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Dear Norman,

Re: Electronic-Cigarettes

Thank you for your letter of 26 September about electronic cigarettes (e-cigarettes). You raise several important issues and concerns and I have tried to respond to them all below.

In England more than 200 people die of smoking related diseases every day and while millions have used e-cigarettes to stop smoking, adverse events remain mercifully rare. The United Kingdom (UK) approach to tobacco control is proving highly successful. Smoking among adults and young people is falling fast and vaping among youth in England has not increased since 2016.

Data on adult and young people's smoking and vaping habits can be viewed at: <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/drugusealcoholandsmoking/datasets/adultsmokinghabitsingreatbritain>; and at: <https://digital.nhs.uk/data-and-information/publications/statistical/statistics-on-smoking/statistics-on-smoking-england-2018/part-4-smoking-patterns-in-children>.

Vaping deaths in the United States of America (USA)

Public Health England (PHE) is in contact with USA federal agencies including Centers for Disease Control and Prevention (CDC), Food and Drug Administration (FDA) and National Institute on Drug Abuse (NIDA). We are obviously concerned to hear about the alleged vaping deaths in the USA and keen to understand more about what has caused them.

The CDC has recently been clearer about the illicit products implicated in this outbreak and it looks as if most, if not all of these, were related to illicit vaping products, including vaping cannabis derivatives. Also, the suddenness of the outbreak across many USA states in just a few months, suggests that this is not a gradual effect of long-term use, but because of a specific agent coming into use in the affected population.

So, it is important to distinguish between this outbreak, which has mainly affected young male users of cannabinoid inhalers, and the products used by around nine million Americans and three million people in the UK, where we have yet to see any comparable effects.

Our response to the USA outbreak is primarily related to the threat to people who use or are at risk of using cannabinoid inhalers, rather than those who use nicotine-inhaling products regulated by the Medicines and Healthcare Products Regulatory Agency (MHRA). We have updated our

advice to the public, including on our FRANK website. We have not issued an alert to date, because the evidence on the causes of the deaths in the US is not yet conclusive, and the information has not reached the threshold needed to issue an alert. This can be viewed at: <https://www.talktofrank.com/news/vaping-cannabis-oils-news-alert> .

PHE has cascaded information about nicotine-inhaling products to relevant local services, including local public health teams, stop smoking services and substance misuse services. This directs people to report any adverse effects to the MHRA's Yellow Card Scheme. This can be viewed at: <https://yellowcard.mhra.gov.uk/>.

Children and flavoured e-cigarettes

There is concern in the USA about increasing electronic-cigarette use by young people in the context of the rapidly declining rates of youth cigarette smoking. Across the USA there are state-wide, and city bans on selling e-cigarettes to minors.

In the UK, youth smoking has been declining rapidly. For example, the University College London Smoking Toolkit Study reports in its most recent monthly survey that 5% of 16-17-year olds smoke, compared to 23% in 2007. This trend is also reflected in official data from the Smoking Drinking and Drug Use Survey. Interestingly, these surveys do not find an increase in youth vaping since 2016. This can be viewed at: <http://www.smokinginengland.info/>.

We also are beginning to get objective data on whether e-cigarette use is re-normalising smoking and so far this is reassuring. Analysis of national data from England, Scotland and Wales suggest that at precisely the time the e-cigarette use was increasing among young people, anti-smoking norms were hardening. This can be viewed at: <https://tobaccocontrol.bmj.com/content/early/2019/03/08/tobaccocontrol-2018-054584.abstract>.

Why should there be such a difference between the USA and UK? Flavours do not explain the difference as the range of flavours available in both countries is broadly similar. However, there are three major differences in policy:

1. The UK has a ban on print and broadcast advertising with restriction on online marketing, but the USA does not.
2. The UK has a cap on nicotine concentration, whereas the USA does not. For example, Juul, the most popular product in the USA, is available in the UK but with less than half the nicotine concentration.
3. The USA has a high-profile campaign warning young people against vaping in graphic terms and although this is intended to reduce youth vaping, the campaign and its media coverage risks heightening young people's perception that their peers are regularly using e-cigarettes, which in turn risks more serious unintended consequences.

E-cigarette ban in India

India is one of several countries that appears to be responding to the outbreak of lung disease among cannabis vaping by proposing a ban on nicotine inhalers. India has a major and complex problem with tobacco use which causes in the region of seven million deaths per year. Cigarette smoking is widespread among people who are relatively wealthy, bidis (a cheap hand rolled cigarette or mini cigar) are widely used by poorer Indians and a variety of highly carcinogenic smokeless tobacco products with almost 30% of males reporting the use of smokeless tobacco. In this context, the prohibition of the least harmful nicotine products seems paradoxical from a UK perspective.

By contrast, we understand that Pakistan has been more positive in reducing risk products and there is a proposal in development for a randomised control trial for e-cigarettes in smoking cessation.

PHE e-cigarette reviews

The government's Tobacco Control Plan for England asked PHE to update its 2015 review of e-cigarettes and other novel nicotine delivery systems every year until the end of the current Parliament in 2022. This can be viewed at: <https://www.gov.uk/government/collections/e-cigarettes-and-vaping-policy-regulation-and-guidance#e-cigarettes-evidence-reviews>.

We are currently in the process of producing these reviews. The most recent review was published in February and focused on vaping prevalence and characteristics of e-cigarette use in adults and young people, and e-cigarette use in English stop-smoking services. This can be viewed at: <https://www.gov.uk/government/publications/vaping-in-england-an-evidence-update-february-2019>.

The next review is due to be published in early 2020 and will include the latest analysis of use among young people.

Conversations with other countries

As you would expect, we are in close dialogue with a range of other countries. We are active members of the Global Tobacco Regulators Forum and work closely with European Union (EU) member states.

In addition to the USA, we are in close dialogue with New Zealand and Canada, both of whom take an approach that, like the UK, seeks to maximise the opportunities of e-cigarettes to reduce smoking, while managing any risks they might raise.

Later this month we will welcome a delegation from the parliament of the Philippines, who are visiting the UK to better understand our approach to tobacco harm reduction.

Advice to the public and clinicians

I am sure it will not surprise you that we stand by the advice that we have given in the past, that e-cigarettes remain much less hazardous than smoking in the UK.

In 2018, the US National Academy of Sciences Engineering and Medicine concluded that on the available evidence, e-cigarette use is far less harmful than smoking. We agree and think that "95% less harmful" is an effective way of communicating that to the public. E-cigarettes clearly help smokers quit.

We have been clear in our public communications that these recent events do not provide any reason to change our advice on e-cigarettes. We have said from the outset that vaping isn't completely risk free but is far less harmful than smoking tobacco and that there is no situation where it would be better for your health to continue smoking rather than switching completely to vaping.

However, we are concerned that the public seem to increasingly think that using a proprietary e-cigarette could be dangerous, which might stop smokers using them to stop smoking. This reinforces the need to have clear and consistent communication from public authorities about the relative risks of smoking and vaping.

It is no exaggeration to say that inflating fears about e-cigarettes could cost lives. Unlike in the USA, most vapers in England stop smoking completely but those who wrongly believe that vaping is as harmful as smoking are much more likely to continue to smoke. Several recent studies have found, not only that e-cigarettes are effective in smoking cessation, but that they are twice as effective as nicotine replacement therapy. One major trial found that this doubling of effectiveness was achieved at one fifth of the cost. This can be viewed at:

<https://www.ncbi.nlm.nih.gov/pubmed/30699054>.

Our Stoptober campaign is currently underway, part of which includes advice to the public about stopping smoking by using e-cigarettes. This information is available at the Stoptober website. This can be viewed at: <https://www.nhs.uk/oneyou/for-your-body/quit-smoking/using-e-cigarettes-vapes-to-quit-smoking/>.

We will continue to provide advice to clinicians where needed. For example, we are currently in discussions with the National Health Service (NHS) about issuing guidance on using e-cigarettes in NHS mental health organisations to help people quit smoking.

Evidence base on e-cigarettes

The government has an ongoing programme to build the evidence base about e-cigarettes. This includes the previously-described evidence updates from PHE, and other sources such as:

- systematic reviews from the National Institute for Health and Care Excellence
- reports from the Committees on Toxicity, Mutagenicity, Carcinogenicity of Chemicals in Food, Consumer Products and the Environment on heated tobacco products and on electronic cigarettes
- the MHRA's Yellow Card Scheme notification process for collecting safety concerns about e-cigarettes
- reports from the National Poisons Information Service.

In conclusion, we acknowledge that some governments such as in the USA and India, feel that their tobacco control policies need to be revised in relation to e-cigarette use. We do not think this is the case in England, where smoking among adults and children has fallen to record lows, where vaping is not re-normalising smoking, where regular e-cigarette use among children remains rare (and confined largely to young smokers and ex-smokers) and where most e-cigarette users have stopped smoking completely and are on a journey to be nicotine free.

I hope this reply is of assistance. Do let me know if you have further questions on any of the above.

With best wishes

Yours sincerely



John Newton
Director of Health Improvement