



Ymchwil Iechyd
a Gofal Cymru
Health and Care
Research Wales



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

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Terry
Public Research Partner





Policy paper

A plan for digital health and social care

Published 29 June 2022

“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.”



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



Improve wellbeing and reduce loneliness



Increase digital inclusion and accessibility of technology

The Parliamentary Review of Health and Social Care in Wales

“Maximise the benefits of technology and innovation”

A Revolution from Within:
Transforming Health and Care in Wales



My Health and Care Research Wales research fellowship

People with a learning
disability in supported living
settings



Older people in social
housing



Innovate
Trust

newydd

Cymunedau
Digidol
Cymru
Hyder Digidol,
Iechyd a Lles

Digital
Communities
Wales
Digital Confidence,
Health and Well-being

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



Beginning of study

3 months

6-9 months

Baseline Interview
Well-being, loneliness,
& digital skills

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

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

*Half of participants receive a
smart speaker*

*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





Building Independence



Trivallis.



Merthyr
Housing
*Where People
Come First*

Tai
Merthyr
*Lle Daw Pobl
yn Gyntaf*



Benefits

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

Accessibility

Enjoyment & relaxation

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



"It keeps your brain going"

Cognitive stimulation

Companionship

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

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"

Barriers



Fear of tech

"Because I don't know a lot about it, I'm afraid to do something."

"I couldn't always hear clearly what [Alexa] was saying back to me. So, I just found it totally frustrating"

Accessibility

Ongoing projects



JOHN
LEWIS
& PARTNERS

Technology to
support sensory
needs at home



Innovate
Trust

More
accessible
Privacy and
security



Google

Social
aspects,
relationships
with AI



CARE

Next steps

NIHR social
care grant
Voice-assistant
Medication
reminders



GIG
CYMRU
NHS
WALES

KTP
Newport City
homes
Smart tech in
social housing



newport
city homes
first for people, places and partnerships



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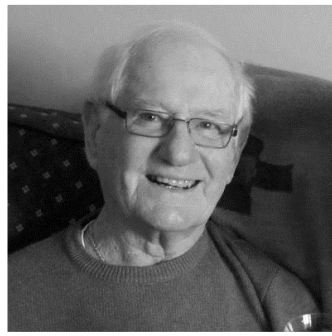
Prof Petroc Sumner



Lauren Makin



Prof Katherine
Shelton



Public research
partners



Results: People with a learning disability

80% liked smart speaker & felt it increased independence

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"

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**



**Speech and
language
therapists**



Case study of a smart home

- 8 4 participants
- 8 Varied speech and intellectual ability, 24hr support needs
- 8 Moved into a new smart home in Cardiff

Amazon Alexa – in communal area and in own room

Music subscription

Multiroom lighting and automatic lighting

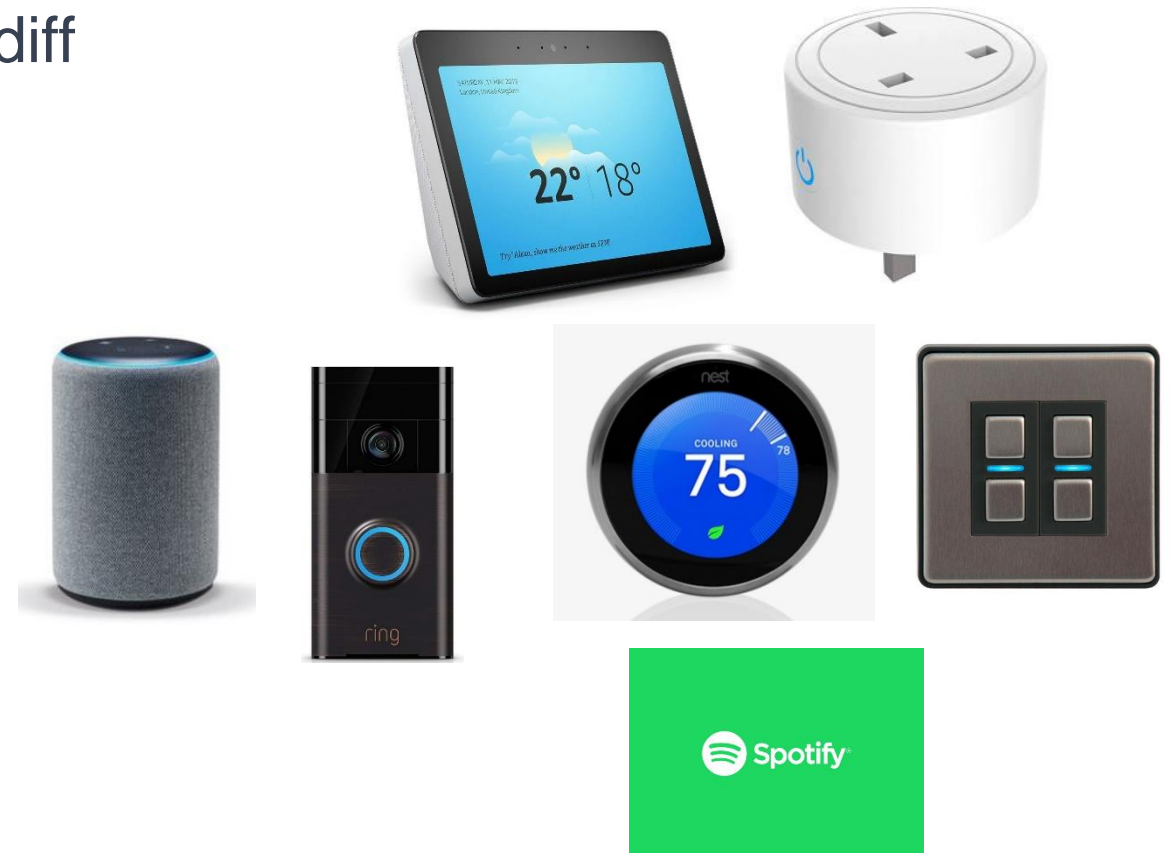
Video door bell

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