NIHR | Applied Research Collaboration Wessex

Health Innovation Wessex

Remote monitoring

# Implementing digital remote monitoring for people with frailty

**The project aimed to evaluate digital remote monitoring for individuals living with frailty. Although implemented during the pandemic, there was limited evidence on its uptake, use and acceptability specific to this group. There was also a need to support the process of implementation of digital innovations.**

## Project summary

Digital remote monitoring is rapidly expanding and stakeholders in the Wessex region identified a need for evidence to support its implementation for people with frailty. We wanted to understand the use and acceptability of two digital remote monitoring approaches amongst older people with frailty, carers and staff: one approach using artificial intelligence-facilitated environmental monitoring sensors, the other monitoring signs and symptoms.

We also wanted to understand the benefits and challenges of using the latter approach within a frailty virtual ward. We developed a toolkit to assist implementation of innovations in practice.

Activity included:

- We completed listening activities, attending six face-to-face older people's community group meetings, to listen to their views on digital remote monitoring.
- We used a mixed methods research study to investigate digital remote monitoring at home, gathering quantitative data on uptake and interview data on acceptability and experience.
- We evaluated use of digital remote monitoring in frailty virtual wards, investigating how and when it is used and staff attitudes, completing staff interviews and two rapid insight events.
- We co-produced a web-based implementation toolkit with stakeholders through three interactive workshops and evaluated the prototype toolkit.

Work pressures meant NHS partners were unable to engage as initially agreed, or provide evaluation data. The reality of rapid evaluation of innovation was delayed timelines and reduced sample size due to poor uptake of pilot schemes. As we collected minimal data from the research and evaluation, data from the first three workstreams were analysed together.

# Addressing health inequalities

The project focused on health inequalities with individuals living with frailty and the use of digital remote monitoring within health and care.

Whilst developing the project, we set up a public and patient involvement group to guide and support the project. The group consisted of six members, who all had experience as a previous or current carer of an individual living with frailty. The group met quarterly and were involved in reviewing and refining the design, project questions, methods, data collection templates and outputs.

For the listening activities, the Health Equity Assessment Tool (HEAT tool) was used to inform design on reaching groups often under-represented. Engagement with Southampton City Council health inequality facilitators helped recruit a variety of community groups. This engagement led to the involvement of two additional community groups, one group from a sheltered housing accommodation, and another serving those from a black ethnic minority population. Additionally, we engaged with two local Age UK branches for feedback on an early proposal and to gather views for the listening activities.

# Outcomes

We asked older people, carers and virtual ward staff about the use, acceptability, benefits and burdens of digital remote monitoring for older people and carers, as well as its use in frailty virtual wards. We asked health, social care, academic, charity and public representatives about how to improve implementation.

The key findings were:

- We found digital remote monitoring needs to be tailored to each individual informed by their preferences, with practicalities and design of the technology, and the ability of the user considered. An appropriate balance of digital remote monitoring and direct interaction (face-to-face, telephone or online) based on individual preferences also needs to be achieved.
- We found perceived lack of reliability and false alarms impact people's trust of digital remote monitoring, and knowledge and simple instructions would aid trust.
- A prototype web-based implementation toolkit was developed.

These findings increase understanding of the complexities of use of digital remote monitoring by people with frailty, an area of limited specific evidence. Digital remote monitoring could have benefits, support independence and reduce hospital admissions for people with frailty, but technologies need to be trialled with people with frailty and further research is necessary to ensure acceptability and appropriate targeting.

# Implications for service improvement

For successful implementation of digital remote monitoring for frail, older people, ongoing research is necessary to ensure policy and practice is underpinned by robust evidence specific to this population. This will require appropriate and flexible approaches, as the pace of digital innovation necessitates rapid evaluation. Straightforward approval and governance processes and dedicated resource within system partners, already working under pressure, are needed.

Accessing the views of this population and their carers is critical but complex, as they face many challenges and many have cognitive impairment, but digital remote monitoring services must be co-produced with them. Views of staff also need to be heard to ensure they trust and use the technology.

Key implications for use of the implementation toolkit include early consideration of implementation in research and development of new interventions and innovations in practice. Together, views from older people, staff and carers, and use of the toolkit, could potentially support the longer-term sustainability of health and social care outcomes.

# Next steps

We are building on this impressive project by working directly with Hampshire and Isle of Wight Integrated Care Board over the next two years to support the development and provision of technology enabled care.

Further evidence is required to support use of digital remote monitoring for older people with frailty. To gain clarity and trust, piloting and testing digital remote monitoring with people with physical and cognitive impairment (e.g. with dementia support groups, Age UK groups) should be completed prior to implementation to ensure acceptability. Without significant evidence, there are risks of wasting resources and technology not being fit for purpose.

The implementation toolkit has potential use as part of a training module to support all those involved in implementation across health and social care settings and third sector organisations. Buy-in and engagement from relevant stakeholders within these settings as well as provision of resources will be key to success and roll-out.

## Resources

Full details of the project and reports can be found on the ARC Wessex and Health Innovation Wessex websites.

The implementation toolkit is freely available. An academic publication about its development is pending.

## Key partners

- Dorset Council
- Hampshire & Isle of Wight Integrated Care Board
- Solent NHS Trust

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The views expressed in this report are those of the authors and not necessarily those of NHS England, the National Institute for Health and Care Research, or the Department of Health and Social Care.

## More information

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**Care settings**

- ✓ Social care
- ✓ Community

**Clinical areas**

- ✓ Ageing

**Cross-cutting themes**

- ✓ Digital transformation
- ✓ Health inequalities

**Solution themes**

- ✓ Monitoring

**Innovation types**

- ✓ Device
- ✓ Digital
- ✓ Service
- ✓ Complex intervention

**Innovation status**

- ✓ Pilot
- ✓ Roll-out