

**SELECT COMMITTEE ON SCIENCE AND TECHNOLOGY****Ageing: Science, Technology and Healthy Living****Call for Evidence**

The House of Lords Science and Technology Select Committee, under the Chairmanship of Lord Patel, is conducting an inquiry into ageing. The Committee invites interested individuals and organisations to submit evidence to this inquiry.

**Please note that this inquiry is considering human ageing as a whole, rather than focusing on the management of individual diseases, and it is not considering the funding for social care.**

When preparing your response, please bear in mind that short, concise submissions are preferred and responses must not be any longer than six sides of A4 – bullet points are acceptable. We do not expect you to address every question below. Equally, if there are any crucial issues not captured by the questions we pose, please highlight what they are and explain their salience.

The process for submitting evidence is set out in Annex I, but if you have any questions or require any adjustments to enable you to respond, please contact the staff of the Committee on the details provided. **The deadline for receiving written submissions is Friday 20 September 2019.**

Public hearings will be held in Autumn 2019. The Committee aims to report to the House, with recommendations, in spring 2020. The report will receive a response from the Government, and may be debated in the House.

**Context and Scope**

Life span has increased over recent decades, but health span, the period of time people live in good health, has generally not kept pace, and so older people are living longer with ill health. This increased duration of ill health, both physical and psychological, and often compounded by loneliness, can be challenging and unpleasant for individuals. The increasing number of people affected is also placing pressure on health services and social care, threatening to overwhelm the funding mechanisms, and failing those in need. Increasing health span would mean that people could live independently for longer, with better health and wellbeing, and would reduce pressure on services and finances.

Increasing health span has been adopted as a policy objective by the UK Government. “Ageing Society” is one of the Government’s Industrial Strategy’s four Grand Challenges, and the stated mission is to “Ensure that people can enjoy at least five extra healthy, independent years of life by 2035, while narrowing the gap between the experience of the richest and poorest”.

This inquiry will seek to determine whether the Government's ambition to increase health span is achievable in principle, and which approaches may be most successful in practice. It will also look at the ways in which science and technology can be used to mitigate some of the effects of ill health in old age, and to support older people living with poor health.

We are seeking written evidence from a broad range of people and organisations with experience and expertise relating to ageing. These may include:

- older people and those who provide care and services;
- organisations and charities who provide support and services for older people;
- developers of technologies and infrastructure to assist with maintaining health and/or independence in old age, and those who deploy them in homes and communities;
- scientists researching the causes of ageing and potential treatments; and
- policy makers, campaigners and funders.

Several policy areas related to ageing are devolved to Northern Ireland, Wales and Scotland. We would be interested to hear about any differences in approach across the devolved nations, and we would hope that our inquiry's conclusions and recommendations would be of interest to the devolved governments.

The issue of funding the cost of social care is significant, but we will not be considering it in this inquiry because it has been recently considered by the House of Lords Economic Affairs Committee and others.

We seek evidence about the following topics (specific questions are listed further below):

- the scientific understanding of the ageing process, and how these areas of research could lead to treatments for delaying or managing the negative effects of ageing;
- technologies that can improve health and wellbeing in old age, and technologies that can enable independent living in old age;
- opportunities for the UK to commercialise discoveries and innovations relating to healthier ageing; and
- the policy implications of a healthier older population.

## Questions

### Scientific basis

1. How complete is the scientific understanding of the biological processes of ageing and their epidemiologies (including the relative roles of genetics, epigenetics, lifestyle, environment, etc.)?
2. How firm is the scientific basis for public health advice about healthy lifestyles as a way to increase health span, including physical health and mental health?
  - a. What are the practical impediments for this advice being acted on?
  - b. Are there examples of good practice in the UK/devolved nations, or elsewhere?
3. Which developments in biomedical science are anticipated in the coming years, in time to contribute to the Government's aim of five more years of healthy and independent life by 2035? Research areas may include:
  - Treatments based on new approaches e.g. senolytics, epigenetic therapy
  - Drug repositioning
  - Treatment of co-morbidities and polypharmacy
  - Diagnostics, particularly early diagnostics for ageing-related diseases
  - Biomarkers for diagnostics and for monitoring effectiveness of treatments
  - Personalised medicine for ageing-related diseases and multi-morbidities
4. How complete is the understanding of behavioural determinants and social determinants of health in old age, and of demographic differences?

### Technologies

5. What technologies will be needed to facilitate treatments for ageing and ageing-related diseases, and what is their current state of readiness? For example:
  - Drug delivery devices, for existing or future treatments
  - Technologies for monitoring conditions and providing personalised medical advice
  - Technologies for monitoring healthy living e.g. fitness, diet, etc.

6. What technologies will be needed to help people to live independently for longer, with better health and wellbeing? What is the current state of readiness of these technologies, and what should be done to help older people to engage with them?

For example:

- Digital communications for services, social interactions, etc.
  - Devices, machines, etc. for daily living in the home
  - Transport, infrastructure, services, etc. for involvement in community
  - Accessible public spaces
  - Smart homes
7. How can technology be used to improve mental health and reduce loneliness for older people?
8. What are the barriers to the development and implementation of these various technologies (considered in questions 5-7)?
- a. What is needed to help overcome these barriers?
  - b. To what extent do socio-economic factors affect access to, and acceptance of, scientific advice and use of technology by older people and those who care for them?

### **Industrial strategy**

9. What opportunities are there for industry in the development of new technologies to help increase health span? In which areas of medical research and technology development does the UK excel?
10. What more is required for the UK to benefit from commercialisation of its discoveries and inventions relating to healthy ageing, as envisioned by the Government's Industrial Strategy?

### **Healthier ageing**

11. How feasible is the Government's aim to provide five more years of health and independence in old age by 2035?
- a. What strategies will be needed to achieve the Government's aim?
  - b. What policies would be required, and what are their potential costs and benefits?
  - c. Which organisations need to be involved?
  - d. Who should lead the work?

12. To what extent are inequalities in healthy ageing, as well as differences in acceptance of technologies, a barrier to achieving the aims of the Government's Ageing Society Grand Challenge?
- a. To what extent could achieving the Government's aim of five more years of healthy and independent life exacerbate, or reduce, these inequalities?
13. What would be the implications of a paradigm shift to people leading healthier lives for longer, and spending less time suffering ill health? For example:
- Economic impacts
  - Time spent in work as opposed to in retirement
  - Provision of activities and services for active older people

## ANNEX I: GUIDANCE FOR SUBMISSIONS

Written evidence should be submitted online using the written submission form available at <https://www.parliament.uk/hlinquiry-ageing-science-technology-submission-form>. This page also provides guidance on submitting evidence. The deadline for written evidence is **Friday 20 September 2019**.

If you have difficulty submitting evidence online, please contact the Committee staff by email [hlscience@parliament.uk](mailto:hlscience@parliament.uk) or by telephoning 020 7219 5750.

Shorter submissions are preferred, no longer than six sides of A4. Paragraphs should be numbered. All submissions made through the written submission form will be acknowledged automatically by email.

Evidence which is accepted by the Committee may be published online at any stage; when it is so published it becomes subject to parliamentary copyright and is protected by parliamentary privilege. Submissions which have been previously published will not be accepted as evidence.

Once you have received acknowledgement that the evidence has been accepted you will receive a further email, and at this point you may publicise or publish your evidence yourself. In doing so you must indicate that it was prepared for the Committee, and you should be aware that your publication or re-publication of your evidence may not be protected by parliamentary privilege.

Personal contact details will be removed from evidence before publication, but will be retained by the Committee Office and used for specific purposes relating to the Committee's work, for instance to seek additional information.

Persons who submit written evidence, and others, may be invited to give oral evidence. Oral evidence is usually given in public at Westminster and broadcast online; transcripts are also taken and published online. Persons invited to give oral evidence will be notified separately of the procedure to be followed and the topics likely to be discussed.

Substantive communications to the Committee about the inquiry should be addressed through the clerk of the Committee, whether or not they are intended to constitute formal evidence to the Committee.

This is a public call for evidence. Please bring it to the attention of other groups and individuals who may not have received a copy direct.

You may follow the progress of the inquiry at: <https://www.parliament.uk/hlinquiry-ageing-science-technology>.