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What are the opportunities to unlock the potential and capital of an ageing population in the North East?

Future of an ageing population: think piece

Foresight, Government Office for Science

What are the opportunities to unlock the potential and capital of an ageing population in the North East?

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I. Background

Ageing is now well documented as one of the greatest social and economic challenges of the 21st century. By 2025 more than 20% of Europeans will be 65 or over, with the fastest growing age group being the over 85s. The impact of an ageing population affects all countries and policy areas, demanding a cross-departmental policy response. The challenge of population ageing goes to the heart of how we think and act in all spheres of our lives. It covers education, employment, where we live, how we provide, market and use products and services, how we take care of ourselves physically and mentally, food, financial management, pension provision, how we tackle inequalities and care for those of all ages who cannot care for themselves. Yet our societal infrastructure was just simply not designed to respond to this and there are legitimate concerns that our existing public sector provision for health and social care, for example, is simply unsustainable. New approaches are essential if we are all to live better for longer.

The UK can potentially be a global leader in providing innovative responses. It has been amongst the earlier nations to experience these changes and has a relatively strong ageing research base from which to develop new solutions. Credible evaluated responses to ageing related challenges could be marketed to similar situations overseas, but only if we achieve a similar lead in their creation.

Each region has its own distinctive challenges but the need to stimulate and invest in innovation to help ensure systems are effective and financially viable is common to all. Each region also has incredible community assets in the capital of its citizens – the North East certainly - and exploring and investing in opportunities and mechanisms to unlock and harness this to co-develop innovative solutions to the real challenges presented by an ageing population has never been more urgent.

2. Valuing our mental and social capital

Mental and social well-being is vital for healthy individuals, communities, social cohesion and inclusion, and economic prosperity. If we are to prosper and flourish in an increasingly competitive global environment then it is vital we make the most of all our resources, enabling people to realise their potential throughout the life course (Foresight, 2008). This focus on a life course perspective is key. Investing in younger people and early life can clearly set a positive course for the future, giving every child the best possible start in life (Marmot et al., 2010). Yet, given the demographic trends, a sustained strategic focus on investment in mid and later life to enable and maintain health and well-being is also essential. There are already more people over 60 than under 16 and no society can afford to continue to ignore the potential of so large a proportion of its population.

Population ageing is challenging cultural perceptions of age, changing our notions of what constitutes education, learning, careers, work and retirement. As many people are reaching older age in better shape than ever before, and the need to work longer due to diminished pension provision, the numbers of older people as a proportion of the workforce are increasing significantly. The North East has a net decrease between 2015 and 2025 in terms of people of middle age (aged 40-64). This has implications for employers and the region in terms of skills retention and productivity. There is surely an economic imperative for strategies to emphasize and stimulate education, lifelong learning and career guidance across the life course. Currently in the UK formal education ends for the vast majority at aged 16-18, yet the pace of technology change is creating new capabilities at an ever-increasing rate. There has never been more need to ensure people have the opportunity to retain and keep up to date. Whilst retraining or reskilling may be essential to continue in work, rhetoric does not match reality. The North East continues to have amongst the highest levels of unemployment amongst people over 55 who are not working, due to the effects of chronic illness.

Balancing working longer, training, care commitments, and everyday life is also a major challenge for a growing proportion of people. The resource of informal care (often provided by people who are older themselves) and volunteers which has underpinned care for many decades and saved billions is under threat as people are working longer and unavailable for care for periods of time or live remotely. There is a clear social and economic cost. Over the next 30 years in the UK the number of people affected by dementia, for example, – either as a person or as a carer – will be over 2 million, with costs rising from a current annual cost of £26.3 billion to over £50 billion. Unpaid carers are overworked and under supported – the cost to people with dementia and their families is £17.4 billion, the cost to the state £8.8 billion (Alzheimer's Society, 2014). If someone has social, emotional and financial resources they may be able to manage to juggle care and other commitments in the short term. But in the long term, they will face a sustained assault on mental well-being, undermine resilience and impact on physical and mental well-being, as well as having an obvious economic cost from reducing hours, loss of income and the associated economic costs of social exclusion. The NE Dementia Innovation Hub is an initiative to join up community sector, public sector, industry, academics and people with dementia and their families to develop innovative and creative responses to help people live well with dementia. Families living with dementia have challenged existing policies aimed at supporting people in their own homes, arguing that a greater range of choice is essential to support their individual circumstances and proposed practical, community based solutions to common problems experienced.

3. The potential for technology

Investing in a range of technologies that help enable and sustain better citizenship, greater engagement and accountability has potential to enable people to take much greater direct control of their own lives, in terms of both their individual circumstances and at a community level, shaping healthcare delivery and future smart cities for an ageing population. How can citizens be directly involved in the design of everyday environments to improve well-being and help us to remain healthy for longer, or better support capability for those with support needs? How best can we envisage, design and implement technologies that support individuals to adopt and maintain behaviours through which they will age well, or that better compensate for individual loss of capacity or capability? Digital technologies have a huge potential. As communication tools they can promote wide public participation in the design and delivery of local services, including education, public health and social care and urban planning. Through the collection, collation, processing and representation of data we can personalize information to simplify travel, purchasing and many other frequent activities. Personalised medicine, bringing together technological advances including big data, cloud computing and smart devices, will transform an individual's ability to take control of their own health and lifestyle with a view to preventing and managing life-limiting illnesses (NIHR Newcastle Biomedical Research Centre on Chronic Disease and Ageing, 2014). However, we need to better understand the willingness and ability of users, particularly older users, to engage with these technologies and design interventions and devices accordingly.

4. Harnessing mental capital for innovation

The North East is a small and reasonably cohesive region. It is fortunate in having superb universities with world-class research on ageing, from all disciplines including biomedicine, computer science, engineering and social sciences. The North East also has the widest inequalities in income distribution and health of any English region and so it is imperative that we effectively utilise partnerships between academia, public and voluntary sector and industry to co-develop innovative responses and solutions using the best available evidence to tackle health inequalities across the life course and directly involve citizens in co-developing solutions to healthy ageing.

VOICE (Valuing our Mental Capital and Experience) North is a lively and creative organization, based at Newcastle University since 2009 and a model which can be used to support the involvement of the public to support innovation. It was established as a mechanism to harness the immense experience and collective wisdom of the public at scale to capture their ideas, insights and vision as active partners in developing and indeed demanding innovative solutions to the challenges presented by ageing populations and demographic change. With well over 1000 people involved, it has supported over 100 research projects and business opportunities in the last 18 months. The majority of members are older people, but people of all ages and backgrounds are involved. VOICENorth has invested in creating a flourishing community of 'research active citizens', with partnerships between members of the public and patients working with academics, policy makers and businesses to co-create and translate research evidence and supporting innovation. Projects are extremely varied – they range from developing new engineering solutions and technologies, to health service design, developing interventions to tackle inequalities, working longer, improving public transport and housing design and exploring the role of arts and culture in supporting well-being. Older people themselves are a valuable resource in helping to identify unmet need and design, develop and trial products and services.

Lifelong learning is at the heart of VOICENorth's ethos. It continues to provide numerous opportunities for large numbers of people to learn about the many complex issues associated with ageing, relevant to their own personal perspective and in a wider societal context. It has an important role in maintaining open dialogue with government and industry to influence their thinking on positive approaches to ageing to ensure people of all ages can live their life to its fullest potential.

VOICENorth has been involved in a wide range of research programmes, including the Social Inclusion through the Digital Economy hub (SiDE led by Professor Paul Watson). MoveeCloud based at Newcastle University, facilitates understanding the type and intensity of exercise a person undertakes with a focus on preventing major chronic illnesses including diabetes, obesity and cardio-vascular disease. A plethora of apps for mobile phones are now available to monitor activity and give real time responses to help individuals to manage their own health. Researchers at DriveLab have gained valuable insights into the problems some older people might experience while driving by monitoring concentration, stress levels and driving habits and co-developing technologies from navigation systems, prompts and driverless vehicles to facilitate boosting an individual's independence and social connectedness. 'Tweet My Street' brings a collaboration of academics from a range of disciplines to collaborate with the public on

how to use social media to overcome barriers to including communities such as civic disengagement and use real time data to influence responses. Technology has incredible potential to facilitate open innovation with people contributing insights and developing ideas as solutions to common problems. From this perspective, older people are not the problem, they are part of the solution and realizing the enormous potential of technologies for learning, empowering individuals to learn by accessing information, advice and guidance is critical. This may well stimulate demand for life- long learning and skills development from individuals and employers.

For this to maximize positive healthy ageing outcomes we must be much more focused on and effective in ensuring complex scientific evidence and knowledge is effectively exchanged and translated and that it is accessible and freely available to enable individuals to make active evidence-informed choices. Citizen science approaches have great potential which deserve greater exploration. Public services can seem paternalistic in their approach and work in complicated silos – seemingly impenetrable to lay people. Solutions need to truly enable – this is not just about providing information but also the training, support and confidence to use it. Cross governmental and holistic responses are essential to deal with complex contexts and issues of data sharing remains a critical area to address and embed different approaches – huge amounts of public funding is still wasted on duplication or stemming from a lack of communication between organizations. Accountability is important, and moving from models of consultation to deep engagement could ensure more responsive, co-developed approaches. The public and private sectors need creative, talented and skilled people to enable transition to cloud approaches and the North East is well placed to grow expertise in the successful application of this technology, critical to the region's long term future economic success.

Businesses have been slow to respond to the opportunities presented by demographic change (House of Lords Science and Technology Committee, 2005) and to have detailed understanding of the diverse needs of older consumers in order to capitalize on the enormous global retail and manufacturing opportunities. In the UK, older citizens control much of the wealth, 80% of financial assets in the UK. Manufacturers and retailers will need to quickly adapt their products and sales channels accordingly and this is an arena ripe to directly harness the insights and ideas of older people in exchanging knowledge and skill sets to develop relevant viable solutions.

“I know what I need, what I feel should be available, but I do not see these items available in the open market. This gives me an incentive to be very much involved and very active in the design and development of products and services which I see as a solution to my problems, so they get made available for many people's benefit. I bring a life time of professional and personal experience to this challenge and am driven by solutions – and urgency to see this happen in my life time!”

VOICENorth member

“We are enabling researchers and commercial investors to get a deep level of engagement with older people to come up with the products and services they really want – what should be possible – as opposed to simply altering what is already there”

VOICENorth member

5. Summary

The capital of an ageing population remains massively under-utilised, yet has incredible potential to create solutions to the challenges associated with population ageing. It is essential to directly involve older people in the design and development of solutions. Citizen's insights are catalysts to innovation and should be harnessed effectively utilising a range of approaches and maximizing the use of technologies. Growing existing capabilities to capture older people's potential to contribute to research and innovation will do much to improve the understanding of the market available to businesses, identifying problems and need and are a valuable source of experience based ideas. Approaches to enable research literate citizens and communities and effective knowledge exchange mechanisms deserve greater attention, with a focus on evaluating approaches so learning can be shared. An ageing population demands greater consideration of fairer allocation of resources for learning and skills development across the life course to enhance lifelong health and well-being and maintain resilience.

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