Sustainable Care
connecting people & systems

circle
CENTRE FOR INTERNATIONAL RESEARCH ON CARE, LABOUR & EQUALITIES

Policy & Practice Brief / OCTOBER 2020

The Potential of Technology in Adult Social Care

Summary

What role can wider use of technology in care at home - and emerging developments in advanced technology - play in bridging the UK's growing care gap?

Policymakers and sector leaders often present technology as a solution to challenges in social care, yet the place of technology as a source of future sustainability is far from clear. James Wright, Kate Hamblin and Matthew Lariviere draw on their ongoing research to explore the potential for technology to address issues of sustainability, wellbeing and care quality.

The Potential of Technology in Adult Social Care

About our research

Central to our approach are our **case studies of local authorities** that have been investing in, trialling and implementing technology for social care. To understand the policy context for these, we conducted a **review of evidence** about digital technologies designed to support or deliver care, covering the period 2000-2019. We looked at:

- *technology enabled care services ('TECS')*
- *digital infrastructure*
- *data and information.*

We also **interviewed stakeholders** involved in the design, provision and uptake of TEC products, asking about challenges, benefits and unrealised opportunities in using technology to support 'ageing in place' – the policy goal of enabling older adults to remain in their own homes and communities. We talked to *housing providers, developers of care robotics and apps, designers* focused on age-friendly design approaches, and *industry bodies* involved in developing quality standard frameworks for care technologies. Our methods included observation and participatory action research in *organisations involved with technology-enabled care in industry, practice and policy*.

Findings

Our review identified an imbalance in supply and demand for care, influenced by population ageing; changes in family and household structures and reduced public investment in the sector. *Local authorities' experience of these challenges varies greatly*:

- In rural areas, populations are ageing more rapidly than in urban centres
- Gains in life expectancy and healthy and disability-free life expectancy are uneven
- Cuts to funding following the 2008 financial crisis fell more heavily on poorer areas.

Use of technology in social care is growing, but *challenges remain:*

- A national 'digital switchover' in 2025 means analogue devices will no longer function reliably
- There is still a 'digital divide' in access to, and skills in using, technology
- The infrastructure needed to deliver reliable, accessible, digital TECS remains weak
- Navigating the numerous devices and new care tech companies emerging can be difficult.

Local authorities thus face many complexities in applying digital solutions in varied care contexts.

Although UK investment in care technologies R&D since 2000 has been significant, most initiatives have been piecemeal and mostly 'bottom up'. They have been driven mainly by local authorities, with limited information to support their commissioning decisions. Their funding and access to expertise in data science, engineering and AI varies considerably. Many projects introducing new
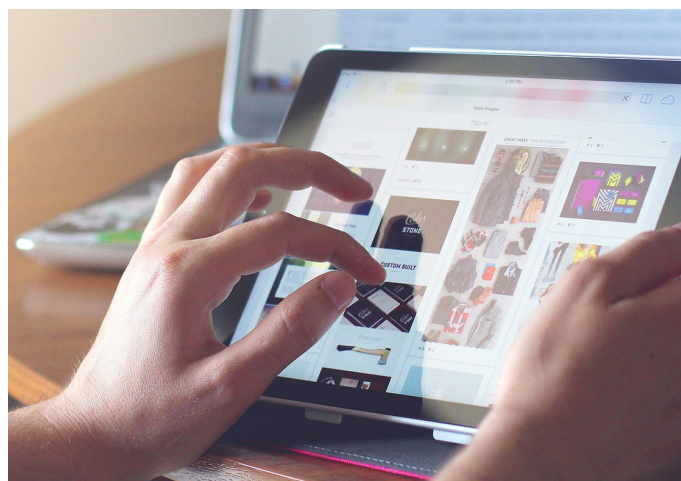
ICT devices have been small-scale, short-term pilots, producing an uneven evidence base on the efficacy and cost-benefits of new technologies. Add limited transfer of knowledge between local authorities, and the result is a fragmented marketplace and uneven capability to navigate it.

Our research highlights two key issues about the shift to digital:

- Uncertainty among care and housing providers about how to develop a digital strategy
- Confusion about the organisational responsibility – IT, operations, R&D – involved in delivering it.

This has led to some interdepartmental stalemates, with senior staff sometimes querying the need for investment in new technologies, or concerned about *'innovation for the sake of innovation'*, where technology is the focus, rather than outcomes. Too often, commissioners, older adults and carers lack adequate information, or rely on marketing materials or social media to guide their decisions about which technologies will suit their service requirements.

Challenges

There are **four** *urgent and important issues* for practitioners and policymakers.

1. The digital switchover

- Commissioners need to address *low awareness of available technologies* in their own organisations and among service users
- The *TECS marketplace could become even more fragmented*
- As analogue services are switched off, inadequate *broadband and 4G/5G networks* in some areas will exacerbate the 'digital divide' in social care
- Responding *without sacrificing service quality* may be hard for housing and care providers.

"In all honesty, it feels a bit overwhelming - the whole digital landscape."
Local Authority Assistive Technology Lead, Shire local authority

The Potential of Technology in Adult Social Care

The switchover also offers crucial *opportunities for innovative approaches*:

- It is *catalysing investment* in trials and pilots of both digital TEC and new mainstream ICT devices (smart home products, care management systems, and physiological sensors)
- Despite a decade of austerity and *low investment, hampering innovation at scale*, a plethora of small, short-term local authority pilots offer *inspirational ideas*.

"It's not about the technology, it's about care delivery."
Head of Commissioning, Shire local authority

2. Leaving the EU

Questions about the UK's future involvement in EU-funded R&D projects and its role in care technology standards frameworks and wider regulatory arrangements remain unanswered. The UK had notable success in the EU Horizon 2020's €85m "Robotics for Ageing Well" programme, but it is unclear what will replace this.

3. Mainstream consumer electronics products

Products like Amazon Echo and iPad tablets are starting to displace more expensive specialist equipment used in social care.

- How long-lasting and reliable are these devices? Most were not designed for care, and the consumer electronics market has short product lifecycles and lacks transparency in how data are collected and used.
- Can standards, regulation, safety and quality in use of digital TECS and consumer products in care settings be assured without stifling innovation.

4. COVID-19 brings new challenges

Short term, COVID-19 has catalysed some *effective use of technology*. Yet longer term, adult social care faces financial problems, an unstable care homes market and challenges in delivering homecare. A concerted effort will be needed to encourage *broader investment in care technologies*.

Further food for thought

Most investment in new ICT in the UK focuses on independent living, and attempts to delay the point at which older adults require institutional care. This approach aims to reduce care costs and caters to most people's desire to remain in their own home as long as possible.

It will be important to avoid creating *a new technological divide* based on '*digital ableism*'. There are limits to the ability of people with severe dementia, serious chronic illnesses or multiple morbidities to continue to live independently, yet *few ICT R&D projects focus on improving quality of life for those living in institutional settings*.

There is a danger, too, that greater use of in-home sensors and monitoring devices (especially if used to replace in-person visits) may *institutionalise and isolate older people in their own homes*. Technology must be part of the broader care landscape, with the aim of *improving wellbeing* – not a set of tools whose primary purpose is to cut the cost of in-person care.

Mainstream technologies are increasingly being advocated and trialled in social care due to their 'user-friendly' design, more attractive aesthetics, and their comparatively lower cost. This raises important questions:

- Does use of mainstream technologies in social care reflect a '*rush to innovate*'?
- Have *privacy and data security* been adequately addressed?
- Are products *ethically* produced?
- Are they suitable for *long-term use*?
- Is ongoing *technical support* available?

More broadly, will innovation *remain at the margins of local authority investment in TECS*? Or will it be '*business as usual*', even after the digital switchover, for local 'telecare' services, with traditional devices simply replaced by others with similar functionality, but internet / SIM-enabled? Will technology be part of 'outcomes-based commissioning', or will the technology and the drive for innovation come first?

Government's emphasis on integrating health and social care means commissioners and regulators need to *reconsider distinctions between health and care technologies* and focus on the perspectives of older adults and carers. Users of TECS may not know - or care to know – how a device is procured or commissioned. But they will want access to technologies that *support them to "age well" or to manage their care responsibilities* in satisfying, meaningful ways. In aspiring to person-centred care, health and care systems must remain focused on supporting people.

The Potential of Technology in Adult Social Care

Key messages

- **The digital switchover requires action from policymakers and commissioners** - it's an opportunity to shift from traditional telecare to flexible, networked, multi-functional Internet of Things (IoT) devices that could generate big data for preventative care.
- **Local authorities need access to expert guidance** on the technologies becoming available. Adult social care services may need a dedicated technology-focused role; councils will need expertise in how these technologies work and how to select from the many specialist and consumer devices entering the market. The opportunities are exciting, but councils reliant on third-party providers could be exposed to risks.
- **Standards and frameworks need re-design** to accommodate the new digital TEC products and mainstream devices in social care.
- **Outcomes-based commissioning** can help providers assess how well technologies support their strategic priorities.

Next steps in our research

- In 2020-21, we will further analyse our local authority case studies and explore how the role of technology in care is presented in national policy documents.
- With our partners in selected countries outside the UK, we'll be exploring how and why technologies are used in their care systems.
- In further, 'future-orientated', stakeholder consultations we will explore the role of technology in care planning, organisation and delivery, and the collection, communication and use of data in adult social care.
- Look out for our *forthcoming knowledge-exchange workshops*, designed to ensure our outputs and findings resonate with the experience and needs of older adults, carers, the care workforce and the sustainability of the care system.

ABOUT THE RESEARCH

The Sustainable Care: connecting people and systems programme explores how care arrangements can be made sustainable with wellbeing outcomes. It studies the systems, work and relationships of care in the context of changes in technology and mobility and aims to support policymakers, the care sector and academics to conceptualise sustainable care as about ethics, justice and the distribution of resources. The programme focuses on adults living at home with chronic health problems or disabilities and their families, carers and paid workers. Funded by the ESRC, it is delivered by eight universities and Carers UK, led at the University of Sheffield by Professor Sue Yeandle.

We would like to thank the staff in local authorities who have generously contributed their time and shared their experiences with us.

This policy brief was authored by James Wright, Kate Hamblin and Matthew Lariviere, edited by Sue Yeandle and designed by Kelly Davidge.

UKRI

**Economic
and Social
Research Council**

sustainablecare@sheffield.ac.uk
@CircleShef
circle.group.shef.ac.uk