



## Challenge 1: How can we use data to predict conditions before they arise?

The application of artificial intelligence (AI) and big data for clinical purposes is still rare. However, it is acknowledged that technology is opening many opportunities for prediction and consequently preventive medicine. For example, health monitoring technologies could support older adults to stay independent for longer, as well as promoting self-management of certain conditions. For this to become a reality there is a need to investigate the barriers that prevent people from using such technologies. Whether it is people's trust, and worries around privacy, or lack of digital literacy, more research is needed to pinpoint the causes. Only then can research be done on the design of new policies to promote the active participation of older adults in their own care by boosting their confidence in technology and data sharing. In the workshop, encouraging NHS patients to use unobtrusive sensors and hearing aids that collect real-life data were two of the examples discussed. Balance analysis for falls prevention, cardiac monitoring for early arrhythmia detection, imaging analysis for early diagnostics, and automated diabetes monitoring were some of the uses debated (4).

## Challenge 2: How can we understand why people feel stigma, and how can we address this?

Ageism and negative attitudes towards older adults have an impact on physical and mental health as stigmatisation can lead to delayed diagnosis, or late requests for support. An example presented at the workshop was the fact that people with hearing disabilities often do not realise it immediately since it happens gradually. Even when they do realise, people may be ashamed of admitting it, so they delay seeking intervention. In addition, the aesthetic of hearing aid devices can make some users reluctant to use them due to perceived stigma (5). Other illustrative cases include the fact that wheelchairs give mobility but also attract attention, or the fact that placing someone in medical care might be beneficial for their physical health but impact on mental wellbeing if they have to leave their home and family behind.

There is the need to investigate which methods would be more effective in collecting information from older adults on why they feel stigma, and what needs to be done from an innovation perspective to mitigate that. For example, co-design of technology and care pathways could be a way to reduce stigmatisation and better design assistive technologies or treatments that meet older adult needs.

More frequent use of participatory approaches such as focus groups, and patient interventions are needed in the design of more inclusive research and user-centred policies to promote engagement with the hard-to-reach

communities such as BAME groups when it comes to their personal care.

### **Challenge 3: How can we better harness the technology we already have?**

Participants noted that there are many opportunities to use existing technologies in new ways to help improve health outcomes. There is the need to investigate the potential of repurposing existing technologies to address some of the current unmet needs.

The rapid deployment of virtual medical appointments (instead of in-person consultations) during the COVID-19 pandemic is one such example. But as with all innovations, there are benefits and drawbacks to be considered. In this example, virtual consultations were more easily accessible for people with reduced mobility or who needed to shield. On the other hand, people with hearing problems or cognitive impairment may have



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