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London – Written evidence (INQ0012)**

1. I welcome this inquiry which links three key issues (Science, Technology and Healthy Living) with Ageing.

This submission is in three parts:

- A. The importance of housing and the environment
 - B. The role of technology
 - C. Other points relating to questions in the call for evidence
- Both relate to my own research and that of others

2. A word of caution which I am sure the Committee will take into account. There is a danger of generalising about ageing and older people. Not only are there great differences between men and women, different ethnic groups and where people live, but there is the often underestimated one of cohorts. For example a study of the baby boomers of the 1960s shows that they are more likely to be childless and more likely to live alone in later life (Young and Tinker, 2017a, Young and Tinker, 2017b). They tend to be highly educated and have high levels of technological proficiency. It is likely that 80% will enter retirement owning their own homes. They have a youthful self-image with high levels of consumption. Health is the most important issue for this age group and they are likely to have high expectations for treatment and management. A follow up on the 1940 baby boomers is planned.

A. The importance of housing and the environment

3. I welcome the emphasis on the importance of the role of housing. The report (House of Lords, 2019 p. 55) states that 'The homes and communities in which we live have a big impact on our health'. This is underlined by the World Health Organisation (2018). Yet this link is often absent from government documents that concentrate on health and social care. For example the recent Social Care document 'Working together to integrate adult social care' has no mention of housing (Leng, 2019)

In my view the call quite rightly concentrates on keeping people in their own homes mainly by aids and adaptations (House of Lords, 2019p. 57). Research shows the cost effectiveness of these schemes (Centre for Ageing Better and University of Bristol, 2017). However, I would suggest that if a move is the right option then extra care housing should also be considered. This is specially designed housing with some communal facilities, a warden on hand and usually the provision of at least one meal per day. These schemes provide better accommodation and more care than conventional sheltered housing or residential care homes giving most residents a better quality of life. However, for older people to remain in their own homes many factors need to be acknowledged and addressed by policy makers; for example that a full financial

and social commitment is necessary if older people are to remain socially integrated in their communities.

4. Sheltered housing, with grouped flats or bungalows used to be a popular option. However, a national survey elucidated the complex reasons why sheltered housing, although popular with governments, has been unable to meet the needs of frail older people. Research has highlighted the unsuitability of many schemes and showed creative ways of overcoming the problems (Tinker, 2007) Existing schemes can be successfully adapted as can residential homes (ibid).

5. Other options were researched for a study across Europe. In 'Revolutionising long term care' a study was carried out for the Technology Strategy Board which examined alternatives to institutional care in the UK and Europe and included examples of effective extra care housing and a case study of the Netherlands. (Tinker et al, 2013a and Tinker et al 2013b) Other options include co-housing, where groups of older people live together and granny flats where an older person lives next door to a family. Home sharing is mentioned in the House of Lords report (House of Lords, 2019, p. 61) and research has endorsed this as a viable option both for the older person and the younger one.

6. Research underlines the importance of the surroundings for the physical and mental health of older people as stated on. p. 45 and p. 59 (House of Lords, 2019). The large research council funded research 'Mobility: Research on Mood and Mobility' demonstrated this (Brookfield et al, 2015). This study also showed the value of involving older people in the planning and designing of housing and environment (Tinker et al, 2016)

Research also shows the value of a wider approach and this is illustrated in the work on Age Friendly Cities. The one on London, for example, shows not only the interlinking of housing with other services but also the key role of small things like the placing of public toilets. (Tinker and Ginn, 2016). This is crucial in allowing people to get out of their homes.

7. Research on housing should be conducted with multidisciplinary teams comprising social scientists, architects, engineers, economists and occupational therapists.

B. The role of technology

8. This section is divided into some of the general research evidence, my own research, lessons from Canada.

a. General research evidence

9. Technology in its widest sense covers a range of equipment from the oldest such as telephones to the newest e.g. robots. Equipment can help with mobility, sensory problems, motor issues (such as trembling) memory and problems such as the inability to carry out more than one task at a time.

10. Telemedicine can be described as the delivery of health services at a distance using information and communications technology. It is a mistake to consider telemedicine just as devices. It uses information and communication technologies to exchange valid information for diagnosis, treatment and prevention of disease and injuries, research and evaluation, and for the continuing education of health care providers. The assumption is often that there is a health professional either at one or both ends of the communication (such as a nurse communicating with a hospital) or a patient communicating with a remote professional such as a nurse. Devices can include those for measuring weight, blood pressure, blood glucose and oxygen saturation. However, there can be security problems including access to health data, data protection, lack of infrastructure and a loss of trust in health professionals.

11. Evidence is needed to support the value and expected benefits from the perspectives of health service providers and patients. A recent issue of *Telemedicine and Telecare* has reviewed research methods and methodology (2017, Volume 23, number 9). An article in this journal summarises major studies and concludes that there is need for more validated instruments for the evaluation of user experiences and the effect on organisations as well as more robust mixed methods (Kidholm et al, 2017).

There are also ethical issues to do with the monitoring of people in their own homes and the need for informed consent.

b. My own research

12. An ongoing piece of research is 'I've looked it up on the web' (Tinker, Khera, and Zaidman, 2019). These are heart sinking words that can open a conversation between a doctor and a patient. This is often followed by the presentation by the patient of a sheaf of documents which may or not be relevant to the consultation. They may be inaccurate. The rapid development of the web and search engines such as Google means that there is access to information about health and other topics in a way that has not been possible before. In the past many households possessed a dictionary of medical conditions. However giving access to symptoms, conditions and treatments on the web has opened up information to a greater extent than for previous generations. But how reliable is this information? How much of it is inaccurate or fake? Or provided by firms with an interest in selling a product. This small research study asked a sample of older people their experiences of using the web. How did they obtain the information? How do they assess its reliability? What experiences have they of presenting this information to a doctor? Initial findings show that there was daily use of internet reported by all participants. We suspected using the internet would definitely encourage GP attendance – making them fear the worst/cancer. In fact this was not the case and in some cases dissuaded/postponed GP consultation. The benefits of seeking health information online included a sense of empowerment or being in control.

13. This cohort primarily consult official websites they deem more legitimate such as the NHS website (most popular), as well as Royal College and voluntary organisation websites. Internet search engines are also used but caution was expressed with regards to assessing the reliability and trustworthiness of

information from non-official sources. Older people were very aware of fake news. There was a culture of concealment from their GPs. Only half of participants felt able to disclose to their GP that they use the Internet to seek health information online. Reasons for this included fear of insulting their GP or being disrespectful towards the profession. This research fits well with the example given on page 10 of the report which was attached to the call for evidence (House of Lords, 2019) when 'Nora' started exercises to help with her arthritis following on line research.

c. Lessons from Canada

14. An interesting and powerful initiative is taking place in Canada. A large programme of research based on the networking of centres concerned with technology has been funded by the Government. Called "AgeWell" it was set up in 2015 to seize the opportunities that technology offers to improve services, help people to live healthy and active lives and create new businesses in Canada. It includes over 250 researchers at 42 universities and research centres and almost 100 technologies, services, policies and practices are being developed. They have supported 25 start ups and created EPIC (early professionals inspired careers) to prepare the next generation of Canadian researchers and entrepreneurs. Crucial too is the active involvement of older people and carers – more than 4,700 – who ensure that the products are practical and will be used.

C. Other points relating to questions in the call for evidence

15. The importance of staying active (House of Lords, 2019, pp.38,41,60 and questions on page 42) is stressed. Research shows the value of exercise in old age particularly for women (Tinker et al 2017a, 2017b). The importance of teeth and oral health should be emphasised. Ways in which this can be done collaboratively with older people themselves is shown in a study where dental students were at the heart of the research (Tinker et al 2018).

16. Inspiring the next generation of researchers (House of Lords, 2019, p. 63) is an important part of the document. In the Department of Global Health and Social Medicine at KCL current and past PhD students have been consulted on what would be helpful for them to prepare for a job.

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9 September 2019