Using smart technology to empower people to live happier and more independent lives

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Empower people to live more independently or remain living independently for longer

Improve wellbeing and reduce loneliness

Increase digital inclusion and accessibility of technology

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“The long-term sustainability of health and social care is dependent on having the right digital foundations in place, and so digital transformation must be the linchpin upon which all of these reforms are based.”

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The Parliamentary Review of Health and Social Care in Wales

“Maximise the benefits of technology and innovation”
My Health and Care Research
Wales research fellowship

People with a learning
disability in supported living
settings

Older people in social
housing

Aim to identify factors which predict which individuals will benefit from receiving a smart speaker and identify challenges

=> Establish best practice for using smart technology in social care settings
Half of participants receive a smart speaker

Beginning of study
Baseline Interview
Well-being, loneliness, & digital skills

3 months
Follow-up Interview
Well-being, loneliness, digital skills, & device use

6-9 months
Final Interview
Well-being, loneliness, digital skills, & device use

Remaining half of participants receive smart speaker

Participants
1. 84 people with a learning disability
2. 100 older adults living in social housing (98 so far)
A handbook for using smart technology in supported living settings

Developed by Dr Georgina Powell, Prof Petroc Sumner, Dr Liz Smith, Lauren Makin and Innovate Trust
Benefits

Accessibility

"the printing is so small in these dictionary books, so I ask my friend over there, Alexa"

Companionship

"It keeps your brain going"

Enjoyment & relaxation

"...if I’m listening to music then that calms me and takes me to a better place."

Cognitive stimulation

"It’s just nice to know there is someone else [Alexa] around in your room."
Barriers

Rely on support from others

“My son tried to help me, but I don’t think he’s got much patience for me to be honest”

Fear of tech

“Because I don’t know a lot about it, I’m afraid to do something.”

Accessibility

“I couldn’t always hear clearly what [Alexa] was saying back to me. So, I just found it totally frustrating”
Ongoing projects

- Technology to support sensory needs at home
- More accessible Privacy and security
- Social aspects, relationships with AI

Next steps

- NIHR social care grant
- Voice-assistant Medication reminders
- KTP Newport City homes
- Smart tech in social housing

CARE
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Lauren Makin  Prof Katherine Shelton  Public research partners
Results: People with a learning disability

Social value
“It’s nice to always have the company even though I do know she is a robot”

Entertainment and fun
“I like being able to play music whenever I like”

Agency
“Definitely makes them feel more independent”
Support worker

Challenges
Perseverance
Support
“Staff have been trying to help me say Alexa. I’ll get there in the end”

80% liked smart speaker & felt it increased independence

Smith, Sumner, Hedge, & Powell (2020). Disability and Rehabilitation: Assistive Technology
Possible improvement in speech clarity?

Recorded speech before and after using smart speaker

Clarity rated clearer after using smart speakers

“As [the person I support] has a speech impairment, having the device seems to encourage them to speak a little slower and clearer”.

Support worker

Why?
• Intrinsically motivating
• Natural reinforcement
• No social stigma

Case study of a smart home

- 4 participants
- Varied speech and intellectual ability, 24hr support needs
- Moved into a new smart home in Cardiff

Amazon Alexa – in communal area and in own room
Music subscription
Multiroom lighting and automatic lighting
Video door bell
Thermostat system
Smart sockets for electrical appliances, e.g., kettle
Motion detector for TV control
Echo show for phone calls/skype
Overall opinions about smart house were very positive:
- More fun
- More safe

Participants reported feeling better able to do things for themselves:
BUT, no objective change in independence

Perseverance was high - communication and skill development:
BUT, more practice/training to use full range of features

Tailoring of smart technology to individual needs