

DIGITAL CARE HOME PROJECT

The Digital Care Home project is enabling care home staff to use existing equipment to record routine monitoring information for residents electronically and communicate with community nursing teams or local GPs to identify the best course of action if there are early signs of patient deterioration.

Care home staff use the digital care home service by logging into a portal using a desktop or logging into the secure Inhealthcare smartphone app on a tablet device. The data integrates directly into clinical systems including SystemOne and EMIS Web, meaning it can be accessed by NHS teams remotely.

Depending on agreed frequency of observations, the designated care home contact receives an email outlining the tasks to complete in a specified period and readings are collected by care home staff as part of their daily routine. The information recorded includes respiration rate; oxygen saturation; temperature, blood pressure; heart rate and level of consciousness. Readings are then sent to a clinical hub to be assessed.

Care responses are coordinated by a centralised Single Point of Access (SPA) team, who are aided by a clinical support framework and review of recent monitoring information. The service acts as an early warning system, highlighting changes in health which may otherwise go unnoticed.

Why are we doing this?

Around 4% of the total UK population live in residential or care homes (Bupa, 2017) which play a vital role in responding to the needs of a growing ageing population.

In Sheffield in 2016/17 there were around 3,000 attendances to Accident & Emergency from care home residents of which 40% were subsequently admitted to the hospital's Frailty Unit.

The aim of the Digital Care Home project is to test and evaluate the impact of digital technology combined with integrated working of healthcare professionals to provide enhanced clinical interventions to care home residents, to reduce and prevent the risk of an emergency admission to hospital.

The Digital Care Home project is testing a new approach to support improving the quality of residents' lives by keeping them well in their own home; to standardise

monitoring of residents health and wellbeing across a selection of care homes; to prevent admissions to hospital through better access to support in the community.

Who's involved in this project?

Sheffield Teaching Hospitals NHS Foundation Trust (www.sth.nhs.uk/)

Lead Evaluation Partner: **University of Sheffield – School of Health & Related Research (SchARR)**(www.sheffield.ac.uk/scharr)

Lead for Public Engagement: **Healthwatch Sheffield** (www.healthwatchsheffield.co.uk/)

Lead Innovator Partner: **Inhealthcare** (www.inhealthcare.co.uk)

Care Home Partners:

- **Balmoral Care Home**
- **Moorend Place Care Home**
- **Chapel Lodge Care Home**
- **Haythorne Place Care Home**
- **Alexander Court Care Home**
- **Loxley Court Care Home**
- **Longley Park View Care Home**
- **Newfield Care Home**
- **Woodhill Grange Care Home**
- **Woodhill House Care Home**

What happens next?

The first phase of the project saw 7 care homes testing the service from June 2017 to November 2018. In the second phase, the programme is recruiting further care homes to participate from June to November 2018. The evaluation report from the first phase of the project will be available in summer 2018.



Digital Care Home

The Digital Care Home project is testing the impact of technology and integrated working to provide enhanced clinical interventions to care home residents. Through this approach, the aim is to improve condition management in care homes and avoid unnecessary emergency admissions to hospital.

Care home nursing staff are able to record residents' routine monitoring information electronically and communicate with community nursing teams or local GPs, via the secure Inhealthcare smartphone app. This enables them to identify the best course of action if there are early signs of patient deterioration. Care is coordinated by a centralised Single Point of Access (SPA) team, aided by a clinical support framework and review of recent monitoring information.

Key aims

- 1 To improve the quality of residents' lives by keeping them well in their care home
- 2 To standardise monitoring of patients health and wellbeing across a selection of care homes
- 3 To prevent admissions to hospital through better access to support in the community

Care Homes



Health data from scheduled observations is sent to the single point of access team

Single point of access



Community Matron/
District Nurse

If required alerts are generated and escalated for clinical follow up

GP



For more information please visit www.ppptestbed.nhs.uk

ASTHMA – EXPLORING SELF-MANAGEMENT

In collaboration with Teva Pharmaceuticals we have co designed the CareTRx Programme which aims to understand how an innovative combination of digital technology, behavioural change science and patient support services can be of benefit to patients in the self-management of their asthma condition.

Asthmatic patients from a number of pilot GP practices in Sheffield are being invited to take part in the pilot programme.

Patients attend a CareTRx Clinic with a respiratory nurse specialist. At the clinic details of the Test Bed and CareTRx Programme are explained and how the programme may be of benefit to them in managing their asthma.

Each patient has access to a CareTRx Sensor that can be attached to their inhaler and a smartphone App. The programme enables patients to monitor their dosage, receive notifications, and view statistics on how often they're taking their medicine. Data is also sent to a case management dashboard, where healthcare professionals can identify high-risk patients. There is also a dedicated nurse call centre as well as a website which provides tools and advice to support patients to manage their asthma.

Why are we doing this?

The current objective is to understand how patients and clinicians engage with this new approach to asthma management with a view to it being integrated into the lives of patients and care pathways if the evaluation is positive, to do this the CareTRx Programme will evolve to meet the needs of patients with asthma as the pilot programme progresses.

Non-adherence to maintenance medication in asthma is estimated to be between 30% and 70%¹ and new approaches are needed to address this challenge and the issue of ineffective inhaler use. Maintenance treatments regimens need to be adhered to by patients' $\geq 80\%$ to achieve the greatest asthma control²

Who is involved in this project?

Lead Evaluation Partner: University of Sheffield (<https://www.sheffield.ac.uk/scharr>)

Lead for public engagement: Healthwatch Sheffield
(<http://www.healthwatchsheffield.co.uk/>)

Lead Innovator Partner: Teva Pharmaceuticals (<http://www.tevapharm.com/>)

GP Practices involved:

- Dover Court Surgery
- Greystones Medical Centre
- Nethergreen Surgery
- The Hollies Medical Centre
- Woodhouse Medical Centre
- Sheffield University Practice
- Porterbrook Medical Centre
- The White House Surgery
- The Crookes Practice
- Birley Medical Centre
- The Walkley House Medical Practice
- Mill Road Surgery
- Tramways Medical Centre
- Gleadless Medical Centre
- Firth Park Surgery

What happens next?

Recruitment of patients into the programme will continue until the end of January 2018. The programme will formally end in June 2018 and a final evaluation report will be available from the end of June 2018.

The CareTRx™ Programme

CareTRx™ is a disease management platform designed to support people with asthma. It aims to improve quality of life using a Sensor and Smartphone App, alongside a Patient Support Programme based on evidence-based Behaviour Change Techniques.



References

1. World Health Organisation. Adherence to long-term therapies: evidence for action [Internet]. WHO. 2003 [cited 2016 Mar 29]. Available from: http://www.who.int/chp/knowledge/publications/adherence_report/en
2. Lasmar L, Camargos P, Champs NS, Fonseca MT, Fontes MJ, Ibiapina C, et al. Adherence rate to inhaled corticosteroids and their impact on asthma control. Allergy. 2009 May 1;64(5):784–9.

STRENGTH AND BALANCE

The project is inviting people aged over 65, registered in one of the participating practices, who are identified as moderately frail on the Electronic Frailty Index (EFI) and have not yet had a recorded fall on the primary care system.

People identified as part of the project cohort will be invited into the practice to have their falls risk assessed by a trained Health Care Assistant using the Kinesis QTUG™ device. Those identified as having a score of over 70% (high risk) will be referred onto the Falls Pathway for a home assessment and intervention. The data from the assessment will be fed through to the Primary Care record and Community Team. At the end of their falls intervention period (6 months) the patient will be invited back to have their falls risk reassessed using the Kinesis QTUG™ device.

The Kinesis QTUG™ (Quantitative Timed Up and Go) is a medical device for assessment of falls risk and frailty. Each QTUG™ product kit contains two inertial sensors, worn on each shin, which stream data wirelessly via Bluetooth to a tablet device. It provides a method for objective assessment of mobility, falls risk and frailty. The device also provides identification of mobility impairment through automatic comparison against reference values for the service user's age and gender.

For more information about how the QTUG assessment is carried out please go to: http://www.kinesis.ie/docs/QTUG_QuickStartGuide.pdf

Why are we doing this?

The rationale underlying the project is that QTUG gives primary care practitioners the ability to assess gait without requiring an expert. They can then make appropriate clinical decisions and referrals based on the information obtained.

The QTUG test is being introduced as part of a change to assessment processes. This provides an opportunity for clinicians to re-think their model of care and assess people at an earlier stage for their risk of falls. Previously people would have been assessed and accessed falls prevention services after they had fallen.

The assumption is that through early identification and management of falls risk and earlier referral onto the falls pathway for treatment we can improve people's ability to self-manage – and thereby reduce their reliance on carers/ health and care professionals improving mental wellbeing of the person and their carers

It may also be that by early identification of falls risk we can reduced unplanned hospital admissions/use of A&E and reduced use of urgent primary care

Who's involved in the project?

Lead Evaluation Partner: University of Sheffield (<https://www.sheffield.ac.uk/scharr>)

Lead for public engagement: Healthwatch Sheffield
(<http://www.healthwatchsheffield.co.uk/>)

Sheffield Teaching Hospitals NHS Foundation Trust (<http://www.sth.nhs.uk/>)

Lead Innovator Partner: Kinesis (<http://www.kinesis.ie/>)

GP Practices involved:

- Pitsmoor Surgery
- Flowers Medical Centre
- Southey Green Medical Centre

What happens next?

Recruitment of patients into the programme will continue until the end of October 2017. The programme will formally end 31st March 2018 and a final evaluation report will be available from the end of June 2018

Tablet and its accessories



7" tablet



Power adaptor

USB cable

Sensor and its accessories



2 wireless inertial sensors

Sensor dock



Elasticated bandages

Miscellaneous



Carrying case



Measuring tape



Quick Start Guide
Warranty and Safety

“DIGITAL HEALTH TRAINING: SUPPORTING PATIENTS TO USE TECHNOLOGY TO MANAGE THEIR HEALTH”

“Digital Health Training: Supporting patients to use technology to manage their health”

The Digital Health Training project involves co-designed resources and training for clinical staff to become ‘Digital Health Champions’.

Digital Champions already deliver informal digital skills training across the Online Centres Network; the new, specialised role of Digital Health Champion would be to enable new conversations, between clinicians and people with long-term conditions, to encourage and support the use of digital health for self-management alongside clinical interventions.

Good Things Foundation, as lead partners in this project, have been supporting the Test Bed to develop further insight into the views and needs of clinicians and health professionals regarding digital health, and, supported by the Test Bed Advisory Group, hosted a co-creation workshop to explore and challenge perceptions of digital health literacy and conduct an initial training needs analysis.

Why are we doing this?

For the past three years, Good Things Foundation has worked with NHS England to deliver Widening Digital Participation, a programme focusing on the activation of patients to self-care using digital tools and resources. The programme connected primary care services with community digital inclusion support, using online and offline resources to help patients gain digital confidence, use NHS Choices and GP online booking systems; and reflecting the findings, Good Things Foundation calculated that every £1 invested in digital inclusion by the NHS would save £6.40 in avoided GP or A&E visits, and that the true saving could be considerably higher.

However, there is not a clear understanding as to how these approaches and resources could be used by healthcare professionals to help people with one or more long term conditions (LTCs) to self-manage their health. Data indicates that digital inclusion activity is most effective when delivered in familiar settings by

familiar people; tailored to personal interests, motivations and needs; and as part of other services or activities of which the user already understands the value.

In theory, this makes healthcare environments and interactions ideal opportunities for developing the digital skills and confidence people need to manage their own health using online tools.

Who is involved in this project?



Lead Innovator Partner:

Lead for Public



Engagement:

What happens next?

We hosted our three digital health workshops between December 2017 and February 2018 and we would like to thank all the health professionals and patients that took part and shared their opinions and experiences.

We are now reviewing all feedback and evaluating the programme and look forward to sharing our learning (and toolkit for hosting Digital Health Workshops) in May 2018.