. This demonstrates the success Travelchoice has achieved in raising awareness of the importance of such issues locally.

The main difficulties we faced during the programme:

- The programme itself ran very smoothly with no major obstacles that we could not overcome. Some projects changed slightly from what we originally intended such as the delivery of smart card technology, however the resultant programme still proved to be successful from other perspectives.
- In some cases we found that significant local support existed for planned schemes and where this was the case we were able to implement initiatives with greater ease. However in some cases progress was not as straightforward often due to a lack of understanding around sustainable travel issues.
- Throughout the programme we were very aware of the natural links our work had with other initiatives such as the Primary Care Trusts aim to get more people active. Whilst these links were clear, lack of certainty surrounding the work of local partners and their funding streams meant we were not able to maximize the effect of these linkages resulting in missed opportunities.
- With retrospect we would like to have implemented more schemes embracing new technologies which have developed significantly during the Travelchoice project and beyond, however at the time these were an unknown entity.

Whether sufficient guidance was made available from central government to help you design the programme:

- Whilst guidance was provided we feel more regular feedback and discussion would have been beneficial to the programme (see point above)

How, if at all, the programme is being taken forward:

- Travelchoice has been adopted as business as normal within the council and the remit has expanded to include the rural areas of the city. However, primarily due to a lack of available funding locally, the programme has reduced in capacity significantly. One significant benefit however is that whilst the team are now significantly smaller, some aspects of work are now delivered by different officers within the council or external organizations where the work has become embedded in their respective roles i.e. the local police are doing more work to encourage people to lock their bike securely and wear appropriate clothing for night time cycling.
- We are currently developing an application for the LSTF in order to drive this work forward and bring a wider array of programmes on line.
- We are looking at opportunities to link new initiatives to London 2012 in order to gain maximum benefits from this initiative.

Sufficient skills and expertise in house:

- We are very keen to monitor the medium to long term effects of the Travelchoice programme and immediately after the end of the DfT funded phase were in discussion with the DfT to enable this. Unfortunately this has not progressed at this stage however we remain optimistic that this may be enabled with the aid of LSTF funding.
- The programme required a broad range of skills including communications skills, specialist expertise etc and we found that often we did have these resources in house, however an effect that we noted is that due to insufficient resources people are often taken away from their area of expertise to backfill another area of work - which means peoples time is on occasion not used as effectively as it could be.

January 2011

Memorandum by the Plunkett Foundation (BC 41)

I. Summary

The summary of our submission is as follows:

- Communities are the most effective way of influencing positive behavior change
- Co-operatives, Mutuels and Social Enterprises such and community-owned shops and co-operative pubs are an effective mechanism for behaviour change in communities
- Co-operatives, Mutuels and Social Enterprises require support to establish and thrive in order to be able to act ad an effective mechanim for bevaviour change
- We call for the government to share with civil society organisations their growing understanding of behaviour change tools that can be utilised by such organisations in order to better achieve their social missions

The focus of the response has been in addressing question 6 of the inquiry, *How should different levels of intervention (individual, organizational, community and national) and different types of intervention (legislative, fiscal, educative) interact in order to achieve policy goals more effectively.*

2. About the Plunkett Foundation

2.1 The Plunkett Foundation helps rural communities through community-ownership to take control of the issues affecting them. Plunkett supports co-operatives, mutuels and social enterprise models which enable communities to set up and run viable businesses that are community-owned, community led and address challenges that a community is facing.

2.2 Plunkett supports the network of community-owned village shops across the UK. There are now 244 community-owned village shops in the UK with a record 39 opening in 2009 alone. Community-ownership now saves ten percent of village shops that would otherwise have closed. In 25 years, only 10 community-owned shops have ever closed out of 254 that have opened.

2.3 Plunkett also works to raise the awareness of and support for the potential for rural communities to set up and run wider forms of community-owned enterprises whether this comes in the form of co-operative pubs, community-owned broadband, community-owned energy and using faith buildings for community enterprise activity. The Plunkett Foundation has recently worked with a range of co-operative development organisations to develop a support package for communities looking to us co-operative approaches to save their local pub.

2.4 Plunkett helps rural and urban communities to establish community food enterprises as a way of helping them to take ownership of their food and where it comes from. Working with a range of partner organisations, Plunkett has supported over 700 such community food enterprises since 2008.

2.5 Founded in 1919, Plunkett is true to the vision that it was established to take forward. Plunkett helps communities to address their own challenges as they are best placed to identify and address such issues. We work with communities to set up community based

co-operatives, mutuals and social enterprises as a way of providing a long lasting solution to the issues facing rural communities.

Communities as the most effective building block for positive behaviour change

Communities have for generations been an extremely effective building block for positive change. Communities have always played a role in providing key services where the public and private sector have failed or chosen not to provide services to.

Behaviour change theory puts great emphasis on the fact that it is not only the message but the messenger that individuals receive in from that matters. Community is a powerful messenger as it has credibility in the message receivers world and help to build social norms that reinforce positive behaviour change.

The Plunkett Foundation works with rural communities to help them to set up and run co-operatives, mutuals and social enterprises as a way of improving their lives. This could be in the form of a community working together to save their local shop and post office or pub, or a community working together to set up a community food growing scheme improving access to fresh and healthy food.

Communities we feel are the best building blocks for behavior change as the people affected by an issue or range of issues are often best placed to solve them. Plunkett has seen that when you empower communities by giving them greater ownership over the issues affecting them and by providing access to community-based enterprise models, this can lead to transformed communities.

An example of such a change occurs in communities which lose their last shop or pub. No longer are people walking to the shop, meeting people and creating social capital via strengthened social bonds and so people consider their community to be dying. When the community responds to such a challenge by working together to save their shop, it creates a stronger community that has greater belief in their ability to tackle difficult issues and this feeling of empowerment plus the existence of the community-owned shop that they helped to establish, it has often been said to us that is puts the heart back in a community.

The Plunkett Foundation has in recent times begun to explore the role that behavior change can play in developing sustainable community-owned enterprises. Specifically, we are currently undertaking two research projects which are relevant to this issue. Making Local Food Work, a programme that the Plunkett Foundation leads, has commissioned the Food Ethics Council to explore the gap between consumers stated intentions to buy local food and their actual buying behaviours. This is being undertaken in a behaviour change context and will focus on the role of community organisations in the process of behaviour change. The second is an action research project funded by Defra and the Cabinet office looking at the role that social enterprises play in delivering food policy objectives. The research includes working closely with Defra's Sustainable Behaviours Unit (the lead department for this work) and is one of the first research projects to explore the role of social enterprise as trusted community based organisations have in behaviour change.

Co-operatives, Mutuals and Social Enterprises as an effective mechanism for behaviour change in a community

The Plunkett Foundation has seen since we were founded 91 years ago that the most effective models for long term behaviour change through community activity involve three key aspects:

- They adopt enterprising approaches in order to ensure the long term sustainability of the service
- They apply principles of community-based enterprise where all members of the community are encouraged to participate
- They plan to provide a whole range of economic, social and environmental outcomes that the community want and need

Individual change:

Co-operatives, Mutuels and Social Enterprises, such as community-owned village shops, have the ability to influence positive behaviour change in a community. For example Plunkett are working with ten community-owned shops to work with their members and wider community to adopt pro environmental behaviours. Some community-owned shops have pledged to stock a greater range of environmentally friendly products such as low energy lightbulbs or composable bin liners and they work hard to educate their customers about their reasons for making such a change. Through this work we have seen that individuals and families are much more likely to adopt pro environmental behaviour through a community intervention than a government or private sector intervention.

An example of best practice is the community-owned shop in Brockweir, Gloucestershire. The shop has been at the forefront of a drive to encourage members of their community to sign personal pledges that they will adopt more pro environmental behaviours receiving over fifty pledges so far. They have also run a community recycling day and as a result have provided greater recycling facilities for the community at their shop.

The community-owned shop in Ryburgh, Norfolk has also spearheaded a local campaign to encourage community members to sign personal pledges relating to pro environmental behaviours. They have also established a community composting facility for the village to use. The key point is that very few of the individuals who have pledged would have done so if it was not because of the trusted relationship they have with their community-owned shop.

Community-owned shops also have a strong record of encouraging behaviour change in relation to health. They provide opportunities for volunteering for all members of the community but particularly for older members of the community. This can often act as a transition from a major life event such as a health problem or retirement and provides an opportunity to keep active for longer within a community. For example, Plunkett has recently undertaken research looking at the role and value of volunteering for older people within rural communities which have a community-owned shop. The evidence suggests that the volunteering opportunities through the community-owned shop provide a lifeline to many people including those in their 80s to participate fully within their community.

Plunkett is working with a range of partners to promote and support the development of community food enterprises through a programme called Making Local Food Work. This programme supports a wide range of community enterprise in relation to every aspect of food production, distribution and supply. One form of community food enterprise which is

delivering positive behaviour change in relation to specifically pro environmental behaviours and better health is Community Supported Agriculture (CSA). CSA comes in many forms but typically it involves a group of people coming together to grow food in the way they decide. Typically these are organic or use low impact production methods which produce as a whole vegetables and fruit for consumption by local members from the local community. By producing health food that is affordable and accessible, it enables a greater proportion of a community to access food that should improve their health. CSAs also provide health benefits by encouraging members to become actively involved in food production which provides exercise and also therapeutic benefits.

Community behaviour change:

Co-operatives, Mutuals and Social Enterprises also have the potential to influence the ongoing behaviour of entire communities. When a community comes together to form a co-operative, mutual or social enterprise to address an issue important to them for the first time, this creates the social capital and knowledge required for communities to use these approaches to tackle a different problem. For example, 82 communities have contacted the Plunkett Foundation since January to enquire about support for community-owned pubs. Eight of these communities, around ten percent, have already gone through the process of saving their shop through community-ownership and it is clear that this experience and the stronger community that it creates enables and empowers communities to take on other issues and challenges that may come up in the future.

Going through the process of setting up and running a community-owned enterprise is transformative for a community. They learn what is possible through working together and they also learn how to use widespread community engagement and participation as an effective enterprise model. This leads to confident and empowered communities which are ready to tackle the challenges that rural communities can and do face.

Communities are also demonstrating their interest in and ability to learn from other communities who have established community-owned enterprises which promote positive behaviour change. In March the Plunkett Foundation launched a new Community Shops Network (www.plunkett.co.uk), a new online facility for knowledge exchange between communities who are running existing community-owned shops and those communities who are interested in establishing one. This enables firstly for the sharing of best practice between existing community-owned shops. This is often relating to best practice and also frequently relates to positive behaviour change such as promoting better health and pro environmental behaviours. It is also used to help communities looking to undergo the process how they can do this for the maximum benefit – economically, socially and environmentally – for their communities.

There is great interest from rural communities in adopting such approaches as a way of improving their communities. For example, the number of community-owned shops opening per year have quadrupled since 2006.

The need for Government to share its growing understanding of behaviour change tools with civil society organisations in order for them to make better use of them in their delivery

Policy formers have begun to see the role of using community to influence positive behaviour change. The Plunkett Foundation calls for the government to share its growing understanding of behaviour change and behaviour change tools with civil society organisations including co-operatives, mutuals and social enterprises in order for them to make greater use of them in the delivery of their social mission.

The need to support Co-operatives, Mutuals and Social Enterprises as behaviour change influencers

The development of Co-operative, Mutuals and Social Enterprises requires access to support infrastructure. They are effective models for behaviour change and as such as cost effective mechanisms for supporting positive behaviour change in a community.

There are three distinct stages of development that each form of Co-operative, Mutual and Social Enterprise goes through. This model has been tried and tested right back to the mid 19th century with the development of community-owned co-operative stores.

Stage 1: The Pioneers

The first stage is where there is a handful of pioneering communities who have established specific forms of community-owned enterprise. They tend to be well resourced communities in terms of access to finance and business support and another quality that they have in common is that they are led by a person or a group of people who are willing to run through brick walls so set something up and will work tirelessly to make sure it is an ongoing success. There is typically a very high success rate for pioneers in terms of long term business sustainability.

Stage 2: The Enthusiasts

The enthusiasts define the second stage of development where wider adoption takes place. This tends to be where people have heard about or come across a pioneer and they look to replicate these using very similar or commonly very different methods. At this stage lessons are learned about which models work and which do not and therefore there are failures at this stage. Communities at this stage commonly do not have access to the range of business and financial skills and therefore the community-owned enterprises are greater risk. This is the quickest of the three stages but also it is the most critical as it will define how the specific sub sector of community-owned enterprises will develop.

State 3: The Mainstream

Once stage 2 reaches a critical mass of communities, their development can explode outwards as it is seen as a viable and sustainable enterprise model that works in a variety of different communities and circumstances. At this stage communities have greater access to finance and business support as awareness of and interest in the community-owned enterprise model increases. It is critical at this stage that support infrastructure is in place and also the individual enterprises must be supported to connect up to each other, to learn from each other and prevent them from having to reinvent wheels.

Support needs: Belief – Business Support - Finance

The needs at each stage of development are common. There needs to be resources for belief building so that communities understand community-ownership and have confidence with themselves to deliver the end product - a community-owned enterprise. There needs to be access to business support at each stage and there also needs to be access to finance - grants and/or loans and Community Shares support. Funding the development of community-owned energy schemes can draw on some similarities with funding other community-owned enterprises but the scale of the funding required, the payback time and the risk capital required to get schemes through the planning process raises distinct challenges.

The Big Challenge

The big challenge is how you move distinct types of Co-operatives, Mutuals and Social Enterprises through the three stages of development. There is a need to learn lessons from the development of community-owned village shops and a number of other forms of co-operative, mutual and social enterprise in order to develop such enterprises as effectively as possible.

8 October 2010

Memorandum by Professor Colin Pooley, Dr David Horton, Dr Griet Scheldeman, Lancaster University (BC 123)

This evidence is provided on an individual basis and does not represent the view of Lancaster University

1. The evidence base

1.1. The three authors of this evidence have extensive experience of social science research on travel, transport and human mobility. Information used to compile this evidence is drawn from a wide range of current and recent research projects with the most relevant current project being: ‘*Understanding walking and cycling*,’ funded by EPSRC 2008-11 (in conjunction with Universities of Leeds and Oxford Brookes). This project focuses on travel behaviour for short trips in urban areas, and uses an innovative mixture of quantitative and qualitative evidence to examine in detail the practicalities of everyday travel. Data were collected from four urban areas in England: Leeds, Leicester, Worcester and Lancaster. The evidence presented here will focus especially on walking and cycling for short trips in urban areas and is drawn mainly from this on-going project. Relevant publications by the authors are listed at the end of this evidence.

2. What factors determine travel modes for short trips in urban areas?

2.1. In general terms the factors that shape everyday travel, and which encourage people to use cars for short trips in urban areas, are well known. These include journey purpose, the composition of the travelling group, time pressures, weather and other environmental factors, perceptions of risk and the mobility identities of individuals (see for instance: Mackett, 2003; Anable, 2005). However, our current research particularly demonstrates the ways in which these (and related) factors interact to produce particular outcomes. Rather than any one individual factor determining travel-mode choice it is both the complexity and the contingency involved in most journeys that makes behaviour change difficult. Almost all journeys are the outcome of a carefully considered decision-making process, and are to some degree contingent on the needs and behaviour of others. This means that even households that have a high environmental awareness, and a willingness to travel more sustainably, often fail to do so.

2.2. Our recent qualitative research makes it very clear that where the household has access to a car, it has become the default option for the majority of journeys because the urban environment has increasingly been shaped in ways that make the car seem like ‘the right choice’, whilst the alternatives of walking and cycling seem like ‘the wrong choice’. As we elaborate below (section 3), for most people there are still far too many affordances to using the car for short urban journeys, and too many barriers to making those journeys on foot or by bike. Correspondingly, we are caught in a vicious circle, whereby many of the people we spoke to who are very clear that they would like to walk and/or cycle more, are still nonetheless jumping into their cars because they perceive currently dominant conditions for walking and cycling as simply too hostile. This is even more clearly the case when journeying with others (especially children) over whom one has relationships involving responsibility and care.

This point can be illustrated by one typical quote from a respondent in the ethnographic field work (all names are pseudonyms): *Usually I go with the car because of convenience, less time, because sometimes J [age 3] is tired when I pick him up from nursery and I would have to carry*

him, and I have my books as well, and when there's two of them... In the week [I use the car] for two days a week, at some point I might even try just walk with the kids, but it's usually because with the two kids they have different energies, and R runs and J is a bit more like staying here and hanging round here and there, so that creates some kind of tension and also I'm on pressure to get on time to work, then it's really much more convenient to just strap them on the seats and take them and leave them and that's it. Apart from that I would just walk. (Don, Lancaster).

2.3. A questionnaire survey conducted in the four case study towns was used to assess attitudes to walking and cycling, and hence the factors that influence travel behaviour. It was found that the single most important motivating factor for both walking and cycling was perceived health benefits. General environmental factors, such as reducing the impact of climate change, were of secondary importance though reducing local air pollution was thought to be more significant. These data suggest that people are more likely to structure travel behaviour around their perception of benefits to themselves or their local community, rather than in response to more remote environmental concerns.

2.4. Respondents were also asked about their enjoyment of walking and cycling. Here there was a noticeable difference in responses between the two modes of travel. Whereas most people felt they would enjoy walking more and that walking would bring health benefits, this was not the case with cycling. While the health benefits of cycling were widely recognised, cycling was much less frequently viewed as enjoyable. This suggests that there is much less resistance to walking than to cycling as a means of everyday travel.

3. What interventions are effective for reducing car use in urban areas?

3.1. Our research suggests that a single intervention is unlikely to have a significant impact on the level of car use in urban areas. There needs to be a combination of interventions that both encourage/promote more sustainable forms of transport and which restrict car use. Due to the complex factors (outlined above) that influence travel behaviour, a single intervention (such as cycle infrastructure) is unlikely to have a major impact.

3.2. Most interventions to promote cycling focus on infrastructure. Whilst the provision of cycle lanes is important, they are not sufficient on their own and must be provided in a form that meets the expectations and which quells the fears of potential cyclists. Even in Cycle Demonstration Towns (CDTs) the provision of cycle lanes is often inadequate in that they are rarely segregated from traffic, tend to end abruptly, and sometimes take inconvenient routes. Two quotations from respondents in Lancaster District (a CDT) illustrate this point:

“My ideal would be if it were possible, transport wise, for cycle paths to be absolutely physically removed from roads as in a proper kerb separating cyclists from traffic so that cyclists didn't have to use the pavement but weren't sharing the road with cars then cycling would definitely be an option and I'd find ways around the other inconveniences of cycling. But as I say, with cyclists having to mix with traffic it just seems crazy”. (Holly, c30)

“The way that cycle lanes have been developed around here it's very hard not to feel a certain cynicism about it, and feel that cynicism has crept in somewhere. There's a large number of places in Morecambe I can think of where you cycle along, there's a cycle lane and you get to somewhere where it's difficult; traffic lights or bus stops and suddenly it disappears. Well, this is only playing at it isn't it?” (Adam, c60)

For cycling infrastructure to be effective it should wherever possible, and especially on busy roads, be completely segregated from both road vehicles and from pedestrians, and must be provided consistently on such roads throughout an urban area. To make cycling more attractive on all roads, including those where segregated routes are not practicable, other measures to restrict car speeds and influence driver behaviour are essential. These could include the introduction of 20mph speed limits throughout an urban area, the use of 'modal filters' such as bollards to remove or restrict cars in residential streets, and changes to liability law following traffic accidents so that responsibility is always placed on the most powerful and physically protected road users (vehicle drivers). This is the case in much of continental Europe and is currently being advocated by a number of organizations in the UK (see: <http://www.stricterliabilityforum.org.uk/>).

3.3. Interventions to improve infrastructure for pedestrians are relatively neglected with a tacit assumption that as pavements exist in most places this is sufficient. However, the condition of the pavement in terms of its uneven surface, failure to clear slippery leaves or ice, parked cars and intrusive street furniture can be a major disincentive for walking and a real barrier for some (for instance parents with push chairs or pedestrians using mobility aids). Interventions to improve pavement conditions and to restrict pavement obstructions would encourage more people to walk in urban areas.

3.4. There have been a number of recent schemes to promote mixed use space where pedestrians, cyclists and (sometimes) cars share road space and have to accommodate each other. Whilst this can work in some situations it has to be very well regulated with clear rules and priorities. In the case study town of Leicester mixed-use space in the town centre (which excludes cars) was discussed at length with a group of residents who had a range of impairments that restricted their mobility. They found mixed-use space especially problematic. In developing interventions it is important that potential negative impacts on particular (minority) groups are not overlooked.

3.5. Many interventions that have taken place also include the promotion of sustainable travel and the provision of information on how travel behaviour might change. Whilst well-targeted schemes, linked to other interventions, can have an impact, on their own such schemes are unlikely to be effective. For instance, although one of our case study towns (Worcester) has been a 'Sustainable Travel Town' for the past five years, with substantial funding put into promoting more sustainable travel, our research shows that whilst there is awareness of alternatives, most everyday travel in Worcester remains highly car dependent. This, in part, is due to the very poor infrastructure for utility walking and cycling. Although a new cycle and pedestrian bridge has recently been completed, the views of respondents suggested that this would be useful mainly for leisure activities rather than for utility cycling and walking (such as travel to work).

3.6. Our research has not included a community which has restricted car use, but there is clear research evidence that in London introduction of the congestion charge had a major influence on reducing car use and in persuading commuters to switch to other forms of transport (Santos and Shaffer, 2004). Although London has many exceptional qualities in terms of urban transport, including a pre-existing high use of public transport, similar effects are likely to be felt elsewhere. Crucially, the congestion charge has also been linked to (first) an improvement in bus services and (later) the development of new cycle routes and a cycle hire scheme (www.tfl.gov.uk). This again emphasises the need to combine interventions that restrict car use and promote alternative means of travel.

4. What will change everyday travel behaviour in urban areas?

4.1. Following from the above we suggest that to be successful interventions to change everyday travel behaviour must include at least four different elements:

1. The provision where possible of excellent, fully segregated cycle and pedestrian routes throughout an urban area together with high quality public transport
2. The restriction of car use within the urban area (through such schemes as congestion charging, road pricing, parking controls, speed limits, restricted access etc.)
3. Strategies to make sustainable travel choices easier for complex everyday journeys (including children).
4. Promotion of sustainable urban travel to make non-car travel normal, and through peer pressure (backed up where appropriate by legislation such as changes to legal liability following an accident) to make urban car use as unacceptable as (for instance) driving whilst under the influence of alcohol is today.

Whilst the first two interventions can and have been achieved (to a limited degree) in some British towns, and have been much more fully achieved elsewhere (for instance in Copenhagen or Amsterdam – see Puscher and Buehler, 2008), the other two are much more problematic. We explain below exactly what may be required.

4.2. Making travel choice easier and normalising non-car travel require changes in both societal attitudes and in the structures of everyday life which shape such attitudes.

Governments (central or local) clearly have limited direct impact on such factors, but there are things that can be done to shape travel behaviour. Relevant examples where significant changes in behaviour have been achieved relatively quickly might be the use of seat belts in cars, the acceptability of driving after drinking alcohol, and of smoking in enclosed public spaces. Whilst improved public transport, better cycle and pedestrian infrastructure and restrictions on car use must be part of the package, there also need to be changes in the shape and structure of cities (controlled by planning legislation) to ensure that key services are available close to residential communities (thus reducing the need to travel), and increased flexibility in working hours to make it easier for parents and children to plan and structure travel arrangements around other needs. There also needs to be a large-scale education campaign against car use in urban areas so that driving in cities becomes the exception rather than the norm. This is not necessarily an anti-car message – it is a message about using cars responsibly (for those trips where alternatives are not available) – and is similar to many past campaigns on road safety including speeding, drink driving, seat belt and mobile phone use whilst driving.

4.3. While it is recognized that governments (national or local) do not control all of the above factors, government can be very influential in both setting examples and influencing behaviour in both the public and private sector. This can be achieved through both direct legislation and fiscal intervention. However, the most effective agent of change is likely to be peer pressure. When enough people believe that using cars for short trips in urban areas is wrong then alternative means of travel will automatically become normal, and leaving the car at home for short urban journeys would become second nature. Education campaigns, in schools and through the media, can all influence such attitudes but ordinary people working in communities, talking to their neighbours and setting examples of sustainable travel are likely to be just as influential.

4.4. The key message from our research has to be that achieving change in travel behaviour to reduce car use in urban areas has to be tackled through a range of complementary measures, and has to be seen as the responsibility of all.

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18 January 2011

Memorandum by Rights to Warmth (BC 74)

1. Rights to Warmth (RtW) is an initiative formed in 2006 to address the issue of why interventions aimed at improving the energy efficiency of the homes of the 'fuel poor' do not have the take-up that would be expected.

2. A few words of background and explanation might be in order to explain why this topic is relevant to their Lordships' Committee and the present enquiry.

3. The story starts with the level of excess winter deaths – in England and Wales, this is typically in the range 25,000 – 30,000, but can be much higher if the weather is atypically cold – in the winter of 2008/10, there were 36,700 excess winter deaths. This is higher than levels in other Northern European countries, suggesting that it is preventable. Excess winter deaths have been much researched and it has been demonstrated that socioeconomic class is not a strong explanation. What has not been extensively researched is the impact of winter on the health service, although the Department of Health's own assessment is that there are eight hospital admissions for every excess winter death.

4. A whole industry has grown up around the issue of 'fuel poverty' – a household is said to be in fuel poverty if it should spend 10% or more of its income on keeping its home at an acceptable temperature. There are a series of measures available to those in fuel poverty – the main scheme is Warm Front, which provides grants to home owners to improve the energy efficiency of their properties. But also, energy suppliers are under an obligation to reduce the carbon emissions of homes by providing energy efficiency measures, either free or at a reduced price. It is important to note that these agencies are driven by targets to do with a reduction in carbon emissions, and not health – although it is recognised that those with low incomes are likely to take the savings by increased comfort.

5. Rights to Warmth has been involved in a number of initiatives, mostly in County Durham. As well as experience on the ground, we carried out some research to find out about attitudes and behaviour towards keeping warm. We found that:

- 24% of older people said they had felt cold most or all of the previous winter
- 51% said that they managed their energy usage as a way of managing their household budget
- They would not be comfortable taking advice from energy companies or their local authority about keeping warm
- They would be comfortable about taking such advice from their GP, and from charities such as CAB and Age UK.

6. We also found evidence that many people had long-term health conditions that could be adversely affected by the cold, and most agreed that their symptoms were worse when the weather was cold, they did not understand the long term impact that being cold have have for health.

7. This suggests reasons why the current schemes, whilst focused on fuel poverty, are not as successful as they should be:

- I. They are focused on the specific issue of energy poverty rather than the more general one of people not keeping themselves properly warm for a variety of reasons

Memorandum by Rights to Warmth (BC 74)

- II. They are delivered by organisations that people are not comfortable taking advice from
 - III. The NHS, and in particular, GPs, of whom people are likely to take some notice, are not sufficiently engaged (this despite the fact that the issue costs the NHS a significant amount of money each year)
 - IV. They do not address people's actual motivation and so headline the chance to save money rather than the issue that resonates more strongly - that they can maintain their independence through maintaining their health
 - V. They are monitored by the number of energy saving measures that are put in place, and not by the extent to which the measures actually get people to keep warmer by using their heating more effectively
 - VI. There is no engagement by the health service.
8. We think that there are a number of lessons from this experience which can be used more generally:
- I. Any programme or campaign must start from people's motivations, attitudes and reasons for these and not from the starting point of the public service
 - II. All the public services affected by the issue must be involved, contribute to the design of the programme, and have buy-in for what it is trying to achieve
 - III. Monitoring the outcome of the programme, and not the outputs, is important.

8 October 2010

Memorandum by the Royal Academy of Engineering (BC 146)

Introduction

The Royal Academy of Engineering welcomes the House of Lords Science and Technology Select Committee's investigation into the use of behaviour change interventions to achieve policy goals, with a case study on *Travel-mode choice interventions to reduce car use in towns and cities*.

This consultation sought views on plans to encourage people to travel more sustainably, particularly in relation to the previous government's *Low Carbon Transport Strategy* published in 2009. While we are unable to comment on all parts of the inquiry, the Academy has made general points on carbon reduction and modal shift in transport, with an emphasis on electric vehicles.

Consultation questions

Question A: *What are the most influential drivers of behaviour affecting an individual's choice of mode of travel?*

Car use in towns and cities depends on traffic generated within the town and also traffic coming from outside the urban area. Much of the peak hour congestion is in the latter category. For many journeys, there is no real choice: one person living five minutes walk from Carshalton Beeches station and commuting to an office in Victoria Street and another person living in Betws-y-Coed and commuting to an industrial estate on the outskirts of Wrexham may have very different sets of options. The former could easily commute the 20km by rail (and probably chose to live at that address to make it possible); the latter has no choice but to commute the 75km by road.

Other than from city-centre to city-centre, it often takes longer and is more complicated to use public transport. Consider a trip from the new BBC site at Salford Quays to an address in Telford: more than three hours by public transport with at least five changes, each of which could fail, or less than two hours by road.

Similar problems exist for many trips within an urban area. London is unique in that it has a centrally-planned bus system and an extensive metro and rail network. For many other cities there is much less choice. Someone travelling from Solihull to Harborne (both in the Birmingham conurbation) could take a bus into the city centre and then a bus out again or drive round the A4040 in less than half the time.

Price is important. With first class "anytime" rail travel from Wilmslow to London costing more than an airfare it is unsurprising if people travel by plane.

Question B: *What is the role of infrastructure in encouraging and facilitating changes in travel-mode choice?*

Multi-mode transport hubs with easy connections between rail and bus services (as in Sweden) and good feeder services to main line stations (as in France) both contribute to a greater use of public transport.

For intra-urban travel, a well-planned and pervasive network, as exists in many continental cities, is important. In many UK cities, bus deregulation has led to a concentration on high-density radial routes, making any trip other than into the city centre uncompetitive with a car.

Question C: *What are the latest developments in the evidence-base in relation to changing travel-mode choice and the implications of those developments for policy?*

We are not aware of any recent fundamental changes. The topics discussed in answer to question (a) have applied for many years. There is anecdotal evidence that congestion, whether of the road network or of public transport, affects modal choice but we are not aware of any hard research that demonstrates the extent of this.

Question D: *What are the most appropriate type and level of interventions to change travel-mode choice?*

Road traffic can be divided between journeys that are fairly straightforward to transfer to rail or bus and those that are difficult or impracticable. The former category includes travel for business and pleasure between reasonably large centres of population by people who are largely unencumbered. The latter category includes trips between places that are far from an inter-city station and those involving people who, either by choice or because of their job, need to travel with bulky equipment or other luggage. In the second category can be included families with children, people going on activity holidays with climbing or windsurfing equipment, musicians with cellos or drum kits, business representatives with samples or tradesmen with an estate car full of power tools. We do not have statistics on the relative sizes of these groups but the latter form a very significant sector of the travelling public.

It seems likely that rail is already the dominant mode on many routes served by frequent inter-city services. Few people travelling from central Birmingham to central London (and having the financial resources to make a choice) would consider any other means of transport. Improving the service, for example by building a new high speed line, is unlikely to result in a significant modal shift.

The most appropriate interventions to achieve modal shift from road to rail for people coming into a city would address those issues raised in answer to questions (a) and (b) – extend the geographical penetration of a high-quality rail network, better multi-modal connectivity, simpler passenger interface, better feeder services and lower prices.

For trips within a city, establishing (or re-establishing) an integrated network, as opposed to a number of self-contained routes, is obviously important.

It is evident on many urban corridors that giving free bus passes to those over 60 has caused a major shift from private cars to public transport, particularly in those urban areas outside London where fares charged by monopoly operators are otherwise higher than the marginal cost of motoring.

Question E: *Who are the most effective agents for the delivery of behaviour interventions to change travel-mode choice?*

No comment.

Question F: *How do current behaviour change interventions seek to change travel-mode choice and what use is made of available scientific evidence?*

No comment

Question G: *Are current policy interventions addressing both psychological and environmental barriers to change?*

It is not obvious that there are consistent policy interventions designed to encourage modal shift. Some, such as forcing an increase in rail ticket prices, appear to have the opposite effect.

Question H: *Are policy interventions appropriately designed and evaluated?*

The ultimate objectives of policy are sometimes not clear – reducing car use may be a means to minimise accidents, reduce local noise and pollution, reduce social exclusion, provide a more congenial street environment or reduce global warming. Simply discouraging car use *per se* is not a self-evident public good. For example, if the objective is to reduce CO₂ emissions, some interventions such as discouraging the provision of off-street parking, may, in the long term be counter-productive as they will discourage ownership of electric vehicles. The cheapest and easiest way of charging an electric vehicle is to put an outside socket from the domestic electricity supply and charge it in the driveway. Parking at the kerbside will be expensive and complicated (i.e. finding a vacant charging point and methods of payment).

There is evidence that provision of bus services that have low ridership levels can produce more CO₂ than the cars they might replace. Research a few years ago³⁰⁰ discovered that the average bus ridership in two major cities was seven passengers. At this level, it is not obvious that modal shift is necessarily desirable from the perspective of emissions, although it might be justifiable on the grounds of social inclusion.

Modal choice is heavily dependent on policies that are not generally considered to be in the “transport” sphere. For example, the encouragement of specialist, free or faith schools or the centralisation of medical facilities and promotion of choice are policies that are likely to increase travel flows that can only be met by private car.

Question I: *What lessons have been learnt and applied as a result of the evaluation of policy?*
No comment.

Question J: *What lessons can be learned from interventions employed in other countries?*

Countries with a high proportion of low-carbon transport, such as Japan or France, are generally those with a well-integrated public transport system.

25 January 2011

³⁰⁰ Professor R. Kemp, RSSB Research Project T618 *Traction Energy Metrics*, 2007.

Memorandum by Professor Mary Rudolf, Leeds General Infirmary (BC 37)

Evidence submitted on an individual basis.

Tackling Obesity through the Healthy Child Programme: A Framework for Action
Document available on the National Obesity Observatory website:
http://www.noo.org.uk/Mary_Rudolf

This is a brief submission to draw your attention to a piece of work I carried out for the Department of Health Cross Government Obesity Unit while I was a visiting research fellow at the USA Centers for Disease Control and Prevention in Atlanta, Georgia. I enclose a hard copy of the document although it is also available on the National Obesity Observatory website. The document relates to section 16 of your call for evidence – Tackling obesity.

The document aims to provide an evidence-based framework for action for health practitioners working with parents to encourage healthy family lifestyle change and prevent obesity. It was developed for use within the Healthy Child Programme, the national child health promotion programme delivered to all babies born in in the UK.

The Framework covers five areas:

- Parenting
- Eating and feeding behaviour
- Nutrition
- Play, inactivity and sleep
- Enhancing practitioners' effectiveness

There are nineteen strategic themes, with each section underpinned by background scientific evidence, interventions that provide supporting evidence, key considerations, potential actions, selected resources and references.

The document addresses the issues you have highlighted in relation to tackling obesity as follows:

- a. *the latest developments in the evidence-base in relation to changing eating and physical activity behaviour*

The document provides a review of the research evidence relating to young children (0-5 years) in terms of interventions conducted in academic settings as well in more pragmatic community settings. Examples of interventions highlighted by the CDC as being promising (but without RCT evidence) are also included

- b. *who are the most effective agents for the delivery of behaviour interventions to tackle obesity*

The document reviews some of the evidence relating to professional skills and self efficacy when working with families of young children around lifestyle change for those at risk of obesity as well as those already obese. While parents are clearly the most effective agents for young children, the focus in the document is on how

practitioners' skills can be enhanced so that they are better able to recognise obesity, help parents and model healthy lifestyles themselves

- c. *how current behaviour change interventions tackle obesity and what use is made of available scientific evidence*

There is increasing recognition that training in motivational enhancement is required. Motivational Interviewing (Schwartz et al) and the Family Partnership Model (HENRY and the EMPOWER trial in the UK) seem to be the only behaviour change approaches under investigation in preschool children.

- d. *whether such interventions are appropriately designed and evaluated*

The evidence base for effectiveness in terms of randomised controlled trials is very limited for baby and preschool interventions.

- e. *what lessons have been learnt and applied as a result of the evaluation process*

The document has been considered helpful by the DH Expert advisory group for the Healthy Child Programme. It forms the core of the HENRY programme, a training organisation developed through grants from the DH and DCSF (HENRY is also submitting evidence for this call).

The document may be of use in your investigation into the use of behaviour change interventions to achieve policy goals because of its development for use in the Healthy Child Programme. Further hard copies of this document are available by request from the author

October 2010

Memorandum by Harald Schmidt, London School of Economics (BC 97)

Harald Schmidt, Commonwealth Fund Harkness Fellow, Harvard School of Public Health,³⁰¹ Research Associate, LSE Health, London School of Economics and Political Science.

1. This response is mainly concerned with ethical issues arising from the use of incentives for health, and lessons that might be learned from their use in Germany and the US. As such, it only concerns a narrow aspect of the committee's enquiry. Nonetheless, it would appear that there are general lessons that can also be applied to the use of incentives for behaviour change in other areas, in particular regarding the question of who benefits most from such interventions, and whether we should be concerned if there are inequalities in uptake.

2. This submission has been prepared specifically for the enquiry. It draws for the most part on material that colleagues³⁰² and I have published elsewhere in specialist journals and/or presented at academic conferences, and seeks to summarise points of relevance to the enquiry. Much detail has therefore been omitted, but can be found in the publications listed at Annex A. For ease of reading, quote marks have only been added for text not authored by me, but where relevant, references have been added to indicate where text excerpts originate.

Background

3. As acknowledged in the Committee's call for evidence, behaviour change is complex, and in policy terms, there is a wide range of options available. For example, the Nuffield Council on Bioethics' 2007 report *Public Health: Ethical Issues* set out an "Intervention Ladder", that stratified interventions by their degree of intrusiveness, beginning with merely providing information; then moving on to enabling choice; guiding choice through changing the default policy; guiding choice through incentives; guiding choice through disincentives; restricting choice; and ultimately eliminating choice altogether.

4. In policy, practice and academic commentary, the use of incentives for health has become of increasing interest in a number of countries over recent years and, to many, incentives appear to be an intervention 'whose time has come'. Incentives might be seen as ethically unproblematic, as they simply appear to reward behaviour that is judged to be positive. But much depends on the way incentives are 'framed' or implemented, and on whether all who are offered incentives have reasonably equal opportunity of choice to avail themselves of the options that are offered. Incentives are often characterised as an encouraging 'carrot', as opposed to a penalising 'stick' approach, but in practice, some 'carrots' can turn out to be 'sticks'. In summary, then, in my view incentives certainly have the potential to play an important part in multi-faceted health improvement efforts, but care is required to ensure they are implemented fairly. To substantiate this view, I am outlining below some experiences with incentive programs in Germany and the US, and conclude with a conceptual analysis that looks at the characteristics of different groups of incentive users.

³⁰¹ On sabbatical from post of Assistant Director, Nuffield Council on Bioethics, 9/2009-12/2010. The views presented here are the author's alone and should not be attributed to the Commonwealth Fund, its directors, officers, or staff; LSE Health; or the Council.

³⁰² Guido Büscher, Tim Doran, Anna Drabik, Andreas Gerber, Christian Graf, Markus Lungen, Stephanie Stock, Björn Stollenwerk, Dan Wikler, and Kristin Voigt.

Lessons from abroad – Health incentives in Germany

Key points:

- Evaluations suggest that implemented programs achieved net savings of approximately €100 p.p./p.a
- Younger, healthier and wealthier people are more likely to benefit from incentives than the less privileged
- Cash and in-kind incentives are used, relatively low amounts (€30-100p.p./ p.a.)
- Incentives must be financed through savings resulting from people taking part in schemes (no cost-shifting)

Background and aims

5. Germany first introduced incentives aimed at individuals into its statutory health insurance scheme in 1989, offering reduced copayments for dental treatment to people who attended regular check-ups. Since then, many other incentive schemes, focussing largely on prevention and compliance in treatment, have been launched. Both financial and in-kind incentives (such as sports equipment, backpacks, cycle helmets, cookbooks) are used, and the value of either is relatively low, typically in the area of €30-100per year, per person.

6. Three general aims of using incentives can be discerned: (1) to improve population health, (2) to maximise efficiency of services, and (3) to enhance competition between sickness funds (sickness funds are the providers of statutory health insurance, covering approximately 90% of the population, with the remainder covered by private health insurance. People can chose among sickness fund and in this sense there is competition among them in various ways). In the best case, all three goals can be achieved simultaneously, but the goals can also come into conflict. Incentives are of interest to sickness funds not just because they may improve the health of insured persons, and (possibly) reduce health care expenditure, but also because they can help attract healthier and wealthier enrolees in the first place (which means that sickness funds have, at least in the short term, lower expenditure due to lower morbidity, and higher levels of contributions, as these are income-tested).

Legal basis

7. The legal framework of incentive schemes is set out in the Social Security Schedule (*Sozialgesetzbuch V*), largely overseen by the Department of Health. Incentive schemes are generally known as ‘bonus programs’. The law requires that incentives (both cash and in-kind) must be financed through savings resulting from the programs, and not through general insurance contributions (which might burden those not taking part). Sickness Funds must report economic data to the relevant authority in regular intervals, at least every three years.

Evaluation of cost-savings

8. Colleagues and I analysed specific incentive programmes implemented by the *Barmer Ersatzkasse*, one of Germany’s largest sickness funds, which insures roughly 6.8m people, or

10% of the population. In a three year controlled cohort study (2004-06, matched pairs) comprising 70,429 members in each group, we found a significant difference regarding mean costs of € 177.48 (90% CI [€149.73; € 205.24]) in favour of the intervention group. If program costs were considered, cost reductions of € 100.88 (90% CI [€ 73.12; € 128.63]) were obtained. Other sickness funds report similar results (see: Schmidt/Stock/Gerber. 2009; Stock et al. 2010).

Demographic profile of incentive users

9. The data available for the above study did not allow for an analysis of socio-economic status of incentive users. However, separate analysis using survey data showed that roughly a year after introduction of incentive programs, almost twice as many incentive users were in the fifth (and hence most well off) quintile of earnings than in the first quintile (19% v 11%, Braun et al. 2006, survey data from the Bertelsman Foundation's Gesundheitsmonitor/Healthcare Monitor. Respondents, n=1,500, are randomly selected from a nationally representative access panel).

10. Subsequent analysis by Tim Doran and me, using the same data source and comparing 2004 and 2009 figures, found that overall there was increasing incentive program participation, with the largest increases among younger, healthier and wealthier population groups. Universal (as opposed to targeted) offer of incentives has lead to differential uptake through self-selection, and over time inequalities in uptake have developed, see Fig 1, which summarizes use by income groups, and Fig 2, which shows health status of users (analysis currently being finalized for publication).

Figure 2: Incentive use, by household income

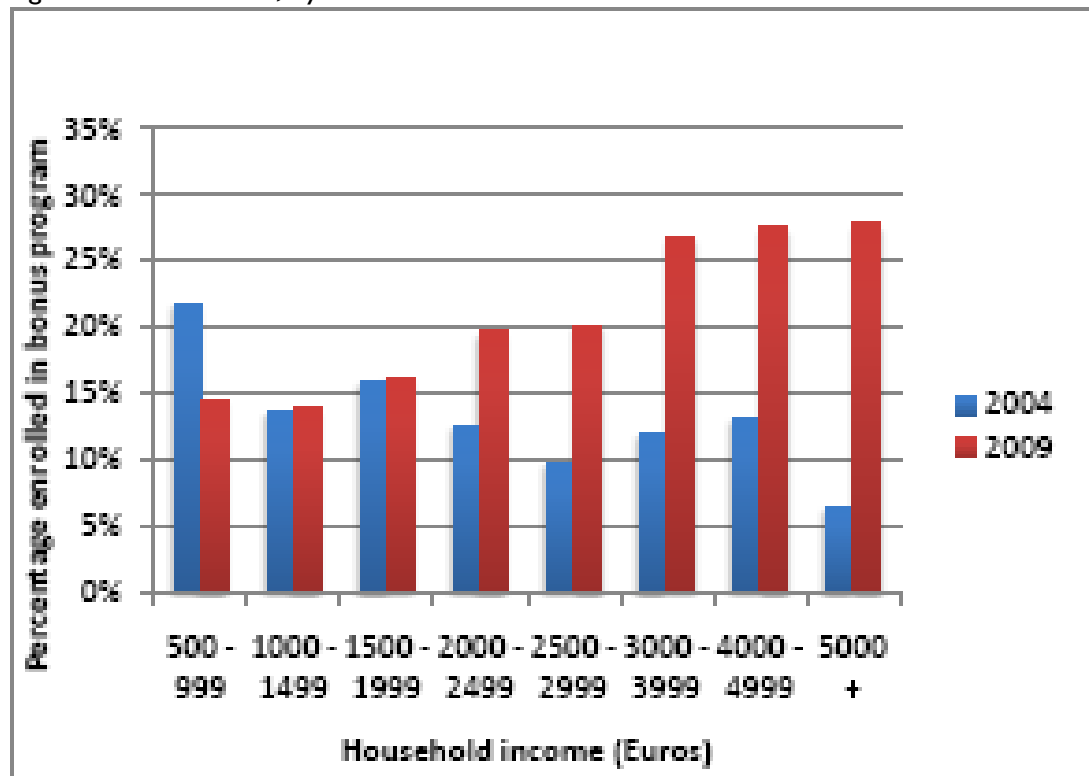
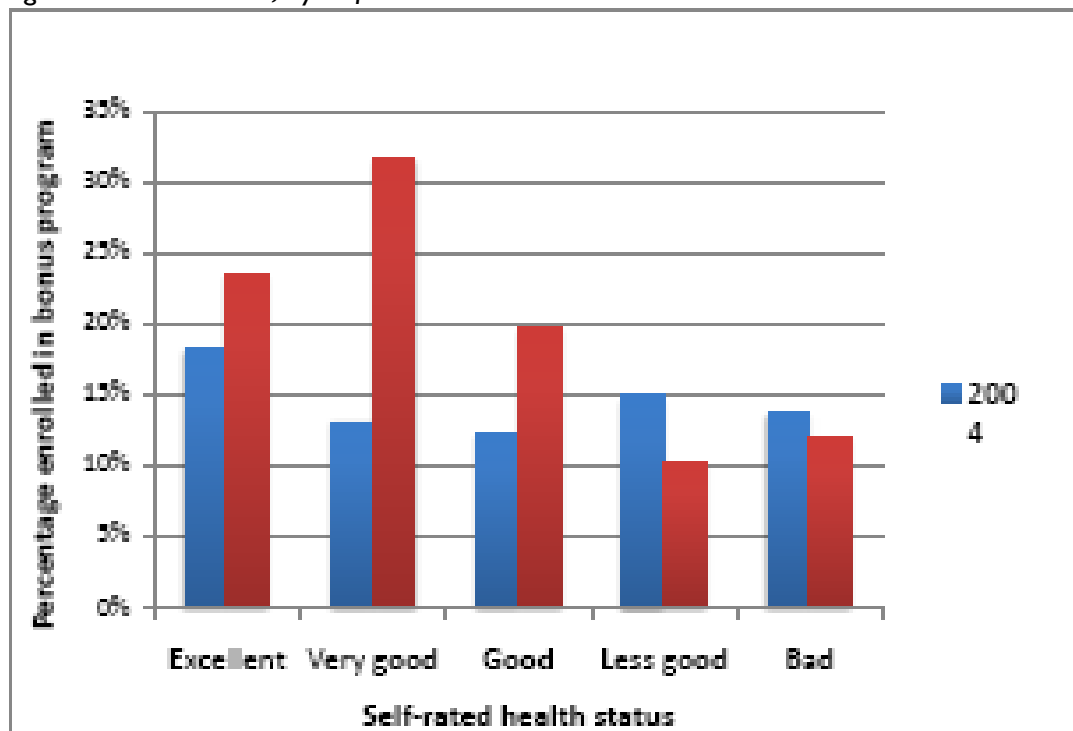


Figure 2: Incentive use, by self-rated health status



11. Initial evidence from Germany therefore suggests a clear potential for cost savings, and mandatory future evaluations will elucidate the longer term financial viability. But other key aspects that are currently not part of the legal requirements also need to be assessed, chiefly the potential for achieving sustainable behaviour change and better health, and the uptake ratios across different socioeconomic groups.

Lessons from abroad – Health incentives in the US

Key points:

- Conceptual distinction is made between ‘attainment’ and ‘participation’ incentives
- Focus on financial incentives, potentially large sums (up to 50% of cost of coverage)
- Incentives can be financed through cost shifting
- Significant interest of large employers to use incentives for cost-reduction

Background and legal basis

12. In the US, so-called ‘wellness incentives’ have been established through regulations issued by the U.S. Departments of Labor, Treasury, and Health and Human Services in 2006, following earlier general guidance in the 1996 *Health Insurance Portability and Accountability Act*. As part of the 2010 Health Reforms, the *Patient Protection and Affordable Care Act* increased the levels of incentives that may be offered for attainment incentive schemes from previously 20% of the total cost of an employee’s coverage to 30%, with the option of 50% in

exceptional cases. 'Attainment incentives' refers to initiatives that require participants to meet certain health risk indicator standards, relating to, for example, Body Mass Index (BMI), cholesterol readings, or not smoking. There is no cap for incentives on participation incentives, which may be offered for partaking in initiatives such as exercise classes or nutrition courses, without achieving particular goals.

Cost-shifting and economics

13. One way of implementing the provisions regarding attainment incentives would be to keep premiums at previous levels, and offer reductions to all who meet required standards. But, in contrast to the German situation, US policy explicitly permits cost-shifting "from plan sponsors to participants who do not satisfy the standards, from participants who satisfy the standards to those who do not, or some combination of these" (DoL, DoT & DHHS 2006). The vast majority of health insurance in the US is employer-based, and using the 20% threshold, regulations would permit an employer of a worker who pays \$700 of the \$4500 annual cost of his insurance (which was the average cost of coverage in 2009) to offer up to 20% of the total in incentives. The employee's premium may therefore be raised to \$1600 (\$700 + 20% of \$4500) if incentive programs are not taken up, or completed unsuccessfully. The new 30% permits raising the cap to up to \$2050, and 50% would amount to \$2950, respectively – far higher than the \$700 cost to other employees.

14. A recent survey by PricewaterhouseCooper found that 56% of large employers see wellness programs as one of the top three means of curbing cost (PWC 2010), and a study reviewing existing programs with regard to return-on-investment data found a broadly similar ratio to Germany of 3:1 (Baicker/Cutler/Song 2010).

The question of 'framing' - 'carrots' turning into 'sticks'

15. Some influential commentators, such as Steve Burd, CEO of the supermarket chain *Safeway*, explicitly encourage using incentives in a cost-shifting way, which, in his view, constitutes an appropriate response to what he terms 'the responsibility gap' of people of poor health imposing cost on the community of people brought together in an insurance plan. In an article in the *Wall Street Journal* that received much attention he linked differential cost for health insurance as a result of implementing incentives to the practice of the car insurance industry, where good drivers were not expected to subsidise the high-risk drivers (Burd 2009).

16. As colleagues and I have pointed out elsewhere (Schmidt/Voigt/Wikler 2009), if people could lose weight, stop smoking or reduce cholesterol simply by deciding to do so, the analogy might be appropriate. But in that case, few would have had these problems in the first place. Moreover, there is a social gradient. John, a Harvard graduate from a wealthy family who just started work as an investment bank consultant in New York, has a slight preference of sushi over tapas, is generally healthy, and has a gym and pool on the top floor of his Manhattan apartment, is more likely to succeed in losing weight if he tries, than Anna, an overweight teenage mother who grew up and continues to live and work odd jobs in a deprived neighbourhood of Baltimore, with poor access to healthy food and exercise opportunities.

17. The US situation is interesting because of the great flexibility that employers have to implement different kinds of wellness programs. Unfortunately, however, unlike in Germany, there is no central reporting requirement on key aspects of the effectiveness of programs,

and it is hence difficult to gauge to what extent programs are implemented in penalising as opposed to primarily encouraging ways. There is, however, considerable potential for unfairness where people are unable to achieve targets that are associated with incentives due to factors that are beyond their control, and as a result either incur higher cost of health insurance than previously, or lose out on the opportunity to reduce their cost in the same way as others. This aspect will be examined in somewhat more detail in the next section.

Incentives and equity: the five groups problem

Key points:

- For almost all incentive programmes there are five different groups of responders who differ in their capabilities and motivations to change behaviour
- In policy terms the challenge is to decide at what point inequalities in the capacity to use incentive programs constitute unfairness

18. Different people are likely to respond differently to incentives, whether they are offered in kind or in cash, for achieving a target or merely participating in an activity. Elsewhere, I have suggested that it is useful to distinguish between the following five groups who might be offered incentives (1) 'the lucky ones'; (2) the 'yes I can' group; (3) the 'I'll do it tomorrow' group; (4) the 'unlucky ones'; and (5) the 'leave me alone' group (Schmidt, forthcoming, material presented previously at the Fourth International Jerusalem Conference on Health Policy, Jerusalem, December 2009; and the Citizens Council meeting of the National Institute for Health and Clinical Excellence, London, May 2010).

19. The distinction between the five groups is intended to show two main things, first, that there can be significant differences regarding whether or not programs promote behaviour change. Secondly, that there are ethically relevant differences among people with regard to their ability to make use of incentive programs. What I suggest might be called the 'five groups problem' concerns the following question: at what point do inequalities in the capacity to use incentive programs constitute unfairness, and how should we respond in policy? A brief characterisation of the five groups can be summarised as follows.

'The lucky ones'

20. For practically any incentive program there will be people who would qualify for associated reimbursements without any form of behaviour change. Some people simply enjoy eating healthily and exercising regularly, and do so quite effortlessly. Their behaviour is hence compatible with the incentive program's spirit, even if the incentive itself does not lead them to change their actions. Others whose actions may remain unaffected include people whose dispositions are not as well aligned. For example, some people may eat in the most unhealthy ways, never exercise, and still have a favourable BMI values. Despite the dissonance between their motivations and the incentive program's spirit, they may reap the exact same benefits as their health-conscious counterparts, without any change in behaviour or motivation.

The 'yes I can' group

21. Other people would not normally have performed the benefit-qualifying behaviour, but they may see the incentive as a welcome occasion - though perhaps not the sole reason - for trying to overcome inertia or weakness of the will. The incentive benefit's 'nudge,' coupled with their underlying motivation, provide an effective basis for action. Here, incentives are likely to feel like a deserved reward. They may help initiate behaviour change in the first place, or sustain it, where intrinsic motivation is not yet sufficiently developed. Conceptually and in practical terms, this group is also generally known as the 'group of responders' in the literature – yet, it cannot be assumed that all, or even the vast majority of those offered incentive programs, are, in fact, able responders.

The 'I'll do it tomorrow' group

22. Others, similar to those in the 'yes I can' group, also have a desire for behaviour change, but, for a range of reasons, often simply cannot bring themselves to act on it. They may simply feel unable to try, or where they try, find that they often fail. As briefly sketched above in the case of Anna (paragraph 16), the reasons may include unfavourable opportunities in their everyday circumstances, such as poor access to affordable and healthy food, or insufficient time to prepare it. Or they may lack access and time for physical exercise in a safe environment. And people have been brought up differently: some received more encouragement to be self-motivated and -efficacious, and others less. For many in this group, incentives may be extremely tempting, yet they can be as far out of reach as the branches of the fruit-laden trees were for the proverbial Tantalus.

The 'unlucky ones'

23. For biological, medical or other reasons that are completely external to their volition, some people face such strong constraints that, whatever they would do, they are simply unable to meet the criteria associated with specific attainment- or participation incentives such as BMI targets or gym participation. For example, some people with genetic mutations will always be obese, regardless of how much they exercise or control their energy intake. As with the 'I'll do it tomorrow' group, incentives that are simply out of reach will make little sense for the 'unlucky ones'.

The 'leave me alone' group

24. A last group of people comprises those who would qualify in principle for incentives but may voluntarily decide not to use them. They may already meet targets, or could do so easily, or could effortlessly participate in incentivized activities, but still resist. Reasons may include that they feel patronized or 'nannied' by incentive schemes; or concerns that incentives introduce an inappropriate element of competition in health plans that they think ought to be based on a principle of mutuality and fair risk-sharing. Or, on quite practical grounds, they might judge the effort required to register for schemes to be too burdensome.

Summary and implications for policy

25. As this conceptualization shows, universally offered incentive programs can give rise to several general problems, including the following:

- Some people may receive benefits, even if their motivation and behaviour runs counter to the spirit of incentive programs;

- Behaviour change is not always required, and some people may receive benefits for default behaviour - whether this is the result of deliberate prior choice, or unreflective habit;
- Some people face constraints due to weakness of the will, poorly developed self-efficacy, or strong medical or societal constraints. Meeting targets, or participating in health promotion activities, requires a much greater effort of them, compared to others. Still, where they fail to begin or complete an incentive program, they must forgo the benefit in the same way as those who had sufficient opportunity of choice, but who voluntarily decided against taking part.

26. Clearly, the extent to which inequalities in incentive use occur, and the extent to which we might find them unfair, and hence inequitable, depends critically on the way in which incentive programs are implemented. The key questions to be asked include (1) how easy it is for people with different backgrounds and abilities to avail themselves of the opportunities offered by incentive schemes, (2) what the size or level of incentives are, and (3) whether they are implemented as ‘carrot’ or ‘stick’ approaches (as discussed in paragraphs 15-16 above, in relation to the US policy). It also needs to be considered who, in practice, assesses whether the activity that has been incentivized has been completed successfully, as it may be that such assessments can interfere with other relationships. For example, in Germany physicians voiced criticism at being given a ‘policing’ role in relation to determining patient’s compliance in cancer care, which they felt interfered with the doctor-patient relationship (Schmidt 2008).

27. While much therefore depends on the specific details of particular incentive programs, at the highest level there are four principal ways of responding to the five groups problem in policy: (1) to offer incentives universally regardless; (2) to offer them universally but with modifications; (3) to offer targeted, instead of universal schemes; and (4) to abandon incentive programs altogether. Fig 3 provides a brief overview of the implications of the different options

Fig 3: Implications of different policy responses to the five groups problem						
Policy options/ groups	‘Lucky ones’	‘Yes I can’ group	‘I’ll do it tomorrow’ group	‘Unlucky ones’	‘Leave me alone’ group	Comments
Offer universally	Benefit	Benefit	Don’t benefit	Don’t benefit	Don’t benefit	<ul style="list-style-type: none"> • ‘Unlucky ones’ lose out • ‘I’ll do it tomorrow’ group, treated identical to ‘leave me alone’ group • Some ‘lucky ones’ reap benefits even if they do not change behaviour, or comply with spirit of policy
Offer	Benefit	Benefit	May	May	Don’t	<ul style="list-style-type: none"> • Create alternative standards

universally, modified			benefit	benefit	benefit	for 'unlucky ones' & 'I'll do it tomorrow;' can improve fairness, but faces practical and arbitrariness challenges <ul style="list-style-type: none"> • Shift focus from attainment to participation incentives
Targeted, not universal	Don't benefit	Benefit	Benefit	May benefit	Don't benefit	<ul style="list-style-type: none"> • No incentives for 'lucky ones' as they do not require further encouragement • Potential for curbing cost, if focus is on improving health status of worst off • Problem of stigmatisation • Minimizes potential for exacerbating existing inequalities in terms of health and wealth
Abandon	Don't benefit	Don't benefit	Don't benefit	Don't benefit	Don't benefit	<ul style="list-style-type: none"> • No unfairness from different use of incentives, but also no potential to use incentives complementary to action at the level of the social determinants of health • Strongest case if it can be shown that there are other measures to improve population health that are equally or more effective

Annex A - Literature cited

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6 October 2010

Memorandum by Slimming World (BC 33)

1. Slimming World welcomes the opportunity to submit evidence relating to behaviour change interventions designed to tackle obesity in the United Kingdom. Slimming World has considerable expertise in the facilitation of behaviour change relating to weight management. The organisation was founded in 1969 specifically to provide better support than any available elsewhere, to effectively help people change their behaviour in relation to food and activity, to help raise their confidence and self-esteem and so manage their weight. The principles on which Slimming World was founded (supporting people to make new decisions and change old habits – often habits formed over a whole lifetime – rather than telling them what to do) have remained constant and been built on during our 40 years.
2. It is difficult for people to make lifestyle changes on their own; indeed they require encouragement and continued support in order to successfully change old habits and behaviours. Slimming World now holds over 6,700 weekly support groups across the UK, each year influencing over 3 million people to eat more healthily and adopt a more active lifestyle. We use our group support structure to facilitate changes in behaviour to both diet and activity levels with the aim of enabling members to take control of their own health and lifestyle for the long-term. In the weekly group, members share experiences and ideas, for instance on how to spot common pitfalls and create strategies to avoid them. They also receive practical, accessible help that makes small changes easy, such as healthy new recipes and menu plans for the family, tips on special offers at local supermarkets to make healthy eating affordable.
3. We believe it is crucial that adequate focus and resource is given to empower, motivate and support people in making healthy lifestyle change, particularly when linked with obesity and the low self-esteem, poor health and lack of confidence in the ability to make changes often associated with it. In our experience, many overweight people want to make changes, lose weight, become fitter or more active, but they lack confidence and belief that they can make effective changes to their diet and lifestyle. This is particularly the case when related to weight loss as many fear they will have to go hungry when making dietary changes and may have to follow a very restricted diet. They may have tried and failed at many previous attempts to lose weight, reducing even further their belief that they will ever be able to do it. They may also not be clear of the benefits of change, particularly in relation to increasing activity levels, lack confidence in how to get started, and have misconceptions about what effective activity is. Enormous help and support is needed to lift individuals out of a spiral of overweight, poor health and low self-esteem. This support must be positive and motivational and, most importantly, self-determined. It is only effective when it is delivered with empathy and encouragement, without judgement, criticism or a desire to control.
4. In order to effectively support people in changing behaviours to manage their weight, Slimming World offer a multi-component approach:
 - A warm, empowering, non-judgmental group environment with a proven self-discovery and behaviour change component which supports members and facilitates behaviour change towards a healthier lifestyle
 - A satisfying eating plan based on easily available everyday foods to promote healthy eating patterns for life

- An activity management programme to help members gradually increase physical activity levels
5. Our group support system is a complex process of individual support in a powerfully motivating group setting made simple for group members. It avoids any criticism, control or judgment and uses elements of techniques including Transactional Analysis, Motivational Interviewing, influence of Ego States on behaviour and more recently Compassionate Mind Theory to help individuals overcome their own personal barriers to change and to avoid relapse.
 6. We believe that the most effective way to deliver behaviour change interventions to tackle obesity is with a whole society approach, one that encourages lifestyle changes for everyone and offers support at every level. Slimming World has the established infrastructure to deliver a large scale effective service. Our weekly groups are held in easily accessible venues such as church halls, community centres and social clubs and are offered across a range of days and at different times of day, with the majority being held outside normal working hours. Therefore we are well placed to reach a very diverse range of people, including those people traditionally considered hard to reach within public health and in most need of support, often those at the middle to lower end of the socio-economic range. Within a relatively short space of time, many members experience an increase in self-esteem, and as they feel more valued they become less isolated and more active participants in their community.
 7. The most effective agents to deliver this service are local people, working in the heart of their community, who have been through the experience of being overweight and have themselves made healthy lifestyle changes in order to lose weight. Our groups are run by a network of 2,700 Slimming World trained consultants all recruited from successful groups and carefully selected to ensure they have the necessary skills to empathise, empower and support people in managing their weight. They receive specific training in facilitating behaviour change and are continually supported with an ongoing system of training and strong management structure to ensure the quality and consistency of Slimming World groups is maintained.
 8. The research team at Slimming World are continually collecting evidence to demonstrate that this intervention is effective in changing behaviour. Examples are summarised below.

9. Influence of Slimming World's healthy lifestyle programme on diet, activity levels and health of participants and their families.

A survey of almost 3000 people accessing the Slimming World programme (either attending weekly group sessions or via Slimming World magazine) revealed that people following Slimming World's programme make significant changes towards healthier food choices in line with current healthy eating guidelines. Almost 80% report now buying more fruit and vegetables, 74% eat less fatty foods and over 60% now eat less sugary foods. 58% eat less ready meals and takeaways and 55% buy more low fat dairy products. Importantly respondents were also influencing others to improve their diet. 41% of respondents said that their partners also followed the healthy eating principles and 63% of those with a family reported that the whole family now ate more healthily. Over 80% of respondents felt that following the dietary programme has improved their health, 37% also felt that it had helped improve their partner's health and 30% believed it had improved their children's health. Members reported that the programme had helped improve conditions such as raised blood

pressure, breathlessness, joint pain, asthma, high cholesterol, irritable bowel syndrome and heartburn. 10% of those who had been attending groups for at least 6 months also reported a reduction in the need for medication. Respondents reported becoming more active since learning about the Slimming World physical activity programme, with those attending weekly group sessions more likely to have become more active than those just accessing the magazine information. Half of those reporting an increase in activity indicated that their partner or whole family had also become more active. (This survey has been analysed and published by Slimming World's research team in the Journal of Human Nutrition and Dietetics, 2009)

10. Slimming World's programme successfully guides members to select a healthier, weight-reducing diet

Diets of low energy density (fewer calories per volume of food) have been shown to be beneficial in lowering energy intake, enhancing satiety and achieving weight loss. The aim of Slimming World's support programme is to guide members in selecting a healthier, reduced energy density diet rather than using prescriptive weight loss plans. They are encouraged to choose highly satisfying, low energy dense foods which they can eat *ad libitum*, so avoiding hunger and the feeling of deprivation commonly associated with weight loss. This encourages members to develop healthier eating habits which can be maintained for life. A study was conducted as part of a European-wide project, Diogenes (EU sixth Framework Diogenes project FP6-513946) to compare the energy density of self-selected diets of Slimming World members to that of British consumers when following their normal diets, and prescribed intervention diets. The study found that the Slimming World's programme helped members to achieve a significantly lower daily energy intake than people following their normal diets, following low-fat weight loss diets and diets just encouraging high intakes of fruit and vegetables. Slimming World members also selected a daily diet lower in energy density than the other weight loss regimes studied. It was concluded that Slimming World's programme enables people to self-select a significantly lower calorie and lower energy dense diet than either fat reduction strategies or by increasing fruit and vegetable intake *per se*. (This study was presented as a poster at the International Congress on Obesity 2010, abstract available in Obesity Reviews 11 (S1): 236).

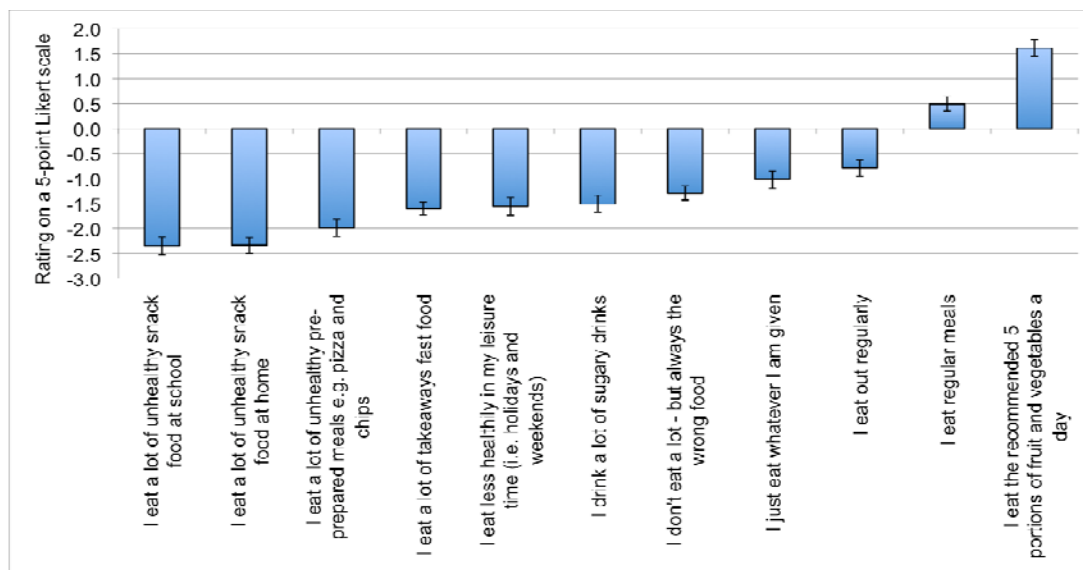
11. Behaviour change in a survey of weight-loss maintainers using the Slimming World programme

We have also conducted a survey to examine behaviour changes associated with weight loss maintenance in a group of 156 Slimming World members who had achieved and were maintaining their personally chosen target weight. On average, these members had lost 15.7kg over 10.2 months to reach their target weight which had been sustained over 11.1 months at the time of survey. They had reduced their BMI by 6.1kg/m² on average. The main factors that these members felt had helped them reach their target weight were being able to eat low energy dense foods *ad libitum* so they were able to satisfy their appetite, being able to follow a flexible diet, peer-group support and having tools to help them cope with small lapses in their weight loss journey. Continued group attendance, regular monitoring of weight and change in long-term habits ranked as most important for maintenance of weight loss. Members also reported significant changes in behaviour since joining Slimming World including eating less unhealthy snacks, less pre-prepared foods, more fruit and vegetables and now cooking from scratch. Activity behaviours had also changed significantly with members now spending less time watching TV, less time being sedentary and walking more. (This study was presented as a poster at the International Congress on Obesity 2010, abstract available in Obesity Reviews 11 (S1): 292).

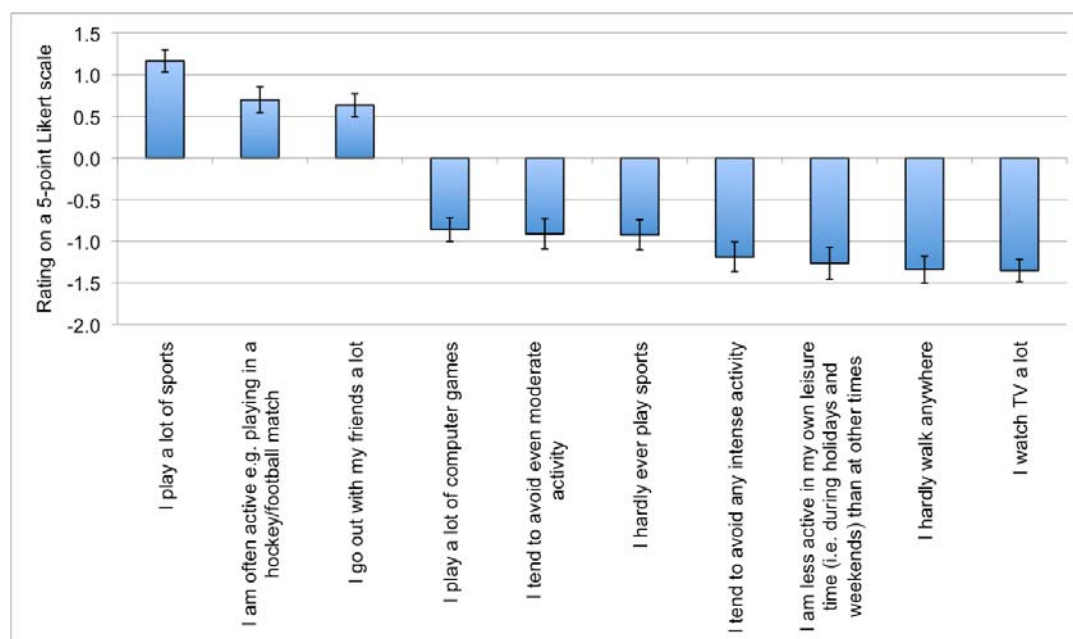
12. The programme helps adolescents make healthy behaviour changes

In 2006, Slimming World launched a Family Affair scheme to support families to adopt a healthier lifestyle and help tackle rising adolescent obesity. With the support of their health professional, young people aged 11 to 15 can attend Slimming World meetings free of charge when they are accompanied by a parent or guardian who is responsible for most of their meals. The focus of our support for adolescents is on behaviour and lifestyle change rather than on weight loss. The emphasis is on making small, healthy changes to eating behaviour and becoming more active. Progress towards a healthier BMI for age is monitored every 3 months with the member's health professional. Every year around 10,000 adolescents join Slimming World groups to benefit from direct support with healthy eating and learn valuable life skills in how to shop for, cook and enjoy healthier food and increase their activity. A recent survey confirmed what a positive impact this has had on their lifestyle choices. The 96 adolescents who participated had been members for an average of 23 weeks at the time of the survey. They had a mean weight loss of 5.0kg, BMI change of -2.5kg/m^2 and BMI z-score change of -0.5 since joining. Height had increased by 0.01m during this time. Since joining Slimming World our young members had made a number of positive, significant changes to their eating and activity habits.

13. Changes in eating behaviours



14. Changes in activity behaviours



Positive values indicate an increase in the behaviour since joining the programme, and negative a decrease.

15. Key correlates of weight and/or BMI Z-score change were increased fruit and vegetable intake, no longer eating just what they were given, and decreased avoidance of moderate activity and intense activity, explaining 7% ($p=0.012$), 5% ($p=0.04$), 12% ($p=0.001$) and 11% ($p=0.002$) of the variance in BMI z-score change, respectively. This survey highlights how adolescents following Slimming World's programme are making a number of healthy changes to their diet and activity patterns. These behaviour changes are associated with significant reductions in weight and BMI z-score, whilst importantly not compromising growth in height. (This study was presented as a poster at the International Congress on Obesity 2010, abstract available in *Obesity Reviews* 11 (S1): 433).

16. Helping members with diabetes manage their weight

Many Slimming World members have diabetes. The purpose of this research was to establish: what dietary advice our members with diabetes are given by their health care team; how Slimming World's eating plan can support members to follow the dietary advice; and how well members are controlling their diabetes and weight. 87 Slimming World members with diabetes completed a questionnaire; 61 had type 2 diabetes (T2D) and 23 type 1 (T1D). Of the T2D respondents 90% took medication for diabetes control. Respondents reported dietary advice given by health professionals to be heterogeneous, e.g. 'eat more fruit and vegetables' vs. 'limit the amount of fruit you eat'. 89% of respondents found it either very easy or quite easy to fit their personal dietary advice into the eating plan. For those who had attended Slimming World longer than six months, average weight change so far was -11.8kg for T2D and -8.2kg for T1D. The average BMI for T2D fell from 38.4kg/m² to 34.3kg/m² and for T1D from 31.7kg/m² to 28.6kg/m². 67% of T2D and 61% of T1D respondents reported increased physical activity since joining Slimming World. Of the T2D respondents 79% reported an improvement in glucose control since joining Slimming World and 21% had so far reduced or stopped medications required for their diabetes management. It would appear that Slimming World's eating plan is flexible enough to cater for the varying dietary advice given to members with diabetes by health care teams. Attending Slimming World and following Food Optimising is beneficial for both weight loss and diabetes control. (This survey has been analysed and an abstract published by Slimming World's nutrition and research team, *Journal of Human Nutrition and Dietetics* 22(6): 582-3).

17. Healthy lifestyle changes following childbirth

Many women find it difficult to lose excess weight gained during pregnancy. As they have more children weight can increase progressively which increases risk of complications in future pregnancies. Therefore, the postnatal period is a key time to support women in managing their weight and many women join Slimming World during the postnatal period. Almost 600 Slimming World members who were attending Slimming World postnatally participated in a survey. 86% said that having a baby had influenced their decision to join. The mums reported eating more regularly, cooking more meals from fresh ingredients, eating more fruit and vegetables and eating fewer unhealthy snacks since joining Slimming World. The majority (76%) also reported being generally more active since joining, stating

they were going for more walks and watching TV less. They also felt that their self-esteem, self-confidence and general well-being had improved since joining group. The average BMI of the women before becoming pregnancy was 30kg/m², had risen to 33.6kg/m² by the time they joined Slimming World after having their child, but had fallen to an average 30.7kg/m² since attending their group. 43% of respondents said they had reached their pre-pregnancy weight and 42% said they are now lighter than before becoming pregnant. Of the respondents who had been members for >6mths (n=152), 57% had reached their pre-pregnancy weight and 55% were lighter than before becoming pregnant at the time of the survey.

Interestingly, of those who had had previous pregnancies where they had not then joined Slimming World (n=309), 72% said they had been unable to lose previous pregnancy weight. When accessing Slimming World postnatally, women also seemed more inclined to breast-feed, with 74% commencing breast-feeding and 57% still breast-feeding at 6 weeks or more. The data suggests that the support provided in Slimming World groups helps postnatal women to adopt healthy lifestyle habits, lose weight and also to feel better about themselves. (Data was presented at the British Dietetic Association annual meeting 2010 and an abstract is available in the Journal of Human Nutrition and Dietetics 23(4):439-40).

18. Behaviour changes lead to weight loss and long term weight management in overweight patients

Importantly the behaviour changes our members are making lead to beneficial weight loss. A study of 5000 Slimming World member's weight records shows that the average BMI of our members on joining is 32kg/m². On average our members who lose 10% of their body weight do so within 13 weeks, irrespective of their starting weight. 6 months later, over 90% of those who still attend Slimming World had maintained their weight loss or gone on to lose more.

19. In 2000, Slimming World pioneered a subsidised referral programme that allows health practitioners to offer patients free membership to one of our weekly groups for regular support with their weight management. The Slimming World on Referral programme is now in place in over 70 NHS Trusts, helping around 60,000 people to date. The programme is based on a feasibility trial conducted in collaboration with Derby Primary Care Trusts which investigate whether people referred from primary care enrolled and maintained attendance at a commercial slimming group and identified factors associated with successful participation. The results of this study have been published in the journal of Public Health, 120, 872-881. Two inner city practices recruited 107 obese patients who were given vouchers covering free membership and 12 week's attendance at a Slimming World group of their choice. The average BMI of the patients on recruitment was 36kg/m², with 50% having BMI>35kg/m². Following recruitment 91 (85%) participants enrolled with a Slimming World group. Of these, 62 (68%) completed at least 10 of the 12 weekly sessions and achieved a mean weight loss of 5.4kg (6.4% loss in body weight). Over half (52%) of members initially enrolled went on to take responsibility for their own continuing progress, choosing to self-fund further attendance at the group. The mean weight loss in those completing 24 weeks was 11.1kg (11.3% baseline weight). Significant improvements in well-being (including feeling calm and peaceful, having more energy and feeling less down-hearted and low) were reported after 12 week and maintained at 24 weeks.

20. The referral scheme has been continually evaluated since the nationwide rollout. A recent audit of the first 34,000 patients to use the referral service shows it continues to

achieve clinical weight loss targets in a significant percentage of referred patients. In average referred members attended 9 out of the 12 weeks and achieved a mean weight loss of 4.0kg (4.0% decrease in body weight). More than half (58.1%) of participants attended at least 10 out of the 12 weeks, achieving a mean weight loss of 5.5kg (5.5% loss of body weight) and decrease in BMI of -2.0kg/m^2 . Over half (55%) of those attending at least 10 weeks lost at least 5% body weight.

21. In summary, the Slimming World programme consists of a multi-component approach in which a highly developed support system is used to facilitate changes in behaviour to diet and activity levels with the aim of enabling members to take responsibility for and control of their own health and lifestyle for the long-term. Our data suggests that members make significant, positive changes to their diet and activity patterns in line with current recommendations. These behaviour changes are leading to successful weight loss and maintenance of weight loss. We believe we can play an important role in supporting health services to meet the public health challenges posed by obesity and ultimately reducing NHS costs. We would be happy to provide further information on our approach and research to the Committee.

6 October 2010

Memorandum by Harpreet Sohal, Health Trainer Services Manager, Solihull (BC 61)

On 7th April 2010 a referral was received from Health Exchange to see a client who lived within the North Solihull area. I rang my client on that day and agreed a convenient appointment for him which was on 12th April to be seen at the You+ Shop. My client was a 53 year old male who had not worked for some time due to ill health.

During this meeting I weighed my client who weighed 26st 12lbs with his BMI being 57.79 (obese class 3) and having diabetes and various other medical conditions, my client showed a negative attitude towards any Healthy Lifestyle change. He agreed to complete a food diary and after been showed health benefit cards showing him the benefits of a healthy lifestyle change he decided that he would like to increase his physical activity but slowly at a pace to suit himself as he did not feel that he would be able to do much exercise due to his medical conditions.

We then discussed Doc-Spot and I explained that he did need to first see his GP for the referral. He said that he would not be able to do much but thought he would give it a go. I agreed to ring my client in one week's time and if a referral was received to attend the North Solihull Sports Centre with my client for his first meeting as support.

My client rang me after visiting his GP saying that he had received the referral form and also his GP had agreed that attending doc-spot would be good for him. He rang for his induction and we met at the sports centre and I introduced him to John Walker who was running doc-spot. Completing the sign up forms was a lengthy procedure and I supported my client in completing them.

After his induction it was agreed by my client that he would attend twice a week on a Tuesday and Thursday evening but I was also keep regular contact with my client for support and also to weigh my client which he did prefer me to do. My client is now 25st 13lbs BMI – 56.85, a slow and steady weigh loss but I explained to my client that any weight loss is good and some weeks he would stay the same or may even increase in weight but it is knowing that he can do it and how to move on to the next week and not get to despondent when it does happen.

In the initial meeting with my client he could only concentrate on the negative side of his health and stated that he would never be able to do much exercise but he would give it a go. His attitude has changed and he enjoys attending doc-spot because it is set at his level of fitness and he has also has a different attitude towards food and enjoys completing food diary's and adding food to his diet that he had never really eaten much of if any. He also understands that he is not on a diet but is making a healthy lifestyle change that he can continue with for the future.

October 2010

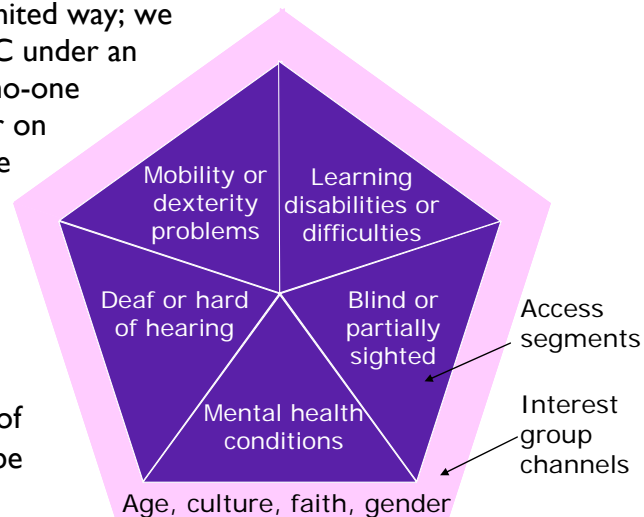
Memorandum by the Switchover Help Scheme (BC 71)

Case Study: The Switchover Help Scheme and Behaviour Change

Using Behaviour Change to Encourage Communities to Help Disadvantaged People Switch to Digital television

Background: In 2007, the Switchover Help Scheme was created to help potentially disadvantaged older and disabled people³⁰³ by offering practical help to switch to digital TV. We do this region by region and in a time-limited way; we are allowed to help people once. We are run by the BBC under an agreement with the Government, and our ambition is “no-one left behind” in the switch to digital television. To deliver on this we are using behaviour change approaches to engage with those who are most difficult to get help to.

We know that television plays a critical connecting role in the lives of many people, especially those who are alone or unable to leave their homes. Our requirement is to deliver a national and fit for purpose service to all people across disability and age in the UK with the goal of reaching those unable to switch on their own – it must be inclusive, accessible, and usable.

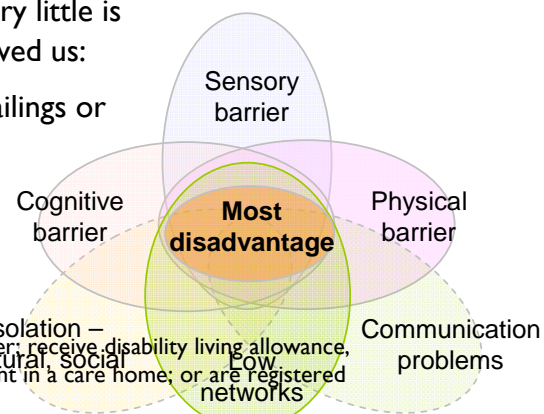


The Complication: the ambition of “no-one left behind” means our challenge and duty is to deliver two things:

1. a fully accessible (inclusive, usable) service - in information and service delivery
2. engagement with the most excluded and hard to reach people

The first, a fit for purpose service, is difficult to get right and the few examples that exist are not often parallel to our goals. We started with a national consultation to develop our Code of Service Standards which lays out our promises which aim to ensure all customers are treated with respect and dignity. But for the second we found even fewer precedents. Due to the nature of TV as a support and needed friend for disconnected people, our approach had to cover those most in need robustly, and with insight. These are people who are marginalised, disadvantaged and often isolated in society; we refer to them as “the 5%”³⁰⁴. Whilst the experts we spoke with across government, the voluntary and community sector (VCS) and academia all verified their existence with anecdotes, they also confirmed how they were often difficult to reach with services, and that very little is known about them. The social research we commissioned showed us:

- the 5% are unlikely to engage with or respond to our mailings or media messages – marcomms won’t work
- they are highly likely to have multiple disabilities or disadvantages

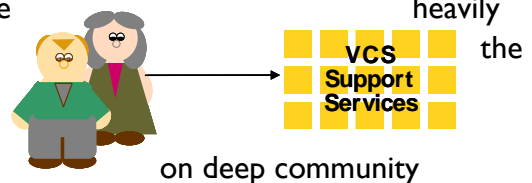


³⁰³ Specifically, the population we are here to help are people who are aged 75 or over; receive disability living allowance, attendance allowance, constant attendance allowance, or mobility supplement; resident in a care home; or are registered blind or partially sighted.

³⁰⁴ We used the term 5% as a name to help identify who we are talking about, not to be disrespectful, but because of the tremendous diversity – very few characteristics are consistently present.

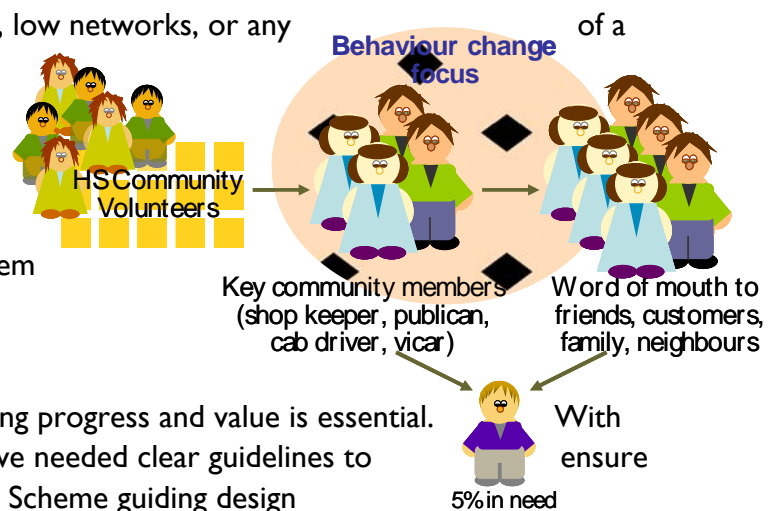
- many are isolated and without support to help them through difficulties – with only one, possibly two people they speak with
- as a result they rely more heavily on television for connection and company

The answer: With our obligation to reach the 5% and little directly relevant precedent, we turned to behaviour change. The 5% don't respond effectively to current approaches, so we started anew with research into behaviours of the people and their chosen contacts. Trust is essential but takes a very long time to build; we are time-limited. The one or two people trusted were only channel to reach the 5%; there is no pattern to who they could be. Most importantly, they may not realise they can help. Our programme focuses on deep community relationships to find the 'hidden people', and employs behaviour change approaches to enlist community support in getting help to the 5%.



Most people come to services, or are provided outreach in a direct manner.

Due to isolation, communication barriers, low networks, or any wide range of reasons, the people in the 5% would not be able to take advantage of these services, and we don't have time to build trust required. Thus we use specially trained volunteers to seek out the trusted people, and encourage them to provide the engagement for us.



Approaching Behaviour Change

As a publicly funded scheme, demonstrating progress and value is essential. little precedent to help us gauge quality, we needed clear guidelines to we were on track. (See Appendix I, Help Scheme guiding design principles). These core principles have guided our approach to all eligible people. They also led to the development of our Code of Service Standards, which in turns governs our service design and delivery.

The behaviour change programme is couched within this framework, and integrated within our delivery structure, outlined below. Reaching the final 5% independently would be very labour-intensive, and therefore costly. We designed the behaviour change programme strategy to first, be very focused, and second to leverage off existing Help Scheme infrastructure to minimise costs. The programme is called the **Communities Programme (CP)**. What follows are some of key principles we followed to keep the programme relevant.

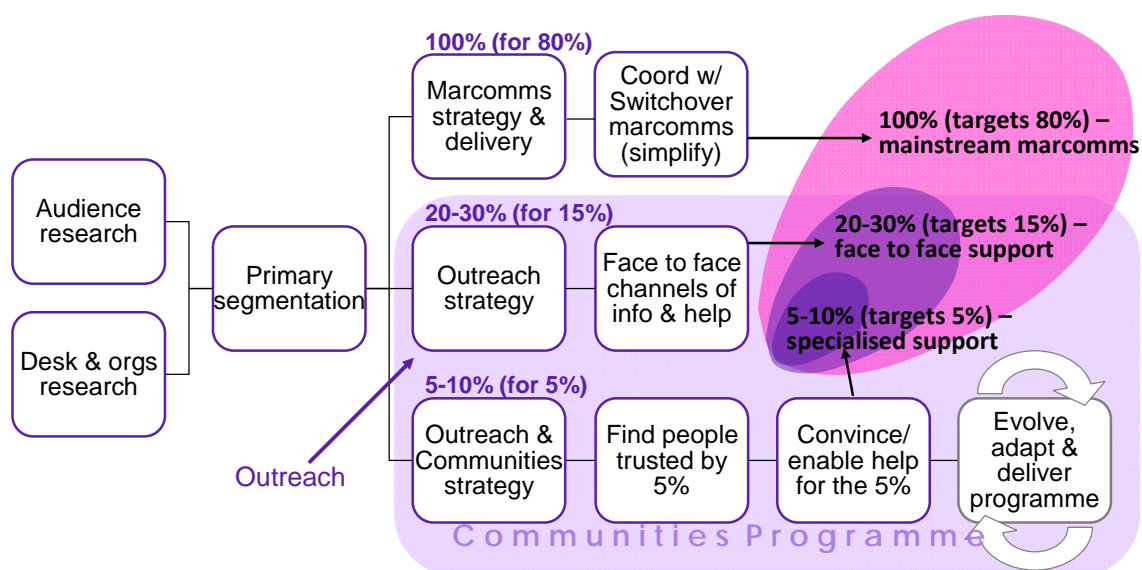
1. Our **strategy and processes** must be substantial and robust.

We emphasise research rigour and evidence-based proposals. From this we designed vision and strategies. Documents include: outreach strategy, CP background, CP governance processes and quality assurance/evolution.

2. **Have a clear, well-founded, segmentation** based on understanding and insight, and integrated into the overall Help Scheme segmentation to maximise effect. (Please see

below). Segments also had to have clear definitions, and overlapping services to help ‘catch’ people.

- The majority of people in our population (the “80%”) participate in some form of media³⁰⁵, and thus if we were clear and provided suitable formats, the most could be reached with effective marketing and communications. This is available to everyone, but probably reaches about 80%.
- The next group we call the “15%”. This group ranges from people who are simply worried by change or technology to those who require someone to support them.
- The final group is the 5%. Please see Appendix V for a full description. The CP has been effective in helping those in both the 5% and 15% although designed specifically for the 5%.



3. Build **effective delivery** for each overlapping segment

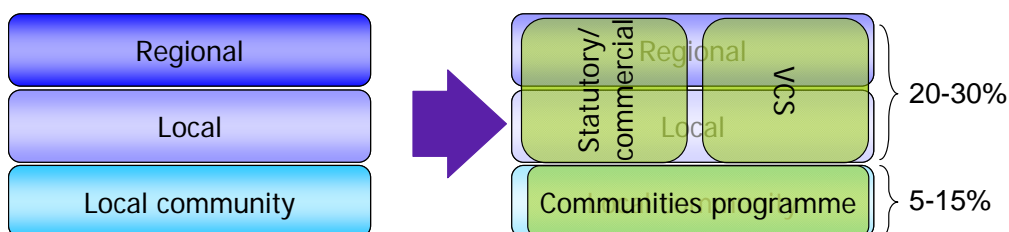
Marcomms focuses on the 80%. To address the 15%, we created a multi-layered outreach programme. We know people prefer face to face support and assurance, and anticipated that 20-30% would benefit from outreach services but that the 15% would be the core beneficiaries. This work includes: presentations to VCS organisations, stands at community events, buses that serve as mobile points of help and advice.

Outreach spans across regional, local and community levels. The VCS and Statutory programmes address regional and local levels, whilst the communities programme

focuses on the most granular levels in communities.

Marcomms and outreach provide essential context to

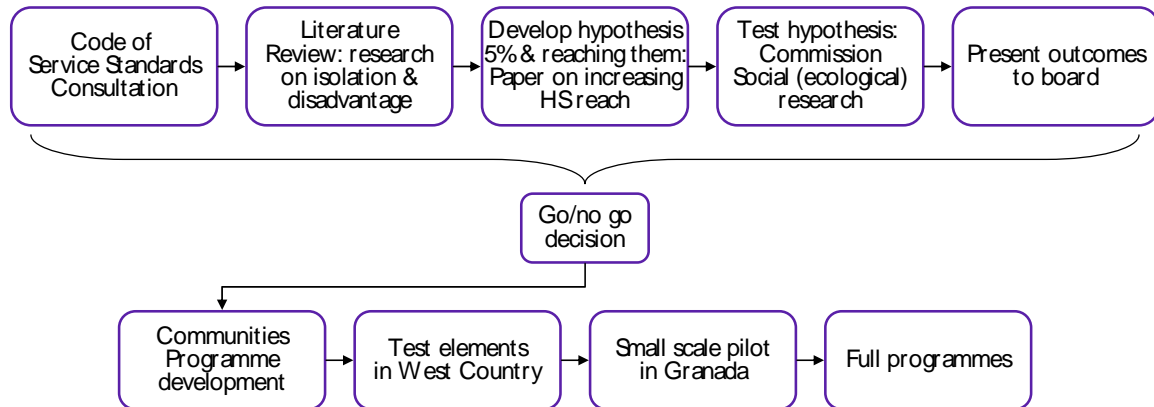
the final programme, the CP. Accessible information, credibility and consistency are fundamental inputs to ensure our volunteers have traction when they are in the



³⁰⁵ Help Scheme 2007 Consultation

communities. Supporting this final programme was the most risky, and therefore required the most rigour in design to gain buy-in for. The following process was followed to ensure it was the right course of action (below)³⁰⁶.

Communities Programme approval and implementation:



The Communities Programme Elements:

There is a trend in social values³⁰⁷ that shows people believe their overall quality of life is best improved by acting in the community interest. Research from 2010³⁰⁸ also shows that over 60% of people surveyed believed they had some kind of responsibility for 'vulnerable people'. The CP relies upon community people wanting to help people and improve their communities. The volunteer provides a trigger and a reason for them to act. The key for us was aligning peoples' existing values with what we would like them to achieve – get people to identify and help the 5%.

- **Invest in the people** (workshops): Research shows what holds people back from helping is a fear they lack skills/expertise, fear of responsibility or fear of repercussions³⁰⁹. Every volunteer doing work for us attends a skills workshop where we discuss such worries, and explore solutions and permissions. We include exercises on framing messages, adapting to different situations, and focuses on sharing anecdotes from other regions – much of this work is about having potentially difficult conversations.
- **Focus on community** (not switchover): We use organisations whose charter it is to strengthen community ties (rather than disability, age or interest groups). This ensures a tight alignment with our goals to reach isolated community members, but also ensures they receive back something of value to their own organisational goals.
- **Indirect approach**: We use higher numbers of volunteers to do one thing – talk to select people in communities. Instead of presentations they engage on a one-to-one basis where the volunteer gauges the situation and adapts the communication to each situation – this is critical as they are asking strangers to 'meddle' in lives of people they feel protective over in order to save hardship or stress later. Each interaction is necessarily bespoke.
- **Constant improvement and evolution** – we are always learning from the field. From the reporting processes to materials we develop for them, we provide three main

³⁰⁶ All research and papers are available upon request.

³⁰⁷ 1996-2009 data Henley Centre/The Futures Company; 2010 data TNS omnibus

³⁰⁸ TNS omnibus 2010, Base: All respondents who were eligible to answer

³⁰⁹ The Futures Company September 2010, IIPS presentation

opportunities for each organisation to feed back their thoughts, and we collect reports twice a month.

- **Outcomes Reporting:** We report heavily on outcomes with no quotas for activity. This gets us a clearer picture of our impact, and motivates the right behaviours in volunteers. This does require a greater commitment from staff and volunteers.

There are a few key differences in this approach. These are further discussed below.

1. It is **necessarily indirect**, and therefore difficult to measure. Whilst our measures are not as finite as many would like, there is clear evidence of success. This is why we emphasise outcomes reporting. (please see Key Lessons)
2. It is **necessarily labour-intensive** which is why we chose social movements rather than other behaviour change approaches. People must create their own momentum for this difficult task for it to be successful, and they must believe in it. What we ask the volunteers to do is difficult – and certainly not to everyone’s taste.
3. The volunteers must **be focused**, both to maintain momentum but also to reap the most benefit from their effort. The workshops focus their existing skills and energy and the programme infrastructure supports them as they progress.
4. It uses many diverse groups and layers of them for delivery – **management is a challenge**, but the reach is much farther (please see Key Lessons)
5. Due to the nature of the behaviour change and the framing of the ‘problem’ the qualitative outcomes have both been substantial and often emotional. This in turn has provided the volunteers and the organisations with a sense of achievement and reward from this work. From our end of region feedback sessions, they have said they benefitted in both profile and in skills development, some saying “it’s the most fun I’ve had volunteering”. All have said they would happily repeat this programme if they could.

The Tool Mix

The success of this programme depends on the input from customer strategy, marcomms, and operations. Customer strategy provides the workshops, on-going oversight and the improvement framework for the quality programme. Insights from reports and feedback are



used as sophisticated tools to motivate people on the front line. Marcomms have provided simple, clear and fit for purpose social marketing materials, as well as a substantial, high functioning, and accessible Help Scheme campaign. Finally, operations have consistently delivered on an accessible, usable service operation which enables powerful word of mouth anecdotes to have an impact. All of this lends urgency and credibility to the behaviour change in a way that another small programme may not have been able in a short timescale.

In addition to these internal supports, both the Help Scheme and specifically the Communities Programme have benefitted from research to gain in-depth behavioural insights on eligible people, community supporters as well as specifically people in the 5%, practical experience of using social movements theory, and substantial advice from academics and organisations across statutory and voluntary sectors. (See Appendix IV).

Key lessons

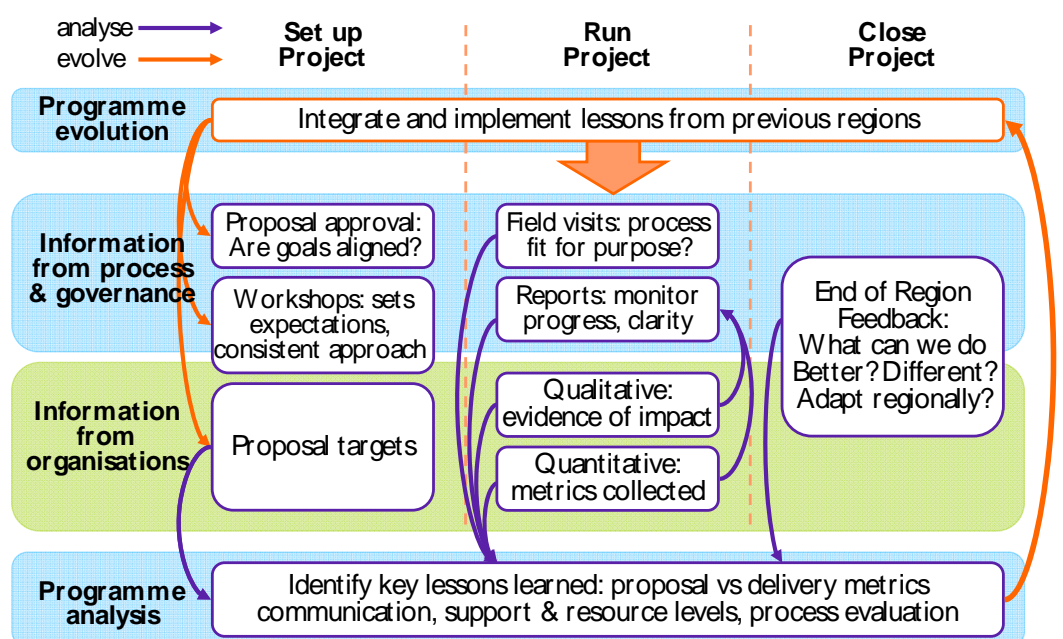
The **behaviour change approach** used, social movements, taps into emotional resources to achieve difficult aims. We have purposefully tried to align our CP organisations with our own goals to provide stronger motivation to do what is a quite challenging task. This has proved to be powerful on its own, with the organisations happily investing much more effort than promised at the beginning.

To our delight, once the workshop and delivery structure were stable, the organisations **delivered impressive results** quickly. At end of region closes, they report many more people were reached and helped than would have been otherwise, and some have gone as far to say no one could have been left with a blank screen as a result of this work. Additionally, many connections were made which benefitted both communities and organisations in the long run. General consensus has also been that had they not done this work, there would have been no way to know if people had or had not been helped.

The greatest challenge has not been in the behaviour change itself, but in its administration – the middle layers. There could be many reasons for this. The set up, background, and theories are fairly complex, but are vastly simplified in executing the workshops. The middle managers are left to translate the complexity, and understanding the reasons for the rigour demanded has proven to be a barrier. There is a significant lesson in **setting expectations**.

As a new programme, we have had to run a rigorous cycle of continual change and evolution, which has been difficult for people trying to implement. Below is a diagram of the analysis and evolution cycle. There is another lesson here in **resourcing**.

As in most delivery projects we have a steep learning curve in **reporting and implementation of lessons learned**. Getting the right governance at the start was not enough; a culture of evolution and



change is ideal to create an appetite for improvement. This is often a luxury sacrificed in short timescales, but success can be difficult region upon region without it.

The following table also provides some of the key metrics collected:

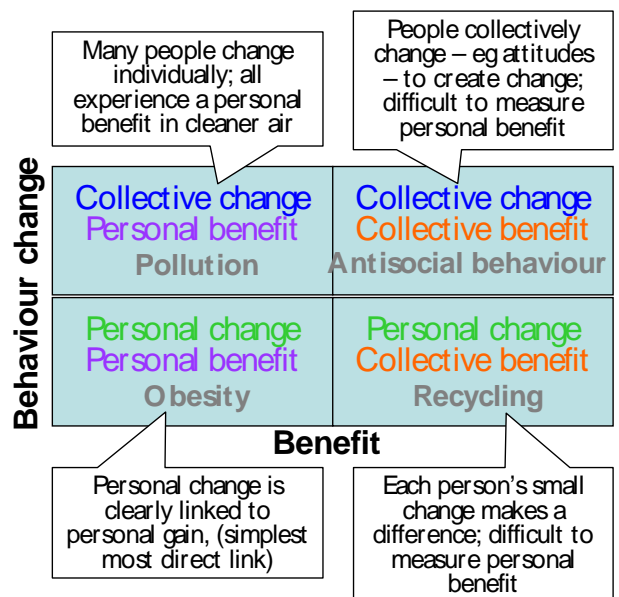
Key Metrics	Description	Qual/quant
Effort	Community supporters located /delivery day	quant
Unit spend	Cost/total days	quant
Value for Money	Cost/community supporter	quant
Coverage	Eligible people in given area/ community supporter	quant
Ambition sense check	5% estimate : community supporters	quant
Reports progress indicators	Rationale	
Community supporters found	Are we achieving the tangible goal?	quant
Revisits achieved	Are we achieving the primary goal?(In conjunction with success anecdotes.)	quant
Quality of success anecdotes	Primary indication of impact – eg, reaching the 5%. This in conjunction with revisits volume gives us the best indication of success in a region.	qualitative
Volume of success anecdotes	Demonstrates our reach. Helps in understanding of our impact and reach along with quality	qualitative
Volume of activity anecdotes	Demonstrates effort is there. if high activity but low success anecdotes either people are ok, or there is coaching to be done with the volunteers.	qualitative

A significant challenge regarding reports and evidence has been gaining acceptance of both **qualitative and quantitative measures** as evidence of progress. For behavioural work, some things are not quantifiable, and in these cases, qualitative information is the richest source. We have tried to use both to help contextualise the other; by the same token, both are needed to understand the progress and value of what was delivered. An example of the qualitative stories and the quantitative analysis are available in Appendix VIII a & b. These must be used in conjunction with experience of other regions, and insights from the feedback from the organisations themselves.

In conclusion

The programme is still evolving and improving. However the evidence we have gathered to date is encouraging, and we feel provides a strong indication of how effective we are being at finding people who would not have been helped in the switchover. The behaviour change work has found substantial support in communities primarily due to the motivation and passion of volunteers and communities themselves. Our work focuses on enabling them to build community connections and in the process lays groundwork for a collective change.

October 2010



Memorandum by the Tavistock Institute of Human Relations (BC 136)

Our expertise in this area

The Tavistock Institute of Human Relations (TIHR) is a not for profit organization and charity which undertakes research, consultancy and professional development activities across a range of sectors. Understanding factors that underpin individual, group and organizational behaviour has been central to the Institute's work since its inception in 1947. In recent years, this experience has been used in work with local authorities exploring innovative approaches to behaviour change, such as addressing risky behaviours in young people (including teenage pregnancy and substance misuse), and in evaluations of programmes in the area of public health, transport and community cohesion/tackling violent extremism. Of particular relevance to the present call for evidence has been our work, undertaken in partnership with the consultancy firm AECOM, in developing guidelines for the evaluation of 'better use' transport schemes³¹⁰ and for enhancing 'attribution' in transport evaluations³¹¹, and the Evaluation of the DfT/ Cycling England Cycling Cities and Towns programme (CCT).

Underpinning much of our work are three key principles:

- Individual behaviour can only be fully understood when seen in the context of a wider 'system' of relationships that include a number of different social and organizational structures, often specific to very local circumstances.
- Causality in such systems is often 'complex': involving multiple influences, and interdependencies that can make causal links indirect and hard to predict.
- Behaviour of individuals, group and organizations is also influenced by non rational factors (unconscious motivations and pervasive 'cultural' norms) which may not be immediately apparent.

Below we provide our evidence and reflections on a number of the questions set out by the Committee:

a) Influential drivers of behaviour affecting individual choice of travel mode.

In the transport field, wide use is made of economic models of individual behaviour that emphasize 'rational' choice. The individual and more rational factors affecting travel choice are relatively easy to identify; convenience, comfort, safety, affordability.

However, there is growing recognition of a wide range of less 'rational' factors that have a powerful influence over travel choice: these include perception of risk (rather than actual risks), cultural and social influences, such as the social acceptability or 'status' attached to different modes of travel. The growing use of social marketing techniques is a welcome development, enhancing an understanding of the different cultural factors influencing different sectors of the population. However, the use of such techniques requires sophisticated research and analytic skills which remain limited in many areas.

³¹⁰ Evaluation of better use interventions evaluation framework report (2009), available at

<http://www.dft.gov.uk/pgr/evaluation/evaluationguidance/existingnetworks/frameworkreport.pdf>

³¹¹ Guidance for transport impact evaluations: Choosing an evaluation approach to achieve better attribution (Hills & Junge, 2010), available at <http://www.dft.gov.uk/pgr/evaluation/evaluationguidance/transportimpact/pdf/guidance.pdf>

A social marketing approach may also overlook the fact that even for one section of the population; choices may be influenced by other factors, such as the reason for travel, time of day or year. Cycling to the shops on a Saturday morning might be a pleasurable experience for some sections of the population, but cycling may not be the preferred mode of travel for commuting to work, or shopping on a winter evening. Understanding these more complex inter-relationships between individual and context requires an even more sophisticated analysis.

A systems view also draws attention to the way in which, over many years, transport and planning decisions taken on the basis of broad economic benefits, have helped to create physical environments which can be unattractive, inconvenient, and potentially dangerous in terms of other modes of transport – for people who by choice or necessity have to cycle, walk or use electric wheelchairs. Only recently, has research begun to emerge demonstrating longer term economic benefits of alternative modes of travel as well as the health benefits of cycling, for example *Quantifying the Health Effects of Cycling and Walking* (The World Health Organization, 2007) ³¹².

Similarly, policy decisions have helped to create a broad cultural ‘assumption’ of car use as the ‘norm’ for the majority of the population. For instance, business parks, shopping malls and stations located on the periphery of towns, the closure of local facilities or promotion of ‘choice’ of school or hospital (which may be further from home) are all less convenient for those unable or unwilling to travel by car, than for car users. Car ownership, and use, is now widely regarded as an emblem of being economically and socially successful. In contrast travel by other means is often perceived as a symbol of poverty, misfortune or eccentricity.

In this context, attempting to change individual travel behaviour is likely to have limited benefits unless cultural assumptions are also challenged, whether in terms of public perception, or as this influences mainstream policy decision making.

b) The role of infrastructure in encouraging and facilitating change in travel-mode choice.

Our evaluation of the Cycling City and Towns (CCT) DfT/ Cycling England Programme³¹³ indicates that infrastructure can be a powerful influence over the choice to travel by bicycle. Many cyclists and ‘would be’ cyclists view the design of most towns and city centres as dangerous and unattractive, discouraging to all but the most committed and confident cyclists. The lack of safe and secure cycle parking facilities may also be seen as a further disincentive to ‘would be’ cyclists, as well as reinforcing the message that cycling is not a main stream travel choice.

However, changing inherited infrastructure is extremely expensive. One of the key challenges for the towns in the CCT programme has been to fill ‘gaps’ in the infrastructure such as provision of cycling lanes and suitable cycle parking. This has required a major investment of additional funding, and considerable work in persuading organizations such as

³¹² Quantifying the Positive Health Effects of Walking and Cycling, Pan-European Programme on Transport, Health and Environment, World Health Organisation, (2008), available at <http://www.euro.who.int/en/what-we-do/health-topics/environmental-health/Transport-and-health/activities/promotion-of-safe-walking-and-cycling-in-urban-areas/quantifying-the-positive-health-effects-of-cycling-and-walking>

³¹³ 12 cities and towns. The evaluation has not yet been published.

schools, hospitals, train companies and local businesses, that investment in infrastructure of this kind is worth while, and of benefit.

In many respects, the lack of infrastructure of this kind can be seen as resulting from a 'vicious circle' where poor infrastructure has led to fewer people choosing to cycle, which in turn has led to less public demand for suitable infrastructure. In the Cycling Cities and Towns, this is being addressed through creating a 'virtual circle' of both improving infrastructure, and providing a programme of activities to promote a positive image of cycling and encourage more people to take up cycling.

c) Developments on the evidence base in relation to changing travel-mode choice.

We believe that certain approaches to 'evidence' will tend to favour specific approaches to behaviour change, and ignore others. Experimental research and evaluation methods (widely favoured as the best source of evidence in the health field, and in the growing field of 'evidence based policy making) tend to favour interventions which can be standardized, in which the outcomes can be achieved relatively quickly, and in which there is a straightforward causal link between intervention and outcome. It also favours interventions which can target individuals (rather than groups, organizations or communities) and in which it is possible to have a control group, ideally enabling individuals to be randomly allocated to an intervention or control group.

Unfortunately, this approach to evidence has an inbuilt bias against interventions which seek to address the complexity of multiple interacting factors that affect behaviour, or which seek to create change at a community, or organizational, rather than individual level. The multiple interacting factors include contextual factors which may lead similar interventions to be successful in one location but fail in another. For example, a relatively minor improvement to infrastructure may lead to a major uptake in cycling in an area where the population is predisposed to cycling, but require much more promotion of the idea of cycling in an area in which cycling is less culturally acceptable. More centrally, it overlooks the key role that individuals as well as organizations and groups may play in the delivery of an effective intervention.

All of these limitations can be overcome by choice of alternative research and evaluation methods such as theory based evaluation methods³¹⁴. However, skills and experience in the use of these methodologies are limited, and the results of such research may still be dismissed as not sufficiently robust. They require a slightly different approach to gathering and using evidence, which places an emphasis on understanding and engagement.

d) What are the most appropriate type and level of interventions to change travel-mode choice?

Behaviour change interventions targeted at individuals have an important place in the overall strategy to change travel choice. However, it is likely that the impact of such interventions will be limited until an understanding of the needs of all road users have been 'mainstreamed' in all relevant areas of policy and practice. In this context, it might be noted that those having

³¹⁴ For example, providing self evaluation support to LAs in using Theory of Change mapping and logic models. TIHR produced for the DfT Logic Mapping: hints and tips for better transport evaluations (Hills. 2010), available at <http://www.dft.gov.uk/pgr/evaluation/evaluationguidance/logicmapping/pdf/logicmapping.pdf>

most influence over policy and practice are more likely to have wide experience of travelling by car, or train, than of travelling by foot, bicycle or bus.

The use of economic models in appraisal of transport developments also tends to favour car use, as the focus is generally on time savings and safety of travel. On the whole, the economic arguments for promoting alternative travel choices remain weak and harder to demonstrate: this will only change once other and longer term economic benefits of change, such as environmental and health benefits have been more effectively demonstrated and built into models of appraisal.

Another effective intervention would be to increase the numbers, and seniority, of transport analysts and staff with experience of alternative methods of travel, and encouraging these to engage creatively with those making other mainstream decisions affecting travel choice. For example, additional funding in the CCT areas enabled local authorities to build up a sizeable team of staff, and engage senior management and local politicians in 'champion' the cause of cyclists. One powerful intervention used in several of the towns and cities was to take councillors, senior managers, planners and transport engineers on cycle rides as a way drawing their attention to the needs of cyclists.

e) Who are the most effective agents for delivery of behaviour interventions to change travel-mode choice?

As will be apparent from the above discussion, local authorities have a crucial role to play in creating a more favourable environment for alternative travel choices. We would observe, however, from our research, that resources and experience in relation to promoting alternative travel choices in most local authorities remain very limited, often short term, and at a relative low level of seniority. In addition; existing resources are currently under threat; with examples of staff roles being merged, minimised or cut in local authorities across England.

Within a systems framework, this raises the question: what factors might encourage change within local authorities, and who would be the most effective agents for creating 'behaviour change' in those making policy and practice decisions within local government? Parliament and central government departments clearly have an important role in setting the national agenda favourable to alternative travel choices. However, expertise at a national level is also limited, and in this respect, the loss of key national agencies such as Cycling England is to be particularly regretted. Cycling England have built up an excellent body of knowledge and experience in what type of interventions are most effective in increasing numbers of cyclists, and in advising local authorities in developing effective interventions.

f) Are current policy interventions addressing psychological and environmental barriers to change?

In the context of a systems view, the question here is how to address the psychological and cultural barriers to developing policy and practice which enhances the travel experience of non car users. This cuts across many different area of policy and practice: policy decisions taken in the fields of health, education, community engagement, town planning as well as transport.

In this context, an environment that supports cross sectoral, cross departmental engagement may be crucial to mainstreaming alternative choices of transport choice. While numerous excellent examples of this kind of cross sectoral and partnership working can be found at a local level, too often this is inhibited by a lack of interdepartmental engagement at a national level, with 'silos' of targets discouraging partnership working locally. For example, partnership work between the Department of Health and Department for Transport helped keep the health benefits of cycling on the 'agenda' in relation to the Cycling Cities and Towns programme.

Improving the policy environment for alternative travel choices is likely to require strong advocates for alternative travel modes in every relevant department, or another powerful national body that is able to challenge any policy decisions that favour car use, over other modes of travel.

g) Are policy interventions appropriately designed and evaluated?

As highlighted above the skills and experience in applying evaluation methods are limited in local authorities and the wider transport sector. Effective evaluation is still very limited in the transport sector, which has also led to the lack of good evidence of the effectiveness of behaviour change interventions. A key factor here is lack of resources in terms of skills, experience and funding available. Evaluation is also not firmly embedded in the culture of the transport sector, this is particularly the case for non-infrastructure projects and less mainstream forms of transport.

h) What lessons have been learnt and applied as a result of the evaluation of policy?

In addition to a lack of evaluation in this field, our research has found that many transport professionals complain about the difficulty and the expense of accessing good research and evaluation evidence. The availability of good systematic reviews of relevant evidence in this sector is limited.

i) What lessons can be learnt from interventions employed in other countries?

The towns in the CCT programme have made excellent use of evidence, examples and experience in other European countries. Cycling England is a potentially useful repository of this experience: hopefully this experience will be effectively stored and saved when Cycling England is disbanded at the end of March. Many European countries have engaged with each other to share learning and expertise, for example, through attending conferences to learn about developments in the field of modal choice. In addition, transport staff have been encouraged to participate with other countries transport environments, such as going on bike rides and using bike facilities. Our research reflects this as some of the CCT sites have proactively formed relationships with other European countries enabling better levels of shared practice and knowledge.

Cross country learning has been encouraged by many European funding streams³¹⁵.

21 January 2011

³¹⁵ A good example of this is the PIMMS TRANSFER project, funded under the European Union's INTERREG IVC programme (2008-2011).

Memorandum by the UK Society for Behavioural Medicine (UKSBM) (BC 36)

Summary

Behaviour has a critical role in the aetiology of many chronic diseases including heart disease, cancer and respiratory disease. Behavioural Medicine is an interdisciplinary field concerned with (a) the development and integration of environmental, behavioural and biomedical knowledge relevant to health and disease, and (b) the application of this knowledge to prevention, treatment and rehabilitation. The central remit of the UK Society for Behavioural Medicine (UKSBM - <http://uksbm.org.uk/>) is the generation and application of scientific evidence regarding health and health related behaviour.

The scope of behavioural medicine covers both the behaviours of individual citizens (either as patients in the healthcare system or not) and the behaviours of healthcare professionals and their organizations. We submit evidence in relation to both of these aspects of behaviour.

Evidence supports behavioural interventions for changing citizen/patient behaviours such as reducing adult smoking rates, increasing physical activity levels, increasing uptake rates for cervical screening.

For healthcare professionals' behaviour (Implementation Research) the best evidence is for educational outreach (for prescribing) and reminders. Multifaceted interventions targeting a range of barriers to change are more likely to be effective than single interventions. Specifically relating to healthcare professional's management of overweight and obese patients - all of the (six) evaluated interventions would need further investigation before it was possible to recommend them as effective strategies.

An overview of evidence based on reviews of studies focusing on addiction is available.

There is a lack of research capacity to address the behavioural research agenda.

Recent reviews of interventions to change weight have shown that:

- Overall, interventions produce clinically meaningful weight loss.
- There is strong causal evidence that the effectiveness of weight loss interventions is increased by a) targeting both diet and physical activity b) engaging social support around the person attempting to change c) using well-defined /established behaviour change techniques.
- Increased effectiveness is also associated with increased contact frequency
- Better outcomes are associated with use of "self-regulatory" behaviour change techniques.
- No relationships were found between effectiveness and intervention setting, delivery mode, study population or delivery provider.

Hence, it would seem that a wide range of providers could potentially deliver successful behaviour change interventions for weight reduction. A number of theory-based and pragmatic interventions are under evaluation.

However, it is important to recognise that the average weight reductions achieved in many studies are still relatively small and often do not move study subjects out of the "obese" category. Used alone such interventions will not stem the obesity tide and this highlights the need for a multi-faceted approach that also addresses the social, physical and economic environment.

Introduction

Behaviour has a critical role in the aetiology of many chronic diseases including heart disease, cancer and respiratory disease. Diet, smoking, alcohol consumption and physical activity are all recognised risk factors for the development of these leading causes of ill health in the UK. Khaw et al³¹⁶ recently provided a powerful illustration of the effect of behaviour on health in the UK general public. They followed up over 20,000 healthy UK men and women for 11 years. Participants scored one point for each health behaviour: current non-smoking, not being sedentary, moderate alcohol intake (1-14 units a week) and fruit and vegetable intake of at least five servings a day, for a total score ranging from zero to four. All-cause mortality for men and women who had three, two, one, and zero compared to four health behaviours were respectively, 1.39, 1.95, 2.52 and 4.04. The 4 health behaviours combined predict a 4-fold difference in total mortality in men and women, with an estimated impact equivalent to 14 years in chronological age. Changes in these key health related behaviours must be a key target for the nation's health, and such attempts to change population behaviour must be informed by high quality behavioural science. Finally, Government must provide adequate funding for high-quality, internationally competitive research into behavioural science and evidence-based health behaviour change.

Behavioural Medicine is an interdisciplinary field concerned with (a) the development and integration of environmental, behavioural and biomedical knowledge relevant to health and disease, and (b) the application of this knowledge to prevention, treatment and rehabilitation. The central remit of the UK Society for Behavioural Medicine (UKSBM - <http://uksbm.org.uk/>) is the generation and application of scientific evidence regarding health and health related behaviour³¹⁷. We believe that while Behavioural Medicine expertise is widely recognised and used in other health care systems (e.g. in the United States), it is seriously under-utilised by the UK Government and NHS.

It is fundamental that the highest degree of rigor of method is applied to the scientific evaluation of all behavioural interventions. This involves multi-disciplinary teams of researchers skilled in: the theoretical basis of changing behaviour; the design and conduct of evaluative studies (e.g. both exploratory and pragmatic randomised controlled trials); evaluation of economic impact of interventions.

The scope of behavioural medicine covers both the behaviours of individual citizens (either as patients in the healthcare system or not) and the behaviours of healthcare professionals and their organizations. We submit evidence in relation to both of these aspects of behaviour.

We annotate our submission in relation to citizen/patient behaviour and healthcare professional behaviour and structure it in relation to your questions. The consultation questions we have responded to are highlighted in ***bold italics***.

Research and Development

What is known about how behaviour can be influenced? What special considerations apply to addictive behaviour?

Reducing adult smoking rates

Health care providers now routinely offer smoking cessation services in primary care, secondary care and community settings. Many of these services use the 'stages of change' approaches to increase smokers' motivation to quit. However, a recent systematic review of 37 trials (Riemsma et al,

³¹⁶ Khaw KT, Wareham N, Bingham S, Welch A, Luben R, Day N. Combined impact of health behaviours and mortality in men and women: the EPIC-Norfolk prospective population study. *PLoS Medicine* 2008; 5(1):e12.

³¹⁷ Marteau et al. *BMJ* 2006, 332, 437-8.

2002³¹⁸) indicated that there was little evidence to suggest that stage-based interventions are more effective compared to non-stage-based interventions, or compared to no intervention, or usual-care. Consequently, it is important to consider other approaches to promoting effective smoking cessation.

To help people stop smoking it has been clearly shown that brief advice from physicians and behavioural support from NHS staff specially trained and employed as Stop Smoking Practitioners are effective and highly cost effective in helping smokers to stop (NICE 2006, NICE 2008). More recent research by behavioural scientists working at UCL and the NHS Centre for Smoking Cessation and Training has begun to discern what are the more effective 'behaviour change techniques' used by these practitioners³¹⁹. This is forming the basis for assessment and training of Stop Smoking Practitioners across England using an evidence-based set of competences (www.ncsct.co.uk).

What are the policy implications of recent developments in research on behaviour change?

Increasing physical activity levels

It is now well recognised that advice, education or information does not lead to lasting change in repetitive health behaviours. It is also universally accepted that increasing physical activity leads to a host of major physical and psychological benefits, but while many individuals have the best of *intentions* to take more exercise, this does not translate into lasting change in *behaviour*. In Behavioural Medicine this is recognised as the intention-behaviour gap. Behavioural Medicine research has clearly demonstrated that general or vague intentions to exercise simply do not work. It is clear that in order to translate intentions into behaviour, plans for action have to be specific, i.e. in terms of where, when and what (e.g. "I will walk home from work at 5.30pm on every work-day over the next three months"). The important thing about these specific action plans is the linkage of specific cues (i.e. the where (place of work), the when (after work every work-day for next 3 months), with the desired behaviour (walking home) such that these associations become strong and *habitual* and lead to the planned actions once the individual encounters the specific cues. Formation of action plans lead to more effective behaviour change. The research evidence also indicates that behaviour change is enhanced by the availability of plans for how to deal with *barriers to behaviour change*. These are called coping plans and involve mental rehearsal of strategies to overcome potential obstacles or barriers to behaviour change, e.g. "In case it is raining, I will always keep a spare raincoat at work" or "If I have to work late any evening, I will walk to work the next morning".

Sniehotta et al. (2006³²⁰) recently showed that the combination of action plans and coping plans in cardiac rehabilitation patients led to an increase in weekly exercise time per week to 179 minutes compared with 95 minutes per week in the standard-care no intervention control group, when assessed 2 months following discharge. Sniehotta et al. (2005³²¹) have also shown that action and coping planning based interventions can double the time spent participating in strenuous exercise compared to standard treatment groups 4 months after discharge from cardiac rehabilitation. Darker et al (2010)³²² have also recently reported the results of a simple, brief behavioural intervention which increased objectively measured daily walking in the general population by over 60%.

³¹⁸ Riemsma, RP et al. A systematic review of the effectiveness of interventions based on a stages-of-change approach to promote individual behaviour change. Health Technology Assessment ; 2002, Vol. 6: No. 24

³¹⁹ West et al, 2010 - Behavior change techniques used by the English Stop Smoking Services and their associations with short-term quit outcomes, Nicotine & Tobacco Research, Volume 12, Number 7 (July 2010) 742-747

³²⁰ Sniehotta, F.F., U. Scholz, and R. Schwarzer, *Action plans and coping plans for physical exercise: A longitudinal intervention study in cardiac rehabilitation*. Br J Health Psychol, 2006. 11(Pt 1): p. 23-37.

³²¹ Sniehotta, F.F., et al., *Long-term effects of two psychological interventions on physical exercise and self-regulation following coronary rehabilitation*. Int J Behav Med, 2005. 12(4): p. 244-55.

³²² Darker et al. An intervention to promote walking amongst the general population based on an 'extended' theory of planned behaviour: A waiting list randomised controlled trial, Psychology an Health, 25, 71-88

Increase uptake rates for cervical screening

As outlined above, we know that vague or general plans for health behaviour change simply do not work. Action Plans (also known as Implementation Intentions) are specific plans for action, which specify exactly *when*, *where* and *how* to act in future situations. There is accumulating evidence that forming implementation intentions is associated with more effective behaviour change and this also applies to improved uptake for cervical screening.

Sheeran & Orbell (2000³²³) conducted a study of 114 women registered at a medical practice in rural England. Half the women were asked to form action plans (specifying when, where, and how they would make a cervical screening appointment). Subsequent attendance was determined from medical records. Despite equivalent motivation to attend, participants who formed implementation intentions were much more likely to attend for screening compared with the controls (92% vs. 69%). More recently, Sandberg & Connor (2009³²⁴) conducted an experimental test of manipulating anticipated regret when inviting women for cervical screening. Approximately 4500 women who were being invited for cervical screening were randomised to a control group, a group sent a questionnaire measuring variables proposed to predict behaviour under the Theory of Planned Behaviour (TPB) and a group who were sent a TPB questionnaire plus anticipated regret questions. In the intention-to-treat analysis, of those who did not return the questionnaire (the vast majority), screening attendance was 21%, 26% and 26% respectively in control, questionnaire and anticipated regret groups, i.e. simply sending out a questionnaire increased attendance by 5%. For those who completed and returned the questionnaire (i.e. were definitely exposed to the intervention), attendance rates were 21%, 44% and 65% respectively. This is quite a remarkable simple intervention effect.

Influencing Healthcare Professional's Behaviour and Implementation Research

Implementation research is the scientific study of methods to promote the systematic uptake of clinical research findings and other evidence-based practices into routine practice, and hence to improve the quality and effectiveness of health care. It includes the study of influences on healthcare professional and organisational behaviour.

The most comprehensive overview of systematic reviews of **professional behaviour change interventions** published between 1966 and 1998 (Grimshaw et al. ³²⁵) identified forty-one reviews covering a wide range of interventions and behaviours. It reported "In general, passive approaches are generally ineffective and unlikely to result in behaviour change. Most other interventions are effective under some circumstances; none are effective under all circumstances. Promising approaches include educational outreach (for prescribing) and reminders. Multifaceted interventions targeting different barriers to change are more likely to be effective than single interventions." The authors concluded "Although the current evidence base is incomplete, it provides valuable insights into the likely effectiveness of different interventions. Future quality improvement or educational activities should be informed by the findings of systematic reviews of professional behaviour change interventions."

Focusing specifically on **organizational interventions** an overview of 36 reviews³²⁶ reported "A total of 36 reviews were included, but not all were high-quality reviews. The reviews were too

³²³ Sheeran, P. and S. Orbell, *Using implementation intentions to increase attendance for cervical cancer screening*. *Health Psychol*, 2000. 19(3): p. 283-9.

³²⁴ Sandberg, T., & Conner, M. (2009). A mere measurement effect for anticipated regret: impacts on cervical screening attendance. *Br J Soc Psychol*, 48(Pt 2), 221-236.

³²⁵ Grimshaw JM, Shirran L, Thomas R, Mowatt G, Fraser C, Bero L, Grilli R, Harvey E, Oxman A, O'Brien MA. Changing provider behavior: an overview of systematic reviews of interventions. *Medical Care*. 39(8 Suppl 2):112-45, 2001 Aug.

³²⁶ Wensing W, Wollersheim H, Grol R. Organizational interventions to implement improvements in patient care: a structured review of reviews. *Implementation Science* 2006, 1:2.

heterogeneous for quantitative synthesis. None of the strategies produced consistent effects. Professional performance was generally improved by revision of professional roles and computer systems for knowledge management. Patient outcomes were generally improved by multidisciplinary teams, integrated care services, and computer systems. Cost savings were reported from integrated care services. The benefits of quality management remained uncertain. The authors concluded “There is a growing evidence base of rigorous evaluations of organizational strategies, but the evidence underlying some strategies is limited and for no strategy can the effects be predicted with high certainty.”

Cochrane Effective Practice and Organisation of Care (EPOC) Group

The focus of EPOC is on reviews of interventions designed to improve professional practice and the delivery of effective health services. This includes various forms of continuing education, quality assurance, informatics, financial, organisational and regulatory interventions that can affect the ability of health care professionals to deliver services more effectively and efficiently. Organisational interventions are those which involve a change in the structure or delivery of health care.

The EPOC section of the Cochrane Library currently contains 62 reviews of the type referred to above. Specifically relating to healthcare professional’s **management of overweight and obese patients** is Flodgren et al.³²⁷, This review included six randomized controlled trials, involving more than 246 health professionals and 1324 overweight or obese patients. Four of the trials targeted professionals and two targeted the organisation of care. Most of the studies had methodological or reporting weaknesses indicating a risk of bias. Meta-analysis of three trials that evaluated educational interventions aimed at GPs suggested that, compared to standard care, such interventions could reduce the average weight of patients after a year (by 1.2 kg, 95% CI -0.4 to 2.8 kg); however, there was moderate unexplained heterogeneity between their results ($I^2 = 41\%$). One trial found that reminders could change doctors' practice, resulting in a significant reduction in weight among men (by 11.2 kg, 95% CI 1.7 to 20.7 kg) but not among women (who reduced weight by 1.3 kg, 95% CI -4.1 to 6.7 kg). One trial found that patients may lose more weight after a year if the care was provided by a dietitian (by 5.6 kg, 95% CI 4.8 to 6.4 kg) or by a doctor-dietitian team (by 6 kg, 95% CI 5 to 7 kg), as compared with standard care. One trial found no significant difference between standard care and either mail or phone interventions in reducing patients' weight. The authors concluded “Most of the included trials had methodological or reporting weaknesses and were heterogeneous in terms of participants, interventions, outcomes, and settings, so we cannot draw any firm conclusions about the effectiveness of the interventions. All of the evaluated interventions would need further investigation before it was possible to recommend them as effective strategies.”

Reviews of addiction

In terms of modifying healthcare professional behaviour in relation to addictive behaviour the EPOC module of the Cochrane Library contains a protocol in preparation³²⁸ but no reviews. A recent overview of the key intervention categories of citizen/patient interventions³²⁹ produced an evidence map that contained:

³²⁷ Flodgren G, Deane K, Dickinson HO, Kirk S, Alberti H, Beyer FR, Brown JG, Penney TL, Summerbell CD, Eccles MP. Interventions to change the behaviour of health professionals and the organisation of care to promote weight reduction in overweight and obese people. Cochrane Database of Systematic Reviews 2010, Issue 3. Art. No.: CD000984. DOI: 10.1002/14651858.CD000984.pub2.

³²⁸ Authors being decided. Interventions to increase the use of screening and brief intervention programmes for hazardous alcohol consumption by patients in primary care settings. EPOC Module, Cochrane Library.

³²⁹ Garrity C, Ansari M, Yazdi, F, Singh K, Galipeau J, Lal A, Daniel R, Moher D, Grimshaw J. Preliminary Evidence Map of Systematic Reviews (SRs) to inform the prevention, treatment and/or harm reduction for illicit drug use. Prepared for: the Institute of Neuroscience, Addiction & Mental Health (INMHA), Canadian Institutes of Health Research (CIHR) by Systematic Reviews Group, Ottawa Hospital Research Institute. OHRI 2010.

For Prevention-related Interventions (5 Systematic Reviews (SRs) Identified)

- Few published SRs on prevention were identified. Most SRs investigated school-based drug education programs to target substance use (usually not otherwise defined). Two Cochrane Reviews were identified.

For Treatment-related Interventions (102 SRs Identified)

- Several published SRs on treatment interventions were identified including 75 SRs that reviewed somatic interventions (pharmacological and/or other e.g., acupuncture) and 60 SRs that reviewed psychosocial interventions.
- Opioid agonist maintenance therapies, medications to decrease withdrawal symptoms, and pharmacological interventions to treat specific dependence were the most common somatic-pharmacological interventions.
- Acupuncture was the most frequently cited somatic-‘non-pharmacological’ intervention.
- General behavioural therapies, specific cognitive behavioural therapy, and motivational interviewing were the psychosocial interventions cited most often.
- Several SRs did not specify underlying substances under review or level of substance use, misuse, or abuses. However, when reported, the class of opioids and morphine derivatives was most common followed by specific substance use of heroin and marijuana.
- A total of 43 Cochrane Reviews were identified.

For Harms Reduction-Related Interventions (16 SRs Identified)

- Of the identified published SRs on harms reduction, SRs primarily investigated HIV or Hepatitis C virus prevention measures or substitution programs. No Cochrane Reviews were identified.

Is there adequate research capability within the United Kingdom to support the current pace of developments in behaviour change policy interventions? Is there sufficient funding for the evaluation of behaviour change interventions?

Our response to both is sadly an emphatic “no”. Although there is a body of work ongoing in the UK, the level of funding applied to this problem, (of which the costs to society of smoking, obesity and physical activity exceed £50 billion per year) in terms of prevention research is pitiful, estimated at around £10-20 million per year or 0.5% of the research budget spend. The main funding streams are currently NPRI (an ad hoc consortium of research council, Dept of Health and charity funders, offering around £10million per year) and NIHR-HTA (funded disease prevention projects amount to around £5-10million per year). The majority of this funding goes to approaches for supporting behaviour change including internet /mobile phone based, one-to-one, group-based and self-help approaches.

There is a lack of research capacity to address the research agenda of Implementation Research and there is no specific stream of research funding from Implementation Research. The CERAG Group identified this in its report to the Chief Medical Officer³³⁰.

³³⁰ Eccles MP, Armstrong D, Baker R, Cleary K, Davies H, Davies S, Glasziou P, Iltott I, Kinmonth A-L, Leng G, Logan S, Marteau T, Michie S, Rogers H, Rycroft-Malone J, Sibbald B. An implementation research agenda. *Implementation Science* 2009, 4:18 (7 April 2009).

It is fundamental that the highest degree of rigor of method is applied to the “service level” evaluation of all behavioural interventions. This involves multi-disciplinary teams of researchers skilled in: the theoretical basis of changing behaviour; the design and conduct of evaluative studies (e.g. both exploratory and pragmatic randomised controlled trials); evaluation of economic impact of interventions.

Policy design and evaluation

What should be classified as a behaviour change intervention?

Behaviour can be influenced by changes to the environment (e.g. pricing, availability, laws, cues to action), changes to services (interventions to support change), changes in cultural /social attitudes (e.g. acceptability of smoking, being overweight) and by pharmaceutical /chemical methods (e.g. appetite suppressants, nicotine patches).

In addition we would like to emphasise and illustrate that policy interventions can (and should) be evaluated and that the subsidiary question **“How should different levels of intervention (individual, organisational, community and national) and different types of intervention (legislative, fiscal, educative) interact in order to achieve policy goals more effectively?”** is informed by articles such as the Lavis & Oxman Evidence based policy making series^{331 332 333 334}.

How should different levels of intervention (individual, organisational, community and national) and different types of intervention (legislative, fiscal, educative) interact in order to achieve policy goals more effectively?

Integration of strategies in each of these areas would be useful. Common messages and aims are important here. For instance, targeting of fat /saturated fat intake, salt reduction, sugar reduction, fibre increase, reduced overall portion size, increased physical activity, increased fruit /vegetable intake are all relevant to tackling obesity.

Should behaviour change interventions be used in isolation or in combination with other policy interventions?

Behaviour change interventions **must** be incorporated into wider societal and policy interventions. There is now unequivocal evidence that behaviour and behaviour change is responsive to a host of social and environmental cues and barriers.

Practical application

Have publicly funded behaviour change interventions been both evidence-based and subject to effective evaluation? How successful have such interventions been?

The answer again is sadly “no”. Too often well intentioned, but evidence-lacking health initiatives are rolled out, usually without well-controlled and rigorous evaluation. A better approach would be to implement innovative ideas, but with a clear focus on measuring outcomes and using outcomes to

³³¹ Lavis JN, Oxman AD, Moynihan R, Paulsen EJ: Evidence-informed health policy 1 – Synthesis of findings from a multi-method study of organizations that support the use of research evidence. *Implementation Science* 2008 , 3:53.

³³² Lavis JN, Paulsen EJ, Oxman AD, Moynihan R: Evidence-informed health policy 2 – Survey of organizations that support the use of research evidence. *Implementation Science* 2008 , 3:54.

³³³ Lavis JN, Oxman AD, Moynihan R, Paulsen EJ: Evidence-informed health policy 3 – Interviews with the directors of organizations that support the use of research evidence. *Implementation Science* 2008 , 3:55.

³³⁴ Lavis JN, Moynihan R, Oxman AO, Paulsen EJ. Evidence-informed health policy 4 – Case descriptions of organizations that support the use of research evidence. *Implementation Science* 2008, 3:56.

improve the system (make Public Health Services into “learning organisations” with strong feedback based on *outcomes* rather than processes which are used to shape ongoing development). We need to apply principles of evolution to allow the development over time of systems that work (i.e. interventions that produce good outcomes are kept and those that don’t are modified until they do or dropped). See comments on the evidence base above - Public Health Services in the NHS have little knowledge of the evidence base and tend to commission poorly informed and poorly evidenced approaches.

What mechanisms exist, at national and local government level, to provide advice and support during the design, piloting, implementation and evaluation of behaviour change interventions in order to ensure that they achieve intended policy goals and also cultural changes within government and public services more generally?

No formal mechanisms exist that we are aware of. Informally, individual researchers or research groups engage local NHS and Public Health colleagues at the design stage, using approaches like Intervention Mapping or REACH to ensure that interventions are tailored to the context in which they are to be applied.

International comparisons

It is important to emphasize that the UK, in spite of very limited research funding, is punching well above its weight in terms of the science of behaviour change. For example, in order for behavioural science to progress one requires a reliable and valid taxonomy of behaviour change techniques. Innovative work by UK behavioural scientists continues to dominate the field in this area^{335 336}

What lessons can be learnt from previous successful or unsuccessful behaviour change interventions in other countries?

Diabetes prevention programmes in Finland, Germany, the US, Australia, China and other countries provide good examples of cost-effective behaviour change interventions^{337 338 339}. Interventions to change lifestyle have reduced the incidence of type 2 diabetes by around 50% in people at high risk, with effects lasting as long as 10 years. The UK trails the world in this and in preventative health generally. Even Serbia has a national diabetes prevention programme, but we still do not.

Tackling Obesity

The Committee would particularly welcome submissions on behaviour change interventions, whether in the public sector, the private sector or by voluntary organisations, designed to tackle obesity, in the United Kingdom or internationally, in order to examine:

- a. the latest developments in the evidence-base in relation to changing eating and physical activity behaviour;

³³⁵ Abraham, C. & Michie, S. (2008). A taxonomy of behavior change techniques used in interventions. *Health Psychology* 27, 379-387.

³³⁶ Michie, S., Abraham, C., Whittington, C., McAteer, J. & Gupta, S. (2009). Identifying Effective Techniques in Interventions: A meta-analysis and meta-regression. *Health Psychology*, 28, 690-701

³³⁷ Lindstrom J, Ilanne-Parikka P, Peltonen M, Aunola S, Eriksson JG, Hemio K et al. Sustained reduction in the incidence of type 2 diabetes by lifestyle intervention: follow-up of the Finnish Diabetes Prevention Study. *The Lancet* 2006; 368(9548):1673-1679

³³⁸ Gillies CL, Lambert PC, Abrams KR, Sutton AJ, Cooper NJ, Hsu RT et al. Different strategies for screening and prevention of type 2 diabetes in adults: cost effectiveness analysis. *British Medical Journal* 2008; 336:1180-1185

³³⁹ Diabetes Prevention Program Research Group. 10-year follow-up of diabetes incidence and weight loss in the Diabetes Prevention Program Outcomes Study. *The Lancet* 2009; early online publication. doi:10.1016/S0140-6736(09)61457-4.

- b. who are the most effective agents for the delivery of behaviour interventions to tackle obesity;
- c. how current behaviour change interventions tackle obesity and what use is made of available scientific evidence;
- d. whether such interventions are appropriately designed and evaluated; and
- e. what lessons have been learnt and applied as a result of the evaluation process.

Recent reviews of interventions to change weight^{340,341} have shown that:

- Overall, interventions produce clinically meaningful weight loss (3-5kg at 12 months; 2-3kg at 36 months) and increased physical activity (30-60 minutes/week of moderate activity at 12-18 months).
- There is strong causal evidence that the effectiveness of interventions is increased by a) targeting both diet and physical activity b) engaging social support around the person attempting to change (e.g. engaging family support) c) using well-defined /established behaviour change techniques.
- Increased effectiveness is also associated with a) increased contact frequency and b) using “self-regulatory” behaviour change techniques (e.g. goal-setting, self-monitoring, and review of goals). No relationships were found between effectiveness and intervention setting, delivery mode, study population or delivery provider.

Hence, it would seem that a wide range of providers could potentially deliver successful behaviour change interventions for weight reduction. A number of theory-based and pragmatic interventions designed for use in real-world settings have been developed and are under evaluation and further evidence is expected over the next 5-10 years.

However, it is important to recognise that the average weight reductions achieved in many studies are still relatively small and often do not move study subjects out of the “obese” category. Used alone such interventions will not stem the obesity tide and this highlights the need for a multi-faceted approach that also addresses the social, physical and economic environment.

To maximise the efficiency of programmes for weight loss, practitioners and commissioning organisations should consider including the above components and also using rigorous intervention development techniques^{342,343}, theory-driven approaches and taxonomies of behaviour change techniques³⁴⁴ to inform their development or selection of behavioural interventions.

October 2010

³⁴⁰ Paulweber B, Valensi P, Lindström J, Lalic NM, Greaves CJ, McKee M et al. A European Evidence-Based Guideline for the Prevention of Type 2 Diabetes. *Hormone and metabolic research* 2010; 42:S3-S36.

³⁴¹ National Institute for Health and Clinical Excellence. Obesity guidance on the prevention, identification, assessment and management of overweight and obesity in adults and children. 2006. London, National Institute for Health and Clinical Excellence.

³⁴² Bartholomew LK, Parcel GS, Kok G, Gottlieb N. *Intervention Mapping: a Process for Designing Theory- and Evidence-Based Health Education Programs*. Mountain View: Mayfield; 2001.

³⁴³ Glasgow RE, Vogt TM, Boles SM. Evaluating the public health impact of health promotion interventions: the RE-AIM framework. *American Journal of Public Health* 1999;89:1322-7

³⁴⁴ Abraham C, Michie S. A taxonomy of behavior change techniques used in interventions. *Health Psychology* 2008; 27(3):379-387.

Memorandum by the University of Aberdeen, Institute of Applied Sciences (BC 67)

Questions

Research and Development

3. Is there adequate research capability within the United Kingdom to support the current pace of developments in behaviour change policy interventions? Is there sufficient funding for the evaluation of behaviour change?

The cost of evaluation should always be built in to large scale intervention trials, and the opportunity to evaluate policy interventions should be maximised by making time and funding available for baseline data collection: often evaluation is considered only at the end of an intervention and only limited funding is provided. Evaluation should include quantitative (process and outcome) and qualitative methods involving intervention beneficiaries and those delivering them, and an assessment of cost-effectiveness, but the skills mix needed to carry out this kind of work is not easy to find.

As a very rough rule of thumb 10% of the total cost of an intervention study should be devoted to independent evaluation.

The very short timescales and very limited funding for project evaluations mean that the best teams may not tender: as an example a current call for evaluation of a community shopping scheme for older people which has a timescale of 18 days from issuing the call to submission of proposals and a budget of £5,000 for a 3 month project. The requirement for institutional approvals and the time taken to build interdisciplinary teams makes it very difficult to prepare good proposals.

Research questions are often focussed on what the organisation delivering the intervention wants to hear.

There is a need for more funding to be directed towards projects where the interventions and the evaluation are developed together and for research into theoretical foundations for behaviour change interventions

Translation

4. Are there adequate structures and expertise across government and the public services more generally to support the translation of research developments in behaviour change into policy interventions?

This is an area that needs attention: support and tools are needed for the translation of evidence into messages and activities that can be used by groups responsible for designing interventions.

The design of intervention studies should involve policy makers so that the actual interventions studied can be those which might be possible to implement: successful 'boutique' interventions which are very costly and cannot be delivered at scale are unlikely to be implemented.

Health practitioners are often expected to deliver health interventions but there are barriers to implementation: resources, training and incentive may also be required.

One major problem is that there is often a very short timescale between the announcement of funding for local authorities to implement interventions and the time limit on spending the funds. This means that the local authorities are responsible for developing and implementing an intervention to meet targets or address the policy, often with little knowledge of evidence of the most effective interventions and no time to engage with the research community on evaluation.

Policy design and evaluation

General

5. What should be classified as behaviour change?

Behaviour change is often only considered at the individual level. We strongly agree with the classification below which includes behaviour change within an organisation (workplace, school.); community (geographic, ethnic...) or local or national government.

6. How should different levels of intervention (individual, organisational, community and national) and different types of interventions (Legislative, fiscal, educative) interact in order to achieve policy goals more effectively?

There is very little evidence on how these interact: the optimum combination, sequence and timing may differ between different areas of health behaviour (e.g. sexual health vs attending for screening) and between different population groups (age, sex, education, ethnicity etc.)

Consistency of messages across all the levels and types of interventions is essential. At this stage the health professional and the corporate world are using different terms and strategies: these should be streamlined and used to support and strengthen one message for the public. Having only one type or level of intervention is likely to be less effective than a three-level approach of different types of interventions.

Different individuals are likely to be reached by and to respond to different interventions; i.e. there is unlikely to be a one-size-fits-all solution.

7. Should behaviour change interventions be used in isolation or in combination with other policy interventions?

It has been recognised for some time that behaviour change interventions on their own - targeting individuals or small groups - are insufficient to support sustained behavioural change at the population level. The World Health Organisation (WHO) recognised this in 1986 (World Health Organisation, 1986) and has repeated this view regularly since, see (World Health Organisation, 1988) (World Health Organisation, 1991) (World Health Organisation, 1997) (World Health Organisation, 2005) (Kickbusch, 2003). The WHO and International Union of Health Promotion and Education have argued over these past nearly three decades that changes to behaviour and health outcomes at a population level, can only be realised through:

- i. community engagement and development;*
- ii. the implementation of healthy public policies;*
- iii. the creation of supportive environments;*
- iv. a health service that is focused on prevention; as well as*
- v. individual education and empowerment.*

As recently as 2007, the UK Government's Office of Science published a wide ranging review investigating causes of the rise in obesity levels in the UK, and the effectiveness of interventions aimed at reducing or halting the rate of increase. The Foresight report ((Butland et al., 2007) p. 10) concluded that "preventing obesity requires changes in the environment and organisational behaviour, as well as changes in group, family and individual behaviour."

Practical application

8. Have publicly funded behaviour change interventions been both evidence-based and subject to effective evaluation? How successful have such interventions been?

Too frequently there has been an inadequate evidence base and poorly designed evaluation. A particular problem is a tendency to rush to implementation before development work has been done. Behaviour change interventions can be characterised as complex, in terms of the MRC guidelines on complex interventions, which recommend the development of the theoretical basis for the intervention followed by modelling and pilot work to inform any full scale trial of the intervention. Where publicly funded programmes have been implemented, the evaluation, if any, is commissioned after the decision to proceed with the programme; the researchers are unable to inform the design to ensure that robust comparisons can be made and there is too little time for baseline data to be captured. As a result, the evaluations do not provide good evidence about what works or does not work, why and for whom.

*Where funding for the programme has been subject to competition between local authorities or health authorities, further problems arise from variation in the implementation of the programme and potential contamination of geographic control areas when unsuccessful areas decide to implement their own schemes anyway. These issues are not specific to behaviour change interventions but characterise other publicly funded schemes. The House of Commons Health Select Committee has been critical of the evidence base for and evaluation of interventions to reduce health inequalities (House of Commons Health Committee **Health Inequalities Third Report of Session 2008–09 Volume I HC 286–I)***

9. Within government, how are the lessons learnt from the success or lack of success of behaviour change interventions fed back into the design of future interventions? Are lessons learned from industry and voluntary sector behaviour change activities also taken into account?

There is generally very little dissemination of evaluation – a central resource (e.g. website) could be used for lodging reports.

10. What mechanisms exist, at national and local government level, to provide advice and support during the design, piloting, implementation and evaluation of behaviour change interventions in order to ensure that they achieve intended policy goals and also cultural changes within government and public services more generally?

We are not aware of any mechanisms in place to support this exchange of information.

Ethical considerations

13. When is it appropriate for the state to intervene to influence the behaviour of members of the public and how does this differ from when it is appropriate for the commercial or voluntary sector to intervene? In particular, when should this be done by outright prohibition and when by measures to encourage behaviour change? Are some methods of producing behaviour change unacceptable? Which and why?

Smoking, safety belts and breastfeeding are good examples of where legislation has made a major impact – also in some countries legislation on salt and trans fat content of foods has impacted on health as well (e.g. Norway and Denmark). It seems to make more sense to provide the healthier option (low salt/sugar/fat items) as the norm and rather tax/limit availability of the ‘high fat/sugar/salt’ items that are seen as the norm currently. Public and private sector though need to work together – if it can work for smoking, why not food?

From an economics perspective, one justification for intervening in behaviour is when private decision making does not reflect all the costs that flow from that decision. In these circumstances, government is acting to correct a market failure. There are numerous examples where costs are borne by the public sector for the consequences of alcohol misuse, poor diet, lack of physical activity etc. There may also be consequences for individuals who are not party to the decision; for example, victims of alcohol related violence, families of those who misuse alcohol. Interventions may also act to influence decisions that are based on misinformation or a lack of information, or to remove or reduce barriers to preferred behaviours. Examples might include food labelling and subsidising healthy foods. Finally, there are circumstances where it is deemed that individuals are not the best judge of their own interests, in the sense that, with hindsight, they will regret the choices they make. This is particularly the case where the adverse consequences of current decisions occur well into the future. For example, many governments have compulsory requirements for individuals to provide for their retirement, whether through public or private schemes. Encouraging individuals to invest in their future health could be compared with tax incentives to invest in future wealth.

Protecting the health of children who are not able to assess the impact of behaviour on future health is essential: sometimes outright prohibition (e.g. of sugar sweetened soft drinks in schools) is needed. If prohibition is in public places (e.g. leisure centres, hospitals, educational establishments.) this does not prevent the individual pursuing the behaviour in private.

14. Should the public be involved in the design and implementation of behaviour change policy interventions and, if so, how? Should proposed measures for securing behaviour change be subject to public engagement exercises or consultation? Should they be piloted? Do considerations differ in the case of interventions aimed at changing addictive behaviour?

There is a particular need for research involving the public to obtain a better understanding of the factors that motivate individual choices, how these interact with individual circumstances and environmental contexts and the methods that will best motivate changes in behaviour. It is unlikely that there is a one-size-fits-all solution and the aim should be to develop a range of cost-effective interventions that are acceptable and feasible.

It is essential to involve the intended recipients in the design of interventions to increase the chances of success and to reduce the chances of unintended consequences. If the intervention is undesirable (e.g. prohibition) there may be ways of making it less unacceptable to the target population which those designing the intervention might not be able to predict.

Tackling obesity

16. The Committee would particularly welcome submissions on behaviour change interventions, whether in the public sector, the private sector or by voluntary organisations, designed to tackling obesity, in the United Kingdom or internationally, in order to examine:

- a) the latest developments in the evidence-base in relation to changing eating and physical activity behaviour?

A key feature to highlight is that dietary change is more likely to reduce obesity than increased physical activity, whereas physical activity has been the main focus of public campaigns. Not only should there be emphasis on eating healthier foods, but also smaller portion sizes. There is very strong evidence that switching to healthier foods without deliberately cutting down calories does not lead to long-term weight loss. The food industry has a pivotal role in product formulation and size which determine dietary intake.

- b) who are the most effective agents for the delivery of behaviour interventions to tackle obesity?

Many people need to be involved: GPs, school nurses, community pharmacists, commercial slimming and health clubs: all are needed! However, these groups lack the training and resources to be involved. Dietitians have the required expertise but are in very short supply outside hospitals.

- c) how current behaviour change interventions tackle obesity and what use is made of available scientific evidence?

Few interventions are monitored for more than one year: those that follow up for 2-3 years suggest that there are real health benefits if the weight loss can be maintained. However, quick fix interventions will not produce long-term weight change.

- d) whether such interventions are appropriately designed and evaluated

Interventions should have a long-term aim and adequate evaluation built in from the start. Intermediate behaviours can be used early on to check that the direction of travel is satisfactory. Techniques such as concept mapping can be used to identify possible markers of change.

- e) what lessons have been learnt and applied as a result of the evaluation process.

We need interventions which combine individual behaviours, community programmes and environmental changes. Health practitioners especially need tools to provide standardised messages which are evidence-based and practical to the patient at the individual level, but society and group interventions in terms of activities, education, media, policy and legislation should be combined.

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October 2010

Memorandum by the University of Bath, Faculties of Humanities and Social Sciences (BC 54)

1. What is known about how behaviour can be influenced? What special considerations apply to addictive behaviour?

1. Drinking to intoxication forms an increasingly normalised part of most young people's social lives. There is ample evidence that price and availability has an impact on levels of young people's alcohol consumption - although this is disputed by the drinks industry and the retail trade, notably through the Portman group. Research at the University of Bath has explored this issue in a recent study that examined the role of drinking in young adults' social lives in relation to the diverse ways in which alcohol is now marketed and advertised to young people³⁴⁵. Young people's alcohol consumption revolves around a collective culture of intoxication that is based in informal mixed and single-sex friendship groups – not couples. Our study indicates that young people already plan safety strategies and discuss the boundaries of excessive drinking and health education campaigns could capitalise on this more.

2. Our argument is that drinking to intoxication is normative (though not all young people do it), and central to many young people's social lives. In contemporary society increasing levels of uncertainty and instability over jobs, education, family life, and a focus on the individual as central to one's success or failure, put particular pressure on young people. The mixed and single sex friendship groups that are the core of the culture of intoxication are even more significant in a social and psychological sense, forming an important locus and sense of 'belonging'. So, any interventions would need to recognise the significance of drinking to young people's group identities - and the significance of the friendship group for their drinking practices.

3. Another key point is the importance of engaging with young people's own perspective on drinking. Recent research and policy has not fully engaged with the role of social media and digital technologies in young people's social lives and especially in relation to drinking. This could be a powerful tool for challenging drinking practices - discussing what you or others look like when pictures appear on Facebook or the future implications when prospective employers find your pictures five years on.

10. What mechanisms exist, at national and local government level, to provide advice and support during the design, piloting, implementation and evaluation of behaviour change interventions in order to ensure that they achieve intended policy goals and also cultural changes within government and public services more generally?

4. These reflections are based on our experience of a range of research projects across a number of government departments. The degree of cultural change across government with respect to the adoption of an evidence-based approach to behaviour change agendas appears to be highly variable. The profile, status and consequent influence of Government Social Research staff in informing the policy strategy and delivery also varies across different

³⁴⁵ Griffin, C., Bengry-Howell, A., Hackley, C., Mistral, W., Szmigin, I., 2009. 'Every Time I Do It I Absolutely Annihilate Myself: Loss of (Self-)Consciousness and Loss of Memory in Young People's Drinking Narratives'. *Sociology*, 43 (3), pp. 457-476.

Departments and Agencies, as do levels of social science literacy and awareness amongst policy staff.

5. In brief, the situation can be characterised as one in which professional policy makers and technical specialists, such as health professionals and epidemiologists, are faced with the challenge of operating beyond their familiar territory of identifying causal influences, or suitable treatment regimes aimed at individuals. The behaviour change agenda is about managing and controlling risk, though finding ways to mitigate undesired consequences, i.e. a prevention, rather than a curative agenda, and to finding ways of doing this in a strategic, evidence informed manner at a population or segmented, sub-population level. What is needed therefore is a major, and in many respects an underestimated, cultural shift and reorientation of policy perspectives. Recognition of this reorientation is not widespread amongst policy makers, and a significant proportion of social researchers.

6. To date the emphasis in pursuing behaviour change agendas across government, and the research councils, has been on elements relating to the theory of change. Routinely, through a combination of systematic review and bespoke commissioned research, the focus has been on discovering models, tools and techniques for engendering behaviour change in target groups. This is appropriate, but has not been matched by similar research on how to design and, in particular, deliver effective interventions. In short, we are lacking what might be termed intervention logic and practice. Many interventions fail to realise their potential, not because of some inherent flaw in the selected theory of change, but due to downstream failures in the delivery process, e.g. due to difficulties in establishing effective working practices, relationships between different professional groups, departments or agencies etc. Indeed, the contemporary evidence base on 'what works' is undeniably fogged and contaminated by lack of clarity over the basis for success or failure, particularly where, as is commonly encountered, evaluation is restricted to evidence of impact on the behaviour of target groups.

7. While policy makers are increasingly awash with review evidence over what works in terms of ways to engender behaviour change in target groups, social science has, to date, made a very modest contribution to the related science of delivery and 'making it happen'. Routinely, intervention architects are data poor and unsighted, in terms of actively monitoring and managing intervention performance. Potential points of failure in the roll-out/delivery process are multiple, not least because almost all large scale interventions bring with them the need for some degree of organisational change, e.g. new procedures, new responsibilities, changes in relationships with others, cessation of established (possibly highly culturally valued) working practices.

8. There remains significant scope to enhance the degree of integration of social science expertise within the policy design and delivery process in pursuit of behavioural change agendas.

15. What lessons can be learnt from previous successful or unsuccessful behaviour change interventions in other countries? Which countries provide the most helpful examples of best practice? Are behavioural change interventions generally transferable between different societies?

9. The Ugandan *Stepping Stones* programme was first published in 1995 following extensive participatory development³⁴⁶. This community health programme was designed to prevent and reduce the spread of HIV/AIDS in vulnerable communities using methods culturally adapted to local communities. It is a participatory programme that addresses gender issues, particularly empowering women to change behaviour within the family. It also incorporates intergenerational dimensions, health concerns about HIV, communications and relationship skills, presented in a culturally appropriate style. The image is of a journey on a path of stones across a river.

10. To date, *Stepping Stones* programmes have been conducted in around 100 countries world-wide: S & SE Asia, sub-Saharan Africa, Latin America and Eastern Europe. This action may have contributed to declining international infection rates in some of these countries (UNAIDS, 2009). However, until recently, its impact was not established (Wallace, 2006)³⁴⁷.

11. A team at the University of Bath are working with UNESCO, UNAIDS and the Salamander Trust (coordinator of the *Stepping Stones* programme worldwide) to complete a systematic review of all the international evidence available from the monitoring and evaluation of *Stepping Stones* workshops. Data we obtained from many centres worldwide supports former anecdotal evidence that *Stepping Stones* has the capacity to reduce HIV e.g. through encouraging condom use, improve health and family relations and more recently, reduce violence against women. *Stepping Stones* has been recently endorsed by the World Health Organisation as one of only two community health interventions that are internationally successful in changing behaviour.

8 October 2010

³⁴⁶ Welbourn A. *Stepping Stones*. A training package on HIV/AIDS, communication and relationship skills. London: ActionAid London, 1995. (Strategies For Hope Training series No 1.)

³⁴⁷ Wallace T. *Evaluating Stepping Stones: a review of existing evaluations and ideas for future M&E work*. London: ActionAid International, 2006.

Memorandum by Professor John Urry, Lancaster University (BC 117)

My main comment on your inquiry about behaviour change interventions is that you focus the question too much on the individual's choice of the mode of travel or alternatively upon the infrastructure/environment. You suggest that these are the barriers to change, either the individual/psychological or the infrastructural/environmental.

A wide range of empirical evidence shows that these alternatives ignore the most important processes altogether. It has been well-established by Peter Jones and colleagues that it is 'activities' that matter and that activities within households are absolutely crucial to how transport choices are made. Households are neither psychological nor infrastructural but are 'socially' organised. See on the 'activity based approach' to transport, P. M. Jones, *Understanding Travel Behaviour* Gower 1983.

And subsequently various sociologically/geographically oriented work as found in the new ISI journal *Mobilities* shows that the patterns of travel are complexly intertwined in and through social life not just in households, but in families, friendship groups, leisure groups/hobbies, diasporas, professional organisations, voluntary associations, businesses and so on. What is crucial is that these social 'networks' are seeking to bring about all sorts of social goals and ambitions, and that from time to time this will necessitate travel as well as many different sorts of communications. So in this approach which focuses upon social practices, the travel can be relatively incidental, a necessary 'burden' which is part of having and 'doing' friends or family or business or a hobby and so on. Also in this approach it is recognised that travel can itself be rewarding and enjoyable, so Lyons and Urry show the intermittent importance of 'travel time uses' and that it is wrong to regard travel time as necessarily 'dead time' (*Transportation Research A* 2005).

This embedding of travel within the practices of social life explains why simple market mechanisms to induce changes in travel-mode choice are never likely to be successful. In *After the Car* Dennis and Urry show that moving to low carbon transport involves at least 8 different components which together need to change in order to engender low carbon system development. But it is also shown in this book that many of these 8 components are indeed changing around the world but that nowhere has yet implemented such a system shift. System is used here to capture the intermingling of activities, practices, pricings, policies and infrastructures analogous to the 'car-system' that has dominated urban environments around the globe. So the question is not one of behaviour change but of system change, and systems do change but often rather unpredictably and in often unplanned and haphazard ways. The development of the internet which has had huge effects upon the nature of travel was not planned but it transforms the system of communications. Incidentally it should not be presumed that system change will result in the 'best' system coming to be implemented. Often the system that wins out, such as the 'steel-and-petroleum car' in the early years of the last century (or the QWERTY keyboard in the 1970s) are not best but merely victorious.

12 January 2011

Memorandum by Mark Watson, Bikesh Dongol, Mathew Calcasola, Sally Simpson, Oscar Nolan, Hany Hashesh, 4th Year Medical Students, University of Leicester (BC 106)

We are a group of medical students from the University of Leicester. We are writing in response to question 13 and 14, ethical considerations of the Science and Technology subcommittee inquiry into behavioural change. We have attempted to provide evidence about the ethical issues surrounding behavioural change particularly in obesity. As future doctors we are concerned about the current obesity epidemic in this country and implications that this will have on our future practice and the health of the nation.

13.1. When is it appropriate for the state to intervene to influence the behaviour of members of the public and how does this differ from when it is appropriate for the commercial or voluntary sector to intervene?

1.1 As a group of future doctors we believe the best and most ethical position is that of state intervention, in turn influencing the behaviour of member's of the public. This however should be reserved for certain situations in order to maintain the government's responsibility to the public. Whilst still allowing for the autonomy of the individual; the evidence for which we have laid out below.

1.2 Public health and health promotion is a massive field and many models have been suggested to enable behavioural change. The models range from looking at the individual to the wider society as a whole. In this wide spectrum there are several models that tackle the health behaviour within communities (1). Each individual model has a specific target; population, community or the individual and disregards a connection between these three groups. We believe there is an integral link between these three aspects in health behaviour change.

1.3 Obesity is widely regarded as an epidemic in this country(2)(3). As an epidemic we feel the government has a responsibility to protect its citizens from the considerable adverse effects of this disease. The World Health Organisation (WHO) has indicated that state interventions against obesity are necessary (4). The three objectives and four values laid out by Department of Health (DoH) (5) suggest that behavioural change interventions are their ethical duty if justified, as referred to in Healthy Weight Healthy Lives, 2008 (6).

1.4 Behaviour changing interventions are a way that the government can reduce the disease burden for the individual and society as a whole. The means by which a government may intervene remain controversial; the Nuffield council on bioethics have produced an intervention ladder that increases with severity at each step (7). Therefore each step requires more justification for its use. Childress et al set out 5 criteria for which individual autonomy can be infringed:

- 1) Effectiveness.
- 2) Proportionality.
- 3) Necessity.
- 4) Least infringement.
- 5) Public justification. (8)

1.5 In order to address these points, we need to first look at the merits of the behavioural change models. We believe that although behavioural change models are appropriate to base the framework of health promotion around they also have major limitations. Health promotion aimed at the population also has an effect on the community and vice versa. While it is appropriate to inform the population that healthy eating will improve lifestyle quality, without community help, individual education and empowerment, people may not have the ability to improve their lifestyles.

1.6 We feel that if a state intervention is mindful of, the afore mentioned criteria, it would be ethical to change the behaviour of the public. Indeed we would like to add a sixth criterion, that of value for money. It is acknowledged that financial gain is not justified for attempting to change the public's behavior (9). Although a utilitarian view, we feel it is the government responsibility to sustain the NHS, which is in the best interests of the country. Although we have a vested interest in the health of the NHS we also believe that it is a corner stone of society and benefits every individual accessing its services. In 1998 the national audit office (NAO) estimated that the direct cost of treating obesity and its consequences was £420 million and the indirect costs (loss of earnings due to sickness and premature mortality) amounts to £2.1 billion giving a total cost of £2.58 billion and that was projected to be £3.6 billion in 2010. However, the 2009 Chief Medical Officer report stated that the estimated cost to the English economy per year was £15.8 billion. Therefore any intervention must be cost effective. We would question, is it ethically correct to spend this amount of taxpayers' money when more cost-effective solutions are available, such as behavioral change interventions. Cost benefit analysis of any behavioral change intervention should be undertaken to assess its cost effectiveness therefore tax payers money is not wrongfully used on a failing intervention.

1.7 Most obese individuals are now aware of some, if not all of the health implications. Is it therefore cost effective to use taxpayers' money to advertise these facts? Would empowerment of the individual and engaging them with community level interventions be a more effective deployment of resources? The World Health Organisation (WHO) looked at behavioural change strategies in health in 2008 (10). They stated that a multi-pronged approach is the most effective way of changing health behaviour. This report showed that individuals need to be involved within the initiatives. Also educating people has been shown to improve results.

1.8 As future doctors we are aware of the effects of obesity at every level of NHS services. We are also aware of some of the healthy eating/living campaigns. The health development agency showed that community based interventions with education is the best way to sustain behaviour change, with regards to physical activities (11). We believe that similar models can be implemented to tackle obesity, as they have proven track records.

1.9 The work completed by the Nuffield council for bioethics in the field of public health and obesity has provided recommendations under what they called 'stewardship' (7). This stewardship model includes both soft and hard paternalism and gives evidence of ethical justification for state interventions such as the "chang4life" and the "be active be healthy: a plan for getting the nation moving" campaigns. This shows that the state can encroach on individual autonomy when justified.

1.10 More over the commercial and voluntary sectors, like the government, also have a roll to play within public health. At what point should none governmental organisations intervene

in public health? To what extent and what are their individual interests are poignant questions? Many commercial organisations within the food industry have healthy eating plans and exercise regimes within their policies. However they have vested interest in the products they sell and responsibilities to their share holders, which could influence their decisions.

1.11 In 2006 a paper was published looking at the commercial sectors commitments' and practice to public health and exercise (12). This publication showed that, of the top twenty five food producers and retailers, most had corporate responsibility policies which directly addressed health issues. However only four of the twenty-five organisations had measurable targets which their policies could be measured against. This shows that commercial organisations may in principle embrace health promotion but do not actively engage with the public.

1.12 Many commercial companies within the food industry have side stepped tackling healthy diets by concentrating on exercise programs. By adopting this approach they have cleverly taken the middle ground in which they are perceived to be tackling obesity without decreasing their product sales of high calorie foods. We believe that the food industry should not take a leading role in the implementation of public health due to the expected bias towards their products. However inclusion within the campaign is needed for a holistic approach. If they can overcome this bias, they will be able to add another dimension and funding to the project while they gain positive publicity.

1.13 The voluntary sector could be encouraged to actively participate in future campaigns to tackle obesity. The implementation hypothesis devised by WHO in 2008 stated that a combination of state leadership with backing from the voluntary and commercial sectors was the approach that should be adopted (10).

13.2. In Particular, when should this be done by outright prohibition and when by measures to encourage behaviour change?

2.1 The state has an obligation to promote health to the public and encourage healthy living. Obesity is such a huge problem for the UK that the government need to continue, as they have been, in keeping this a priority in public health. Prohibition laws that have been introduced in the past are usually implemented because the risks of whatever is being prohibited outweigh the benefits to society. The most important public health driven prohibition of recent years is the smoking ban of 2007. Non-smokers had a human right to be protected from the harms of second hand smoke and should be allowed to breathe smoke-free air in public places. A similar stance cannot be taken with obesity epidemic, as obesity rarely affects other people. The exception to this being children of obese families who tend to be obese, however the government is already intervening with this group with health promotion schemes. We feel the state should not ban the sale of fast-food and high calorie meals, as the majority of the population in 2010 is not obese and only eat these foods on occasions, thus eating such food poses little threat to their health. An introduction of a tax on high calorie products would also risk a hard paternalistic state and infringe peoples' autonomy.

2.2 Evidence showed that obesity is more prevalent within lower socioeconomic groups. [13, 14, 15] Taxation of high fat foods may further marginalise this deprived group and would not make healthier food more affordable. We have considered that one option may be to

lower the price of healthier food items below that of high fat foods, thereby encouraging individuals on the lowest incomes to consume healthier alternatives. We need to remove the barrier of cost which may prevent people from purchasing healthier food options; this in turn may encourage people to change their buying and eating habits.

2.3 Obesity is a multi-factorial problem and prohibition targeting one aspect would not necessarily combat the problem. Healthier lifestyle encompasses more than just the diet.

2.4 The public want a quick fix for weight issues and it is for this reason that drop-out rates of weight loss schemes are high. Also fluctuating weight loss would contradict an incentive scheme. Therefore we don't feel that incentive schemes would have a lasting effect. Advertising should try a different angle and inform patients on how to stay disciplined, where to go and what to do if they relapse and this can only be achieved by behavioural change models as discussed above.

13.3. Are some methods of producing behavioural change unacceptable? Which and Why?

3.1 There is a fine balance between invasion of personal autonomy and the states duty to intervene on public health matters. Unacceptable methods are those which are in breach of maintaining personal autonomy. Yet in the face of ever increasing calls for action (16) against "Fat Britain", where or when the fine line between personal autonomy and state control should be drawn is murky. (17) We believe that if hard paternalism is implemented to such a degree, it will encroach on individual's autonomy, therefore disengaging them from behavioural change and hinder public health. If we use the guidelines mentioned in answer to question 13.1, we believe that we can balance personal choice and large-scale intervention without effecting non-obese individuals negatively. (18)

3.2 It has become increasingly clear that education alone has failed in stopping or slowing the rise of obesity (19). There is now ever increasing calls for more action and legislation. Success of the smoking ban in reducing smoking levels has led some researchers to debate use of legislation, taxes and fines. The debates centre on benefits of a mildly stigmatizing approach which might outweigh its negative impact. We have been unable to find any evidence for the effectiveness of this approach (18).

3.3 The possibilities of a "fat tax" have often been mentioned. But the effectiveness, methods of application and indiscriminate nature of taxing are still being debated (20). Although we are not opposed to taxing, we fear if introduced it will be seen socially as a revenue generating exercise for the government rather than promoting health. We believe such taxing will effect lower income groups more and be discriminatory. It is necessary to firstly try and reduce the cost of living healthier lifestyles rather than simple taxing and increasing costs of living unhealthily.

3.4 Stigmatization once ingrained within society will often become deep rooted and difficult to reverse (21). Society's view of obesity has always been seen as self inflicted, due to reckless living and poor lifestyle choices. This has a negative impact on the obese individual. Therefore many obesity prevention programs have focused on individual behaviour change rather than good social and physical elements. We believe societies stigma of obesity need tackling, leaving individuals to exercise freely within society. Dietary advice is key in managing weight gain, however dietary advice is not consistent and is not often based on good

evidence.(9) This stigmatisation leads to victim blaming and isolation of the individual we wish to help. Fear of ridicule while exercising is used as an excuse to abstain (18).

3.5 Currently we are focused on high risk groups. This targeted campaigning not only stigmatises these group but may also give a false reassurance to others that are healthy (21). As future doctors, we believe that stigmatising individuals with weight problems could alienate them. This will lead to a negative attitude towards behaviour change.

14.1 Should the public be involved in the design and implementation of behaviour change policy interventions and, if so how?

4.1 As future doctors, we believe that people should be involved in managing their own health issues and should take ownership of their healthcare needs. At the individual level the ethical issues of behavioural change are less controversial as the person seeking the behavioural change has consented. When devising a public intervention the views of the public must be taken on board to assess the level of appropriateness.

4.2 Public engagement at any level of health intervention is shown to be an effective form of behavioural change. WHO in 2008 (10) stated that intervention alongside community involvement improved target outcomes. From this we believe that public consultation and participation should be included at every level in designing state intervention.

14.2 Should proposed measures for securing behaviour change be subject to public engagement exercises or consultation? Should they be piloted?

5.1 Public perception to behaviour change should be taken into consideration when designing programmes. An Australian study (23) explored the opinions and attitudes of obese individuals towards different interventions to tackle obesity, from individual and population perspectives. The study was conducted via telephone interviews with different samples of obese people (n = 142) aged between 19-75 and their BMI was 30 or above. The interviewees were asked about which approach they thought most appropriate to deliver the message of weight control. Different approaches were;

- media based marketing campaigns.
- public health interventions and initiatives
- obesity surgery
- regulation(e.g., banning junk food advertising)
- commercial diets
- specialized fitness programs

5.2 The researchers found that about two thirds of participants thought that regulation was one of the most effective solutions for the obesity epidemic in Australia. These results highlighted the need for a stronger message from the state to control obesity as the public are more likely to respond to state led highly motivating interventions aimed at what is considered to be the best for the nation.

One example of such interventions is the smoking ban introduced in England in 2007 which has proved to be a success in terms of reducing number of smokers despite the opposition from some groups (23).

5.3 On the other hand, a different study in the USA looking into childhood obesity and what the public thought in terms of best ways to tackle such a burden. A representative of USA

households (n = 1047) that included detailed questions about perception of the severity, causes and public support for specific intervention strategies to combat childhood obesity. The respondents supported most school and community based strategies that involved offering health information, limiting unhealthy food promotion and increasing healthy nutrition and physical activities choices, but were generally opposed to regulatory and tax or cost based interventions (24).

5.4 From the afore mentioned examples, it is clear that imposing measures to promote behavioral change is subject to different views and careful planning and consultation will be needed in order to reach an acceptable approach for the public. We suggest a similar study should be conducted within the UK as none were identified in any searches.

14.3 Do considerations differ in the case of interventions aimed at changing addictive behaviour?

6.1 It has been suggested that obesity may be a form of addictive behaviour, though this view is shared by a minority of researchers. If this is the case, it would present some difficult ethical decisions.

6.2 Currently it is thought that obese people may have the same maladaptive behaviour patterns as those addicted to alcohol or drugs (25). However we feel it would be unhelpful to label obese people as being “addicted” to food as it may encourage them to relinquish ownership of their problem and instead blame the fact that they suffer from an addiction. People need to be responsive to change if they are to successfully adapt their behaviour and by removing responsibility from the obese person, we would be encouraging them to blame a food addiction rather than their own choices. The view we share is that obese people need interventions in their lives which help them to change their behaviour and eating habits rather than adopting a hard paternalistic approach.

6.3 Changing addictive behaviour is tackled by specific means, whether obesity is viewed as an addiction or not. The fact remains that these people need to be assisted to change their behaviour and similar methods can be applied (26). Evidence suggests that methods employed in the past to change behaviours in relation to public health issues have been complicated, ill-received or ineffective in closing the gap on health inequalities (27).

Recommendations

As future doctors who will be tackling obesity and its consequences, we humbly suggest the select committee acknowledge our recommendations.

- Government intervention is needed to tackle obesity taking into account individuals' autonomy.
- A multi-level cohesive approach aimed at the population, community and individuals.
- Decrease investment on population advertising, the facts of which are well known to the majority.
- Reinvest the funds into community and individual behavioural change strategies.
- Government organisations should take a strong leadership role with backing from the commercial and voluntary sectors.
- Reducing the prices of healthier food options will increase choices in lower

socioeconomic groups.

- Public views should be taken into account when designing behavioural change strategies. UK based research into public perceptions on behavioural change is needed.
- Avoid the negative effect of stigmatising obese individuals during health promotion campaigns.
- Encourage the public to take ownership of their own health.

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September 2010

Memorandum by the Wellcome Trust (BC 38)

1. The Wellcome Trust is a global charitable foundation dedicated to achieving extraordinary improvements in human and animal health. We support the brightest minds in biomedical research and the medical humanities. Our breadth of support includes public engagement, education and the application of research to improve health. We are independent of both political and commercial interests.
2. There is a real need for research to understand how best to influence behaviour, both at individual and population level, in order to improve the evidence base and begin to reduce the present burden of chronic disease. We therefore welcome the Committee's inquiry on the topic and are pleased to have the opportunity to respond.
3. The Trust's Strategic Plan 2010-20³⁴⁸, launched in February 2010, recognises that "understanding the elements that influence lifestyle decisions will be key to improving public health", and makes a specific commitment that the Trust will support "multidisciplinary research to understand the biological, social and environmental factors that influence lifestyle decisions, in order to inform prevention strategies at individual and population levels". The Trust also supports work to explore the ethical, social and cultural issues relating to these challenges, and to inform and engage the public. This is an emerging priority for the Trust, and we will work with other funders to begin to develop expertise and build understanding of the issues. Details of some of our current funding in this area are provided below.
4. The Trust has recently held two Frontiers meetings that explored these issues in more detail: '*Environmental and behavioural determinants of childhood obesity*' and '*Built environment: how can we maximise health*'. In both, participants agreed that addressing the challenges will require a fundamental change in behaviour, both at the individual and the population level. There was agreement that this would need multidisciplinary approaches involving, for example, social scientists, economists, architects, engineers as well as biologists, clinicians and public health researchers.
5. Another key message from both meetings was the importance of developing a robust evidence base to inform public health policy. There was recognition that it is not possible to wait for the perfect evidence, and that it may be necessary to proceed on the basis of the best available evidence. However, this should be linked to rigorous evaluation of ongoing intervention programmes and natural experiments, with modification and refinement of programmes and future policies as necessary. It is also important that researchers engage with policy makers at an early stage, in order to frame relevant research questions and develop appropriate methodologies.

National Prevention Research Initiative

6. The Trust has recently committed funding of £2 million over five years to the fourth call of the National Prevention Research Initiative (NPRI). The NPRI is a multi-disciplinary, multi-funder initiative which was established in 2004 in response to a report of the Strategic Planning Group on Prevention and Risk Research, commissioned by the National Cancer Research Institute.³⁴⁹ This report recognised that prevention of

³⁴⁸ <http://www.wellcome.ac.uk/strategicplan>

³⁴⁹ http://www.ncri.org.uk/includes/Publications/reports/ncri_prevention_and_risk_report_2004.pdf

common diseases, such as cancer, cardiovascular disease, obesity and dementia, is a priority, and that addressing it requires research to develop interventions which are effective and can provide an evidence-base for policy makers and practitioners.

7. The NPRI has three strategic aims:
 - to provide funds to increase the amount of high quality research aimed at preventing incidence of new cases of preventable diseases such as certain cancers, coronary heart disease and diabetes;
 - to encourage and facilitate cross-disciplinary collaborations in UK preventative research; and
 - to encourage research aimed at risk reduction in communities / social groups with a high incidence of cancer, coronary heart disease and diabetes, and exploring approaches that will reduce inequalities in incidence from these diseases.
8. The MRC is the lead partner on the NPRI; other funders include ESRC, EPSRC, BBSRC, the Food Standards Agency and the Department of Health, as well as the Alzheimer's Research Trust, the Alzheimer's Society, the British Heart Foundation, Cancer Research UK, Diabetes UK and the Stroke Association.
9. There have been three calls to date under this initiative, with £21 million committed to 55 projects.³⁵⁰ Studies have examined a number of issues, ranging from influencing the choices low-income consumers make when buying food, through to mapping physical activity and health in the urban environment, the role of economic incentives in behaviour change, and developing strategies to tackle the early origins of obesity. The results of some of these studies have already begun to inform policy discussions.
10. A fourth call has just been announced, to support cross-disciplinary research that develops or tests interventions that can potentially have a major impact on population health, using the full range of evaluation methods, including experimental and quasi-experimental (or observational) designs and natural experiments. There will be a particular focus on interventions at the community or population level.

Centre for the Study of Incentives in Healthcare

11. The Trust has provided a Strategic Award in Biomedical Ethics to support the Centre for the Study of Incentives in Healthcare (CSI Health), a collaboration between King's College London, the London School of Economics and Political Science (LSE), and Queen Mary, University of London (QMUL).³⁵¹ Research at CSI Health will address the use of incentives to change people's behaviour from the perspectives of three main disciplines - philosophy, psychology and economics. The aim is to evaluate whether financial incentives are an effective and acceptable means by which to improve population health.
12. CSI Health will conduct a programme of research, starting from four case examples of current uses of financial incentives in the UK, to analyse the relationship between financial incentives, coercion, equity, autonomy and behaviour. The overarching question the researchers hope to address is: 'when is it right to use financial incentives to

³⁵⁰ Information on the awards can be found at <http://www.mrc.ac.uk/Ourresearch/ResearchInitiatives/NPRI/index.htm>, together with case studies

³⁵¹ <http://www.kcl.ac.uk/schools/biohealth/research/csincentiveshealth/>

Memorandum by the Wellcome Trust (BC 38)

improve health?' The Centre will also train post-doctoral fellows and PhD students, with the aim of creating a cadre of interdisciplinary specialists to undertake innovative, substantive research and advise policy makers.

October 2010

Memorandum by West Midlands NHS Maternal and Early Years Services (BC 57)

1. Introduction

This paper summarises evidence gained from delivering a behaviour change intervention tackling development of obesity in children by targeting changes in eating, activity, breastfeeding and introducing solid foods. The target audience is women who are pregnant and have a pregnancy BMI of 30 and above.

It focuses on answering questions numbered 1, 4, 6, 8, 14 and in particular, question 16 of the Call for Evidence.

2. Background

The Investing for Health 2b programme was a programme of activity developing interventions to tackle Childhood Obesity across 19 West Midlands Primary Care Trusts. A number of activities were undertaken, including the implementation of care pathway to influence the behaviour of pregnant women and their families in order to reduce the impact of their behaviour on their children's predisposition to childhood obesity. The work commenced during 2008 with a review of existing evidence and the test phase of the intervention completed in June 2010. Several sites are continuing activity and are being funded by West Midlands PCTs.

3. Development of a Care Pathway for Maternal and Early Years

The Maternal and Early Years service was developed as a prevention pathway to target intense support at families before their children developed behaviours, which predisposed them to future obesity. A literature review and review of user views were undertaken. Both pieces of work concluded:

- Few interventions targeting pregnancy or under 5s
- Perceived benefits to providing interventions to manage obesity in the pre-pregnancy, antenatal and post natal phases
- Risks of obesity are higher amongst socially excluded groups and it is linked to deprivation
- Providing interventions to families where a baby is at risk of obesity (i.e. those families with parents who are already obese) may prevent the development of obesity in children

There was limited evidence of effective interventions in place at this time (2008). However, the evidence available suggested the focus of any service being developed should be on minimising weight gain during pregnancy (to limit the health impacts of obesity); promoting and supporting initiation and continuation of breastfeeding (evidence linked to increased risks of obesity in formula fed babies); practical skills and knowledge to support appropriate and timely introduction of solid foods (evidence linked to early introduction of solid foods and links with future obesity); healthy eating knowledge and the skills to put knowledge into practice; parental role modeling and active play.

User views concluded that a proactive offer of help would be appreciated particularly in relation to family meals, role modeling and feeding their babies/children. Postnatal weight

loss and activity was particularly endorsed. Users also identified a desire for a combination of health professionals delivering services and community based support.

As a result a three phased service was developed to work with clients intensively and on a long term basis – recognising that short-lived interventions are not as successful as they do not embed the changes in behaviour. The service commences during pregnancy and works with the family for 2 years and six months – on a monthly/bi-monthly basis.

The service was developed around the same model as the successfully evaluated Health Trainer intervention – which utilised one-to-one, personalised support, motivational interviewing and behaviour change theory in its approach. The service was designed to utilise key, evidence based health messages and skills in working with clients to support them to change behaviour and implement those key health behaviours into their every day life. The behaviour change elements are based on the work of Rollnick (reference) who uses self-efficacy checks, goal setting, diaries and self-monitoring as key elements in the success of changing behaviour. The service would provide one-to-one support to eat well and be active during pregnancy – monitoring weight gain and encouraging clients to remain within limits (7-10kg based on American recommendations); support to lose weight post pregnancy, eat well, be active and support during breastfeeding and introduction of solid foods; and, finally, a family phase focussed on embedding positive behaviours in the family and developing positive role models.

The service is based around home visits by non-clinical healthy weight advisors, enhanced by local service provision of cook and eat group sessions, antenatal and postnatal exercise classes, activity sessions for mums and babies amongst others. HWAs were recruited from a number of professional backgrounds including Children's Centre workers, Health Trainers, Weight Loss mentors and Family Support Workers. They are all employed locally – so have detailed knowledge of the communities they support.

Healthy Weight Advisors (HWAs) make contact with pregnant women when they are referred into the service after their booking appointment with their midwife. This is usually at around 12-16 weeks gestation. The HWA visits the mum at home and works with her to identify small behaviour change goals around eating and activity, working towards a healthier diet and increased activity levels. The HWA also support the client to access additional services – either in a group or one to one setting, including developing cooking skills, attending antenatal exercise classes, and, in the post natal period, weaning sessions, breastfeeding support and postnatal exercise. The advisors give practical ways for clients to apply the key DH messages such as eat well, move more, 5 a day, and 30 active minutes. They integrate Change4Life, Start4Life and Healthy Start in their practice. Clients are weighed regularly during their engagement with the service enabling them to log their own progress and set themselves targets, which are reviewed at each meeting. The service provides support to maintain progress, helps clients find solutions to their barriers to eating well and being active and provides ongoing momentum for them to make key changes and maintain healthy behaviours. The service is in addition to mainstream midwifery and health visiting services and works closely with those services – and other services – to support the mother during her time in the service. A video of the service is available via: <http://files.media-dog.com/NHS.wmv>.

4. Service Delivery and Outcomes- MAEYS

Six sites across the West Midlands (Dudley, Shropshire, Telford, Walsall, Wolverhampton and Worcestershire) were selected to test the intervention over a 12-month period. The Pilots commenced recruitment and training in May 2009 and established referral pathways with midwifery services, beginning client recruitment in June 2009.

The pilot phase aimed to recruit a total of 600 participants for the duration of the pilot.

The results were very positive.

The pilots have managed to test out proof of concept and have fulfilled the original role as set out in the original ethics committee proposal *to test out the practicality of testing the referral pathway including recruitment to the service and the training of the staff. It would also test out the collection of key performance indicators to measure the effect of the service*". This is supported by the independent qualitative research, the evaluations undertaken by each of the sites through case studies evidencing some of the behaviors that have been changed.

The pilots were only for one year and so the data collected has been insufficient to collect sufficient numbers for all of the key performance indicators identified at the project initiation, but the most significant indicator was to have an average weight gain in pregnancy of 7.27 kg. The benefits associated with this can be significant and can reduce risks of pre-eclampsia caesarean sections and many others. The most consistent adverse outcome for mothers with large gestational weight gain is increased post partum weight retention, which is maintained up to 3 years after the index pregnancy, independent of pre pregnancy BMI³⁵². This in turn is likely to contribute to adverse outcomes in the next pregnancy where this risk will be much greater. The other major risk is to the child in becoming obese. Other indicators suggest a positive outcome in relation to initiation of breast feeding and weight loss post pregnancy.

5. Evaluation

Coventry University was commissioned to undertake a qualitative evaluation of the work of the MAEYs service. A copy of the evaluation report is submitted alongside this submission. The evaluation was comprehensive and included the views of those who engaged in the service as well as clients who declined to access the service or dropped out after initially being engaged.

Key findings were:

- Feedback from the women engaged in the service was extremely positive. Stated benefits were many and varied and included: weight loss/weight management; healthier diet; increased physical activity; healthier family and food habits; increased self esteem and quitting smoking
- Women valued the personalised, one to one nature of the service and that the healthy weight advisors could provide support on a number of topics
- Reasons for declining the service were mainly related to the way the service was described or poor referral processes
- Women who did not access the service described a similar service when asked what they would like to access

³⁵² [Nohr EA, Vaeth M, Baker JL, Sorensen Tla, Olsen J, Rasmussen KM](#). Combined associations of prepregnancy body mass index and gestational weight gain with the outcome of pregnancy. [Am J Clin Nutr](#). 2008 Jun;87(6):1750-9.

The overall conclusion was that for the women who engaged with the service have experience far reaching benefits, across many aspects of their lives and lifestyles. The potential of the service to impact on childhood obesity is apparent from the evidence of healthy eating and activity during pregnancy, and from the evidence of establishing healthy weaning and family food habits and activities.

There were a number of recommendations for refining the service – many of which related to procedural aspects, in particular around referral pathway and ensuring health professionals were adequately explaining the service to clients. All sites continuing to deliver the service have amended pathways and procedures to reflect recommendations outlined in the evaluation. Many of the recommendations had already been implemented as part of the ongoing service review and design during the implementation of the pilot.

The service has a number of positive case studies which demonstrate the wide impact of the service – beyond the initial stated aims.

One service user, aged 23 from Shropshire said the following: “I know it sounds silly – but it really has changed my life”

6. Conclusion

The care pathway was developed prior to the work of NICE recently published on Weight Management before, during and after pregnancy (NICE Public Health Guidance PH27, July 2010). However, the service fits a number of the recommendations made in the NICE guidance and in particular meets the criteria of the services recommended to reduce the impact of weight on pregnancy and after childbirth.

The work of the PCTs selected to undertake the pilot phase of activity is continuing locally and a number of PCTs have now commissioned the care pathway as core service delivery. Walsall, Wolverhampton, Dudley, Telford & Wrekin have all committed NHS funding for the continuation of the service locally. Worcestershire PCT has funding until March 2011 and Shropshire has ceased service delivery at this time although is exploring ways to continue service activity. Several other West Midlands NHS organisations have expressed an interest in implementing the service.

The work undertaken by the MAEY service during 2008-2010 has also been submitted as a feasibility study and proof of concept in a bid to the National Institute for Health Research on their Health Technology Assessment Programme in a joint proposal from Birmingham and Coventry Universities. The research question is “What is the clinical and cost effectiveness of targeted dietary and physical activity interventions undertaken in the antenatally and/ or postnatally compared to routine care in reducing maternal obesity and associated maternal and fetal complications. The proposal has got to the second stage and is applying for a research grant of £1.84 million.

A detailed analysis of service cost and impact on particular health outcomes did not form part of the original service specification and is therefore difficult to provide detailed, robust conclusions on. However, we have estimated that it will cost about £106k to set up and run the service locally but the return on investment is at least £3 for every £1 invested.

The final report on the project will be completed by 1st November 2010 and all associated documents will become publicly available:-

<http://www.ifh.westmidlands.nhs.uk/InvestingforHealthKeyProjects/P02bChildhoodObesity.aspx>

This will include the delivery manual and training manual for the service, data collection systems and the Qualitative Evaluation undertaken by Coventry University.

In conclusion, the Maternal and Early Years service utilised behaviour change theory and motivational interviewing to work with mothers to change their eating and activity behaviours to reduce childhood obesity. Results of the pilot suggest the service is effective and the qualitative evaluation demonstrates that the service has wide benefits for improving the health of families engaged in the service. Clients considered the non-clinical aspect of service delivery to be important and that the service is tailored to their specific needs. Delivery within an NHS organisation enables positive links to be made with midwifery and health visiting teams but the service could be delivered by a third sector provider. Intensive, one-to-one support was considered to be the most effective way of delivering the service and is influential when considering success in promoting changes in behaviour.

8 October 2010

Memorandum by West Midlands NHS Maternal and Early Years Project (BC 80)

Evidence on managing children with complications of obesity – West Midlands

7. Introduction

This paper summarises evidence gathered during a study into children with excess obesity, services available, perceptions of health professionals in order to define effective treatment and referral pathways. It relates mainly to question number 4 of the Call for Evidence in relation to structures in place to support translation of research into policy developments and service delivery. The study explored current approaches to and provision for the treatment of children with excess obesity.

8. Background

The Investing for Health 2b programme was a programme of activity developing interventions to tackle Childhood Obesity across 19 West Midlands Primary Care Trusts. A number of activities were undertaken, including the development of a care pathway for children with excess adiposity and co morbidities. Research was undertaken to map the extent of the problem in the West Midlands and prepare a referral pathway. This paper outlines two streams of work – one which focussed upon mapping the problem; the second part evaluating current services and proposing a model for future interventions.

9. Part I – Mapping the Problem

A review of the data available from key sources such as the West Midlands Public Health Observatory and National Child Measurement Programme, in conjunction with a literature review of co-morbidities. The key findings are outlined below.

Estimation of numbers of BMI>99.6 centile

The overall prevalence of severe obesity (>99.6th centile) in 4-18 year olds in the West Midlands was estimated as 3.0 %, a total number of **32,120** children. Prevalence rates are higher for the boys (3.3 %) than for girls (2.6 %). It was decided that it was inappropriate in this context to extrapolate estimates for the prevalence of extreme obesity downwards to the 0-3 year old age group.

Estimate of numbers with comorbidities (metabolic syndrome)

In the West Midlands, using conservative estimates of co morbidity prevalence, there may be approximately 1040 children and young people with BMI>99.6th centile with the metabolic syndrome (obesity plus 3 comorbidities). It is likely, that children will not present with comorbidities until puberty therefore there may be 828 children who require a specialised service. The evidence base for obesity related co morbidities is limited, and our projected numbers of affected children in the West Midlands may be an underestimate. The upper limit of our estimate is based on the numbers of affected children seen in clinic based surveys, i.e. 30% of all children with BMI >99.6th centile (9600 children).

Summary of treatments for co morbidities

The first line management of the complications of obesity in children and adolescents is advice to change lifestyle to reduce calorie intake through eating less, and increase calorie expenditure through exercising more.

This should be in line with national evidence-based guidelines and effective management will require dietary, exercise and behavioural interventions delivered by a multi-disciplinary team, including a doctor to monitor effects on co morbidities.

This first line management frequently fails to reduce obesity or improve co morbidities and children usually require medical management with medicines, and monitoring of the progression of complications. This can be delivered by the same multidisciplinary team with support from and access to tertiary paediatric sub specialist services.

Service users and providers offered rich data about obesity services. The key recommendations identified were **clear referral pathways, wider access to information** in particular specific information relating to nutrition and physical activity opportunities, and **centralisation** of services to reduce referral times and improve the continuity of care.

Examples of good practice/case studies/guidelines

There are three model care pathways in the UK based on clinics in Bristol, University College London Hospital and Leeds. Taking the best elements of these together with stakeholder comments, a composite care pathway for a multi-disciplinary community based service has been suggested. The composite care pathway can manage up to 250 children per clinic per year. Each clinic has an approximate yearly cost of **£73,789.28**. If only postpubertal children who are most likely to have co morbidities are included, there may be 828 children who require the service. The total cost to deal with 828 children will be approximately **£221,367**

The full report published by Birmingham University can be found on:-

<http://www.ifh.westmidlands.nhs.uk/InvestingforHealthKeyProjects/P02bChildhoodObesity.aspx>

10. Part 2 – Commissioning Guidance for Child Weight Management Services

Work was commissioned from the University of Worcester in recognition that due to the increasing prevalence of obesity in children and adolescents, numerous interventions with the potential to reduce obesity levels or associated risk of chronic diseases in children and youths have been implemented across the UK, including the West Midlands. Few of these interventions being implemented have been systematically evaluated and this work sought to examine their effectiveness and this summary outlines an evaluation of seven child weight management programmes that were in place in the West Midlands region during July 2007-July 2009.

The project aimed to determine the following:

- The benefits to participating (a) children and (b) families in terms of health improvement and behaviour change;
- Possible barriers to change for (a) children and (b) families undertaking treatment programmes;
- The range of short and longer term support available for programme participants;
- The cost effectiveness of each intervention.

The evaluation employed a multi-method strategy as follows:

- An audit of the Standard Evaluation Framework (SEF) essential and desirable data collected by each intervention programme;
- A review of programme materials, including the theoretical rationale and evidence base for each intervention programme;
- An assessment of physical and psychosocial benefits to programme participants;
- An economic evaluation of the interventions.

Results: In summary the results indicated that:

- No programme collected all of the essential or desirable SEF criteria, however 19 essential criteria were collected by all the interventions including child weight and height. Physical activity and dietary measures were collected by the majority of programmes (N=6 and 5 respectively);
- The dietary and physical activity measures used by programmes were varied, however all asked about fruit and vegetable intake and number of days in the past week in which moderate activity had been undertaken for 30 or 60 minutes;
- Four programmes collected data on psychosocial outcomes, including information on self-esteem;
- Barriers to data collection included literacy levels and time constraints;
- Five programmes collected long term follow up data at 3 and/or 6 months;
- The quantity of data collected at follow up was often limited due to participant drop out, which appeared to relate to participant perceptions that once the weekly programme had finished, the intervention was complete;
- A variety of recruitment methods had been tried by all programmes, the most successful of which appeared to be links with community and schools events;
- Little success had been had from the use of NCMP letters for recruitment purposes, as parents either did not understand the implications of the letters or did not believe that their child had a weight problem;
- Recruitment to programmes was primarily by self referral which was thought to be successful because of awareness raising in the community and word of mouth;
- Retention rates ranged from 32.9% to 89% with the majority of programmes (N=6) having a retention rate of at least 50%;
- No differences were found in terms of demographics or starting weight between completers and non-completers for the majority of programmes (N=5);
- Barriers to attendance included the child not wanting to attend, other family commitments and problems with access to the venue;
- Most programme deliverers reported that parental attitudes to their child's weight was also an issue, suggesting that many parents of overweight and obese children did not believe their child had a problem;
- All the programmes were based either on NICE guidelines or theories of behaviour change and offered both nutritional advice and exercise classes;
- Other support offered included one to one mentoring (N=2), cooking classes for parents (N=3) and goal setting and monitoring (N=4);
- Long term support was offered by five programmes and ranged from referral to exercise programmes to one to one mentorship;
- Financial costs, based on programme ranged from £203 to £669 per participant;
- It should be noted that costs per participant increased if the programme had difficulty recruiting;

- Weight change ranged from an increase in group mean of 0.4Kg to a decrease of 0.9Kg;
- Even when group means showed an increase in weight there were often benefits for the majority of the group, with over half of all children either maintaining or losing weight in three programmes;
- Weight loss is not the best indicator of change in weight status for children, due to changes in height and BMI or BMI SD which shows how far a child's BMI is from the population norm are preferred;
- BMI change ranged from an increase of 2.7 points to a decrease of 0.9 points;
- BMI SD decreased in four programmes (by 0.1-0.2 points) and remained unchanged in two programmes;
- Psychosocial benefits reported by three programmes included improved self-esteem and perceived physical appearance;
- Improvement in diet and exercise were reported by participants in all those programmes which measured these behaviours;
- It should be noted however that these self-report measures may reflect a social desirability bias.

Conclusions and Recommendations:

- As all the programmes evaluated have strengths as well as weaknesses, it is recommended that sharing of good practice between programmes and PCTs is facilitated in order to improve outcomes/data collection in all areas across interventions;
- Consideration should also be given to the systematic evaluation of any delivery tools currently in use (e.g. visual aids vs. hands-on lessons to teach nutrition education), in order to inform practice and allow commissioners and providers to assess what best delivers
- There are differences in data collection and recording across the programmes and this can make comparison complicated;
- It is therefore recommended that there is some standardisation of data collection in terms of what is collected and how the information is recorded;
- Difficulties collecting follow up data make it difficult to gauge the long-term impact of the programmes;
- Good follow up data is essential in order to assess the potential impact of weight management interventions on children's future health. It is therefore recommended that priority is given to establishing ways of collecting this data;
- Given the difficulty of gauging the impact of weight change on a child's weight status, the use of BMI, rather than weight as a measure of physical change is recommended;
- Changes in behaviour related to food intake and exercise should also be measured in a systematic and standardised way and this information fed back to clients as part of the change process. A set of standardised measures to assess this behaviour change is proposed;
- Use of an interoperable data base either accessed through a centralised system or made available to all programmes locally is also recommended.

This provides a short synopsis of the work undertaken by the University of Worcester. The full report is available at:

<http://www.ifh.westmidlands.nhs.uk/InvestingforHealthKeyProjects/P02bChildhoodObesity.aspx>.

11. Summary

Work was undertaken to gather evidence on the size of the problem in the West Midlands and reflect on what activities were being undertaken in order to impact on co-morbidities and complications for children with excess obesity. Secondly, a review of services was completed in order to identify effective programmes to limit the impact of obesity. As a result, the work has been presented to children's and obesity commissioners to ensure commissioning takes on board these key messages. Further work is required to test the effectiveness of pathways designed as part of this project and funding is being sought in order to do so. Behaviour change forms a key element of interventions at early stages for children with obesity and is a cornerstone of activity.

8 October 2010

Memorandum by the Wine and Spirit Trade Association (BC 81)

Introduction

We welcome the opportunity to give evidence to the Committee on behaviour change. We wholeheartedly believe that informing and encouraging consumers to lead healthier lives both in the round and specifically with regards to their alcohol consumption is key to fostering a mature drinking culture, alongside targeted and evidence based intervention and enforcement.

The WSTA is the UK organisation for the wine and spirit industry representing over 310 companies producing, importing, transporting and selling wines and spirits. Our members include retailers who between them are responsible for thousands of licenses.

We work with our members to promote the responsible production, marketing and sale of alcohol. The WSTA has been involved in a range of work to reduce underage access to alcohol and promote a responsible drinking culture. More detail is provided about each of these initiatives at Appendix A and their effects in changing behaviour and attitudes towards alcohol.

In summary we believe that:

- Behaviour change interventions should be well researched and set clear objectives for evaluation.
- Government should be clear about the audience and behaviour they are seeking to change with any intervention, and should consult those whose behaviour they are seeking to change to ensure the most effective measures are used
- Government, needs to co-ordinate interventions to ensure consistency and clear objectives across individual departments
- Businesses have a role to play in behavioural change initiatives and can be invaluable partners due to their lines of communication with customers and expertise in creating the messaging that is most appropriate to them.

We have confined our submission to the Committee to those questions where we and our members have views based on experience of behavioral change campaigns and published studies.

I. Research and Development

I.1 It has been found by the National Institute of Clinical Excellence (NICE) that effective behaviour change programs should help individuals to:

- understand the short, medium and longer-term consequences of their health-related behaviours, for themselves and others
- feel positive about the benefits of health-enhancing behaviours and changing their behaviour
- plan their changes in terms of easy steps over time

- recognise how their social contexts and relationships may affect their behaviour, and identify and plan for situations that might undermine the changes they are trying to make
 - plan explicit 'if-then' coping strategies to prevent relapse
 - make a personal commitment to adopt health-enhancing behaviours by setting (and recording) goals to undertake clearly defined behaviours, in particular contexts, over a specified time
 - share their behaviour change goals with others³⁵³.
- I.2 It would seem that the objectives set by NICE provide individuals with control of the process. Campaigns that have been successful do appear to be those that encourage small changes over a long period of time rather than those which seek to achieve radical change over a shorter period.
- I.3 Studies have shown that interventions that are most effective across a range of health behaviours include physician advice or individual counselling, and workplace or school-based activities. Mass media campaigns also showed small to moderate effects in changing health behaviours³⁵⁴. While targeted interventions are useful in all stages of life, it is often effective to implement behaviour change programs at a young age.
- I.4 The WSTA Community Action Partnership's (CAP) is a good example of a programme which targets and challenges the behaviours of young people to alcohol and significantly reduces related instances of anti-social behaviour. The police assessment of the CAP in St Neots, Cambridgeshire indicated that incidents of anti-social behaviour declined by 42% over the course of the pilot period.
- I.5 There is also evidence that dispelling myths about 'social norms' can cause individuals to change their behaviour. Perceptions of social norms strongly influence how we behave as individuals. However, research has found that we are often inaccurate in these perceptions, and tend to assume others behave in a less healthy manner than is actually the case. This approach seeks to correct such misperceptions through the dissemination of information on the actual norms in a population.
- I.6 Addictive behaviour is often relapsing, compulsive and only changes over a significant amount of time. Motivated individuals actively seeking to make changes in their behaviour require a different approach from those who are unmotivated³⁵⁵. Therefore, approaches to influencing addicted behaviour would need to be specifically tailored.
- I.7 It has been noted that the more individualised and broad-based the treatment a person with addiction receives, the better the outcome³⁵⁶. Care would need to be taken that broader interventions do not have unintended consequences for this group, for example, measures to decrease the availability of a product via pricing could lead the addicted to stop spending on other goods in order to maintain consumption.

³⁵³ NICE public health guidance 6: 'Behaviour change at population, community and individual levels', October 2007 Pg. 24

³⁵⁴ Jepson RG; Harris FM; Platt S; Tannahill C, The effectiveness of interventions to change six health behaviours: a review of reviews, BMC Public Health, 8 September 2010

³⁵⁵ NICE public health guidance 6: 'Behaviour change at population, community and individual levels', October 2007 Pg. 15

³⁵⁶ Sellman D, The 10 most important things known about addiction, Addiction Vol 105, No 1, 2010, pp6-13

2. Translation

- 2.1 While we cannot comment in detail on structures in Government and the public sector, we strongly believe that businesses have a role to play in behavioural change initiatives and can be invaluable partners due to their lines of communication with customers and expertise in creating the messaging that is most appropriate to them. Campaigns such as the Campaign for Smarter Drinking and the work of the Drinkaware Trust are examples of where Government and businesses have worked closely together to develop strong, targeted and effective behavioural change campaigns.
- 2.2 A recent assessment of the Campaign for Smarter Drinking campaign, against the Government's own key performance indicators, found that:
- 60% of the total sample said they would adopt the tips in the future.
 - 63% of the target audience said they are likely to consider drinking differently.
 - 65% of the target audience said that communications were distinctive, interesting and involving.
- 2.3 The Committee may wish to consider how resources outside of Government, for example from partners in business, may help to tap into expert knowledge in encouraging consumers to change behaviour, which could also be used to support a range of Government initiatives effectively.
- 2.4 NICE states that it is necessary that practitioners are equipped with the necessary competencies and skills to support behaviour change, using evidence-based tools.³⁵⁷ We believe that all interventions need to have a clear evidence base and should have clear objectives to ensure results can be effectively evaluated.

3. Policy design and evaluation

- 3.1 The four main types of intervention are:
- **policy** – such as legislation, workplace policies or voluntary agreements with industry
 - **education or communication** – such as one to one advice, group teaching or media campaigns
 - **technologies** – such as the use of seat belts, breathalysers or child proof containers for toxic products
 - **resources** – such as leisure centre entry, free condoms or free nicotine replacement therapy.
- 3.2 The level of intervention also depends on the outcome desired. Those targeting specific individuals are generally designed to change an existing behaviour, whilst

³⁵⁷ NICE public health guidance 6: 'Behaviour change at population, community and individual levels', October 2007 PG. 19

those aimed at the general population or groups such as school children are designed to promote positive behaviours³⁵⁸.

- 3.3 Different interventions should be used at different levels to achieve an overall objective. While there should be a central uniform theme, if this is backed up at different levels and with other types of information, it will achieve more cut-through. Levels of outcome are rarely just restricted to the level of the actual intervention as the behaviour change of an individual influences their family and friends³⁵⁹.

Behaviour change interventions

- 3.4 Behaviour change interventions need to be targeted. No single method can be universally applied to influence all behaviour and all people. Universal interventions do not invariably have uniform effects, and may be more effective among some population groups, or in some settings, than in others³⁶⁰. For example, different groups (measured by age, socioeconomic position, ethnicity or gender) react differently to incentives and disincentives, or 'fear' messages. Effective interventions target specific groups and are tailored to meet their needs.
- 3.5 However, sometimes more general interventions can be beneficial for a range of behaviours. Enabling individuals and communities to develop more control (or enhancing their perception of control) over their lives can act as a buffer against the effects of disadvantage, facilitating positive behaviour change
- 3.6 The following checklist of questions should be used when planning a behaviour change initiative:
- Whose health are you seeking to improve (target population/s)?
 - What behaviour are you seeking to change (behavioural target)?
 - How will you know if you have succeeded in changing behaviour (what are your intended outcomes and outcome measures)?
 - Which social factors may directly affect the behaviour, and can they be tackled?
 - What assumptions have been made about the theoretical links between the intervention and outcome?
- 3.7 NICE public health guidance has also stated that those carrying out behaviour change programs can increase the quality and efficacy of the model by being rigorous in planning, evaluation and defining goals. They should:
- critically evaluate the evidence for different approaches to behaviour change
 - design valid and reliable interventions and programmes, that take account of the social, environmental and economic context of behaviours
 - Identify and use clear and appropriate outcome measures to assess changes in behaviour

³⁵⁸ Jepson RG; Harris FM; Platt S; Tannahill C, The effectiveness of interventions to change six health behaviours: a review of reviews, BMC Public Health, 8 September 2010

³⁵⁹ Ormerod, P N Squared: Public Policy and the Power of Networks. Royal Society of Arts August 2010

³⁶⁰ NICE Special Report on Health Systems and Behaviour Change Pg. 66

- employ a range of behaviour change methods and approaches, according to the best available evidence
- regularly review the allocation of resources to interventions and programmes in light of current evidence³⁶¹

3.8 We believe that where policies have failed in the past it is because they have failed to adequately establish a clear evidence base for policy, the need for targeted interventions or giving adequate consideration to the socio-economic factors that might be driving a particular behaviour.

4. Practical application

4.1 While we do not have full knowledge of behaviour change initiatives throughout Government, we have observed that not all Government behaviour change initiatives that have been carried out have been fully consumer tested before implementation. This is worrying as it may mean that programmes are based on assumptions held by the programme leads rather than evidence. For example, in labeling, whether an alcohol unit guideline is portrayed as advice from the Government, business or the Chief Medical Officer can significantly affect its credibility.

4.2 It is also important that a review of interventions is taken to understand its impact before further interventions. For example, to curb alcohol misuse in recent years new legislation has been introduced to increase the penalties for sale to under age customers, implement 'Alcohol Disorder Zones' and mandate new licensing conditions without a chance or attempt to assess the effectiveness of the previous measures before the next intervention is introduced.

4.3 This is an area where we hope a research based approach will be followed in the future, for example, when specifying the language to be used in health messaging and labeling.

4.2 This is another area where we believe business can play a useful role in communicating with consumers. It is inherent to consumer focused businesses that they need to understand and target consumer behaviour. Business will therefore have a breadth of useful information and expertise, regarding consumer testing and behaviour which could provides useful insights to Government when seeking to introduce policies to change behaviour.

5. Cross-government coordination

5.1 While we aware of cross-Government structures, such as specific Cabinet Sub-Committees, we have observed that activities aimed at changing a particular behaviour are sometimes not joined up between different Government departments, often because of the different priorities of each. It is important that a cross-Government approach is adopted and that aims and desired outcomes are prioritised and consistently sought. Different interventions from various Departments should complement each other and fit into a wider plan which should also encompass action by business and NGOs. It is essential that these groups are involved from the start and have an input into the

³⁶¹ NICE public health guidance 6: 'Behaviour change at population, community and individual levels', October 2007 Pg. 10

campaign. There have been instances where Government has presented a behavioural change campaign to business as a *fait accompli* and asked them to roll it out at short notice. Where Government wishes to use the relationships between businesses and their customers in campaigns, they should involve business fully from the beginning and appreciate the timescales that businesses work to.

5.2 Government also needs to recognise the legal limitations that industry may face when asked to implement an identified intervention. For example in the area of reduced alcohol products, businesses are limited as to how they can promote them as a lighter choice. A European Regulation covering the conditions allowing the use of nutrition and health claims sets strict rules for the use of claims about products where ABV is reduced but does not meet the technical definition of low alcohol. This is only applicable to claims made in commercial communications. It means industry may not legally be able to use the same message that Government prefers. Due to the importance of consistency, these issues should be well assessed beforehand and Government should consider acting to allow businesses more scope to promote these types of products.

6. Ethical considerations

- 6.1 A key difference between when Government acts and when the commercial or voluntary sector acts is that while businesses and charities can appeal to their target audience (either to their emotions or reason), Government has the levers to dictate to individuals and communities.
- 6.2 Ethical concerns arise when action is taken to change behaviour by limiting the individual's freedom to choose, forcing them to use a different behaviour. Such interventions as well as being ethically problematic can create unintended consequences in the long term, as people make unpredictable changes to their behaviour to circumvent the restriction on them. There is a role for the state to intervene only when there is clear evidence it is required and there is no indication that change can be delivered through the existing processes, such as the market. A great deal of Government's activity could be classed as a behaviour intervention. Everything from dedicated campaigns to a statement or interview that a Minister gives which is then reported in the media could be seen as an intervention. The last point is an important one, as many consumers gain the information they use to make choices from media reports and opinions from friends and family. In this way informal statements can often have a large impact on influencing behaviour
- 6.3 We believe that it is very important that interventions seeking to change behaviour do not limit the freedom of choice of the whole population, when they are attempting to target a specific group. Generally, aside of clear safety issues, we do not believe prohibition is the correct approach. In our experience in the alcohol area, the target is to reduce consumption rather than stop consumption entirely and the best way to do that is to work with consumers to help them to make clearer, improved choices. One of the reasons why organisations like Drinkaware have been successful and have had strong resonance with consumers is the fact that the behavioural messages used are not hectoring, but instead encouraging people to make small but impactful changes or reconsider their attitudes. Consumers have responded well to this approach.

- 6.4 Involving the public in designing schemes can be an effective way of increasing the effects of behaviour change. For example, it has been noted that in pupil mentoring schemes, the mentor experience as much (and sometimes more) benefit than the pupil being mentored. It seems that the act of being involved helps to foster the general resilience that we discussed above.
- 6.5 It is also worth noting that achieving public consent for a measure that impacts on the freedom of individuals can help to allay ethical concerns. Government should allow the public to have a deciding say in any policy which significantly impacts their freedom of choice. Likewise, opinion research shows that the public favour targeted interventions which don't impact on the choice and options of those who do not display damaging or illegal behaviour. Public opinion on this point should not be disregarded or the public health policy itself will not be seen as legitimate and more likely to change behaviour in an unforeseen and potentially counter-productive way.

7. International comparisons

- 7.1 It is difficult to directly transfer messages and interventions from other cultures with different social and cultural norms. We also caution against the use of international comparisons to justify policy interventions that may not be transferable to the UK's culture. Examples here would be the use of limited research into the effectiveness of interventions into other cultures' relationship with alcohol when it is often observed that the UK has a vastly different approach to alcohol.
- 7.2 However, there are a number of successful foreign behaviour change initiatives that can be learned from, if projects are adapted to the local circumstances. We have provided a series of International examples at Appendix B where industry and Governments have worked together successfully to effect behavioural change.
- 7.3 The publication "Social Norms Guidebook: A Guide to Implementing the Social Norms Approach in the UK"³⁶² is also a valuable guide to making other countries successful projects work in the UK.

October 2010

Appendix A

WSTA & Industry work to promote responsible drinking and to reduce underage access to alcohol Retail of Alcohol Standards Group

The Retail of Alcohol Standards Group (RASG) was formed at the end of 2005 when several major retailers of alcohol came together to examine ways they could cooperate to reduce the incidence of alcohol sales to minors. The secretariat for RASG is provided by the WSTA.

³⁶²McAlaney, J., Bewick, B. M., and Bauerle, J. (2010) *Social Norms Guidebook: A Guide to Implementing The Social Norms Approach in the UK*. University of Bradford, University of Leeds, Department of Health: West Yorkshire UK

RASG is an example of unprecedented cooperation between hugely competitive rival companies. It has provided a focus for the entire alcohol retail trade and continues to be a source of industry best practice.

Challenge 25

The Challenge 25 scheme is part of the RASG's commitment to reduce sales of alcohol to those under 18. It encourages anyone who is over 18 but looks under 25 to carry acceptable proof of age if they wish to buy alcohol.

Challenge 25 builds on the highly successful Challenge 21 campaign developed by the Retail of Alcohol Standards Group in 2005. The Challenge 25 signage is available to download from the WSTA website and has been successful tool for businesses in reducing underage access to alcohol.

Community Alcohol Partnerships

Community Alcohol Partnerships (CAPs) bring together local retailers, trading standards and police to tackle the problem of underage drinking and associated anti-social behaviour. The partners share information and training to facilitate risk-based enforcement and to resolve local problems swiftly and effectively.

What started as a pilot in Cambridgeshire is now in place in 20 areas in the UK. The independently evaluated project in Kent showed that CAP pilot areas saw a decline in 6 out of the 7 measures of different anti-social behaviour. CAPs operate under the banner of the Retail of Alcohol Standards Group employing a dedicated project manager to manage schemes.

Campaign for Smarter Drinking

The Campaign for Smarter Drinking is a £100 million social marketing campaign aimed at encouraging responsibility among young adults and shifting attitudes towards drunkenness. The initiative was developed by over 45 of Britain's best known companies across the drinks trade and was launched in partnership with charity Drinkaware and the Government.

Following the past phase of the campaign, results were independently assessed on the Government's own KPIs by Milward Brown. It was found that:

- 60% of the total sample said they would adopt the tips in the future.
- 63% of the target audience said they are likely to consider drinking differently.
- 65% of the target audience said that communications were distinctive, interesting and involving.

Appendix B – International Examples

All of the projects below provide examples of successful international projects which seek to change behaviors relating to alcohol. Whilst it is always difficult to transfer lesson from part of the world to another they raise a number of interesting points.

I. FAS (Fundacion Alcohol Y Sociedad)

Run in Spain by a group of spirits producers, through the FAS charity (Fundacion Alcohol Y Sociedad). The programme was created in 2001 by a group of experts in the field of education and it is still running across Spain. It is targeted at school pupils between 12 and 18 and also at their parents and teachers. Its objectives are clear:

- to delay the age at which young people start drinking alcohol;
- to reduce the number of underage drinkers; and
- to reduce the amount of alcohol people consume amongst those young people who have already started drinking.

The programme involves spending time with teachers and providing them with teaching materials. Parents are also given guides and are invited to attend a conference on the issues related to alcohol consumption during adolescence. Teaching materials and informal lessons are given to pupils depending on their age.

Efforts have been made to quantify the success of the project. According to FAS, the following results were visible:

- For those participating, the age of onset increased from 13.92 in 2002 to 14.50 in 2006 (13.90 in 2002 to 14.22 in 2006 for control group).
- For those participating, the percentage of underage drinkers (11 to 18 year olds) decreased from 60.1% in 2002 to 53.0% in 2006 (decrease was only from 68% down to 67.3% in control group).

Among participants, the number of drinks per month reduced from 17.59 units down to 10.96 where for the control group the reduction was only from 17.81 units down to 16.56.

2. Northern Illinois University (NIU)

The NIU approach is based on research demonstrating that, at many colleges and universities, there is a significant disparity between student estimates of binge drinking by students and actual binge drinking behavior. After implementation of a more traditional alcohol abuse prevention effort failed to change drinking behavior, NIU implemented a campus-based mass media campaign to change student perceptions of drinking norms.

During the course of the campaign, NIU students have reported reduced binge drinking for each of the last six years, with an overall 35 percent reduction. They have also reported 31 percent fewer alcohol-related injuries to self and 54 percent fewer alcohol-related injuries to others.

A specific account of the methods used can be found in “A Social Norms Approach to Preventing Binge Drinking at Colleges and Universities”, published by the Higher Education Center for Alcohol and Other Drug Prevention

The experiences at NIU suggest that using mass media is the most cost effective method of reaching students on large campuses.

3. The School Health and Alcohol Harm Reduction Project (SHAHRP)

SHAHRP is part of the Australian National Drug Strategy. The programme provides an initial year of eight alcohol harm reduction lessons. These lessons begin prior to the age when children are likely to have been offered an alcohol drink. It helps pupils think about how they can ensure they do not put themselves in a position where they are under peer pressure to drink alcohol.

In the second year of the programme, when the pupils are more likely to be experimenting with alcohol or at least seeing their peers do so, there are five booster lessons to support the pupils handle any drinking opportunities which they are facing.

The next and final set of booster lessons are taught four years after the start of the programme. They are delayed to coincide with a period when many teenagers will be

experiencing pressure to consume alcohol on a regular basis. During third phase, drink driving and drinking at licensed premises are also considered in the lessons.

Over the first three years of the study, students who participated in the programme were found to have:

- 10% greater alcohol-related knowledge;
- consumed 20% less alcohol;
- experienced 33% less harm associated with their own use of alcohol and 10% less harm associated with other people's use of alcohol than the control group

4. Intensive Alcohol Education, Israel

One thousand 10th-grade students from seven high schools, chosen by random from the roster of all schools in southern Israel, were assigned to intervention and control groups. The intervention, which was based on Botvin's social skills theory, was conducted over 3 days and included dissemination of information, workshops, lectures by guest experts, and activity areas. It was administered by the staff of the high schools and the Psychological Counseling Service in Israel.

A self-administered questionnaire was answered anonymously by students in the 10th grade (pre-test) and again in the 11th and 12th grades (post-tests). It included questions on socio-demographic data, alcohol-related habits, smoking habits, use of illicit drugs, knowledge, and attitudes.

Data was collected between 1994 and 1997 with a 76% follow-up rate at 2 years. It was found that in the one and two year follow-up the rates of alcohol consumption did not change in the intervention group but rose significantly in the control group.

Academics assessing the programme noted the 'relative ease' of this particular programme³⁶³.

³⁶³ Peleg A, Neumann L, Friger M, Peleg R, Sperber AD, Unit for Health Promotion and Disease Prevention, Faculty of the Health Sciences, Ben-Gurion University of the Negev, Beer-Sheva, Israel, 2001

Memorandum by the Workplace Cycle Challenge (BC 21)

The aim of the Workplace Cycle Challenge is to get more people cycling.

A Workplace Cycle Challenge is a behavioural change programme that has proven to be highly successful at:

- Encouraging 'non-cyclists' to take up cycling
- Encouraging 'occasional cyclists' to start cycling regularly
- Encouraging more people to cycle for transport
- Increasing people's level of physical activity

The Workplace Cycle Challenge is a social marketing intervention that has been proven to be effective at encouraging more people to take up cycling and those who are already cycling to cycle more often.

The Workplace Cycle Challenge promotes competition between organisations and individual departments against each other to see who can encourage the most staff to cycle for at least 10 minutes during the two or three week challenge.

Each Challenge is run on a sophisticated Challenge website application which allows organisations, departments and individuals to register their involvement and log their cycling activity while displaying live results and competition information to motivate further involvement. The website builds up a comprehensive database of participating individuals and organisations that is used to target messages and relevant interventions at specific segments eg new cyclists. It can also be used to further promote and encourage cycling as well as measure changes in cycling behaviour

Research is carried out with participants at baseline, two weeks and three months post each Challenge, via the website.

Some of the key findings from the final evaluation report for the Swindon Workplace Cycle Challenge:

- 32% of participants who were 'non-cyclists' before the Challenge have continued to cycle once a week or more
- 55% of 'non-cyclists' can now be classed as either 'occasional cyclists' (37%) or 'regular cyclists' (18%)
- 20% of 'non-cyclists' are now cycling to work once a week or more
- 38% of 'occasional cyclists' are now cycling once a week or more and 21% can now be classed as 'regular cyclists'.

A Workplace Cycle Challenge:

- is a highly effective way of encouraging 'non-cyclists' to cycle more often
- uses a behaviour change model
- encourages regular cyclists to cycle more often
- contributes to an increase in physical activity and a potential reduction in obesity
- has reliable, consistent and replicable results
- can help reduce CO₂ emissions and reduce traffic congestion.

Department of Health South East, CTC Charitable Trust and Challenge for Change are currently working in partnership to implement a Workplace Challenge involving six Primary Care Trusts in partnership with local authorities from across the South East region in summer 2010 and 2011.

Topline results from the recent DHSE, CTC and Challenge for Change Workplace Challenge (behaviour change surveys still to be completed).							
Oxford	Chichester	Southampton	Milton Keynes	Isle of Wight	Ashford	Total	
58	39	55	76	57	57	342	Organisations
210	175	258	247	188	71	1,149	Departments
1334	1038	1302	1171	837	375	6,058	People
121	138	134	169	139	78	779	Rookies
11800	7118	11515	10355	7068	1896	49,752	Cycle trips logged
99332	63701	95886	103484	61359	15249	439,011	Miles cycled
12.9	8.3	12.4	13.4	8	2	57	Millions of Kj energy burned
9233	4826	8667	6928	4697	1047	35,398	Trips cycled for transport
21956	10689	18698	17394	11045	2037	81,819	Kilogram's of CO2 saved

The Workplace Cycle Challenge Programme Summary of Results Achieved

The CTC Challenge for Change partnership specialises in designing and implementing behaviour change programmes that get more people cycling. One of their principal programmes is the 'Workplace Cycle Challenge', a behavioural change programme that has been proven to effectively:

1. Encourage more people to take up cycling;
2. Encourage people who are already cycling to cycle more often; and
3. Encourage people to cycle for transport purposes.

This document contains some information detailing the background, theory and achievements of the 'Workplace Cycle Challenge' programme. The aim of this document is to enable more people understand how the programme works, its benefits and its success in getting more people cycling.

I. Background

How does a Workplace Cycle Challenge work?

A Workplace Cycle Challenge is essentially a fun competition between organisations to see which can get the most employees to ride a bike. In each size category, the organisation or department that motivates the highest percentage of staff to cycle wins a team prize. Staff only have to ride a bike for ten minutes or more for their participation to count towards the Challenge. They can ride wherever they feel comfortable and whenever they like over the two or three week Challenge period.

What is the theory behind it?

A Workplace Cycle Challenge is an ideal way to introduce more people to cycling. Instead of promoting cycling through traditional methods, such as advertising and information on the benefits of cycling, a significantly more effective form of marketing is to get people to actually experience what it is like to ride a bike.

Giving people a fun ten-minute cycling experience quickly breaks down negative perceptions about cycling, and replaces them with new, more positive attitudes. When people experience what cycling is actually like (as opposed to what they assume it is like) they often find themselves saying:

“Hey, this isn’t so bad after all. Cycling isn’t as scary or as hard as I thought. It’s actually quite easy to ride a bike, and it’s fun!”

Giving people this positive cycling experience an ideal first step to encouraging more people to start cycling.

Creating 'Cycle Champions'

People who already cycle form the key audience to target to sign up to the Challenge first. Most regular cyclists are quite passionate about cycling and would like to see more people out on bikes. A Workplace Cycle Challenge provides regular cyclists with the opportunity to encourage their non-cycling colleagues to hop on a bike and give cycling a go.

The ratio of regular cyclists to non-regular cyclists in the Challenge is typically 1:1. On average, every regular cyclist registering into the Challenge results in a 'non-regular' cyclist taking part. 'Non-regular' cyclists include people who are non-cyclists and those who only cycle a couple of times a month or less.

A Workplace Cycle Challenge utilises existing networks of regular cyclists such as the local cycle events database, cycle clubs and Bicycle User Groups. It gives regular cyclists the opportunity, the incentives and the mechanism to actively help us to get more people cycling.

2. Benefits

As well as the primary benefit of encouraging more people to take up cycling, a Workplace Cycle Challenge offers many other benefits, including:

A Database of Cyclists

The Challenge generates a database of the cyclists and 'non-cyclists' who took part in it. This database is valuable because it can then be used to continue the behaviour change process that the Workplace Cycle Challenge started and accurately measure the impact of the programme over time. Specific groups of people can be identified using the database, allowing for targeted communications.

Conducting Research

Research can be conducted with the participants of the Challenge programme using the database and an online survey tool. Different groups of people can be identified on the database (e.g. people new to cycling) and sent a tailored survey to gain a better

understanding of the barriers and benefits specific to that group of people. The results can reveal real insight into the barriers and benefits that people perceive towards cycling more and provide essential information to aid the development of relevant programmes.

Follow-on Interventions

Follow-on interventions can be run to continue and advance the behaviour change among participants. Various interventions can be developed and then targeted at specific groups of people in order to overcome the barriers they perceive to cycling. For example:

- Specific groups could be targeted with cycle skills sessions. E.g. women between the ages of 25 and 35 who do not currently cycle, whose main barrier to cycling may be a lack of confidence when cycling on the road and whose main perceived benefit is improved health and fitness.
- Recreational cyclists who live within three miles of their workplace but are not yet cycling to work could be targeted with an intervention to encourage them to start cycling for transport purposes.

Effectively evaluates and measures success

The database and survey tool measure the behaviour change with surveys at baseline, two weeks and three months after the Challenge. This enables a long term monitoring of the actual change in people's behaviour that has been achieved by the Challenge programme and other interventions targeted at each individual.

3. Applying Behaviour Change Theory

A Workplace Cycle Challenge incorporates principles of social marketing, behaviour change theory, and commercial marketing principles. It is important that promotions, campaigns and marketing efforts which aim to encourage more people to cycle go beyond the traditional elements of:

- Raising awareness;
- Promoting benefits;
- Advertising; and
- Providing information.

While the above elements have a role to play, it is important to realise their limitations. These methods can be effective in raising public awareness, but it is rare that behaviour change occurs simply as a result of providing information.

The key behaviour change theories that the Cycle Challenge programme utilises are:

- **Self Perception Theory** – An understanding that people's experiences of a behaviour will give them their strongest perceptions of that behaviour. Giving someone a positive cycling experience is an ideal way to quickly and convincingly change a person's perceptions towards cycling.
- **Self Efficacy** – An understanding of what people perceive they are able to do or achieve. Self efficacy is similar to self confidence, but focussed on one particular behaviour.

- **Social Learning Theory** – An understanding that people learn through observing other people's behaviour. If people observe positive desired outcomes, they are more likely to adopt the behaviour themselves.
- **Principles of Community Based Social Marketing (Barrier and Benefit Theory)** – An understanding that most behaviours can be broken down into a series of sub-behaviours that need to be carried out in order to complete the main behaviour. For example, starting to cycle can be broken down into: getting a bike, setting it up correctly, learning to ride, finding a safe route to cycle on. Each of these sub-behaviours has its own perceived barriers and benefits to carrying it out. These need to be identified and addressed in order to get people to implement the main behaviour.

4. Achievements

The 'Workplace Cycle Challenge' programme has achieved consistent results in getting more people cycling in each area it has been implemented. Each programme is measured and evaluated via the following surveys:

- A baseline survey of participants at registration to find out about participants' previous cycling behaviour.
- A survey of participants two weeks after the Challenge to gather information on the barriers and benefits that individuals and segments perceive towards cycling more often and to understand people's intended future cycling behaviour.
- A survey of participants three months after the Challenge to monitor changes in people's behaviour after they took part in the Challenge programme.

The results of the surveys together with other data collected as part of the programme (e.g. participant cycle trip records) will be analysed, evaluated and presented in a final evaluation report at the end of the programme.

The results of the surveys together with other data collected as part of the programme (e.g. participant cycle trip records) are analysed, evaluated and presented in an evaluation report.

The following tables display and compare the results of the most recent Challenges. They demonstrate consistency in the results of the programmes and can be used to understand the potential to get more people cycling in other locations.

Top line Results

Table I shows the top line results for the most recent Workplace Cycle Challenges. These show the level of engagement per Challenge location.

Table I. Top line results

RESULTS	CHALLENGE
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	2007	2008		2009			Wolverhampton	Adelaide
	New Zealand	Swindon	Colchester	Darlington	Somerset	Woking		
Organisations	505	38	29	33	38	40	40	108
Departments	1,220	250	77	135	174	126	178	232
People	10,000	914	407	382	682	422	647	1,404
Distance	98,238km	49,190m	18,678m	24,143m	34,489m	23,147m	37,911m	308,539km
Cycle Trips	48,000	5,407	2,246	2,255	4,296	2,325	3,963	19,865

Consistently Targeting the Right People

The Workplace Cycle Challenge programme is consistently attracting similar proportions of each audience groups. Table 2 shows the breakdown of participants of each Challenge based on their cycling behaviour before they took part in the Challenge.

The percentage of ‘non-cyclists’ ranges from 28% - 48% in the UK, with an average of 36%. Differences can be explained by variable factors such as the weather, the existing cycling culture in an area and the design of the Challenge programme for that area. For instance, the Wolverhampton Cycle Challenge had additional measures included in it that proved to be highly effective at engaging more non-cyclists.

Table 2 shows that the Workplace Cycle Challenge consistently attracts and recruits high proportions of ‘non-cyclists’ and ‘occasional cyclists’ – the two primary target audiences.

Table 2. Cycling behaviour of participants before taking part in the Challenge.

GROUP	CHALLENGE							AVERAGE (UK)
	Swindon	Colchester	Darlington	Somerset	Woking	Wolverhampton	Adelaide	
Non-cyclists People who before the Challenge either hadn't cycled in over a year or had only cycled once or twice in the previous 12 months.	32%	28%	35%	35%	38%	48%	18%	36%
Occasional Cyclists People who either only cycled a few times a month or about once a week before taking part in the Challenge.	26%	26%	32%	21%	32%	24%	22%	26%
Regular Cyclists People who cycled 2-3 days or more each week before the Challenge.	42%	46%	37%	44%	30%	28%	60%	38%

Consistently Influencing Cycling Behaviour

Research shows that we are consistently making an impact on participants' cycling behaviour.

In the survey two to three weeks post the Challenge, participants are asked to think ahead to the next twelve-months to estimate how often they will be riding their bike. The responses from recent Challenges are detailed in Table 3 for 'non-cyclists' and Table 4 for 'occasional cyclists'.

The percentage of non-cyclists stating that they intended to cycle more often in the future ranges from 61 - 89%, with an average of 77%. This shows that Cycle Challenges are consistently encouraging more non-cyclists to cycle in each area they are implement.

Table 3. Non-cyclists' intended cycling behaviour after taking part in the Challenge, given in response to the question "Thinking ahead to the next 12 months, will you be riding your bike...?"

Response	CHALLENGE							AVERAGE
	Swindon	Colchester	Darlington	Somers	Woking	Wolverhampton	Adelaide	
Definitely more than I did before the Challenge	46%	51%	68%	51%	46%	39%	57%	47%
More than I did before the Challenge	32%	29%	21%	36%	35%	22%	27%	30%
About the same as I did before the Challenge	14%	16%	8%	11%	13%	35%	13%	19%
Less than I did before the Challenge	2%	0%	0%	<1%	0%	1%	2%	1%
Definitely less than I did before the Challenge	2%	0%	0%	0%	0%	0%	0%	1%
I don't know	4%	4%	3%	2%	6%	3%	1%	4%
<i>Total % non-cyclists who intended to cycle more after taking part in the Challenge</i>	78%	80%	89%	87%	81%	61%	84%	<u>77%</u>

The percentage of occasional cyclists stating that they intended to cycle more often in the future ranges from 54 - 92%, with an average of 63%. While there is a greater range between the responses measured in each area, the data in Table 4 shows that the programme is working to encourage more occasional cyclists to cycle more regularly after they've taken part in the Challenge programme.

The results in Table 3 and 4 show that giving people a positive cycling experience (or experiences) is a highly effective way of changing people's perceptions towards cycling and encouraging them to cycle more often in future.

Table 4. Occasional cyclists' intended cycling behaviour after taking part in the Challenge, given in response to the question "Thinking ahead to the next 12 months, will you be riding your bike...?"

Response	CHALLENGE							AVERAGE
	Swindon	Colchester	Darlington	Somerset	Woking	Wolverhampton	Adelaide	
Definitely more than I did before the Challenge	26%	22%	49%	32%	44%	43%	21%	31%
More than I did before the Challenge	28%	38%	43%	37%	27%	25%	35%	32%
About the same as I did before the Challenge	40%	38%	9%	31%	27%	24%	44%	34%
Less than I did before the Challenge	4%	2%	0%	0%	2%	5%	0%	2%
Definitely less than I did before the Challenge	0%	0%	0%	0%	0%	0%	0%	0%
I don't know	2%	0%	0%	0%	0%	3%	0%	1%
<i>Total % occasional cyclists who intended to cycle more after the Challenge</i>	54%	60%	92%	69%	71%	68%	56%	63%

Consistent Interest in Repeat Challenges

Overall participant satisfaction with the Workplace Cycle Challenge is very high, with on average 99% of participants stating that they would like to participate in future Challenge programmes. This reflects very positively on participant engagement and satisfaction with the programme.

Table 5. Participant responses to "How likely is it that you would take part in the Challenge again if repeated?"

Response	CHALLENGE							AVERAGE
	Swindon	Colchester	Darlington	Somerset	Woking	Wolverhampton	Adelaide	
Very likely	79%	69%	82%	77%	78%	81%	Questionnaire	79%

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Quite likely	19%	30%	18%	22%	22%	18%	n not asked	20%
Not very likely	1%	1%	0%	0%	0%	0%		0.4%
Not at all likely	0%	0%	0%	0%	0%	0%		0%
<i>Total likely</i>	99%	99%	100%	100%	100%	99%	NA	99%

Encouraging Non-cyclists to Take Up Cycling

Three months after the Challenge, participant research is carried out to monitor changes in people's behaviour after they took part in the Workplace Cycle Challenge.

Table 6 shows non-cyclists behaviour three months after participating in the Challenge. Overall, of the survey respondents who reported being 'non-cyclists' at baseline, an average of 63% showed an increase in their cycling behaviour, showing very positive indications of change and indicating that the Workplace Cycle Challenge programme is effective at encouraging non-cyclists to take up cycling.

Table 6. Non-cyclists' responses to "How often have you ridden a bike during the last 3 months since the Cycle Challenge?"

RESPONSE	CHALLENGE				AVERAGE
	Swindon	Somerset	Darlington	Woking	
	n=133	n=57	n=20	n=35	
Not at all in the last 3 months	9%	7%	10%	17%	10%
Maybe once or twice	38%	40%	5%	26%	27%
About 1-3 times a month	25%	18%	40%	29%	28%
Roughly once a week	14%	14%	5%	11%	11%
2-3 days a week	8%	16%	25%	6%	14%
4+ days a week	6%	5%	15%	11%	10%
<i>Total % non-cyclists who have increased their cycling after taking part in the Challenge</i>	53%	53%	85%	57%	63%

Please note: The statistics for Darlington and Woking are coloured in blue because the response rates for the three month surveys for Darlington and Woking were too small to give robust indications of behaviour change. The response rates for Swindon and Somerset were high enough to provide robust indications of behaviour change.

Table 7 shows occasional cyclists behaviour three months after participating in the Challenge. Overall, of the survey respondents who reported being 'occasional-cyclists' at baseline, an average of 31% showed an increase in their cycling behaviour, showing positive indications of change and suggesting that they have increased their cycling since taking part in the Challenge.

Table 7. Occasional cyclists' responses to "How often have you ridden a bike during the last 3 months since the Cycle Challenge?"

RESPONSE	CHALLENGE				AVERAGE
	Swindon	Somerset	Darlington	Woking	
	n=112	n=47	n=20	n=36	
Not at all in the last 3 months	4%	4%	0%	3%	3%
Maybe once or twice	21%	13%	0%	14%	12%
About 1-3 times a month	28%	21%	21%	22%	23%
Roughly once a week	22%	36%	26%	39%	31%
2-3 days a week	20%	13%	37%	11%	20%
4+ days a week	5%	13%	16%	11%	11%
<i>Total % occasional cyclists who have increased their cycling after taking part in the Challenge</i>	25%	26%	53%	22%	31%

Please note: The statistics for Darlington and Woking are coloured in blue because the response rates for the three month surveys for Darlington and Woking were too small to give robust indications of behaviour change. The response rates for Swindon and Somerset were high enough to provide robust indications of behaviour change.

Increasing Cycling to Work

Three months after the Workplace Cycle Challenge, participants were asked how often they had ridden their bike to work or part of the way to work during the three months since participating in the Challenge.

Table 8 shows that on average, over a third (37%) of ‘non-cyclist’ survey respondents reported cycling to work since taking part in the Challenge. This highlights very positive indications of change for this segment that had either never cycled in the 12 months prior to taking part in the Challenge or had cycled once or twice.

Table 8. Non-cyclists responses to “How often have you ridden a bike to work during the last 3 months?”

RESPONSE	CHALLENGE				AVERAGE
	Swindon	Somerset	Darlington	Woking	
	n=133	n=57	n=20	n=34	
Not at all	65%	61%	55%	69%	63%
Maybe once or twice	14%	14%	0%	14%	11%
About 1-3 times a month	6%	9%	25%	3%	10%
Roughly once a week	5%	4%	5%	0%	4%
2-3 days a week	6%	11%	5%	3%	6%

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4+ days a week	5%	2%	10%	11%	7%
Total % non-cyclists who have cycled to work after taking part in the Challenge	35%	39%	45%	31%	37%
Total % of non-cyclists who reported cycling to work weekly three months after the Challenge	16%	17%	20%	14%	17%

Three months after the Challenge, occasional cyclists were also asked how often they had ridden their bike to work or part of the way to work during the three months since participating in the Challenge. Table 9 shows that on average 21% had cycled regularly to work during this period after taking part in the Challenge. This highlights positive cycling behaviour and indicates an overall increase in cycling to work, particularly amongst those respondents that had never cycled or did not cycle regularly to work.

Table 9. Occasional cyclists’ responses to “How often have you ridden a bike to work during the last 3 months?”

RESPONSE	CHALLENGE				AVERAGE
	Swindon	Somerset	Darlington	Woking	
	n=111	n=47	n=19	n=36	
Not at all	46%	36%	42%	33%	41%
Maybe once or twice	19%	17%	11%	22%	18%
About 1-3 times a month	9%	17%	11%	14%	12%
Roughly once a week	12%	9%	11%	11%	11%
2-3 days a week	11%	11%	21%	11%	12%
4+ days a week	4%	11%	5%	8%	6%
Total % occasional cyclists who cycled regularly to work after taking part in the Challenge	15%	22%	26%	19%	18%

Please note: The statistics for Darlington and Woking are coloured in blue because the response rates for the three month surveys for Darlington and Woking were too small to give robust indications of behaviour change. The response rates for Swindon and Somerset were high enough to provide robust indications of behaviour change.

Increasing Cycling Frequency

Three months after the Challenge, participants were asked to think about if they had ridden their bike more or less often in the last three months compared to before taking part in the Challenge.

Table 10 shows that on average, the majority of ‘non-cyclist’ survey respondents reported cycling more in the last three months compared to before the Challenge. Nearly half (46%) reported that they had cycled ‘definitely more ‘ and a fifth (20%) reported that they had cycled ‘more’. This highlights positive indications of change for this segment that had either never cycled in the 12 months prior to taking part in the Challenge or had cycled once or twice.

Table 10. Non-cyclists response to “Thinking about the last 3 months, did you ride your bike....?”

RESPONSE	CHALLENGE				AVERAGE
	Swindon	Darlington	Somerset	Woking	
	n=133	n=20	n=57	n=36	
Definitely more than I did before the Challenge	41%	70%	40%	31%	46%
More than I did before the Challenge	22%	10%	28%	20%	20%
About the same as I did before the Challenge	27%	10%	25%	40%	26%
Less than I did before the Challenge	6%	0%	4%	3%	3%
Definitely less than I did before the Challenge	5%	10%	2%	6%	6%
I don't know	0%	0%	2%	0%	0%
<i>Total % non-cyclists who reported cycling more after taking part in the Challenge</i>	63%	80%	68%	51%	<u>66%</u>

Table 11 shows that on average nearly half (46%) of ‘occasional cyclist’ survey respondents also reported cycling more in the last three months compared to before the Challenge. This highlights positive cycling behaviour after participation in the programme and reflects positively on the Challenge.

Table 11. Occasional cyclists response to “Thinking about the last 3 months, did you ride your bike....?”

RESPONSE	CHALLENGE				AVERAGE
	Swindon	Somerset	Darlington	Woking	
	n=112	n=47	n=33	n=36	
Definitely more than I did before the Challenge	16%	26%	21%	19%	21%
More than I did before the Challenge	21%	23%	37%	17%	25%
About the same as I did before the Challenge	52%	36%	42%	47%	44%
Less than I did before the Challenge	10%	13%	0%	11%	9%
Definitely less than I did before the Challenge	2%	2%	0%	3%	2%
I don't know	0%	0%	0%	3%	0%

Memorandum by the Workplace Cycle Challenge (BC 21)

Total % occasional cyclists who reported cycling more after taking part in the Challenge	37%	49%	58%	36%	46%
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Please note: The statistics for Darlington and Woking are coloured in blue because the response rates for the three month surveys for Darlington and Woking were too small to give robust indications of behaviour change. The response rates for Swindon and Somerset were high enough to provide robust indications of behaviour change.

At the three-month survey, respondents were asked “What is the main reason(s) that you cycled more/less often or about the same in the last 3 months?” This was an open ended question allowing participants to give their own reasons why they cycled more or less often. Here are some respondents’ comments that give some colour and deeper understanding to the statistic and results outlined above.

“I have fallen in love with cycling again, when I get on my bike this smile creeps along my face & I feel like a young girl again. It also inspired my husband to purchase a bike & we cycle together every day, plus I ride my bike everyday to work. Thank you for making me feel young again & keeping fit.”

“Through the Challenge I realised I could still ride a bike, despite a 40 year gap.”

“Just didn’t realise the fun (not to mention the benefits) of jumping back onto a bike. I've saved money on parking and lost 2 stone since the challenge.”

“Discovered that it’s actually quickly and cheaper by bike than by car getting to work and around town!”

“The benefits for us as grandparents is that we all can take part in this activity. One of our Granddaughters has Cerebral Palsy so this is an activity that she is on a par with everyone else and not made to feel out of it as with many other leisure activities.”

“I cycled more after the cycle challenge because it proved to me how easy and effective a way to get exercise and save money.”

“The Cycle Challenge rekindled my love of cycling. I live in St Johns and can now cycle to/from work in about 10 minutes along the canal. The canal scenery, the fresh air and the knowledge that I am staying healthy make for the most positive start to the day.”

“After the cycle challenge I began to ride my bike routinely to work or to go shopping in Woking instead of driving as I realised how much quicker and cheaper it was.”

October 2010

Memorandum by WRAP (the Waste & Resources Action Programme) (BC 88)

Executive Summary

1. WRAP is Defra's sole delivery body for waste and resource efficiency issues. A large part of our work is focused on helping individuals and businesses to change their behaviour in this area. This memorandum answers questions 8 and 9 in the call for evidence, with particular reference to WRAP's two main consumer behaviour change programmes – Recycle Now and Love Food, Hate Waste. We have tried to show how each programme was designed on the basis of clear evidence, is subject to regular review and evaluation, and has been successful in meeting its objectives.

About WRAP

2. WRAP (the Waste & Resources Action Programme) is a not-for profit UK company providing recycling and resource efficiency programmes for Defra, the Scottish Government, the Welsh Assembly Government and the Northern Ireland Executive. The organisation was formed in 2000 to implement a number of the actions set out in the Government White Paper *Waste Strategy 2000*.

3. WRAP's vision is a world without waste, where resources are used sustainably. We work with businesses, local authorities and individuals to help them reap the benefits of reducing waste, developing sustainable products and using resources in an efficient way.

4. There are two things that differentiate WRAP from others working on these issues. The first is our technical and market expertise, which we use to help inform and implement our funders' policies. The second is our practical ability to help individuals and businesses embrace change and become more resource efficient.

5. WRAP exists to address market failures. We only intervene where the free market is not delivering our funders' policy agendas on its own. Once the market failure has been addressed, we seek to exit, leaving the market to operate freely.

6. We add value through our skills, our expertise and our ability to help other bodies, at both a national and a local level, to achieve real change. We deliver value for money through:

- minimising the cost to business of meeting Government requirements;
- leveraging private sector finance to address market failures;
- creating efficiencies and economies of scale; and
- accelerating the growth of key sectors of the low carbon economy.

7. WRAP is also working with the think tank Green Alliance on their 'Green Living' programme of work, which aims to investigate how pro-environmental behaviour change can be most effectively supported by governments³⁶⁴. The recent MINDSPACE report by the Cabinet Office and Institute for Government³⁶⁵ has been highly relevant to this work.

³⁶⁴ Details of Green Alliance's Green Living work can be found at www.green-alliance.org.uk/greenliving/.

³⁶⁵ MINDSPACE: Influencing Behaviour Change through Public Policy (2010), Cabinet Office/Institute for Government. Available at www.instituteforgovernment.org.uk/images/files/MINDSPACE-full.pdf.

8. Much of our work is directly concerned with helping both individuals and businesses to change their behaviour. We therefore welcome the opportunity to contribute to this inquiry.

Response to questions

9. The sub-committee's call for evidence includes sixteen questions. We have focused our evidence on the two of these where we feel we can add value: questions 8 and 9. We have answered them by reference to our two main behaviour change programmes aimed at helping consumers to recycle more and to reduce food waste.

10. WRAP helps both individuals and businesses to change their behaviour in a number of distinct areas around waste prevention and recycling. This response focuses on the two main consumer behaviour change programmes that we have undertaken, as these seem most directly relevant to the call for evidence. However, it is worth emphasising that we have also run several behaviour change programmes aimed at helping businesses. For information, the two largest of these are:

- The Courtauld Commitment – a responsibility deal with the retail sector focused on helping supermarkets and their supply chain to reduce levels of packaging and food waste; and
- Halving Waste to Landfill – a responsibility deal with the construction sector focused on helping construction companies across the entire supply chain to halve the amount of waste they send to landfill by 2012 (against a 2008 baseline).

Q8. Have publicly funded behaviour change interventions been both evidence-based and subject to effective evaluation? How successful have such interventions been?

11. WRAP has run two major consumer behaviour change programmes:

- Recycle Now (2004 to present) – this was the UK's first national programme designed directly to help individuals and organisations to recycle more; and
- Love Food, Hate Waste (2007 to present) – the aim is to raise awareness of the benefits of reducing food waste, and to provide advice on easy practical everyday things we can all do to waste less food.



12. We set out below answers to question 8 for each of these programmes in turn.

Recycle Now

Origin, evidence base and programme design

13. The Recycle Now programme originated from a recommendation in the Prime Minister's Strategy Unit's 2002 report 'Waste Not, Want Not'³⁶⁶. Recommendation 18 (page 93) stated that 'WRAP should promote education and awareness of waste issues through a programme of national and targeted local or issue-specific campaigns related to waste minimisation and recycling.' This recommendation was based on a review of evidence which showed (paragraphs 7.14-7.17) that:

- 'The level of awareness of waste in the UK is very low. As noted in Chapter 4, a recent MORI survey found that only 7% of respondents saw waste as a key environmental issue unless prompted. However, 94% said they were concerned about the disposal of society's waste. It also demonstrated that there were many misconceptions about waste, and that if the facts were explained to them, people would be more receptive to various waste measures that they would not intuitively accept.'
- 'Many national campaigns have already been led by the National Waste Awareness Initiative (NWAi). However, awareness of waste remains low so it is not clear that a further large-scale generic campaign would in itself be effective. There is a stronger case for continuing education and awareness through more targeted and focused practical messages in parallel with the roll-out of specific schemes and programmes.'
- 'Good practice from other countries indicates a significant level of spend per capita on waste awareness would offer good value for money in support of government objectives for waste. For example, Canada spends the equivalent of about 45 pence per household per year. A well-designed campaign is estimated to cost £30m over 3 years.'

14. The Government's response to that report, issued by Defra in May 2003³⁶⁷, responded to this recommendation as follows (page 14): 'Underpinning these activities, WRAP will implement an education and awareness programme. This will operate at both a national level, raising the general public's awareness of waste issues and the benefits of recycling, and at a local level, to support the ROTATE and waste minimisation initiatives outlined above.'

15. In response, WRAP worked with Defra, local councils and waste-focused NGOs to design a programme that would overcome the weaknesses of previous national behaviour change programmes (such as the National Waste Awareness Initiative, and the 'Rethink Rubbish' campaign), which had not had a significant impact on public action on waste issues. A key decision, based on the evidence of the previous lack of success, was that the Recycle Now programme should integrate the national awareness work with local initiatives, delivered by local authorities, in order to achieve not only significant increases in public awareness ('cut through'), but also substantial increases in public action resulting from that greater awareness (the so-called 'call to action').

16. The Recycle Now programme was formally launched by WRAP in September 2004, with two linked targets³⁶⁸:

³⁶⁶ 'Waste Not, Want Not: A strategy for tackling the waste problem in England', Prime Minister's Strategy Unit, November 2002.

³⁶⁷ 'Government response to Strategy Unit report "Waste not, Want not"', Defra, May 2003.

³⁶⁸ 'Business Plan 2: 2004-2006', WRAP, May 2004, page 31.

- to generate a minimum increase of 10% in the public perception of recycling as a 'must or should do' activity, following national campaign periods, based on a benchmarking survey; and
- to achieve measurable and substantial increases in participation in recycling by householders in response to all local authority programmes using WRAP awareness campaign funding.

Measures of success

17. Progress against the first target was measured by reference to the 'committed recycler' metric. This metric measures the proportion of people who, when surveyed, agreed with all three of the following statements:

- Recycling is very or fairly important to me;
- I recycle everything, or a lot, of what can be recycled; and
- I recycle even if it requires additional effort.

18. At the launch of the Recycle Now programme, 45% of the English population were committed recyclers on this metric. The metric has been tracked every six months since the start of the programme. The proportion of committed recyclers increased to 57% by the middle of 2006 (an increase of 12%, exceeding the 10% target referred to in paragraph 15 above). It has subsequently increased further, and currently stands at 74%. On this measure, the programme has therefore been a success.

19. Progress on the second target can be considered both at a local level (in relation to the specific local authorities that WRAP has worked with over the years) and at a national level (by reference to the overall recycling rate across England). At both levels, the Recycle Now programme has delivered measurable success – although it should always be kept in mind that many other factors (such as improvements in local authority recycling infrastructure) will also have contributed to increases in participation. For example, the proportion of municipal waste either recycled or composted in England has increased over the duration of the Recycle Now programme from 19% in 2003/04 to 37% in 2008/09 (the latest available figures).

20. The Recycle Now programme has continued to develop since its inception, and this development has been informed by ongoing research into and evidence about the issues that affect public attitudes to, and engagement with, waste issues. For example, WRAP published a major piece of research on the barriers to recycling at home in August 2008³⁶⁹. The objective of the research was to generate a more rigorous and in-depth understanding of what prevents householders from recycling. The research has led to some important fresh thinking about how different population groups might be engaged more effectively by recycling behaviour change programmes, especially at a more local level.

Evaluation

21. All WRAP programmes are subject to annual evaluations, to assess progress against the targets set in each Business Plan, with the evaluation that follows the end of each (two or three year long) Business Plan being particularly rigorous (and published). The Recycle Now programme is no different in this respect.

³⁶⁹ 'Barriers to recycling at home', WRAP, August 2008. Available at: www.wrap.org.uk/local_authorities/research_guidance/communications/barriers_to.html.

22. WRAP are shortly to publish a research report, evaluating all the evidence surrounding the first five years of the Recycle Now programme. Although this is as yet unpublished, some of the draft findings are worth highlighting here:

- Recycle Now has successfully penetrated a broad base of consumer awareness, going from 19% brand recognition among people surveyed in 2004 to 74% in 2008.
- Recycle Now recognises that much of the success of the programme can be attributed to the close working relationships it has developed with local authorities. For example:
 - the Recycle Now logo and branding are used by more than 90% of local authorities in England;
 - the major pull of the brand for many local authorities is that it links with a national campaign, and provides a consistent message;
 - there is a widespread feeling among local authorities that there is a comprehensive range of (free) materials for communications development, including guidance for planning, running and evaluating communications campaigns; and
 - 85% of local authority users report that the materials either meet or exceed their expectations.
- The Recycle Now logo is also used by retailers, community and not-for-profit groups, educational institutions, commerce and industry. In particular:
 - It has been used by Royal Mail as a postage frank since 2006, reaching at least six million households every day;
 - It has been recommended for use on direct marketing materials by trade organisations; and
 - The use of specially customised versions of the logo is actively promoted by trade bodies within the publishing sector.
- As well as the committed recycler metric increasing from 45% to 74% over the first five years of the programme, the proportion of people saying they do not recycle has decreased from 14% to 2% over the same period.
- Evidence such as the reported increase in numbers of committed recyclers and the increase in household waste recycling over the life of the campaign both imply Recycle Now has been a success; and
- Partner organisations, including local authorities, have greatly benefited from economies of scale, strong brand identity, clear messaging and the call to action represented by the Recycle Now campaign.

Conclusion – Recycle Now

23. In summary, we would argue that the Recycle Now behaviour change programme is a good example of a publicly-funded intervention which was firmly based on evidence, which has been subject to regular review and evaluation since its introduction, and which has been successful in meeting its objectives.

Love Food, Hate Waste

Origin, evidence base and programme design

24. An estimated 8.3 million tonnes of household food waste (approximately one quarter of all household waste arisings) is produced each year in the UK, most of which could have

been eaten³⁷⁰. This wastes good food, wastes money and adversely impacts on the environment. The food we throw away is a significant contributor to the production of greenhouse gases in the UK, because most food waste ends up dumped in landfill sites, where it creates methane, a greenhouse gas which is twenty five times more powerful than CO₂ in global warming terms. Action on food waste is therefore an important component of the Government's approach to meeting its climate change targets.

25. In policy terms, one of the main drivers for action on waste is the EU Landfill Directive, which requires large reductions in the amounts of biodegradable municipal waste (BMW) sent to landfill over the coming years. Since food waste forms around one third of the BMW that currently gets sent to landfill, it is a key priority for action in order to meet the Directive's targets.

26. The economic costs of food waste are also substantial. Consumers spend £12 billion a year on food that is not eaten, while local authorities spend at least £1 billion a year in collecting and landfilling this waste.

27. To help reduce the amount of food that is thrown away, WRAP announced in its third Business Plan³⁷¹ that we would have a target 'to deliver 100,000 tonnes of household food waste reduction' across the business plan period (2006-2008).

28. To do this, WRAP launched the 'Love Food, Hate Waste' (LFHW) behaviour change programme in 2007. The first stage in doing so was to produce the evidence base, given that prior evidence in this area was not comprehensive. WRAP therefore commissioned several research studies in 2006 and 2007; these are available on our website³⁷². In summary, they identified the scale of the problem, investigated householders' knowledge, attitudes, beliefs and behaviour around food and food waste, and considered different ways in which householders might be supported in changing their behaviour.

29. For example, the research showed that householders' good intentions are often hampered by a range of factors including:

- a lack of planning when food shopping - buying more than is needed;
- poor food storage knowledge;
- a lack of confidence around cooking (especially in making meals from the food available in the house, and around portion control); and
- confusion over food date labels (such as the difference between 'use by' and 'best before' dates).

30. There are a number of different approaches to reducing food waste. As well as working with consumers, the programme also works with the food and retail industry, since food packaging and technology can also play an important role. Improving or adapting packaging, and applying technologies such as:

- increasing the shelf life of products;
- using oxygen scavengers;
- modified atmospheres;

³⁷⁰ 'Household food and drink waste in the UK', WRAP, November 2009. Available at: www.wrap.org.uk/retail/case_studies_research/report_household.html.

³⁷¹ 'Increasing resource efficiency, reducing carbon emissions: Business Plan 3, 2006-2008', WRAP, May 2006, p.12.

³⁷² See www.wrap.org.uk/retail/case_studies_research. Search under 'food waste' and 'reports'.

- interactive films; and
- resealable packaging

are all helpful in maintaining food quality for longer, both in store and at home. This extends shelf life and so reduces food waste.

31. Having gathered the evidence base, the behaviour change part of the LFHW programme was launched in November 2007. It consists of a national website (www.lovefoodhatewaste.com), containing facts and figures along with ideas for how to reduce household food waste, supported by local authority programmes of local action. Building on the success of the Recycle Now model, where national and local activity were combined under a single brand, delivering synergies as a result, the LFHW programme was designed on the same model.

32. As well as an active partnership with more than three hundred local authorities across the country, the LFHW programme works with the UK grocery sector, the food industry, the Government and other organisations such as the Food Standards Agency to develop practical solutions and improved communications, all with the aim of making it easier for consumers to get the most from the food they buy and to waste less of it.

33. WRAP's current aim is to reduce consumer food waste by 250,000 tonnes by March 2011 – although it is important to note that this relates to all the work that WRAP is doing on food waste reduction, of which the LFHW behaviour change programme is only one part.

Measures of success

34. As mentioned above, our first target in relation to food waste was 'to deliver 100,000 tonnes of household food waste reduction' over the period of our third Business Plan (2006-2008). We were successful in doing so: our Impact Review³⁷³ published in October 2008, which evaluated our performance against the third Business Plan targets, reported that we had delivered 110,000 tonnes of household food waste reduction, exceeding the target by 10%.

35. We still have six months to go until the end of our current (fourth) Business Plan, and so it is not yet possible to make a definitive statement about the success of the LFHW programme during this Business Plan period.

36. However, we recently announced the outcome of the first phase of the Courtauld Commitment, the responsibility deal we brokered with the retail sector to reduce packaging and food waste. This work goes wider than LFHW, but is intimately linked to it on the food waste side. We were able to announce that a cumulative total of 670,000 tonnes of food waste had been avoided across the UK between 2005 and 2009. This meant that we had exceeded our overall target, which was to reduce annual food waste arisings by 155,000 tonnes per year (in fact, 270,000 tonnes less food waste arose in the year 2009/10 than in 2007/08).

37. Although these results are the outcome of more work (by WRAP and our many partners) than just the LFHW behaviour change programme, we are sure that that programme has made a significant contribution to this level of success.

³⁷³ 'Creating a world of difference – WRAP Business Plan 2006-08: Impact Review' WRAP, Oct 08, p.23. Available at www.wrap.org.uk/downloads/ImpactReviewDesigned.264c0f94.5918.pdf.

Evaluation

38. Due to the fact that the Love Food, Hate Waste behaviour change programme was launched in late 2007, some three years after the start of the Recycle Now programme, we do not yet have a sufficiently long time series of data on which to perform a rigorous evaluation of the programme in the same way as has recently been done for Recycle Now.

39. However, the results of the latest consumer survey (Feb 2010), tracking people's engagement with food waste issues and the LFHW programme, do provide some indications:

- 53% of those surveyed said they had seen or heard something about the amount of food we throw away, or about encouraging us to cut this down;
- 63% recognised the statistic (a key fact used in LFHW materials) that 'a third of the food we buy ends up being thrown away';
- 64% strongly agreed or tended to agree that, since seeing/hearing something about food waste, 'I should make more effort to try and minimise the amount of food I throw away at home';
- 30% said that 'the Government' was behind what they had seen or heard; and
- 26% had seen at least one image associated with the LFHW programme.

40. In addition, since the start of the Love Food, Hate Waste programme:

- the LFHW website has been visited by over 1 million people; and
- over 2 million people have made changes to the way they shop for, prepare, store and use food.

Conclusion – Love Food, Hate Waste

41. In summary, we would argue that the Love Food, Hate Waste behaviour change programme is also a good example of a publicly-funded intervention which was firmly based on evidence, which has been subject to regular review and evaluation since its introduction (although not to the same level as the Recycle Now campaign, since it is three years younger), and which has been successful in meeting its early objectives – although more remains to be done.

Q9. *Within government, how are the lessons learnt from the success or lack of success of behaviour change interventions fed back into the design of future interventions? Are lessons learned from industry and voluntary sector behaviour change activities also taken into account?*

42. WRAP cannot, of course, speak for the Government. However, in our own work on behaviour change programmes, we have always tried to learn lessons from our own, and others', efforts, and to use these in improving future interventions.

43. As mentioned above, the Recycle Now programme was designed after rigorous analysis of the evidence surrounding the successes and failures of previous behaviour change programmes such as 'Rethink Rubbish'. It was this analysis which led us to design Recycle Now as a combined national-local effort, ensuring that the programme did not simply raise awareness of the issues, but provided people with a call to action and locally-tailored information on how they could recycle more in their own areas.

44. The Love Food, Hate Waste programme, in turn, learned from the experience we had gained in running the Recycle Now programme. A key piece of learning here was the value of the synergies produced by running a national behaviour change programme in parallel with many local ones, all of which were delivered using a single brand identity.

45. Finally, our work on both the Recycle Now and Love Food, Hate Waste programmes has benefited hugely from active discussions with industrial and voluntary sector partners. Our food waste work is delivered in collaboration with retailers, food manufacturers and others across the supply chain, and the exchange of information and experience has enabled both sides to learn from each other. Similarly, our decision to work with Green Alliance on their 'Green Living' programme of work reflects our wish to learn from the voluntary sector, and more widely, as we look to the future of our behaviour change interventions.

Conclusion

46. WRAP has run two highly effective behaviour change programmes – Recycle Now and Love Food, Hate Waste – since 2004. These programmes were both designed on the basis of clear evidence of what had – and had not – worked previously. We constantly evaluate the success of these programmes, to ensure that they are effective and represent good value for money, and we will shortly be publishing a detailed evaluation of the success of the Recycle Now programme over the last five years. We hope that this evidence will be of use to the sub-committee, and would be happy to expand upon it further if that would be helpful.

8 October 2010