

Well Connected Care Homes

“The digital tablet is a useful resource... You can look at a resident and think, ‘They’re not quite right, but I don’t know why.’ It seems silly phoning a doctor to say, ‘They’re just not themselves.’ But if you’ve done their NEWS score and their NEWS is indicating, you can obviously relay that information to the GP and say, ‘Their score is normally this, but it’s gone up to this so there is obviously something going on somewhere.’”

Care Home Manager

Overview

A digital tablet intervention to record and communicate data on the health of residents was used in care homes in Sunderland. Between April 2017 and March 2018, a small-scale evaluation compared data between eight of the care homes routinely using the intervention with eight similar care homes who weren’t. The evaluation found that the eight care homes using the intervention made an estimated saving of around £756,144 in A&E attendances and ambulance services during this period.

The AHSN North East and North Cumbria (AHSN NENC) Well Connected Care Homes Programme commissioned a small-scale evaluation of a new digital health intervention that aims to enhance the appropriateness of healthcare received by care home residents and the skills of care home staff.

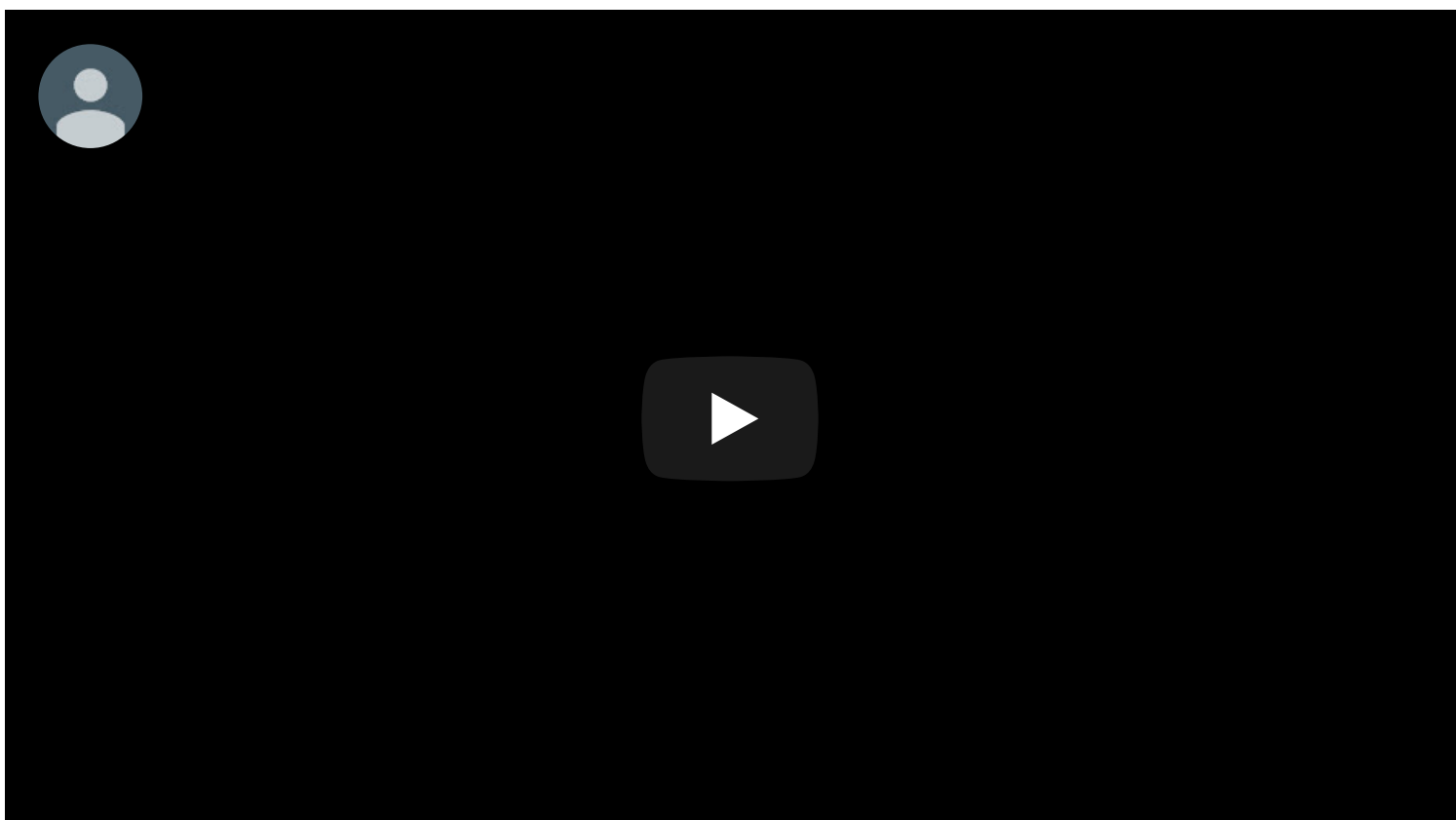
The goals were to:

- support care homes in becoming internally and externally ‘well connected’ in the digital age;
- to enhance the quality of care experienced by care home residents, and by
- significantly improving communication between care homes and the external health environment.

This would provide better and more efficient cost-effective care. It had the following elements:

- to improve record keeping of care home residents by using tablet-based apps to allow electronic recording of aspects of care plans
- to train qualified and unqualified care home staff to make and record relevant clinical records (NEWS scores)
- to promote use of electronic communication of patient clinical information between care homes and primary care (GP electronic patient records), emergency care (including out of hours), and ambulance services and community services.

This phase of the project was a partnership between AHSN NENC and NHS Sunderland CCG, which aims to evaluate the outcomes of its care homes technology project.



Challenge / problem identified

There are around 400,000 older adults living in care homes in England, and they are some of the most complex NHS patients. [Read more here.](#)

As populations age, older adults are living longer with complex health and social needs. As a result, the needs of care home residents and the challenges faced by care homes, their staff, and NHS and social services that support them, are increasing.

Care homes are often perceived to be a burden on primary and acute health care, with the use of services being described as often inappropriate or avoidable.

Care home residents experience higher rates of emergency hospital admissions and accident and emergency attendances, compared to the general population aged 75+.

Some of this service use is appropriate and driven by the needs of the care home population. However, the quality and nature of primary care for care homes may also influence these hospital admissions, with many services reacting to problems as they arise, rather than adopting a proactive, preventive approach that could avoid escalation.

The skills and expertise of care home staff are also influential. Carers who are alert to changes in residents' health status are well placed to call for help at an early stage, and potentially avoid a hospital transfer. Improving training and increasing the skills of care home staff so that they can effectively care for their residents has been described as an 'ethical and policy imperative'.

Actions taken

The AHSN NENC Connected Care Homes Programme commissioned the evaluation of this new digital health initiative to inform decisions about the long-term future of the intervention. AHSN NENC provided programme support to the local delivery team and provided connectivity to the wider system across the region.

A regional event was held to celebrate the uptake of the innovation and to encourage spread.

Digital technology was introduced into care homes to support staff in the recording and communication of digital data on the health of residents. The intervention included three measurement tools:

- National Early Warning Score (NEWS)
- Malnutrition Universal Screening Tool (MUST), and
- Abbey Pain Scale.

Technology used included:

- a digital tablet
- blue tooth blood pressure cuff;
- pulse oximeter.

Non-qualified staff were trained to use the equipment in providing baseline NEWS scores, repeated when there is a clinical concern for a resident. Data was then shared with attending health care professionals from the NHS to improve triage and decision making.

To date, 14 care homes in the Sunderland area are using the digital tablet following training and support from the local system. The project is supported by a steering group representing partner organisations, which includes North East Commissioning Support, North East Ambulance Service, Newcastle Universities, Tyne and Wear Care Alliance, Sunderland NHS Foundation Trust and the Patient Safety Collaborative.

The steering group developed the correct information governance infrastructure to progress the work. Ongoing support was provided to the delivery team and the focus was on three elements of evaluation:

- an economic evaluation of the impact of the innovation
- a qualitative evaluation including a number of interviews
- a NOMAD survey.

Impacts / outcomes

From April 2017 to March 2018, the small-scale evaluation compared data between eight care homes of a similar size regularly using the digital tablet intervention against data from eight care homes who were not using the tablet.

The results demonstrated:

- where the tablet was in full use in eight care homes there were 192 fewer non-elective admissions over the year. This resulted in a saving of £601,920 (based on tariff)
- a scatter plot of the counts of A&E attendances showed fewer attendances at every time point over the year in 'in use' care homes. The total difference was 336 fewer A&E attendances, resulting in a cost saving of £71,232 (A&E attendances) and £82,992 (ambulance services).

This demonstrates an overall approximate cost saving of £756,144 in one year for eight care homes.

A further analysis using a more robust study design using an interrupted time series regression analysis compared the performance of eight care homes in the year prior to using the digital tablet intervention against a year post implementation of full use. This also included a 13-month intermediate rollout period. In comparing bed days for those admitted to hospital before and after the introduction of the digital tablet intervention, it was suggested there was a 49.2% reduction. It was shown in the 35 months prior to the introduction of the tablet system that if it had not been introduced, the use of emergency bed days would have cost £837,877 in the 25 months after March 2016. However, the actual cost was £658,451 which was a saving of £179,426.

In addition, 18,000 NEWS scores have been secured, which will be analysed in detail in the coming months.

Results from a NOMAD questionnaire circulated to 47 Sunderland care homes demonstrated respondents were generally positive about the intervention and the way it had been implemented, and believed it could fit with their current work and become part of the norm.

If the results from this small-scale evaluation were extrapolated to more care homes, the potential financial savings would be considerable for the health economy, whilst improving quality of care and job satisfaction of staff in the care homes. A further, much larger evaluation is underway.

Using lessons learned, the use of tablets to record information on residents is now rolling out as 'routine use' in the whole Sunderland health economy. Four other CCG areas in the North East and North Cumbria are now adopting this approach.

Plans for the future

AHSN NENC, North of England Commissioning Support Unit and Newcastle University are sponsoring a series of events focused on sharing and developing good practice, research and evidence within the care home sector.

The first event was delivered in partnership with Yorkshire and Humber AHSN on 26 March 2019, considering the learning across five projects that have all delivered digital solutions in care homes across the two regions, including the Sheffield NHS England Wave 1 Test Bed programme.

The second event, led by Newcastle University, will showcase the rapidly expanding care home related research in the Institute of Health and Society / Institute of Ageing at the university.

The final event, led by North of England Commissioning Support, will bring together the questions that arise from the previous events and from staff in all sectors to shape future collaborative research and evaluation.

AHSN NENC are currently working with colleagues to develop system data sharing agreements, and has an allocation of funding to extend the evaluation to 2021 to consider the long-term impact of this innovation.

Start and end dates

May 2017 to November 2018.

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Addressing the care and quality gap | Addressing the funding and efficiency gap | Addressing the health and wellbeing gap | Driving economic growth

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Data integration / interoperability | Digital health (including road maps and enabled care services) | Long term conditions (including ageing and frailty) | Medicines optimisation (including atrial fibrillation) | Patient Safety Collaboratives: deterioration

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