

Tech for Better Care: Personalised community medication support and management project.

Funding

This project is funded by the Health Foundation, Tech for Better Care funding stream (FR-0004830).

What is the research question?

This is phase one of a Health Foundation funded project, focusing on discovery work, to understand the challenges people face in managing their medications and review the provision of medication aids by local health and care providers.

What is the problem?

Increased life expectancy means that many older adults will develop long term conditions, such as hypertension, diabetes, arthritis, dementia or cardio-vascular disease. As a result, older adults are often prescribed 6 or more medications. Adherence – the extent to which a patient acts in concordance with the dose and dosing interval of the prescribed medication, then becomes a major challenge. Studies have found that 24% of seniors (those aged over 79) may not understand their dosing regimen. Nonadherence is associated with poor memorisation and increased number of medicines and age-related sensory changes; other predictive factors include the cognitive ability and level of education. Estimates of the incidence of nonadherence in older adults can be as high as 30%, in spite of the introduction of medication aids. The hidden economic costs of nonadherence are huge, this is not only in terms of wasted prescription, but more significantly in the increased burden of disease.

In Bristol, patients are having difficulty with medication, are assessed by their local pharmacist and may be referred to a local authority technology enhanced care team, who can provide one of a number of medication aids. Any support is means tested and there are a limited range of devices available with limited follow up, or opportunity to provide a personalised solution.

What is the aim of the research?

The project will explore whether there is an opportunity to use technology to better support individuals with their medication beyond the current provision and to provide more personalised support.

1. Can we proactively and effectively identify people who need assistance in taking their medications?
2. Is the current provision of medication aids by pharmacies, health or social services, equitable and effective?
3. Is there potential for hospital link workers, or other care providers, to use digital technologies to provide personalised support for patients and carers who need help taking their medications.

The outputs of this research will then be used to apply for phase two funding to explore the practicalities of delivering a Personalised Medication Support Service.

How will this be achieved?

There are smart or intelligent assistive technologies, that have the potential to provide individualised support for people with sensory or cognitive impairments to take their medications. The initial focus of this project is to explore whether there might be potential for home from hospital Link Workers to use these new digital technologies to provide personalised relational support for people who have taking multiple medications.

There are three work packages to enable us to understand the current situation:

Work Package 1: Home visits to service users who are discharged from hospital, to explore their needs. Use of online and postal surveys to reach a wider sample.

Work Package 2: Review of the provision on medication aids provided by local authority TEC teams. Interviews of stakeholders to understand their perspective.

Work Package 3: Focus groups with service users, and health and care professionals.

Who is leading the research?

The research is led by Debbie Campbell, Chief Pharmacist at the Bristol North Somerset and South Gloucester (BNSSG) Integrated Care Board and Prof. Nigel Harris, (previously Director of Innovation and Growth, West of England Health Innovation Network) and visiting Professor at the University of the West of England.

The study is a collaboration with Sirona Care and Health, BNSSG Local Authorities, Age UK Bristol and Age UK BANES, together with a number of community organisations.

Subject: Update on the Tech for Better Care Project Personalised Medication Support Service

Dear colleagues,

We wanted to share an update on the Tech for Better Care project. We concluded Phase 1 in December, looking at the needs of people who require assistance with their medication, evaluating the effectiveness of existing medication aids, and exploring the potential for digital technologies to offer personalised support.

Phase 1 Highlights:

- We conducted a rapid literature review, gathered insights from service users, reviewed current service provision, and held focus groups and structured interviews with key stakeholders.
- The results showed that many people require support with medication adherence, but there is considerable variation in the provision of medication aids across BNSSG.
- There's considerable potential for digital technologies to offer personalised support for both patients and carers.

Plans for Phase 2: Building on these insights, in Phase 2 we will seek to develop innovative ways to support medication adherence. The goals for this 5 month project include:

1. **Personalised Support:** Developing methods to better support individuals taking multiple medications.
2. **Exploring Digital Technologies:** Investigating new technologies, these include customised SMS reminders, smartphone apps, remotely monitored dosette boxes, Alexa Show, telemedicine systems, alongside traditional medication reminder charts. We plan to pilot these technologies with 30 users over the next 3 months.
3. **Unified Support System:** Examining the possibility of a unified approach across health and social care, through the development of a personalised medication support service, delivered by third sector partners.
4. **Funding and Resource Management:** Addressing funding constraints by developing sustainable financial models for the service.
5. **Evaluation:** Creating a model to evaluate the rollout of new technologies and services for deployment in Phase 3.

Activities for month 1

We are pleased to have appointed two project workers with our partner Caafi Health who will directly support the recruitment of patients to the project, and if applicable support the use of the technology. We have held focus groups with Brunel Care and Sirona Medicine Optimisation Team to map out pathways and criteria for use of the

technology. Once the information governance requirements have been met, we will be launching the personalised medication support service in Bristol Centre and East, and Weston.

If you have any questions or if you'd like more information about either Phase 1 or Phase 2 of the project, please do get in touch. Your feedback and ideas are always welcome.

Best regards,

Debbie Campbell, BNSSG Medicines Optimisation Lead

Nigel Harris, Project Technical Lead

This project is funded by the Health Foundation Technology for Better Care Programme

<https://www.health.org.uk/funding-and-partnerships/programmes/tech-for-better-care>

Newsletter: Personalised Medication Support Service - Phase 2 Update

Hi everyone,

We'd like to share some updates as we move further into Phase 2 of the Personalised Medication Support Service. This phase is focused on preparing our resources and ensuring participants receive the best support for a smooth and successful pilot program.

Recruitment and Resource Development

Working with our partners Caafi Health, we've recruited two great project workers who will be assisting our participants throughout the process. To help spread information and involve more people, we've created promotional materials like flyers, leaflets, and ads to explain the benefits of our study and encourage participation.

We've also prepared information packages to guide participants through the services we offer, providing all the details they need to make the most of the available support.

Device Integration and Demonstrations

We've received all the necessary devices from our suppliers and have been conducting demonstrations for our team, providers, and care staff. These sessions have been helpful in getting everyone acquainted with how the devices work and their benefits.

Interventions and Technological Solutions

In this phase, we're introducing several tools to help with medication management and improve the overall care experience. Here's a brief look at each one:

- **Medisafe:** This mobile app helps users keep track of all their medications in one place and stick to their schedules. It's available for both Android and Apple devices.
- **YourMeds Dosette Box:** This smart dosette box, filled by a pharmacist, has alarms to remind users to take their medication. If a dose is missed, a supporter is alerted to assist. Milton Pharmacy is helping us by filling and providing these boxes for service users.
- **SMS Reminders:** We're also using text message reminders for some users, managed by The Old School Pharmacy, to help them stay on track with their medications.
- **Self help pack:** For those where technology is not suitable, this provides a guide statutory health and care support, or to products that can be purchased online.

As we continue with Phase 2, our aim is to provide personalised and medication support 20 participants for 8-12 weeks. This pilot will help us to assess whether

having dedicated support workers and innovative technologies will be able to improve medicines adherence.

Thank you all for your ongoing support.

Warm regards,

Nigel Harris

Technical lead, Personalised Medication Support Service Team

Stakeholder Letter October 2024

Key points

Technology for Better Care End of Phase 2 Pilot Study

This pilot study aimed to test the delivery of personalised digital technologies to support people with taking their medications as prescribed. We selected a number of technologies - SMS text messaging, Smart Phone App, Video calling, YourMeds Dosette box and Sentai voice prompting. Service users were recruited by project workers from our partner Caafi Health and they were offered a trial of the technology that was most appropriate for them. We followed up participants every two weeks and conducted end of project interviews to assess the usability, reliability and benefits of the technology.

Although enthusiasm for the project was high, we found it hard to recruit participants, in part this was due to time delays with the project but some people did not want to disrupt their existing medication regimes and there were concerns about how they would access the technologies at the end of the trial. Other participants were in and out of hospital or could not be contacted for follow up. Some potential participants did not have home Wi-Fi which limited options to technologies that did not use broadband (SMS messaging, Smartphone App and YourMeds). So, although we identified 25 potential participants, we were only able to test the SMS messaging and smartphone app with three of these. Despite this, the participants reported positively on their experiences. At the end of study interviews all stating that the technological intervention had made improvements to their compliance, was easy to use and they would recommend to other users. All the participants have continued to use their technology at the end of the trial. This has given valuable learning about patient selection to move into the next phase

The final report for the project is due to be published on the project website shortly, if you would like an advance copy, then please email the team.

Self Help Pack

As part of our outputs for Phase 2 we created a 'Self Help Pack' for users or family members to provide information on what resources and services are generally available to help with medication compliance. The guide was developed with input from the Sirona Medicines Optimisation Team and service users and is available as a PDF on the [BNSSG Healthier Together website](#).

Large scale Phase 3 pilot trial

We are very pleased that we have been selected to receive following funding for a larger Phase 3 trial of the PMSS project from The Health Foundation. We are all thrilled that we will be able to continue work the project and offer this service to a much wider group of participants.

Starting in January 2025 we will aim to recruit 180 users across BNSSG for a 12-24 week trial of the service. We will be working directly with the Sirona, including the TEC Direct to Access hospital discharge teams on a complimentary trial that is

providing technology for high risk fall patients, and other partners include Caafi Health, North Somerset TEC Service, Home Instead, Gordano Primary Care Network, Network. It will also include support from many of the system partners including One Care, Community Pharmacy Avon, Acute trusts and the West of England Health Innovation

Working with T4BC delivery partners IPSOS and Social Capital, we have developed an evaluation framework to capture the learnings, benefits and outcomes of the trial, this may then be used to inform a business case for continued funding of the service.

Thank you all for your continued support. We're looking forward to sharing more updates as we keep moving forward.

Warm regards,

[Name]

Personalised Medication Support Service Team