



UCL



HEALTHY AGEING

Symposium 2019

An ageing society

Thanks to advances in healthcare and living standards, people in the UK (and many parts of the world) are living longer than ever before. In 2016, there were 1.6 million people aged over 85 in the UK. By 2041, this number is expected to double.

An ageing population brings new benefits and challenges.

Many people in later life struggle with deteriorating health, loneliness and difficulty accessing services. Society needs to adapt to meet older people's needs and provide them with a better quality of life.

There is not just social value, but also economic value to be gained by extending the quality of life for older people. The so-called 'silver economy' is an opportunity for businesses to tap into a demographic with huge spending power.

Change won't come from one place alone. To achieve a better future for older people, we need to take a multi-pronged, collaborative approach. We need to harness expertise from policy, research, business and consumer communities - and, crucially, from older people themselves.



UCL Institute of
Healthcare Engineering
Transforming lives through digital
& medical technologies

ucl.ac.uk/healthcare-engineering
healthcare-eng@ucl.ac.uk

Funding responses

As part of their Industrial Strategy Challenge Fund (ISCF), the UK Government wants to “ensure that people can enjoy at least five extra healthy independent years of life by 2035”.

They have committed £98 million in funding for research and innovation projects that go towards making healthy ageing a reality.

www.ukri.org/innovation/industrial-strategy-challenge-fund/healthy-ageing

Over the next few years, this area will continue to be a funding priority.

Some other current opportunities include:

‘Complex Health and Care Needs in Older People’ is an ongoing priority for the National Institute for Health Research (NIHR). They welcome relevant proposals for clinical and applied health research.

www.nihr.ac.uk/funding-and-support/themed-calls

Zinc is a company-building programme that creates new businesses tackling unmet needs in society. They are inviting potential founders with an interest in the area of healthy ageing.

www.zinc.vc/mission-3

UCL Healthy Ageing Symposium

On 15 February 2019, the UCL Healthy Ageing Symposium took place in Bloomsbury.

Co-hosted by the UCL Institute of Healthcare Engineering and the Institute of Digital Health, the event brought together academics, industry leaders, government, charity and patient representatives.

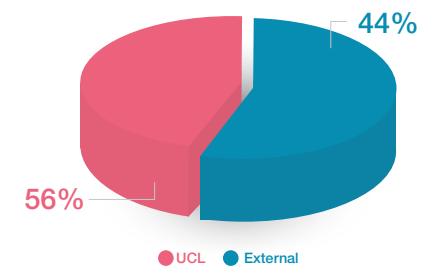
The aim was to address the challenges of ageing healthily, such as helping people live at home longer, tackling loneliness and increasing independence and wellbeing.

Research into ageing and age-related diseases is one of UCL’s key strengths.

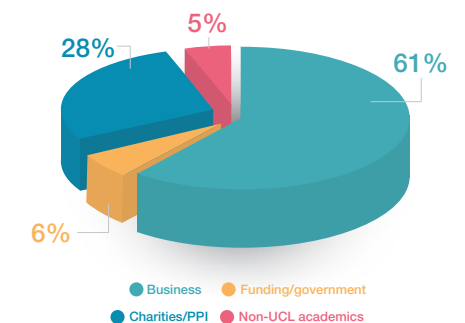
‘Ageing’ is a theme within the UCL Populations & Lifelong Health Domain. UCL is also home to the Institute of Healthy Ageing, the Centre for Ageing Population Studies and the MRC Unit of Lifelong Health & Ageing

Many different disciplines were present at the symposium, including engineering, medicine and social sciences.

Breakdown of attendees



External attendees



The UCL Healthy Ageing Symposium was an opportunity to:

- Gain insights into the current healthy ageing technology landscape and future opportunities
- Learn about current approaches, challenges and opportunities to address healthy ageing through the ISCF
- Connect and collaborate with ageing specialists from policy, research, business and consumer communities

After a morning of presentations and panel discussions, attendees split into four themed sessions:

1. Physical activity during ageing
2. Age-friendly infrastructures
3. Social engagement/services during ageing
4. Care support for age-related diseases & extending independence at home

The smaller sessions gave people from different backgrounds an opportunity to mix and have more in-depth discussions. Many groups came up with strong ideas they are working to carry forward.



Physical activity during ageing

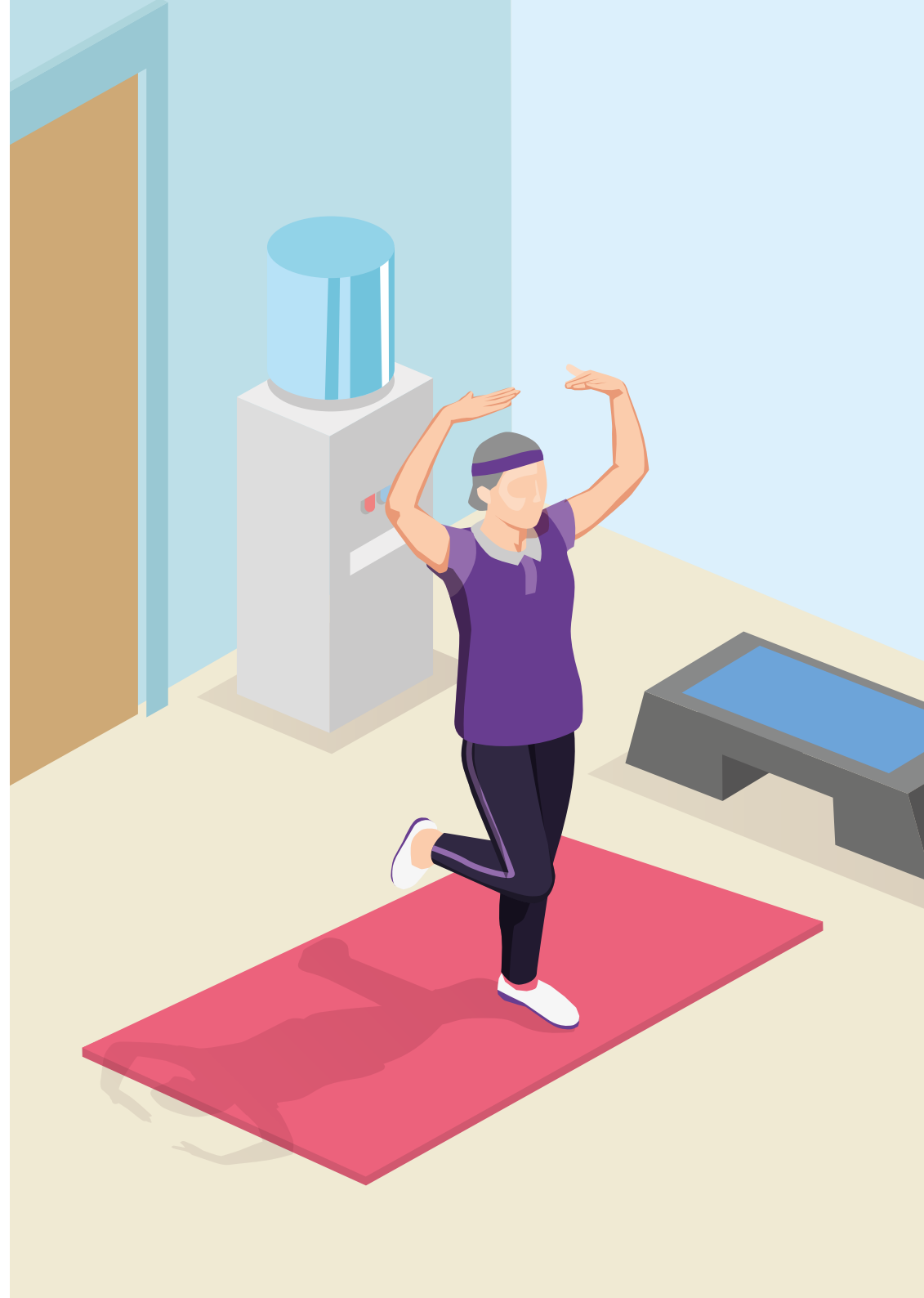
- Amongst 65-74-year-olds, 80% of men and 70% of women are overweightⁱ
- Physical activity can reduce depression and could reduce risk of dementia and some cancers (like breast and bowel cancer)
- High blood pressure is a risk factor for stroke

Attendees discussed some of the different approaches that physical activity for healthy ageing could take. They questioned the concept of 'ageing' as something that happens only in later life, pointing out that incorporating physical activity into lifestyles whilst people are young would act as a preventative measure for bad health.

They explored the links between physical activity and diseases such as diabetes and dementia, but also mental conditions like depression and loneliness.

Issues that may hinder progress were identified, including stigmatisation, motivation and poor usability of the technology created. Groups agreed it was key to draw on psychology and behavioural science to make physical activity more interesting and sustainable, such as gamifying fitness tools and using social sharing and rewards.

Finally, attendees split into teams that proposed technological solutions to some of these identified challenges and are working to move these forward.



Age-friendly infrastructures

- Older people may have difficulty getting in and out of baths, walking up and down stairs
- Housing for older people needs to be near public transport links, GP practices and shops
- Multi-generational neighbourhoods can reduce social isolation
- 3.8 million people over 65 are interested in downsizing – meaning more family houses would come onto the marketⁱ
- Poor housing for older people costs the NHS at least £634 million each yearⁱⁱ

During this session, participants discussed the infrastructure needs of an ageing society, particularly things government and industry can do to make older people feel connected.

The group included cross-faculty academics (from a broad range of disciplines to the built environment) construction and real estate professionals, and non-profits.

The main topics discussed were ensuring that people with dementia feel a part of society, creating a sense of community, delivering appropriate care services and how age-friendly infrastructure fits into government strategy.



i
ii

Unlocking the potential, Demos (2014)

Homes and Ageing in England, Buildings Research Establishment/Public Health England (2015)

Social engagement & services during ageing

- Loneliness can be as harmful to our health as smoking 15 cigarettes a dayⁱ
- People who are lonely are twice as likely to develop Alzheimer's and more prone to heart disease and strokeⁱⁱ
- Each year, the NHS sees a 4% increase in demand for its services. Digitally-enabled prevention could reduce the burdenⁱⁱⁱ
- 29% of 65-74-year-olds take part in volunteering^{iv}

Participants worked in small groups to identify the main areas where innovation and intervention are needed, and come up with potential solutions.

They discussed reaching older people at key stages of their life (i.e. retirement and moving into care), as well as ways of engaging isolated communities.

The group identified several potential solutions, most centring around changing the way we engage with older people and providing support for people as they undergo life changes.

ⁱ Loneliness & risk of Alzheimer's disease, RS Wilson, Arch Gen Psychiatry (2007)
ⁱⁱ Loneliness & social isolation as risk factors for coronary heart disease and stroke: systematic review and meta-analysis of longitudinal observational studies, N Valtorta, BMJ (2016)
ⁱⁱⁱ Underfunded, underdoctored, overstretched: the NHS in 2016, Royal College of Physicians
^{iv} Later Life in the United Kingdom, Age UK



Care support for age-related diseases & extending independence at home

- Technology like robotic vacuum cleaners, smart appliances and stair lifts can help people stay independent for longer
- Most people want to live in their own homes for as long as possible
- Most older adults spend the last decade of their life with some form of disabilityⁱ
- 30% of people use some form of local authority-funded social care in the last year of life

This session had the largest number of participants. They divided into four multi-disciplinary groups to discuss issues and ideas in a smaller setting.

They addressed a range of challenges from poly-pharmacy to the effect of poor sleep, and how digital technology could alleviate some of the difficulty. One of these groups is already in follow-up discussions to move their idea forward.



ⁱ Social care and hospital use at the end of life, M Bardsley (2010)

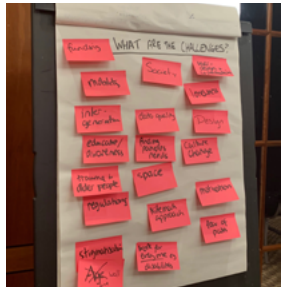
Next steps

Strategic follow-up sessions are taking place to ensure the ideas and connection from the symposium generate real-world impact.

Qualifying UCL academics can apply for further follow-up seed funding to develop links, ideas and collaborations on this topic.

There is still scope to be involved in these activities. If you are interested, please contact the Institute of Healthcare Engineering for more details.

healthcare-eng@ucl.ac.uk



Who's who?

UCL Institute of Healthcare Engineering

The Institute of Healthcare Engineering (IHE) is based at UCL, transforming lives with digital and medical technologies. They stimulate and support interdisciplinary, world-class research and innovation in healthcare engineering. Their work covers all stages of the translation pathway.

In March 2019, the Institute of Digital Health merged with the IHE – bringing with it expertise in health sciences, behavioural sciences, data sciences, law and physical space.

www.ucl.ac.uk/healthcare-engineering

UCL Innovation & Enterprise

The Innovation & Enterprise team work with UCL staff and students, businesses, government, NGOs and charities to turn brilliant ideas into world-changing solutions. They create partnerships, give academics access to funding, commercialise UCL technology and provide development opportunities.

enterprise@ucl.ac.uk

BEAMS Research Funding Office

The BEAMS Research Facilitators provide support to UCL researchers within the Bartlett, Engineering, and Mathematical & Physical Sciences (BEAMS) community to identify research funding opportunities and develop strong research proposals. They also coordinate large-scale strategic bids.

ovpr.beams@ucl.ac.uk

Some Tweets from the day



KirstenK_MND @KirstenK_MND · Feb 15

A thought provoking day so far at **#HealthyAgeingUCL**. Now the opportunity to discuss care support for age related diseases & extending independence at home



Sarah Rodrigues @SarahKRodrigues · Feb 15

@Health_Eng what great day discussing challenges, ideas and solutions at the Healthy aging Symposium **#HealthyAgeingUCL**. Great to see such a diverse range of industries involved.



Dr Gary Zhang @garyhuizhang · Feb 15

Do you know "The largest segment of Apple Watch owners is aged 55+"? A good example of why meeting the challenge of healthy ageing is great business. **#HealthyAgeingUCL**



Flo Greatrix @flo_greatrix · Feb 15

Deep in thought here! Thanks @Health_Eng for a great day. This afternoon's workshop on physical activity during ageing was a really fun opportunity to combine my passions for policy and exercise! **#HealthyAgeingUCL** **#healthyageing**



Sarah Jackson @DrSarahEJackson · Feb 15

A great mix of industrial, charity and government stakeholders in attendance today at UCL's healthy ageing symposium. Looking forward to this afternoon's focus on idea generation for future collaborative work to help people enjoy a healthier old age **#HealthyAgeingUCL** @UCL_BSH



Jennifer Hazelton @hazey_jen · Feb 15

Sharon Tynan @ageuklondon talked passionately about **#tech** working for people of **#allages**, @ianspero @agileageing argues effective tech is for **#everyone** without being labelled **#elderly**. Dan Pattison @EndLonelinessUK: tech must be accessible **#HealthyAgeingUCL** @Health_Eng



Charles Lowe @LoweCM · Feb 15

Dr Mike Short makes the point that there may be insufficient scale for innovations purely in the UK market, so it may be essential to consider overseas sales in order to make your innovation economically attractive **#healthyageingUCL**

Supported by



EPSRC Impact Acceleration Account (Grant Reference EP/R511638/1)
ESRC Business Boost Programme (Grant Reference ES/S501311/1)



UCL Institute of
Healthcare Engineering
Transforming lives through digital
& medical technologies



@health_eng

HEALTHY AGEING

Symposium 2019