

# Identifying deterioration remotely

Remote monitoring in care homes during the COVID-19 pandemic

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## Insight

During COVID-19 care homes were under extreme pressure<sup>(1)</sup>. Government guidelines reduced the frequency of onsite clinical support. With clinicians' in person attendance restricted there was a need for care homes to use remote monitoring solutions to communicate the status, observations and health information of their residents. This was particularly important in identifying deterioration which may eventually lead to hospitalisation, which was particularly high-risk during the pandemic. Prolonged hospital stays can result in clinical deconditioning<sup>(2)</sup>. This can result in a person not being able to return to their original care home because their place may no longer be available, or they require a different level of care.

Although remote monitoring had previously been used and piloted in NHS services (sometimes referred to as telehealth), it had not been done consistently on a wide scale. Not everybody in the health and care workforce knew how to use the technology and many did not have the hardware to communicate the information. The methods used for identifying and then escalating a deteriorating resident could differ between services, which risked potential for misunderstanding and communication issues.

## Intervention

Even before the pandemic Patient Safety Collaboratives (PSCs), which are embedded within the AHSN Network, were working to enable the adoption of a common language related to deterioration across the health and social care system to ensure clarity when transferring vital clinical information between healthcare professionals:

1. Use a soft signs tool<sup>(3)</sup> to articulate worries or concerns about a resident
2. Complete a NEWS2 score
3. Hold a structured conversation using SBAR<sup>(4)</sup>

The consistent rollout of this common language, paired with remote monitoring, to care home settings became part of the PSCs' commissioned response to COVID-19 in April 2020.

The Eastern Patient Safety Collaborative was made aware of an Innovate UK grant to pilot a digital solution using NEWS2. The Whzan Blue Box (pictured) utilises digital replication of a soft signs tool that care homes are already familiar with such as 'Is my resident well?'<sup>(5)</sup> and the SBAR communication tool, providing staff with a digital version of existing paper processes. Included in the box are all the components to take vital signs which are Bluetooth enabled reducing the risk of transcribing errors. The data stored in each resident's personal profile is securely accessible to clinical decision-makers to initially validate readings and view photographic images, whilst monitoring trends, supporting the virtual ward rounds and early intervention. If a resident deteriorates, this saves valuable time and a potential conveyance to secondary care.

This funding, with support from the PSC and Eastern AHSN, led to a pilot of the telehealth system to inform clinical teams and identify deterioration. The pilot was conducted across 33 residential care homes across seven clinical commissioning groups (CCGs), representing 1,600 beds. The 33 care homes represent 2.5% of care homes in East of England.

The kit was distributed and staff trained on its correct use with materials made available through Health Education England and the Royal College of Physicians. To enable flexible access for care home and GP staff this was paired with virtual training and drop-in sessions delivered by the PSC and co-designed with the Whzan team. In 10 virtual sessions, 82 staff were trained.

Recognising the immense pressures during COVID-19, we reduced the burden of data collection for staff and instead build an improvement dashboard utilising quantitative data direct from the Whzan system.

## Impact

Staff reported improvements in responsiveness of clinical teams through use of the digital equipment, and an increased feeling of empowerment to support residents remaining in their place of choice.

Comparing service data, the pilot period saw a reduction of 73 (15.75%) conveyances to hospital. Factoring costs for ambulance conveyance, ED attendance, 50.4%<sup>(6)</sup> converting from an ED attendance to an emergency admission, and the cost of the empty care home bed based on an average length of stay of 8.22<sup>(7)</sup> days, we estimated a cost saving of £201,810 over six months in 33 care homes.

Extrapolation of the cost savings during the pilot suggests the potential regional savings over 12 months could be £403,620, equating to around £34,420 net saving per care home over three years once costs are factored in. This represents 2.5% of care homes in the East of England. If coverage reached 80% of care homes, the potential cost saving would be £12,915,845. 100% roll out would take the potential cost saving to over £16m.



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Innovators

**15.75%**

REDUCTION IN CONVEYANCES TO HOSPITAL

MORE THAN

**£201k**

IN COST SAVINGS OVER SIX MONTHS IN 33 CARE HOMES



*"Staff wish they had this sooner as it could have prevented hospital admissions. They now have more understanding on signs of deterioration so will be able to act sooner once they spot these signs. Very useful piece of equipment, user-friendly, easy to use – it could save someone's life".*

Care Home Manager



[Read the full evaluation report into this work here.](#)

*It is important to state we were unable to obtain data for care homes not participating in the pilot. We are therefore unable to exclude COVID-19 as a contributory factor to the reduction in conveyances to hospital. the modelled impacts and associated costs.*

*There are also additional impacts and cost benefits that have not been included in the analysis such as potential reduction in post-acute deconditioning which incur health and social costs such as physiotherapy and supported living services.*

## Who was involved?

Delivering this programme required coordination across health and care providers, including care homes, our clinical commissioning groups, primary care networks, secondary care providers and the regional NHS England team. We would like to thank the managers and staff from care homes across the region for their cooperation, engagement and hard work.

Find out more about Whzan by [visiting their website](#)

## References

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