

Tech for Better Care programme evaluation

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**The
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Executive summary

Introduction

This report summarises the evaluation of the Health Foundation's Tech for Better Care (T4BC) programme. This was a £2.2 million funding initiative that ran from May 2023 to March 2026 and aimed to foster technology-enabled care models for home and community settings. The evaluation, conducted by Ipsos, used a theory-based approach using contribution analysis to assess the programme's influence on the developing models of care, and to provide actionable feedback for the programme team at the Health Foundation.

About the programme

The programme was designed to foster radical, technology-enabled care models. It used a phased funding structure to support early-stage innovative ideas into piloting, aiming to advance the most promising concepts. The programme's vision was to enable transformative, relational, and proactive care in home and community settings, addressing systemic barriers like a lack of trust in technology and skills gaps within the care system.

Ten teams were funded in the initial exploratory phase, selected from over 100 applications. This was narrowed down to six for prototyping and finally to three for a 12-month pilot. In addition to grants, the programme provided teams with innovation support from partners Social Finance and Ipsos, including training in user-centred design¹ and evaluation guidance.

The three projects selected for the pilot phase were chosen for their potential to create scalable service models.

- **Bristol, North Somerset and South Gloucestershire (BNSSG) ICB:** Developed a personalised medication support service that used existing technologies like smart calendars and apps to help patients manage their medications after leaving the hospital, thereby reducing errors and improving adherence.
- **NHS Lanarkshire:** Focused on a co-designed, digitally-enabled falls prevention service called 'No Need to Fall'. This project created a digital front door for self-assessment and a personal data store to reduce repetitive information sharing.
- **Sutton Primary Care Networks (PCNs):** Piloted the Sutton Virtual Community, a proactive support service for lonely people. It used a population health approach to connect at-risk people through facilitated virtual peer support groups, aiming to address their wider health and wellbeing support needs.

¹ The terms 'user engagement' and 'user-centred design' are used to describe the purposeful involvement of people with lived experience of the service. This encompasses people receiving care and their families and carers, and health and care staff.

How the programme influenced change

At the end of the pilot phase, the evaluation found that the programme was a catalyst, with strong evidence that its structure and focus on user-centred design and cross-sector partnerships helped teams strengthen their service concepts² and develop more relational and proactive care models. While the pilots showed promise in improving care quality for specific groups, the long-term embedding and transformation of the wider health system remains uncertain due to significant systemic barriers like funding, commissioning pathways, and the challenge of scaling the relational aspects of care. This assessment is based on analysis of the following contribution hypotheses.

1. User engagement	The programme's emphasis on user-centred design was effective. There is strong evidence that the programme's structure and flexibility enabled teams to strengthen their service concepts through iterative user feedback, resulting in more usable and acceptable services.
2. Programme design and support offer	The programme's design and support offer provided a useful framework, valuable tools, and psychological safety that helped teams refine their concepts. However, it was not the sole factor enabling teams to strengthen their service concepts, as teams also benefited from pre-existing capabilities and other partners.
3. Local system partnerships strengthen service concepts	There is strong evidence that the programme fostered cross-sector partnerships that strengthened service concepts. These collaborations, enabled by the programme's structure and funding, were key to refining service blueprints, recruitment, and the use of technology.
4. Local system partnerships to enable embedding	While cross-sector partnerships created positive conditions and important assets for future adoption (like business cases), it is too early to confirm long-term embedding of the services. Systemic barriers, including funding and commissioning uncertainties, are risks to embedding.
5. Concepts enable proactive and/or relational care	The programme enabled the development of service concepts that were more relational and proactive. There is strong evidence that its specific focus pushed teams to incorporate relational elements, leading to new, personalised interactions and increased psychological safety for users.
6. Proactive/relational models improve quality of care	The piloted service models demonstrated improved quality of care for participants, particularly for underserved groups. While short-term outcomes addressing real needs were identified, long-term data is required to confirm impact on clinical effectiveness, efficiency, and equity.

² The term 'service concept' is used because it describes something that sits between an idea and a fully implemented service, in line with what this programme was funding. It describes to a clear, testable description of how a proposed service / model of care will create value for a specific group, within a specific care pathway, and how it works operationally.

7. Learning	The programme has begun sharing its learning through national-level engagement and local dissemination plans. However, there is not yet evidence of this learning being formally adopted or cited by external programmes.
8. Transforming models of care	The programme acted as a catalyst, enabling teams to design service concepts with transformative potential by focusing on relational and proactive care. However, with significant barriers to funding, sustainability, and scaling yet to be overcome.

Wider learning

The programme focus on the relational and proactive potential of technology in health and care services resonated with frontline teams. Engaging with health and care professionals and the public on the role of data in relational and proactive tech-enabled models of care requires building trust through clear governance and enhancing data literacy for both the public and professionals. While technology can foster proactive, preventative care and reduce workforce pressures through tools like AI-assisted administration and group consultations, these benefits are not automatic.

The pilots demonstrated that a relational application necessitates additional funding and dedicated staff to avoid widening inequalities and digital exclusion. While the service concepts show potential to be adaptable for different use cases and showed promise in shifting care out of hospitals, scaling will require overcoming significant systemic barriers, including siloed funding, data interoperability challenges, and a cultural shift towards integrated, community-based care models.

Overall, learning from the programme suggests that future funding initiatives would benefit from funders acting in a supportive role that extends beyond simply providing grants. Providing funding for frontline teams for developing early-stage ideas is most successful when it empowers experienced teams with strong local partnerships. This includes project leads that have the license, space and funding by the programme to operate and drive progress. Programme structures should actively help teams to navigate system constraints and build in additional time for funded teams to both undertake co-design with digitally excluded communities and conduct relationship building with staff and local partners.

Conclusion

In conclusion, the evaluation suggests that the T4BC programme was a catalyst, enabling teams to design and pilot service concepts with transformative potential. The programme structure of phased funding and dedicated support enabled teams to design and pilot tech-enabled models of care that were relational and proactive. While pilots showed promise, the long-term embedding and scaling of these new models of care is uncertain. Therefore, while the T4BC programme enabled the Health Foundation to influence the development of new models of care, for these to go beyond piloting to have genuine transformative and sustained impact, future funding models must consider how to better support teams to navigate and disrupt the current systemic barriers.

1 Introduction

This section provides a high-level overview of the programme and the approach taken in the evaluation. It sets expectations for what this report covers, how evidence was generated, and how to interpret the evaluation findings.

Overview of the programme and rationale

Tech for Better Care (T4BC) was a £2.2 million, three-phase funding programme from the Health Foundation running between May 2023 and March 2026. It was designed to catalyse new, care-led, technology-enabled models of care delivered at home or in the community.

T4BC responded to rising demand, and unmet needs, for care that is more proactive and relational, and to barriers that inhibit technology adoption in health and social care. These include capability, time, skills, routes to market, digital infrastructure, and public concerns on safety and/or quality of care.

The programme's ambition was to enable radical, potentially transformative models of care that change how people experience care, extending beyond the novelty of the technology in use. Its goals were to improve the experience, quality, efficiency and health and wellbeing outcomes for people receiving and delivering care.

The programme used three 'stage gates' to select teams (see figure 2.1 below). This involved funding being awarded in phases to a decreasing number of teams after a competitive application process. Three projects were funded throughout, down from ten teams funded in phase one (idea generation and testing) and six up to phase two (prototyping). In addition to funding, the Health Foundation provided teams with additional capability-building and support to upskill teams in human-centred design and digital innovation. This capability building support was delivered by Social Finance, a not-for-profit consultancy which specialises in human centred design.³ The support involved delivering training, one-to-one support and community events with project teams.

Evaluation approach

The Health Foundation commissioned Ipsos to deliver a developmental, theory-based evaluation to:

1. Capture the T4BC programme story, including the delivery of the programme and the impact this had on the interventions developed.
2. Provide independent, timely feedback to inform decision making.

³ Further details about Social Finance are available at their website: <https://www.socialfinance.org.uk/>

3. Support funded teams to build evaluation capability.

To capture the programme aims and evaluate it, Ipsos co-developed a **Theory of Change** (ToC) with the Health Foundation and revisited this at the beginning of phase three. The ToC is a framework which sets out how a programme's inputs and activities are expected to lead to outputs, outcomes and longer-term impact, under clearly stated assumptions. The T4BC ToC sets out outcomes covering:

- The development of stronger, user-centred service concepts, clearer piloting plans, and stronger cross-sector partnerships.
- The development of evidence-backed value propositions for models of care, and the embedding of these models in local pathways.
- The application of learning to mobilise models of care beyond the individual sites, and to inform future programmes or tech-enabled care models.
- Greater use of relational and proactive care principles, improved experience from those receiving care, quality, health and equity, and a more efficient, satisfying system for staff.

The full ToC is presented in the **methodological appendix**.

To assess progress against the ToC, the evaluation has used **contribution analysis**. This is applied to programmes, like T4BC, where a comparison group or counterfactual is not available due to the evolving, developmental nature of the programme and funded projects. A series of contribution hypotheses are set out that link to the ToC outcomes, and multiple evidence sources are brought together to judge the additionality of T4BC. Adopting this approach provides a credible account of what T4BC contributed and under which conditions.

The evidence for the contribution analysis was generated through the following sources:

- Regular check-ins and learning meetings with the Health Foundation and Social Finance programme teams.
- Semi-regular workshops and interviews with funded teams and their partners.
- Exit interviews and reviews of unsuccessful applications.
- Regular review of achievements in line with team-level ToCs which were developed for the individual projects.

For this evaluation, eight contribution hypotheses were identified from the programme theory of change. These hypotheses are presented in Table 1 in the methodological appendix. By assessing whether outcomes the projects achieved were attributable to the programme or alternative sources, four evidence tests were considered:

- **Straw in the wind:** Evidence points in a direction to suggest the hypothesis may be true. For example, projects achieve a relevant outcome. However, this cannot be directly linked to T4BC.
- **Hoop test:** A necessary condition related to T4BC is observed. For example, projects confirm that they benefited from the programme structure or support.
- **Smoking gun:** A direct, traceable link is made between T4BC and an outcome, which weakens alternative hypotheses. For example, programme outcomes are tied to an element of the programme or its support.
- **Doubly decisive:** Confirms T4BC's role and rules out credible alternatives. For example, multiple sources show that there is no other plausible driver for the programme outcomes.

About this report

This report consolidates the evaluation findings for the programme using data from the pilots to build on the emerging findings shared in the evaluation reports at the end of phase one and two.

Chapter 2 covers the programme summary, including details on the phases and projects supported. **Chapter 3** covers the contribution analysis, evidence base for each claim and findings for the eight hypotheses. **Chapter 4** covers wider learning and implications. The **appendices** cover case studies of the three projects funded through to phase three (pilot), and the evaluation methodology.

The main report provides illustrative examples from the three named pilots which were funded throughout the programme. Quotes used in the main report are anonymised so as not to attribute them to specific pilots in the main report. However, case studies of the three pilots are included in the appendix, and these allow for quotes to be attributed to specific pilots.

2 Programme summary

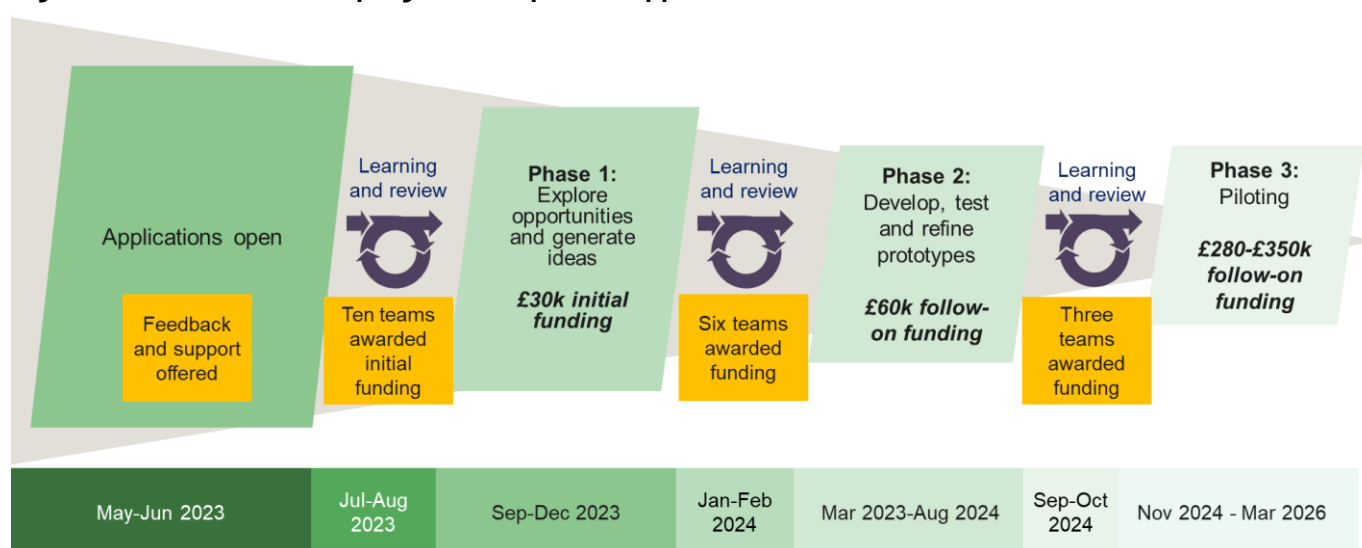
This section summarises the story of the programme. It explores the rationale underpinning its design, the funded teams and resulting service concepts developed.

Phased funding

The programme was designed to fund and support diverse teams from across the health and social care sector to develop and test promising approaches to technology-enabled care that have the potential for future scaling. It was designed as a phased funding programme to enable the Health Foundation to work in a more experimental way, to ‘fail fast’ by funding potentially risky ideas that showed potential before committing further funding. It was part of the Health Foundation’s strategic focus to support ‘radical’ improvement and innovation in health and social care. It had an iterative, three-phase process that started with an exploratory stage, providing ten teams with up to £30,000 over three months to test their initial concepts. In the second phase, six of the most promising projects received up to £60,000 for a six-month period of intensive co-design and prototyping. The final phase initially set out to support three teams over twelve months to pilot their services and build an evidence base for potential future adoption, with an extension then granted to March 2026 provide additional time to teams to carry out and complete piloting following an initial set-up period.

The programme approach is set out in **Figure 2.1:** below. Between each phase, the Health Foundation reflected on learnings from the programme delivery and reviewed each project team’s funding application for the next phase.

Figure 2.1: Overview of the programme’s phased approach and timelines



Source: Ipsos review of programme documentation

An ambitious vision for new models of care

The programme was seeking disruptive, radical innovations to enable new models of care capable of transforming the current system. Specifically, it sought innovations that enabled more relational and proactive models of tech-enabled care within home and community settings. Relational care was defined as focused on developing and nurturing human relationships and support networks, while proactive care aimed to address underlying causes and prevent issues before they arise.

It was designed in response to analysis by the Health Foundation that highlighted the barriers to realising the potential of technology-enabled care.^{4 5} This analysis highlighted a lack of trust and confidence among staff and patients to technology-enabled care solutions. It highlighted the gap between the ambition for proactive, relational care and the reality of reactive, siloed systems struggling with systemic pressures. These challenges were compounded by a fragmented technology market and a skills gap within care systems, hindering their ability to effectively implement new solutions. To address this, the programme wanted to support front-line teams to develop innovative models of care by co-designing with users, building collaborative partnerships, and ensuring technology enhances, rather than replaces, the human elements of care.

Broad eligibility criteria

The Health Foundation provided applicants with their broad definition of the concepts of relational and proactive care, and rationale for this area of focus, but kept the funding criteria broad. They required teams to be led by an organisation responsible for delivering care in the home, a residential setting, or the community, with the assessment process also seeking teams that had the 'seed' of an idea, strong local partnerships, and senior buy-in.

Funding plus innovation support

In addition to grant funding, the programme provided support to the funded teams. This was delivered by an external support partner, Social Finance and the evaluation provider, Ipsos. This included capability-building support through training modules on user-centred design and prototyping, bespoke technical advice on procurement, and evaluation guidance. Additionally, the Health Foundation programme team facilitated cross-programme networking and learning events with external stakeholders to foster collaboration and knowledge mobilisation. This programme support model and knowledge mobilisation was intended to give teams the capabilities, resources

⁴ PUBLIC. (2022). Technology enabling new models of care in the home or community: Final report: analysis and recommendations. The Health Foundation. <https://www.health.org.uk/publications/reports/technology-enabling-new-models-of-care-in-the-home-or-community>

⁵ Keck, L., and Godec, S. (2024, November). Trust and confidence in technology-enabled care: A joint analysis with Q. The Health Foundation. <https://www.health.org.uk/reports-and-analysis/briefings/trust-and-confidence-in-technology-enabled-care>

and opportunities to refine their ideas while also sharing insights and learning with interested policy stakeholders.

Funded teams

Just over 100 eligible applications were received. These applications were seeking to apply technology to fix the shortcomings of existing services, which applicants described as being outdated, fragmented, and reactive. The most common types of technology proposed were mobile health/eHealth apps, and health information technology for managing data. Technologies that enabled use of AI and data analytics also featured, and many projects combined multiple technologies. The intended focus for these innovations was primarily on patients and health care providers, with a strong emphasis on delivering care in people’s homes and community health settings. The proposed changes aimed to improve various stages of the care pathway, particularly treatment, prevention, and follow-up care.⁶

Ten teams were initially funded in Phase one (Table 2.1). The lead organisations and their partners spanned NHS providers, local authorities, ICBs/PCNs, hospices, VCSEs, social enterprises, universities, HINs and technology firms. The interventions were focused on health and care challenges related to multimorbidity and polypharmacy, end-of-life support, frailty/falls, isolation/loneliness, live-in care workforce, self-management, transitions of care, carer wellbeing, and use of personal care budgets. The service concepts included focus on user-led tools and platforms (apps, online communities, monitoring/wearables adapted to context) and developing digital infrastructure/process changes to enable holistic, person-centred pathways and collaboration. The projects selected for funding were not necessarily about creating novel technologies but often involved applying existing digital tools, such as apps, monitoring devices, and online platforms, to transform care pathways and service models to be more relational and proactive.

Table 2.1: Overview of funded teams and programme phase(s) they received funding for

Team	Summary of initial service concept	Phase(s) funded
Guy’s and St Thomas’ NHS Foundation Trust	Tech4Better Care @Home, aiming for interoperability of different technologies to support people with multiple health conditions.	1
Powys County Council	Supporting Care Circles, a project to enhance and make a home monitoring service for vulnerable adults more affordable and less intrusive.	1

⁶ Taylor, K., and Scott, J. (2025, May). Tech for Better Care programme: Analysis of applications [unpublished]. Ipsos.

St George's University Hospitals NHS Foundation Trust	Creating a digital platform for neuro-rehabilitation, specifically an app to provide interventions for patients discharged into community services.	1
St Rocco's Hospice	Care Well, a project to help carers access support and live well, using technology similar to virtual wards.	1
Care City and Partnerships	Thrive, a platform aimed to create 'digital scaffolding' to help people better use personal care budgets and have more control over their social care.	1, 2
Rowcroft Hospice	Explored using technology to provide high-quality end-of-life care at home for people not yet meeting the threshold for hospice care, aiming to prevent carer distress and breakdown.	1, 2
Shared Lives Plus	Developing a new digital infrastructure to improve the matching service between live-in carers and people with learning disabilities and autism.	1, 2
NHS Lanarkshire	'No Need to Fall', using in-home technology to provide more proactive and relational support to people at risk of falls.	1, 2, 3
Bristol, North Somerset and South Gloucestershire (BNSSG) Integrated Care Board	Personalised Medication Support Service, using technology to help people manage their medicines after leaving the hospital to reduce errors.	1, 2, 3
Sutton Primary Care Networks (PCNs)	Sutton Virtual Community, using technology to support housebound adults, empowering them and meeting holistic needs through online events and peer support.	1, 2, 3

Early insights from phases one and two - user testing and prototype development

In the initial phases of the programme, insights from user testing led many teams to simplify their initial ideas to focus on applying existing technologies in accessible ways rather than developing novel ones. The changes made in response to user feedback included pivoting from a wearable device to a web app (Rowcroft Hospice) and removing a chatbot feature (In Control and Care City). Teams' design decisions were also pragmatic responses to systemic barriers. For example, one team chose to remain independent of local government to maintain user trust (Care City and In Control) and another focused on a specific clinical use case to build a stronger argument for future commissioning (Sutton PCNs). The programme's time-limited nature also provided a rationale for adapting existing technology instead of building new platforms from scratch (BNSSG and Sutton PCNs).

The teams valued the opportunity to undertake user-centred design and found that putting simple prototypes in front of users yielded deep, practical feedback that abstract discussions could not.

Key challenges all teams reported related to barriers developing proactive models in reactive systems and navigating data governance issues in a risk-averse context following high-profile NHS data breaches. It also became clear that creating a shared language between care providers and tech developers was important for realising the co-designed approach.

Promising service concepts selected for piloting

Three projects were selected for a 15-month piloting phase. The number of teams and amount of funding per team for the pilot phase were not pre-determined by the Health Foundation. The decision-making on the service concepts to progress from phase one to two, and two to three, was based on their transformative potential for shifting power from health systems to individuals. The successful teams were seeking to work within the existing system to develop holistic service models that had wide potential application, rather than focused on creating a single technical tool.

For the pilot phase, the teams received between £250,000–£380,000 as well as innovation support including human-centred design training and coaching, technical/digital support and sustainability planning support. The level of funding available for each team was based on splitting the overall programme budget across the three teams the Health Foundation wanted to fund and the level of funding the teams thought was needed to be successful within a 12-month pilot timeframe. The three pilots were:

1. **Bristol, North Somerset and South Gloucestershire Integrated Care Board (BNSSG ICB).**
This pilot was focused on developing a personalised, technology-enabled medication support service (PMSS) to address inconsistencies in how patients are supported to take their medication. The pilot focused on building relationships with service users and their families through community-based project workers to match them with the most suitable technology-enabled medication aid. This included low-tech options, such as a digital reminder clock, vibrating watches, SMS text reminders, to higher-tech options such as a smartphone medication app, a tablet with reminders, an AI-enabled voice assistant. The innovation in this pilot was its application of existing technologies in a new, relational and proactive pathway, with particular focus on groups experiencing health inequalities. Project staff conducted home visits to assess individual needs, provided the technology, and followed up over a 16-week period. The pilot demonstrated that this personalised and relational approach could lead to more reliable medication adherence and reduced contact with NHS services for many participants. The team worked with local partners to develop a business case for scaling the service, to consider how the quality of personalised care could be delivered on a larger scale and be integrated into existing community-based services.
2. **NHS Lanarkshire** which focused on a digitally-enabled falls prevention service. The project team included staff from the NHS board, North and South Lanarkshire Health and Social Care Partnerships, the University of Strathclyde, and the Digital Health and Care Innovation Centre. Through a co-design process with older adults, carers, and staff, they created concepts for a 'No Need to Fall' service and a 'Tell My Story Once' personal data store. The

service featured a digital “front door” for self-assessing fall risk and finding support, while the data store allowed users to share their information with consent, reducing repetitive questioning. The innovation in this project was to systematically shift reactive models of care to be more proactive and preventative. An interoperable digital space allows people to control and share their health information and improve communication across fragmented systems. This serves to empower individuals to have more ownership over their care and allow for more coordinated and timely responses. The project did not include a live pilot as doing so would have required significantly more funding than the Health Foundation had available when splitting the programme budget across three pilots.⁷ Instead they focused on extensive workshops and research to refine the prototypes. This process highlighted the importance of involving carers, using clear language, and ensuring the service was accessible. As the project developed, it aligned with national implementation across the NHS in Scotland of a digital front door service. Although the service itself was a prototype, some aspects of the front door and data store concepts have already been taken up by a neighbouring health board and in other condition-specific pathways, such as work on supported self-management for weight loss.

3. **Sutton PCNs**, focusing on developing the Sutton Virtual Community, a proactive neighbourhood support service for people experiencing poor health as a result of loneliness. The pilot used a population health approach to identify at-risk individuals, including those with poorly controlled type 2 diabetes and lonely people (indicated health, social or demographic aspects including living alone, recent major life events, having chronic health conditions or functional impairments), and connected them through a structured onboarding process to facilitated virtual peer support groups. The virtual platform, developed during the phase two prototyping phase, allowed for use of AI to support facilitators to match participants and plan sessions. The innovation in this pilot was to develop a service model to enable primary care teams to address the psycho-social factors influencing health through a population health approach and commissionable model. It aimed to develop a user-friendly and interoperable digital front door for community-based support and connection. This approach aimed to create a scalable model of care to enable primary and community care teams to more consistently and proactively address people’s social and psychological needs so that they can better manage their physical and mental health and wellbeing. It was designed to complement clinical care by fostering a supportive environment for shared experiences and supported self-management. The pilot showed promising health and wellbeing outcomes, particularly with the diabetes cohort. The inclusion of a one-to-one onboarding interview was effective at building trust and matching participants to groups, and the virtual platform provided an accessible route for isolated and housebound people to

⁷ While the funding did not lead to a live pilot, this report still refers to them as the “pilot team” to be consistent with the descriptors used to distinguish the three phases of the programme

engage with others. The project has shown potential as a tool for integrated neighbourhood teams to provide proactive care for various conditions.

3 How the programme influenced change: evaluative assessment using contribution analysis

This section provides an overview of the contribution hypotheses that guided the evaluation. It presents the evidence, drawn predominantly from the pilot phase, underpinning an assessment of the extent to which there is evidence to support the hypothesis, the strength of this evidence, and the alternative explanations that have been identified.

Summary of the hypotheses and assessment

Eight contribution hypotheses were developed to test the programme theory of change. Across each hypothesis, evidence suggests that the programme had an important (if not always exclusive) impact on developing concepts for tech-enabled care. The service concepts followed stronger principles for proactive and relational care than would otherwise have done, and T4BC led to new and stronger engagement activities and partnerships which were facilitated through ring-fenced time for engagement. At the same time, the programme's flexibility allowed teams to adjust their direction, bring on board new partners and keep delivery plans in place despite wider pressures.

The teams developed tangible assets and pilots delivered promising early outcomes for service users. However, each has not yet embedded and spread the services by the end of the pilot phase. This is, in part, due to wider barriers including commissioning, governance and workforce constraints. Disseminating programme learnings and encouraging wider transformation are also longer-term goals which have not yet been realised.

Each hypothesis, evidence test achieved and assessment is summarised below in **Table 3.1**. Further details of each hypothesis are set out across this chapter.

Table 3.1: Summary of contribution hypotheses, explored in more detail below

Contribution hypothesis	Evidence test achieved	Summary of assessment
1. User engagement / user-centred design supported teams to strengthen their service concepts in ways they otherwise would not have been able to.	Smoking gun (doubly decisive in some cases)	The programme aims, ring-fenced time and structure focused teams on user engagement from the outset, helping team members to develop new skills. This led to refinements in service concepts before and during piloting. Alternative partners or sources for conducting engagement remained for some teams.

<p>2. The programme support (provided by the Health Foundation, Social Finance, and Ipsos), its structure and level of resources available, enabled teams to strengthen the design of their service concepts in ways they otherwise would not have been able to.</p>	<p>Straw in the wind</p>	<p>The programme's design and support offer provided a useful framework, valuable tools, and psychological safety that helped teams refine their concepts. However, it was not the sole factor enabling teams to strengthen their service concepts. All three teams, to different extents, also benefited from pre-existing capabilities internally (such as in user design and technology innovation) and the reach and capability of other partners.</p>
<p>3. Cross-sector partnerships supported teams to strengthen their service concepts in ways they would not otherwise have been able to</p>	<p>Smoking gun</p>	<p>New and stronger cross-sector partnerships developed during the programme. Partners informed service concepts, including language and accessibility, service scope and pathways, referral routes and technical adjustments. Partnerships were facilitated by the programme's clout and flexibility which allowed partners to join as T4BC continued. Some pre-existing relationships and wider policy influences cannot be ruled out from influencing service concepts.</p>
<p>4. Cross-sector partnerships increase the possibility that the service concepts can be embedded in their local systems and potentially more widely</p>	<p>Straw in the wind</p>	<p>While cross-sector partnerships created positive conditions and important assets (like business cases) for future adoption, it is too early to confirm long-term embedding of the services. Systemic barriers, including funding and commissioning uncertainties, are risks to embedding.</p>
<p>5. The service concepts developed through T4BC enabled technology to be used in care that is more relational (e.g. enhancing the quality of human relationships and connections and takes a whole person approach) and/or proactive (e.g. preventing issues before they arise, enabling people to be independent for longer).</p>	<p>Smoking gun (doubly decisive for the relational care principle)</p>	<p>The programme encouraged teams to frame concepts around proactive and / or relational care and, in phase three, clarified how to deliver, and to deliver in practice, more proactive and relational care within their piloted services. Multiple teams noted that they had no prior awareness of relational care that was not something they were encouraged or able to deliver outside of T4BC.</p>

<p>6. The service concepts developed through T4BC and piloted with end users add value to previous or existing services and address a real need in care (related to quality, efficiency, experience, equity, health outcomes).</p>	<p>Smoking gun</p>	<p>The piloted service models demonstrated improved quality of care for participants, particularly for underserved groups. While short-term outcomes in addressing real needs were positive, long-term data is required to confirm lasting impact on clinical effectiveness, efficiency, and equity.</p>
<p>7. Learning captured through T4BC informed future programmes and the wider development of tech-enabled care</p>	<p>Straw in the wind</p>	<p>The programme began to collate and share actionable learning (internal deep dives, national engagement) with project teams planning further dissemination and reuse of assets. However, external adoption and citation of knowledge have not yet occurred.</p>
<p>8. T4BC enables teams to develop service concepts that work towards a vision of care which transforms the wider system of health and social care, envisioning long-term shifts in the way things are done, rather than small tweaks to current practices.</p>	<p>Straw in the wind</p>	<p>The programme acted as a catalyst, enabling teams to design service concepts with transformative potential by focusing on relational and proactive care. However, with substantial barriers to funding, sustainability, and scaling yet to be overcome.</p>

1. User engagement

Hypothesis: User engagement / user-centred design supported teams to strengthen their service concepts in ways they otherwise would not have been able to.

Overall assessment

The programme enabled structured user engagement from its outset. This was a critical part of phase one and, while early engagement was time bound, teams maintained this during phase three as part of piloting or follow-on tests. The programme support provided by Social Finance actively focused on user-centred design (UCD)⁸, such as usability testing, journey mapping, personas, wireframing, iterative user testing and evaluation planning with UCD lens. These introduced new concepts and skills for many if not all members of each project team. For example, the NHS and social care representatives involved in the NHS Lanarkshire pilot did not have these skills and learned about how to apply UCD and take a problem-oriented approach to developing 'No Need to Fall' during the project. This was important for them and beneficial. However, staff at their partner organisations, DHL and the University of Strathclyde, did have specialised staff with these skills. One of the leads of the Bristol, North Somerset and South Gloucestershire Integrated Care Board (BNSSG ICB) pilot reflected that they had some prior exposure to UCD, however the programme structure and focus enabled them to enhance their skills and their application in practice.

While this support was concentrated in earlier phases of the programme, and the teams' service concepts were relatively defined by phase three, it remained the case that teams prioritised engagement and user feedback to course-correct the pilots and improve usability and acceptability of the proposed services.

Engagement and user-centred design was embedded through stated goals for T4BC and staged funding phases. This supported teams to develop and continuously refine their service concepts. For example, following initial consultations with medical professionals and patients including under-represented groups, the BNSSG ICB team developed its personalised medication service. However, it continued to use pilot visits to service users to identify ways to tailor and improve the service, as well as change the technologies on offer.

Supportive evidence

There was evidence that the teams focused strongly on user engagement and user-centred design into piloting, in line with the programme principles, and that this led to changes in service concepts which more strongly reflect user feedback. All teams reported prioritising user

⁸ User-centred design is a process that is led by designers, to enable them to continually learn and seek feedback from users to shape their product or service. Users are engaged to provide insight and feedback, but unlike co-design or co-production, decision-making sits within the team.

engagement and user-centred design in line with programme principles, and changes were documented which reflected user feedback.

“We used a platform for the interviews as well as the group work, so it became the working platform for all the prep work, conversations with patients in terms of suitability and understanding what would happen in the sessions.” Pilot team member

In addition to this, many team members reported that the approach to engagement and user-centred design had not been applied to previous projects at all, or that they did not apply them recently or consistently across their projects.

“We’ve gone down quite a different route to perhaps what we would have done if we’d been approaching our project from that sort of traditional service lens [...] People before us had tried and really struggled to make inroads [in user design].” Pilot team member

Feedback was gathered throughout, by all teams, from service users and staff to define and assess the acceptability of the service concepts. Changes took place in how staff interact with participants, language used, and choice of engagement channels.

In Sutton PCNs and NHS Lanarkshire for example, users informed how technology needed to look or how the groups needed to operate, including with carer or professional staff inputs. In BNSSG ICB, although user engagement could not directly lead to alterations in individual technologies under use as these were purchased or leased off-the-shelf products, the piloting stage provided opportunities to inform each user’s choice of technologies from a large roster of medication aids and continuously alter the roster.

“After the previous workshop, the language used in the prototypes was destroyed by the participants. We didn’t try and hide the clinical [...] components. We’ve come back to them in that last round with some softened language, more person-centred language and broadly speaking it was very well received.” Pilot team member

In pilots, live adjustments were also made to recruit groups with higher needs effectively. For example, those with mental health conditions, low digital literacy and informal carers. The BNSSG ICB pilot made adjustments when engaging people with mental health needs and dementia, adding phone-first calls to the service and including known carers in visits. Adjustments that each team made also followed on from extensive engagement and design of the service concept that took place before piloting, over phases one and two.

The programme’s staged programme structure and assessment questions for funding, which tied back to Tech for Better Care’s objectives for user-centred design, encouraged teams to consider and report on user-centred engagement and design.

“The fact that the Health Foundation used [a] design thinking structure with the three phases was really helpful. Imposing that and effectively the need to summarise the findings and submit an application for further funding provided a really useful stage gate process.” Pilot team member

Alternative explanations

The following alternative factors are likely to also have influenced each team’s ability to apply user engagement and to strengthen service concepts:

- Some opportunities to gather feedback did not occur or could not translate into concept change. For example, certain groups remained hard to recruit. In some cases, there was limited scope to adjust off-the-shelf technologies, and the selection of the technology had been made in advance of this user testing. Some adjustments made mid-pilot were incremental in nature and did not alter the overall service concept.
- All teams included partners (universities, public bodies, vendors) with prior user research experience. While these partners were funded through the programme, and their involvement can therefore be attributed to it, it is plausible that these partners contributed materially to engagement quality in addition to the programme’s structure and support.

In spite of these explanations, the programme’s structure still elevated the priority and focus on user engagement, either by upskilling projects team members or by setting programme aims that encouraged successful applications to include partners. It should be caveated that user engagement often focused on a small sample of individuals or issues, given that the pilots and earlier activities were small in scale which is to be expected for projects operating at an early stage of discovery. This does however mean that service concepts may need to revisit and reconsider some user groups not engaged during T4BC, which will need ongoing consideration if they are scaled.

Evidence test

The evidence meets the **“smoking gun”** evidence test.

This is because there are documented examples of improvements to each project’s service concept as a result of user testing; examples where key staff or partners did not have comparable or extensive pre-programme experience in user testing; and an established case that the programme’s focus and structure encouraged project teams to carry out engagement and user-centred design, to make improvements.

Evidence was stronger in some instances and would have met the “doubly decisive” test. One team reported that, alongside the improvements made, there was not a historic or current alternative route for them to deliver repeated user testing of this nature. However, it was not possible to rule

out alternative, external sources for conducting engagement and user research⁹ for all projects and partners.

⁹ User research refers to a structured, time-bound, ethical approach to generating evidence about people's needs, contexts, behaviours, language and experiences with a proposed service. It can involve interviews, A/B testing, ethnography. The term user engagement is also used in this report. This refers to the overall approach to involving people, of which research is one part.

2. Programme design and support offer

Hypothesis: The programme support (provided by the Health Foundation, Social Finance, and Ipsos), its structure and level of resources available, enabled teams to strengthen the design of their service concepts in ways they otherwise would not have been able to (for example, because of better capability to deliver quality user-centred design and user engagement activities; through generating more relevant and robust evidence to illustrate the added value vs 'business as usual' than they would have otherwise).

Overall assessment

The evidence indicates that the programme's design and support offer made a positive contribution to strengthening the pilot teams' service concepts. Teams appreciated the different types of support on offer, from structured design exercises and advisory support to peer-led 'check and challenge'. There is evidence that teams engaged with the support provided, using the tools and processes to produce concrete outputs and refine their approach. The programme design provided a useful framework to focus efforts on developing the service concepts. The support was particularly effective fostering psychological safety, which built the teams' confidence. However, the hypothesis is not fully confirmed because specific improvements cannot be solely attributed to the programme's support. The presence of other support and pre-existing capabilities means that alternative explanations for the teams' progress remain plausible.

Supportive evidence

There is evidence that the programme design influenced how funded teams developed their service concepts and the programme support was used by the teams and led to tangible changes in both processes and outputs.

Teams valued access to external support, which provided a different perspective and expertise than they would otherwise have had access to. They actively used a variety of tools and methods introduced by the programme, including a Theory of Change / logic model, advice on data collection and research methods. Social Finance and Ipsos delivered specific training in topics such as human-centred design (HCD), facilitated road-mapping sessions for planning, and provided structured reflection and feedback on evaluation plans and business cases.

This engagement directly led to the creation of project assets (e.g., a theory of change, an evaluation plan, and a health-economic model). The support also helped teams refine their business cases and pitches as they were seeking continuation funding.

“Having support for the theory of change and the way we developed a system to record the outcomes, and log the impact, was again a really good example of how you would put in place a service evaluation [and we were able to do for this pilot].” Pilot team member

Alongside the support made available through participating in T4BC, the staged programme design and competitive application process to progress to the next phase, helped teams to focus efforts, to meet the timeframes for undertaking user testing, concept development and piloting.

Teams appreciated that the programme was focused on testing and learning rather than just on meeting output targets. The funding created protected time and team capacity to develop and test their service concepts in ways they would not otherwise have been able to. They valued the opportunities to share their learning and reflect with others externally to their teams. This ensured they gave priority, and felt confident, to test their ideas, dedicate time to co-design, and reflect on learning as it emerged.

In addition, teams reported that the programme design and support was responsive to enable them to successfully navigate challenges, such as implementation delays, staff turnover and supplier changes.

“The programme design, from my perspective, was amongst the best I've seen in terms of a commission project because it kind of embodied the methodology, support and capacity to enable you to do something different and it had the right level of challenge as well as support in there to help you find the answers”. Pilot team member

There is evidence that the ambition that the programme design set out, for relational, proactive models of care influenced what the teams focused on. It was described as creating a “north star” that validated their own ambitions for new models of care and kept them focused.

“We’ve gone down quite a different route to perhaps what we would have done if we’d been approaching our project from that sort of traditional service lens.”

Pilot team member

Alternative explanations

In some instances, teams were known to have received capability support from other partners (health innovation specialist organisations, academics, industry partners). This was support that was responding to an identified, specific need of the pilot and was provided through contracted services (covered by the pilot funding) or shared interest from partners in the pilot progress. Teams benefited from pre-existing expertise and drive, and experience and support from people within their existing networks.

“On a previous project [an innovation expert organisation] were really good at just providing support, giving an outsider's opinion, and I think that's really valuable when you're doing innovation. Because sometimes you can't see the wood for the trees when you're too close to it, and it's nice to have people outside.” Pilot team member

Alongside this, the following factors are likely to also have influenced the teams' progress:

- Rather than the programme design and support offer being the most influential feature of the programme it was the funding provided by the programme that allowed the teams to allocate dedicated capacity for staff and partner organisations to manage their projects and fill specialist roles. This ensured they had the right expertise in place and had capacity to create a supportive learning culture within their teams and create opportunities to develop and test the service concepts. It is plausible that with this alone would have enabled teams to develop their service concepts in ways they would not otherwise have been able to.
- The support did not address all of the teams' needs. For example, the support did not enable the teams to avoid issues with contracting suppliers, Data Protection Impact Assessments (DPIAs), ethics approvals, senior leader capacity and commitment, and sustainable funding options. Some of the teams reported during phases one and two that content arrived late for team timelines and perceived competition impeded cross-team collaboration which could have been beneficial to idea sharing during concept development. The restricted programme timeframes also limited teams' abilities to engage with seldom-heard groups (such as the most digitally excluded groups).
- The teams' needs changed over the course of the programme, and neither the programme design nor support were not the most influential factors at pilot stage. The early user design workshops during phases one and two were influential at that point. However, the teams moved away from developing their service concepts during the pilot to focus on demonstrating its value and embedding within existing pathways. While the teams appreciated the support for embedding their concepts and engaged in the different sessions offered, their progress depending on other factors within their local systems and leveraging existing skills and relationships which were beyond the programme's control.

Evidence test

The evidence for this hypothesis meets the **“straw in the wind” test**. The teams engaged with the programme support offers, which had an influence on their confidence and how their pilots were designed and tested. The support was appreciated and well received but isn't working in isolation. The programme's support was not the primary or sole cause of the improvements. The evidence cannot rule out that teams did not have access to similar support from expert teams in the local system and that if the programme provided the funding alone it would have enabled teams to strengthen their service concepts.

3. Local system partnerships to strengthen service concepts

Hypothesis: Cross-sector partnerships supported teams to strengthen their service concepts in ways they would not otherwise have been able to (e.g. because they have sought buy-in from / alignment to commissioners' needs or the needs of local partner organisations, they have built on learning from other related initiatives, formulated their value proposition).

Overall assessment

Throughout the programme, NHS, care sector, voluntary sector and technical partners became increasingly involved in informing the service concepts. After phase one, in which some projects worked with a smaller core group given the time available, additional partners – such as community organisations and care providers – became formally involved as part of the funded teams. Each contributed to service concepts and phase three piloting approaches. For example, by shaping service blueprints (for example, entry routes, user eligibility and safeguarding), supporting the recruitment for the service and by rationalising technology.

The Health Foundation's profile and convening role was reported to add credibility that allowed teams to secure partnerships. The phased, flexible programme structure also enabled partners to join and contribute throughout as project needs evolved. While some partners were in place before the programme, the evidence suggests that the T4BC pilot enabled them to strengthen their relationship to the project team through their involvement.

Supportive evidence

There is reasonable evidence to confirm that cross-sector partnerships supported teams in strengthening the service concepts. Teams felt that the partnerships would not otherwise have happened to the same extent or pace without the T4BC programme.

"It feels like this is a project that surprisingly has pulled together more partners across the system very quickly than I've experienced before, even around hospital discharge itself." Pilot team member

Local research partners, and health and care teams supported user engagement and interpretation of feedback, leading to scope refinements during piloting. Partners led or informed discussion of issues related to safeguarding, consent and carer roles, and often introduced new approaches, or deepened the teams' knowledge in these areas.

"[As part of tailoring the piloting approach] I think each of the partners has identified a slightly different methodology and different patient base as well." Pilot team member

Primary care, pharmacy and community partners also enabled changes in referring people into the service, using assets unavailable to teams alone. For example, a PCN team were able to introduce GP-endorsed texts for recruitment, which replaced centralised invites while a care provider carried out active case finding to improve their response rates.

“The referrals that [the care provider pilot team are] getting, they've been vetted through the [service] teams already. So, the people that are getting referred [...] 75% of them are saying yes.” Pilot team member

Design and technology leads consolidated multi-partner feedback from user engagement activities, local evaluators and care partners into updated service blueprints. These updates reflected changes in language and user preferences. Technology leads also rationalised technology and replaced options that became unusable, while preserving the original concept.

“Our designers work with the developers, we come back to different groups, relay the findings, share video captures of us walking through and talking about the changes we're making.” Pilot team member

The T4BC programme supported this by offering flexibility to the projects by offering leeway in project timelines, setting phased breaks for teams to develop funding cases and onboard new partners, and by holding open discussions about risks and mitigations with the team leads and partners. This created suitable conditions in which to secure and maintain partnerships. In turn, as project leads were each able to offer flexibility, partners fed back that this helped them participate.

“What helped us is the fact that [there was] flexibility around the timelines or around the methods that we use to approach. I think they [the project team] has been quite flexible. That's really helped sustain the work that we do at the moment.” Local partner

Alternative explanations

Plausible alternative explanations, in which partnerships formed as part of the programme did not strengthen the service concept, include:

- Partnerships and core ideas for the service existed before the programme, with teams instead leveraging existing networks. This weakens the programme's specific contribution in forming partnerships. For example, there was prior engagement work on menopause, homelessness and domestic violence in Sutton PCNs with relevant charity partners. Local technology-enabled care teams across NHS Lanarkshire previously worked with the project lead.
- Other initiatives or policy around remote monitoring or online support could, given the widespread nature of issues covered (e.g., loneliness, falls and access to data), create conditions for the service concept. For NHS Lanarkshire, the national digital front door and ongoing frailty work taking place in parallel in NHS Lothian served as external inputs for the project, though these were generally routed through DHI as a dedicated T4BC partner.

To challenge these explanations, it was observed that new partners were added to projects and refinements were made to the service concepts since 2023. Additionally, existing partnerships were generally strengthened or deepened as a consequence of this programme.

Evidence test

Evidence was sufficient to pass the **“smoking gun”** evidence test. This is because:

- specific improvements to scope, recruitment design, user pathways, safeguarding, and technology use were attributed to local partner contributions;
- new partners joined the programme to guide key elements of the service concept;
- pre-existing partner inputted in ways to the concept that were novel or strengthened compared to pre-T4BC contributions; and
- programme structures (such as staged phases, flexible timelines, resourced partner roles) enabled local partner engagement that produced the in-programme changes.

The final evidence test was not cleared as not all inputs prior to the programme, nor inputs from organisations external to T4BC, can be ruled out when considering what shaped the service concepts end-to-end throughout the programme.

4. Local system partnerships enable embedding

Hypothesis: Cross-sector partnerships increase the possibility that the service concepts can be embedded in their local systems and potentially more widely (e.g. because they have sought buy-in from / alignment to commissioners' needs or the needs of local partner organisations, they have built on learning from other related initiatives, formulated their value proposition, better understand how to integrate their solution into existing business models, system and policies).

Overall assessment

The evidence suggests that, while the programme encouraged teams to explore cross-sector partnerships as part of their plans to sustain and embed their service models, it is too early for evidence of sustained service take-up at this stage. The teams engaged with partners to develop important assets (such as business cases and service specifications) that may support future adoption, and aspects of their service models have been (or are likely to be) commissioned. This improved their understanding of the different perspectives and systemic issues that will likely affect whether their solutions are ultimately embedded. However, there are significant system-level barriers that make future and further embedding uncertain, including the funding environment and lack of clarity on who the future commissioners would be.

Supportive evidence

The teams have been proactive in engaging with partners to create the conditions conducive to future embedding and scaling. They created tangible outputs to engage commissioners and that could potentially enable replication. These include data on uptake and adherence, working prototypes of their service concepts, findings from co-design, a health-economic model and a business plan.

For example, the NHS Lanarkshire pilot influenced a service model that was commissioned in a neighbouring Health Board, they have had funding to develop the concept along a different long-term condition pathway (for obesity) and have sparked wide interest in the service concept to go much wider than the original NHS Lanarkshire footprint. Partners involved in the Sutton PCNs pilot would like to implement the model even without additional funding.

The programme design encouraged and enabled the teams to engage partners to focus on sustainability, because of the dedicated capacity, the focus of the phased funding, and the involvement of the Health Foundation.

“The fact that the Health Foundation has supported it, you know, that's a really great start for any conversation.” Pilot team member

Partnerships broadened the teams' capability, legitimacy and routes to adoption. Partners helped shape operating models and information governance practices, they enabled the teams to test different use cases and opened new pathways / commissioning routes for the services to be

applied within, such as third-sector delivery and community-based delivery. For example, the NHS Lanarkshire pilot involved delivering demonstrations / walkthroughs with wireframes / prototypes of the front door and the data store as part of user testing with carers and care receivers. It is likely that this will help with future embedding as the team strengthen the service model as they respond to feedback and test its acceptability within existing services, like vaccination hubs. The BNSSG ICB pilot successfully piloted the service model in partnership with a PCN, care provider and voluntary and community sector provider, thereby testing the appetite among these partner organisations and their different service users for future uptake of the model.

"This work is repeatable. We could do it in other places [...] It very much speaks to the priorities around prevention and hospitals to community." Pilot team member

There is also evidence of engagement with key governance and commissioning bodies (such as ICBs, health innovation networks, Frailty Boards, hospital trusts, community-based organisations). Partners helped broker these connections and endorsed the service model.

Teams explored practical routes for integrating their service concepts into the existing system (for example, by aligning with the local digital front door policy in Scotland, with the integrator/neighbourhood policy leads in England, with existing services including GPs, pharmacies, community-based care organisations). Partners have or are planning to integrate aspects of the service models into their services, even if they are not able to replicate or roll-out the models in full.

"What you probably have to do in order to make it work for somewhere else is to break it down into its component parts and [...] people can cherry pick what parts they want." Pilot team member

Alternative explanations

The potential for future embedding is influenced by factors outside the direct control or contribution of the local system partnerships.

The success of embedding is dependent on the wider system and social context, and barriers remain that could prevent adoption regardless of the strength of local system partnerships. While partners engaged were generally aligned on prevention aims and the ambition to deliver care closer to home during the pilot period, continued and future alignment may be affected by multiple factors. These include:

- the availability of funding;
- the priority given to preventative models of care, cultures and established ways of working within health and care organisations;
- join-up or fragmentation of digital infrastructures;
- NHS organisational restructuring;

- operational pressures in the NHS including winter pressures;
- workforce capacity;
- risk aversion to new technologies, digital literacy and economic barriers;
- Information governance;
- reliance on unpaid carers; and
- persistent health inequalities affecting the hardest to reach groups.

Without the dedicated funding for the service models to specifically enable a more relational and proactive model, the resource constraints will dilute these features in the future.

“For some people [our service, once the pilot staff are no longer in place] may enable more human contact, but for others, I can see how it could potentially take it away a little bit.” Pilot team member

It is also possible that national policy initiatives (related to digital models of care and neighbourhood health approaches) were influential on partner engagement. These could independently drive the adoption of similar services, making it difficult to attribute any future take-up to the programme's influence.

Many of the partnerships necessary to embed services and that supported the pilot teams' progress were in place already. The established reputation and existing networks of the pilot teams may have been more influential in opening doors than new partnerships fostered by and through the programme.

“I speak to partners or other organisations that have heard of [the pilot organisation] and there's always such, such positive feedback. I think that always helps. You know, if you come from a place that's established, it's always you get a much more positive reception.” Pilot team member

Evidence test

The evidence for this hypothesis aligns with the **“straw in the wind”** test. There are positive signs about the continuation and future scalability of the piloted service models. However, no commissioning commitments have been secured, and a clear, funded pathway has not been established. Furthermore, the alternative explanations for any future success cannot be excluded.

5. Concepts enable proactive and/or relational care

Hypothesis: The service concepts developed through T4BC enabled technology to be used in care that is more relational (e.g. enhancing the quality of human relationships and connections and takes a whole person approach) and/or proactive (e.g. preventing issues before they arise, enabling people to be independent for longer).

Overall assessment

Throughout the programme, each funded team was expected to frame their service concept in terms of promoting proactive and/or relational care. This was reinforced in support sessions, activities the project teams carried out using ring-fenced time, and phased funding application process. While the focus each team placed on the principles differed, teams focused on relationships their service models would enable and maintained care-led and technology-assisted services.

During phase three, the teams gained clarity on how to deliver proactive and / or relational elements in their services. Teams focused on making sure that people felt secure using the technology. For example, BNSSG ICB ran home visits and Sutton PCNs created user-led spaces and ran sessions that were not recorded (unlike other group sessions which were recorded to enable AI-supported notetaking). Where pilots did take place, teams gained experience in running meetings with care receivers, safeguarding activities and follow-up support. The NHS Lanarkshire team was not able to pilot its service before programme end but did gain additional feedback on how to support care receivers and their carers or families when integrating the service locally.

As a result of the pilots, people reported feeling *seen* and *safe*. Some service users, such as those in Sutton PCNs, are continuing with the models of care. The pilots did not remove existing interactions or contact between care receivers and staff or carers, even if the purpose of some technologies in use was to reduce contact time or identify efficient care models. However, by nature of the stage the projects are at, teams have not yet established how the nature and quality of care will be maintained when scaling the services.

Supportive evidence

The evidence suggests that project teams' concepts enabled proactive and relational care. Teams reflected that the relational care principle was particularly novel to them and had a greater focus under T4BC compared to prior programmes. This in turn had additional benefits for the services delivered and how proactive the services were.

“For me, the relational part was novel [...] the relational element became the much stronger theme for work and that wouldn’t have happened without this focus.”

Pilot team member

The live pilots also created new interactions between care receivers and staff, including conversations to assess a person’s wellbeing, risk of illness or care needs, introducing or installing

the technology, and check-in or follow-up conversations. The additional contact was plausibly associated with, and may have mediated, improvements in loneliness in Sutton PCNs, and adherence in BNSSG ICB. Separately, NHS Lanarkshire explored how to offer falls support in more engaging or empowering ways through integrating the offer within existing community services.

“People are not going to stumble upon [our intervention] on its own and we need to link it to other health care interactions. For example, community assessment days, tech-enabled care, vaccination hubs and carers organisations.” Pilot team member

Across the pilots, the service concepts included routine visits, workshops or check-ins which identified opportunities to support carers as well as care receivers, support with sensory impairments and low digital confidence. For example, the BNSSG ICB team piloted low-tech and sensory friendly options, such as vibrating watches. The Sutton PCNs team’s concept centred around peer-to-peer interactions to reduce loneliness among attendees and, in some cases, to support them in each managing their conditions.

“Because our idea was all around the power of the group, group consultations, that for me... really fixed on the relational aspect... the dynamics between the users, the dynamics between the facilitator and the user.” Pilot team member

The relational framing of the programme encouraged project teams and carers to deliver the pilots in relational ways, suit individuals’ needs and increase psychological safety. For example, Sutton PCNs’ virtual sessions disabled recording for a group that was not comfortable with it, they required people to have cameras on for group sessions, and they sought consent for sharing contact details to allow groups to continue after the pilot ended. Pilot staff actively listened to participants and demonstrated that there was a safe space to engage.

“We have learned so much and understand way better the importance of relational care, but also the types of journey you need to go on when making such changes. Because there’s a technical element, there’s a people element and there’s also the emotional intelligence... awareness of some of the barriers, challenges and enablers of those changes that you need to tackle in order to get [these models of care] through.” Pilot team member

Although projects have not fully addressed how they deliver relational care at scale, and have not yet deployed the model, pilot findings have helped to fine-tune or gather feedback on the service. Sutton PCNs have established minimum standards focused on one-to-one onboarding, consent, structured matching for group fit, and support roles e.g. nursing co-facilitation. Teams were continuing to consider how they maintain relational care as part of their concepts. For example, the NHS Lanarkshire team was defining consent and caregiver access arrangements with local safeguarding and IT governance colleagues and piloting assisted-use routes to address digital inclusion.

“Medical professionals had quite the appetite to move towards a more preventative side... building leg strength should be talked about in the same conversation as eating healthily or stopping smoking.” Pilot team member

Team members noted that they were more familiar with proactive care as a concept in their wider work, it was still encouraged through T4BC. This included through NHS Lanarkshire’s work to test peoples’ ability and willingness to conduct falls risk assessments, Sutton PCNs’ focus on virtual sessions covering diabetes management, and BNSSG ICB’s project worker check-ins that surfaced risk earlier than usual care.

The programme’s flexibility and focus on gathering learning rather than rigid outcomes gave teams, and their partners, additional license to deliver their services in ways which maximised the focus on proactive and relational care, with barriers or other system targets or constraints posing fewer issues. Participating staff held discussions in ways that did not feel restricted or pre-determined. Additionally, the programme gave teams space to resolve constraints they experienced in their system when conducting other work.

“I think [proactive and relational care] is an aspiration within the system. The system constraints are such that it’s quite difficult to deliver care in this way. Whereas with this programme we had the benefit of the funding and time to be able to provide a system that really did meet people’s needs.” Pilot team member

Alternative explanations

The development of relational and proactive care concepts could be influenced by the following:

- The proactive or relational focus could have been encouraged by carers, peer networks or voluntary, community and social enterprises (VCSEs) operating independently.
- Policy or funding from elsewhere could have driven the increased focus in proactive and relational care (e.g. through prevention and neighbourhood health care policies). Support or knowledge could have come from peer Integrated Care Boards or Health Boards.

Project team feedback suggests that the focus on relational care, in particular, was encouraged through T4BC. Rather than receiving prompts from outside of the programme to focus on relational care, teams instead directly involved VCSEs, carers and peers. These new partners contributed to recruitment, trust-building, feedback and consent exercises for services they were previously not part of. While neighbourhood care is a supportive policy, feedback suggests that system-wide appetite and maturity for relational care, in particular, is limited. By contrast, teams did have some prior or longstanding experience with proactive care.

Evidence test

Evidence was sufficient across the programme to pass the **“smoking gun”** evidence test. This is because piloting delivered and tested ideas to enable relational and proactive care, and the programme influenced how teams delivered their service concepts. There were instances where

teams confirmed there were no historic or current programmes which focused on relational care, thus satisfying the “Doubly Decisive” test. In spite of this, teams still have not yet demonstrated that relational care can be sustained as each project scales up. Furthermore, for proactive care, it was not fully possible to exclude wider support and knowledge exchange external to T4BC.

6. Proactive/relational models improve quality of care

Hypothesis: The service concepts developed through T4BC and piloted with end users add value to previous or existing services and address a real need in care (related to quality, efficiency, experience, equity, health outcomes).

Overall assessment

The evidence indicates that the piloted service models improved the quality of care for the people that took part while the pilots were happening. If taken up and embedded, the learning from the pilots suggests that the service concepts have potential to improve the quality of care longer-term, particularly by filling a gap and addressing the needs of specific patient groups who were not well-served by standard services. Early signs from the pilots are positive, with clear theories of change and promising short-term outcomes reported from pilot evaluations (summarised in the case studies in Appendix A). However, this assessment is based on short-term data, and the long-term clinical effectiveness, efficiency, equity, and value in different contexts cannot be assessed at this time.

Supportive evidence

The pilots have engaged specific patient groups that standard services struggle to reach. For example, the Sutton PCNs pilot provided mental health support to housebound individuals and helped diabetes patients who had previously missed appointments to achieve better control and improve their health behaviours. The BNSSG ICB pilot through its partners engaged housebound and isolated people, providing them with access to a home visit and tailored support over the pilot period. Participants reported feeling heard and valued by health and care services that they previously had not engaged with.

“We have some clients who are quite isolated and depressed [...] for service users like that, [the contact with project workers] is really helpful because at the end of the day, they want someone to have a chat with.” Partner staff member

The pilots show promising outcomes for the health system and there is a general acceptance by project partners that the service concept was efficient and effective and could be delivered within existing time and governance constraints. For example, based on self-reported use of health care services over a three-month period from 82 participants, the BNSSG pilot reported a reduction of A&E and outpatient appointments by two-fifths, a reduction in visits to primary care services by one-fifth, and a reduction in overnight hospital stays by more than half. It showed a significant improvement in medication adherence using the MARS-5 questionnaire, with the average score improving by 3.95 points.

Feedback from participants about the quality of the services was positive. Participants reported feeling more informed and in control of their health, with many wanting to continue (for the BNSSG pilot, to continue with the technology, for the Sutton PCNs pilot, to continue with the peer support

group). Project partners also reported that they recognised the potential for the model to deliver time savings and quality service delivery. The projects also made inclusive adaptations, such as making language changes and providing offline options which enhanced the accessibility of the services.

“It’s coming from NHS and having that space within NHS where they can discuss these things really gives them that sense of trust back to the NHS again.” Pilot team member

Alternative explanations

It is not possible to rule out other factors that may have contributed to the positive outcomes reported.

- There are other initiatives, such as the digital front door programme in Scotland and neighbourhood health programmes, that are targeting similar outcomes and are prompting other services towards digital models of care. Any future gains in this area could be attributable to these wider services rather than to the T4BC-developed service.
- The results are primarily based on short-term data. Given the timescales of the end of pilot reporting, the pilot teams have not been able to collect long-term data to explore lasting impact on quality, efficiency, and equity. Whether these outcomes will be achieved will likely be dependent on alignment with existing pathways and access to support, such as funding for at home technology to sustain self-management.
- The evidence for equity and efficiency is mixed. The reach of the pilots was limited by the timescales for delivery which influenced the extent of the support available to engage the most digitally excluded and isolated groups. The health service efficiencies of the service models are not yet evidenced: the pilots had additional staff capacity to deliver their pilots that may be additional to the staff capacity available if the service models become part of ‘business as usual’. This staff capacity – such as project workers, health coach and expert facilitators – played an important part in the positive participant engagement and experience.

Evidence test

The evidence for this hypothesis meets the criteria for the **“smoking gun”** test. The evidence from the pilots supports the link between the T4BC-developed service and improved outcomes on the quality of care for underserved groups. The piloting provides evidence that support the pilot theories of change, producing positive indicators of change. However, longer-term evidence is needed before alternative explanations can be excluded.

7. Learning

Hypothesis: Learning captured through T4BC informed future programmes and the wider development of tech-enabled care.

Overall assessment

At a programme level, there are examples where T4BC collated actionable lessons and learning. This is visible in early networking such as with the Department of Health and Social Care and an event organised with external stakeholders, including NHS England. At a local level, going beyond actions to support funding, project teams also plan to share pilot results or learnings with peers and, in one case, a national programme. Some staff also report that they intend to take principles, such as user-centred design, into future projects. However, knowledge mobilisation has not yet occurred, and learnings have not been cited or adopted at this stage.

Supportive evidence

There is some evidence to demonstrate that learning is being shared as it emerges with stakeholders who may be involved in future care-led programmes. The Health Foundation began to participate in joint learning with peers, including the Department of Health and Social Care's Accelerating Reform Fund team. It also convened a Hospital to Community learning event, which included teams from NHS England among other health and care organisations.

Each event raised learnings on the design and delivery of tech-enabled care programmes. Common issues noted including interacting with different Integrated Care Systems, identifying common definitions for community services, and helping local health care staff to navigate cross-team data sharing. While these channels were established, follow-up and outward knowledge sharing has been relatively contained.

The programme also held internal 'deep dive' meetings, with two internal teams across the Foundation. These explored routes to mobilise the learnings and influence policy. They discussed principles around "how" the programme worked. Examples include enabling pathway design, onboarding, trust, building, facilitation, safeguarding and team engagement. Each also raised opportunities to share project results with other programmes or mature systems. However, at this stage, outputs from these meetings have not influenced learning to be applied beyond the development of the T4BC programme.

In addition to developing funding cases, project teams are beginning to share learnings both around "what" they found and "how" they approached the work. NHS Lanarkshire has developed 'Tell My Story Once' and digital front door assets and is in the process of pitching the area as a use-case within the broader Scottish digital front door service. Sutton PCNs is developing a relational group care pathway via OpenTribe, which could support wider adoption by ICBs. Learnings from Lanarkshire's work were also shared with the NHS Lothian health board. This has enabled it to

progress similar work on falls prevention and patient self-management, and both teams are now learning from one another.

“Learning was constantly applied throughout our project... shared also with a local partner, a mental health group, who already are looking at starting their own groups with the learning that we’ve shared with them.” Pilot team member

Broader practical learnings from the project are being taken forward by staff or partners in some of the project teams, however each team is at a different stage, with some reflecting that further development and piloting will be necessary to share this.

“I think there's the potential here, but I think it's a bit too early [...] it will be interesting to look at this [learnings shared] in 12 months' time.” Pilot team member

Alternative explanations

Plausible alternative explanations, in which learnings were not able to inform wider tech-enabled care or programmes, include:

- Learnings are not yet successfully mobilised following the completion of T4BC, due to limited momentum or agreement to leverage programme learnings.
- Parallel agendas and support ecosystems could have shaped designs irrespective of the programme. Potential parallel agendas include DHSC's Accelerating Reform Fund, NHS England prevention, neighbourhood health and ICB development, digital front door initiatives, Health Innovation Network initiatives and Social Care Institute for Excellence communities of practice.
- Pre-existing networks that participated in the programme – such as Primary Care Networks, technology agencies or VCSE partners – may have come to similar positions when informing future programmes regardless of the programme.
- Some learning may not be novel and learnings on “tried and tested” issues may not be sufficient to create the external pull for partner-led change. For example, broader system issues relating to community care delivery, data governance and funding.

While future activities may lead to programme learnings being used to influence further work at the Health Foundation and within the networks of the pilot teams, at the time of reporting, programme-wide learning had not been substantively mobilised beyond the engagements cited.

Evidence test

The ‘hoop’ and ‘doubly decisive’ tests cannot be applied to this claim, since the delivery of other technology-enabled care and innovation programmes will, by its nature, be influenced by a wide

range of factors external T4BC. It is not possible to expect the programme to have an exclusive influence on stakeholders or their programmes, given how lively the policy landscape is.

Nevertheless, evidence was only sufficient to pass the **“straw in the wind”** evidence test as external programme and policy stakeholders have engaged with emerging programmes learning via current engagement channels and events. There are not yet confirmed signs that engagement and mobilisation of learning led to detailed citations or an adoption of learnings, however there are plans to carry this out.

8. Transforming models of care

Hypothesis: T4BC enables teams to develop service concepts that work towards a vision of care which transforms the wider system of health or social care, envisioning long-term shifts in the way things are done, rather than small tweaks to current practices.

Overall assessment

The evidence indicates that the programme has acted as a catalyst, enabling teams to design and pilot service concepts with transformative potential. They reported that the programme gave them the protected time and funding to progress their ideas “further and faster” than would have been possible otherwise, allowing them to explore and address long-standing systemic barriers to better care. The focus of the programme on relational and proactive care pushed teams to prioritise these features, resulting in a different way of delivering care.

There are early signs of system-level promise, with projects challenging conventional service delivery and aligning with strategic national priorities. However, the pilot teams identify substantial barriers to future sustainability and scaling. Funding, ownership and scale-up arrangements are not secured and momentum is fragile. Overall, T4BC likely made a difference to the formative design of the piloted service concepts – as a result of the user-centred design, partner coordination and early delivery – however its unique contribution to a meaningful shift in care is not established.

Supporting evidence

During the funding period the programme enabled teams to design service concepts that aimed for system transformation rather than incremental tweaks. This is evidenced by projects challenging conventional views on how services are delivered and how technology can be applied to enable a needs-led and relational model of care.

The feedback suggests that the pilots have tested service models that meet unmet health and care needs, while being delivered within existing governance and infrastructural constraints. The projects are supported by multi-partner collaborations that cross NHS organisations, voluntary and community sector organisations, and the private sector. In doing so, the pilots enabled a new way of working while demonstrating alignment with national priorities.

The focus on relational and proactive care also pushed teams to keep this in focus. This resulted in service concepts that delivered care in a new way. The teams report that local partners have been inspired by these concepts to apply them elsewhere. For example, the NHS Lanarkshire team applied this lens to clinical guidance on falls, and a neighbouring health board adapted their service concept in a new service.

“We have learned so much and understand way better the importance of relational care, but also the types of journey you need to go on when making such changes.”

Pilot team member

The programme provided the catalyst and protected space for these ideas to be developed and tested, allowing teams to build a credible model and generate initial evidence. The piloting enabled teams to lay the groundwork for scaling, including outline business cases, working prototypes, evaluations, and health economic models.

“It just gives us that permission to spend time on this area that's always been on that ‘too difficult to do’ list.” Pilot team member

Alternative explanations

The potential for transformation is dependent on external factors and systemic barriers, making the programme's specific influence difficult to isolate.

- Progress (within the programme funding period, and beyond) is constrained by a lack of secured funding and unclear future procurement routes. Organisational changes (for example, ICB restructuring), workforce pressures, and risk aversion around information governance all present hurdles to adoption.
- The momentum towards change will also be influenced by concurrent national reforms and parallel initiatives, such as the neighbourhood and technology-enabled care agendas. These factors could drive similar changes regardless of this programme, making attribution difficult.
- The projects' progress was also influenced by factors outside the programme, including alignment with national NHS strategy, the presence of ambitious local leaders, and the role of local partners.

Evidence test

The evidence meets the **“straw in the wind”** test. There are potential signs of change but this is not yet realised. The development of transformative concepts, evidence and assets to support adoption, and local partnerships are all encouraging indicators. However, transformation and project sustainability is dependent on funding, confirmed commissioning commitments, and demonstrated replication.

4 Wider Learning

This section summarises the broader programmatic learning beyond the contribution hypotheses. It explores learning on 1) the design and development of relational and/or proactive technology-enabled models of care, that bring care closer to home/in the community, and 2) the role of the Health Foundation (or others) to fund and support these types of innovations. The specific questions under the two themes were identified collaboratively with the Health Foundation as aligning to specific topics of interest.

Learning about designing and developing relational, proactive, closer-to-home tech-enabled care

The following sub-questions were developed to structure learning on the overall programme themes of relational, proactive tech-enabled care for delivering care closer to home or in the community.

These questions consider learning related to the ambitions and systemic challenges the programme was designed to explore, including the practicalities of shifting power to individuals, addressing inequalities, and aligning with wider health service goals.

1. What are the conditions and mindsets needed to support a shift in data ownership and control?

A goal of the programme was to support innovations that had the potential to transform the existing models of care. When deciding which projects to continue funding into phase two, a feature of a 'transformative' model was identified as relating to how the proposed service concepts sought to shift power from health professionals and the health and care systems to individuals. The NHS Lanarkshire proposal provided an example of this with its aim for an interoperable, person-held data store that lets individuals "tell their story once," control data sharing, and unlock care across organisational boundaries. The question of how the service models enable the conditions and mindsets (both for individuals and institutions) to enable that shift was identified as being an important step to achieve this transformation.

During the prototyping and piloting phases, the funded teams found that people receiving care were receptive to carers or professionals and third-party providers collecting and using their data. Teams found that people are willing to share their data when they trust the organisation, understand in simple terms how it will be used, and consent is revisited if changes are made. From an operational perspective, pilot teams put in place robust governance (e.g. DPIAs and data flows) alongside accountable and responsive operational processes (central Customer Relationship Management (CRM) systems, error-handling and apology processes), and strong, collaborative relationships with technology partners.

For example, learning from the Sutton PCNs pilot suggests that health outcomes related to diabetes control improved when people could see and use their own data. This was evidenced in how they used continuous glucose monitoring to prompt understanding about diabetes management and control to enable informed self-management. The NHS Lanarkshire pilot found that enabling a change in culture and mindset among health and care professionals required a focus on workforce data literacy and clear data-sharing protocols to reduce confusion and align partners on a data culture that strengthens shared decision-making.

2. How AI can be applied within relational models of care?

Tech-enabled models of care create potential opportunities for AI to be applied to enhance personalisation and reduce administrative tasks. The Health Foundation's research conducted at the early phases of this programme highlighted concerns from the public about safety and quality of care that use AI and other technologies.¹⁰ This programme provided an opportunity to explore how AI could be used within the relational models of care to understand how to overcome these public concerns and build trust.

Applying technologies that used AI tools was not a dominant feature of the funded teams. For one team that proposed its use during the user-testing during phase one, a purely transactional application of AI was rejected. This was evidenced by the Care City team, who through its user engagement, removed a proposed 'chat bot' feature as it was unpopular. This highlights the importance of using AI as an assistive tool, not as a substitute for human interactions. It also highlights the benefit of user testing and co-design for understanding more about user needs and preferences for the applications of AI in health and care.

Insight from the piloting suggests that when AI is applied to improve follow-through and reduce admin tasks, it has an important role in relational models of care. This was evidenced by the Sutton PCNs pilot which used an AI tool to summarise themes to inform matching participants to groups, to report themes to enable them to plan sessions based on topics of interest, and to reduce facilitator admin (by generating summaries and action logs). It was important that the AI tools were optional and tailored. Some service users explicitly did not trust an AI-assisted service (such as a group in the Sutton PCNs pilot for people with mental health conditions).

The T4BC programme provided an opportunity for the pilots to test AI through user and partner testing and iteration. This was important for improving trust and enabling a relational application of AI within the service models.

3. How can tech-enabled models of care be implemented in a relational way?

¹⁰ Thornton, N., Binesmael, A., Horton, T., & Hardie, T. (2024, July 31). AI in health care: What do the public and NHS staff think? The Health Foundation. <https://www.health.org.uk/reports-and-analysis/analysis/ai-in-health-care-what-do-the-public-and-nhs-staff-think>

The programme's purpose was not just to fund technology-enabled models of care, but to do so in a way that is person-centred, relationship focussed, promoting open communication and collaboration. The background research for the programme highlighted a risk of new technology-enabled service models as being technology-led and poorly implemented, rather than being led by the needs of care recipients and carers.¹¹ One of the findings from phase one was that the programme met a gap in funding for “care-led innovation” by funding user-centred design to test how technology-enabled service models could be implemented to enhance the quality of relationships and experiences of care.

However, in the context of workforce and budget pressures in the health and care system there is interest in technology-enabled service models that reduce demands on staff time. It was therefore important that the T4BC programme considered the unintended consequences of the shift to digital, for example the consequences of reduced face-to-face support.

The pilots have provided promising evidence that technology can be implemented in a way that is relational. For example, by improving the quality of communications and dynamics between people and health and care professionals and using digital tools to connect people to support.

- For the Sutton PCNs pilot the technology platform enabled them to create safe, patient-led group spaces online where people set the agenda, felt listened to, and build peer connection. The relational delivery hinged on structured, confidence-building onboarding, use of video to pick up non-verbal cues, and the groups being led by facilitators and nurse educators to lead non-clinical health and wellbeing support and steer group conversation.
- For the BNSSG pilot, the tech-enabled model was wrapped around with multi-channel human support (via the phone, email and in-person) so that project workers could introduce technology alongside trusted carers, make home visits to co-select aids, provide step-by-step training, monitor use and follow up.
- For the NHS Lanarkshire prototype, the digital tool is designed to be enabling for people, without replacing human care. It relies on the involvement of family and informal networks in a supported way to identify risks and centre the person's context in the data model, such as who matters to them, access arrangements.
- For all pilots, strong professional relationships and co-design across organisations informed implementation of their relational models that could work across organisational boundaries.

However, the pilots have not yet identified learning on how to implement tech-enabled models of care in a relational way when delivered within existing funding constraints. The pilots were

¹¹ PUBLIC. (2022). Technology enabling new models of care in the home or community: Final report: analysis and recommendations. The Health Foundation. <https://www.health.org.uk/publications/reports/technology-enabling-new-models-of-care-in-the-home-or-community>

developed with additional funding and team capacity (including for project management and staff to support delivery). This was essential to implement a relational model of care despite capacity constraints within busy health, care and community organisations, and without having to overly rely on families and informal carers and email-only outreach and onboarding.

4. How can tech-enabled models support the health service to shift focus to prevention/proactive care?

When the programme was launched, it specifically called for teams to develop innovations that enable proactive care, defined as addressing underlying causes and supporting prevention. This recognises a current challenge with the health and care system is that it is often reactive, with priorities and funding focused on addressing acute medical needs.

The pilots were focusing on different aspects of proactive care. For example, NHS Lanarkshire was exploring technology to provide proactive support to people vulnerable to falls, to potentially prevent issues before they arise. BNSSG was focused on using technology to help people manage medicines after leaving the hospital to proactively reduce errors and readmission. Sutton PCNs was exploring how to develop a service to proactively address a gap in support that leads to poor management of long-term health conditions.

All three pilots used risk stratification tools and partnership referrals to proactively identify people at risk to direct them to the new services. The pilots then moved care “upstream” and out of primary and secondary care clinics. For example, NHS Lanarkshire and BNSSG used digital tools to deliver self-assessment and supported self-management interventions. NHS Lanarkshire and Sutton PCNs used group-based, and peer support to address social and emotional drivers of health such as loneliness and confidence to enable and support people to make lifestyle changes. Practical tools reinforced prevention between appointments, such as simple reminders prevent medication errors (BNSSG) and continual glucose monitoring to enable people to control of glucose spikes (Sutton PCNs).

The service models provided an opportunity for health and care organisations and individuals to surface unmet need, to enable targeted prevention, and to reduce unnecessary attendances at A&E and GPs. However, all pilots experienced barriers in identifying future funding for their service models to fully align with the NHS ambition to prevent ill health and keep people out of hospital. A risk is that idea of proactive / preventative models is conflated with ‘cost saving’ within the current system and is commissioned to focus on the outcome of reducing NHS contact time, rather than stepping back and considering what an ideal proactive model looks like on its own merits.

At the end of the pilots all service concepts had interest from commissioners and service providers as proactive service models for people already in the health and care system, such as for long-term condition management. So, while in theory they provide service models by empowering people to self-manage and reduce avoidable ill health, it is more likely that they will be applied alongside primary and secondary care interventions to reduce readmission and further escalation.

5. How can relational/proactive tech-enabled models support the health service shift care out of hospital?

An important rationale for the programme was that relational, proactive tech-enabled models can shift care out of hospital at home and in community settings. The pilots illustrate high levels of acceptance and appetite for the principle of shifting care out of hospitals or other clinical settings because these models complement, rather than replace, face-to-face care for those who need it. Furthermore, the pilots expand access for people who would otherwise have limited or no access due to mobility, anxiety, or isolation.

Key features of how these services shifted care out of hospital and clinical settings included joining up with local services (for example through community hubs and VCSE partners) and providing digital support to increase independence at home and access to a wider range of health and care support. However, the pilots could not address system barriers relating to funding flows from hospitals to community, data connectivity between providers, and discharge referral pathways. Hospital buy-in and integrated commissioning would be important to enable further development of these out-of-hospital models.

6. How can relational/proactive tech-enabled models address inequalities and digital exclusion?

For people with low digital literacy, confidence or access, a shift to tech-enabled models of care could potentially widen inequalities. The funded projects from phase one developed partnerships with community organisations to enable them to test their service concepts with people who experience inequalities and digital exclusion. However, as reported at the end of phase one, for many of the teams the timeframes for the programme were not conducive to working with the most digitally excluded and isolated populations, due to limited time to engage with them. For the pilot teams, the pressure to develop the evidence and proof of concept meant the teams shifted from testing with users who required more intensive support to more responsive and easier to access groups.

However, they did engage people who experience inequalities and digital exclusion to some extent, and in doing so identified the importance of:

- Providing choice of non-digital and low-tech options alongside apps and digital coaching and onboarding support.
- Using carers and community access points (e.g. libraries/hubs) and recognising that carers may also need support with digital skills and confidence.
- Working with community-based organisations to enable culturally responsive outreach and support for different digitally excluded groups.
- Planning for affordability to prevent two-tier access: both Sutton PCNs and BNSSG found that when the costs of the technology were no longer covered by the pilots, people stopped using them on an ongoing basis, even if they had found them beneficial.

This learning suggests that, to avoid widening inequalities, service models should strengthen non-digital, third-sector-supported routes and have people in place for onboarding and ongoing troubleshooting. Funding programmes should consider how their scope and timeframes can enable meaningful and potentially more resource intensive engagement with people experiencing inequalities.

7. How can relational/proactive tech-enabled models address workforce pressures and improve productivity?

The programme was designed within the wider context that the NHS and care system is under pressure. It recognised that there is a need to transform models of care at a time when changing demographics are increasing demand on an already stretched system. There is clear strategic and policy interest in the technologies offering the biggest opportunities to save time for NHS staff or organise care in ways which are productive or efficient while retaining overall quality.

The pilots were testing how the proactive and relational features of their service models could reduce workforce pressures by:

- A prevention focus (e.g. improved self-management, medication adherence, lifestyle changes) to reduce avoidable repeated hospital admissions and GP appointments.
- Moving from intensive one-to-one clinic appointments to group consultation/support
- Recruiting experienced but lower cost staff (e.g. health coaches, nurses, project support workers) to take pressure off more specialised staff in higher-paid roles.
- Protecting clinical time by using AI/admin tools for notes and follow-up.
- Targeting capacity to people most at risk of avoidable service use.
- Online and telephone support to replace travel.

While the pilots provide promising evidence these approaches are accepted by people receiving and delivering care, as additional services they still required additional workforce and pathways to be put in place. Teams or programmes developing care models need to focus not just on the 'cost saving' business case – though this is immediately what is needed – but also the broader vision around how people engage with services. This requires discussion around system/pathway redesign, working arrangements, implementation of changes and one-off and recurring budget implications.

Learning about how to fund and support these innovations

Beyond the design of the service models, the Health Foundation wanted to understand the most effective ways to fund and support frontline teams. The following questions explore this from three perspectives: the viability of a 'bottom-up' innovation model, the systemic constraints that teams must navigate, and the potential for the resulting service concepts to be scaled and adapted for wider impact.

8. How can innovations be driven 'bottom-up' through different system actors (e.g. PCNs, ICBs, partnerships with community organisations)?

The T4BC programme was an experiment in funding bottom-up innovation. By providing grants to health and care teams and seeking applications from teams that had the 'seed' of an idea, but nothing too far developed, the programme was testing an 'incubator' funding model for grassroots concepts. The programme design recognised that for innovations to be taken up, they had to provide persuasive evidence of effectiveness and alignment to system priorities and eventually be funded and supported by the permanent system actors. Given the early stage of the development of the service concepts, and small-scale pilots the funding enabled, future sustainability or wider impact is far from certain.

Learning from the programme suggests that bottom-up innovation is both possible and effective when it aligns with experienced project teams and trusted local partners convening around a shared priority. For example, among the pilot teams Sutton PCNs is a proactive, ambitious and experienced organisation committed to catalysing change. Throughout the pilot programme they harnessed their grassroots champions within their PCNs, partnered with community organisations and enabled citizens through co-design and user testing. The pilot used bottom-up recruitment tactics (through community organisations) alongside GP-based outreach. Their focus on the diabetes pathway alongside testing an intervention for loneliness was a pragmatic decision to present outcomes to the ICB for spread. The pilot funding provided protected time and capacity for a dedicated pilot project team, but wider practice engagement was difficult, given existing demands on time. Sustainability will be constrained by siloed funding. Overall, the Sutton PCNs piloting suggests that innovation can be enabled when teams:

- have relevant experience but start small;
- test assumptions and feasibility by working with organisations in their existing networks and co-producing with communities;
- evidence impact aligning with specific system priorities; and
- address buy-in and funding barriers upfront.

9. How can frontline teams innovate within system constraints and what constraints need to be addressed as a priority to enable front-line innovation?

The programme was designed in response to the barriers to innovation and new technology adoption in health and care organisations. The programme funding and support sought to address some of these barriers (such as lack of capability, time and skills of frontline teams to develop new ways of working) and provided an opportunity for frontline teams to design for ambition. Yet it still had to operate within the context of a stretched health and care system and long-standing operational and cultural processes that affect continuity of care across boundaries, and which prioritise a medical model of care.

Learning from the funded teams highlights that they were constantly grappling with these constraints in their work. The teams (across all phases) that were developing a new technology, rather than repurposing existing technologies into new contexts, encountered the most barriers to progress. In addition, information governance issues also affected the teams within more risk averse organisations.

The protected time and ring-fenced funding gave teams space to develop their service concepts. The pilot teams had people with experience on innovation and pilot projects who were skilled in working in an agile way to take a test and learn approach. The teams worked strategically and in partnership to align with current pathways, local and national policy and priorities, and to build commissionable offers. The funding allowed them to bring a diverse skills mix onto their teams, providing delivery capacity outside routine practice time. The project teams involved driven and skilled people who, through the programme, were given the license, space and funding by the programme to operate and progress their service concepts. However, their experience suggests that frontline innovation is not an easy process because of the number of internal and external barriers to navigate. This includes the fact that as an externally funded pilot it is a discretionary project that sits outside of key operational priorities. Despite this, the teams had the resilience, tenacity, internal support and experience to navigate these challenges.

Learning from the pilots suggests that priority constraints to address are:

- funding and commissioning flows (relating to short-term costs, siloed pots, transfer from acute to community, post-pilot affordability);
- policy and budget uncertainty;
- cultural resistance and variable buy-in from different health and care teams;
- limited time and staffing (including turnover and skills gaps);
- heavy, fragmented IG/IT and data-sharing processes; staff/user involvement in tech selection coming late in service design;
- education for both professionals and patients.

10. What other use cases are there for the service concepts?

The programme was launched to support approaches with potential for future spread and scale. A service concept with multiple uses has a much greater potential for both.

Learning from the pilot teams suggest that the service concepts are adaptable and can extend beyond the initial focus. The Sutton PCNs service concept of a virtual community – enabling peer support and structured education and health information – has shown potential to be relevant to people experiencing a range of long-term conditions and lifestyle events beyond diabetes and loneliness, such as menopause, ADHD, COPD, obesity, cancer quality of life. The NHS Lanarkshire pilot similarly has already been identified as relevant to a national digital front door and other settings (such as vaccination and musculoskeletal clinics), with infrastructure already repurposed for weight management. The BNSSG ICB project, while focused on medications management,

could also be repurposed to focus on other aspects of self-management and remote monitoring at home. The pilots have shown acceptance of technology-enabled care that enable supported self-management. Their pilots also suggest technology-enabled models are appropriate for digitally excluded or digitally sceptical groups with appropriate onboarding support.

Appendix A – Case studies

Bristol, North Somerset and South Gloucestershire ICB's medication support service

Summary

The team based out of Bristol, North Somerset and South Gloucestershire Integrated Care Board designed a personalised, technology-enabled medication support service (PMSS) to help people manage their medications. This addressed challenges for those on multiple medications, or those with cognitive impairment, in taking their medicines regularly. For the pilot, project staff met people at home, reviewed their support needs, matched them to a technology-based medication aid, and followed up over 16 weeks.

The pilot, in particular, placed a strong emphasis on relationships between project staff, service users and carers or families. It helped to match technologies with users and put them at ease. At pilot end, many users reported taking medication more reliably and using NHS services less frequently. The team developed a funding case, and must now assess how to offer personalised, relational care at-scale or integrate PMSS for wider user groups.

Context

The project arose from concerns that there is not enough emphasis, locally and across the UK, in health and care pathways to support people to take their medication in an effective way. Inconsistent and irregular provision of medication reviews as well as in the availability of technology-enabled care offers and follow-ups led to many people buying aids without guidance. Pressure on NHS and pharmacy teams meant this was often unavailable. For community partners, language and access were also concerns. To address this, BNSSG ICB set out to offer medication aids to support patients to remember to take their medication in a timely manner. This would support people in a more consistent way, and in ways that would reduce pressure on health and care staff.

“Medication adherence starts right at the beginning and is a partnership between the doctor or the health professional and the patient. That just does not happen at the moment.” Pilot team member

Phase one: Idea testing

Using surveys, interviews and focus groups, the team met older adults (including Southeast Asian and Somali communities through Dhek Bhal and Caafi Health), technology-enabled care teams and care professionals. This brought together ICB, pharmacy, social care and hospital discharge services. Some groups were not directly funded by T4BC, but there was widespread acceptance that medication compliance was an issue and the formal nature of the programme encouraged participation.

“It feels like this is a project that surprisingly has pulled together more partners across the system very quickly than I’ve experienced before, even around hospital discharge itself.” Pilot team member

“Sirona, the care and health team and the team here, [and the] information governance team here at the ICB have been fantastic in really fast tracking that through that ... might take months sometimes as we’ve got through relatively quickly.” Pilot team member

The team assessed issues and preferences people had when taking medication, and additional needs. They also reviewed available technologies, such as voice assistants, smart calendars and smart screens. They found that:

- Routine processes often did not flag many people who needed help with medicines. This confirmed concerns that medication reviews were inconsistent, and professionals were unsure what support technology-enabled care services could offer, or how to follow-up.
- Staff capacity was a major barrier. Staff were commonly asked whether discharged patients were using medication aids, but limited availability of technology and human resource issues meant that this was often not followed up.
- Two-thirds of surveyed aid users bought devices themselves without advice. Many used smartphones but did not have a sense of how these devices could support them.
- There was appetite from people to try technologies which fitted their routines, however *no single option* worked for everyone. Feedback from the Somali and Southeast Asian focus groups, for example, revealed different outlooks for using medication aids.

These findings let the team consider a wide range of aids and avoid narrowing down early, to meet the needs of a wide range of service users. They also concluded they would need a relational wraparound service to match and assess peoples’ use of aids.

“The personalisation agenda is really important. One size does not fit all [...] We’re going to need a range of solutions and we’re going to need to match those to the service user.” Pilot team member

“By doing that discovery phase it cemented what anecdotally we thought was the problem.” Pilot team member

“At the moment, people are being left with being given something and then the assumption is that they can then take their medicine, which we know isn’t always the case.” Pilot team member

The focus in phase one on discovery and understanding the problem gave the project team space to carry out structured user engagement, rather than jump to a single technology. This gave the

team space. Feedback from the programme helped the team focus on gathering feedback from medication users and gain one-to-one contact.

“It just gives us that, I suppose, permission to spend time on this area that's always been on that ‘too difficult to do’ list.” Pilot team member

The opportunity provided by the programme for open space to consider the discovery work and hear from peers was still well-received. The team did however feel that some training arrived out of sequence with their available time and needs, with some better suited to pre-discovery or prototyping. The phase one timeline, run over a couple of months, put pressure on the team to form ideas, attend the training, and manage day-to-day duties.

“I was able to have a conversation with the design lead at Social Finance. So, you know, to have that as we were developing the home visit pack, as required support, is very useful.” Pilot team member

“Having a meeting where you’ve got all the teams together to talk about their projects, is really brilliant.” Pilot team member

“Working at this sort of pace has been a challenge.” Pilot team member

Phase two: Prototype development

The concept for a PMSS came together at the end of phase one, as a result of the discovery work. In phase two, the idea was developed and tested with stakeholders as a form of pre-piloting. For this, the project team designed materials for consent, matching aids, training and self-help. It also established which additional conditions people required to take their medication, such as support and training, which a wraparound service could put in place.

“The idea of a personalised medication support service only sort of really crystallised at the end of phase one, I would say, because we didn't know the scale of the problem or what the problem was.” Pilot team member

The work involved Sirona Care and Health's medicines optimisation team and brought Caafi Health and community pharmacy partners on board. Some other partners Age UK, Brunelcare, Continuing Healthcare and Dhek Bhal could have participated or involved users with support needs, however, this did not go ahead.

Alongside the service prototype, more medication aids were reviewed and included. For example, SMS prompts, a smartphone app, monitored dosette box and alarm reminders were added. At the same time, some aids were removed due to information governance concerns or viability barriers.

Interviews with small groups, including potential users recruited via Caafi Health and a local pharmacy, provided feedback on the service and usability for some medication aids. This helped to inform how PMSS would run as a service.

Conversations to pilot and ultimately embed or scale the service began to take place. This included conversations with Home Instead, a private care provider, as well as a wider, senior group of staff at Sirona Care and Health which worked with the medicines optimisation team. In the pilot team's view, the programme helped to enable this. The pilot team began to consider what would be needed from other groups, including ICB teams which manage business cases, the ICS digital group and the local Health Innovation Network, however discussions remained contingent on demonstrating results at the piloting stage.

“I would say the fact that the Health Foundation has supported it... that's really a great start for any conversation and all of the conversations I've had have been wholly positive.” Pilot team member

The project continued to focus on a relational, personalised service. However, it has had to maintain this against tensions that the service could reduce face-to-face contact which some patients may prefer. While there was local demand to reduce down the resource needed to enable people to take medications, the team was cognisant that they needed to manage this carefully.

“Well, the classic unintended consequence of digital tech for home support is that there's less in-person contact with the service user. [It is seen as] second class.” Pilot team member

The team benefited from programme check-ins, support to develop an evaluation theory of change and felt able to contact Social Finance on demand to troubleshoot. However, they felt that some modules arrived out of time, could not attend all available training, and encountered wider information governance barriers.

“The questions you're asking [...] we go away and reflect and think how actually, yes, that's something to sort of take on board or do differently.” Pilot team member

“This work wouldn't have happened without the support of the Health Foundation [...] not to this scale and be able to kind of bring in the whole range of stakeholders that we have done.” Pilot team member

Phase three: Piloting

The pilot for PMSS went ahead with 118 people referred via Sirona Care and Health, Caafi Health, Home Instead and the newly joined Gordano Valley PCN. A local authority withdrew for capacity reasons. A pharmacy partner also joined later during piloting, though the community pharmacy sector as a whole had limited capacity to participate. Partners each employed a project worker who completed eight weeks of training and onboarding course and joined weekly calls.

Participants each received a home assessment, installation and training, on-demand assistance and a monthly follow-up over 16 weeks. Nearly two-thirds of these reported physical limitations, about seven in ten reported memory problems, and a third were moderately or severely frail. While

the majority taking part were older adults, the pilot did widen its focus to some people aged 16 and over. Those involved, at this stage, included people who could readily be referred or who were willing to join. Some groups, for example insulin users, that the team would have liked to be part of the pilot were unfortunately not referred.

Broader learnings when piloting PMSS and the medication aids included that:

- Simple, visible tools were more commonly preferred. This included simple, programmable reminders, such as with the MemRabel reminders (a memory aid which presents a digital clock and visual prompts to users), vibrating watched or – for those people comfortable with smartphones and who we were often younger – the Medisafe app. However, some differences in preference remained.
- The roster of tools was inclusive. For example, a vibrating watch was included on the roster to support older people with hearing difficulties, which was well-received.
- Some devices were less preferred in practice. AI voice tools were used sparingly due to privacy and trust concerns. Long-term prices and product complexity also discouraged use.
- Some piloting routes, including Home Instead, experienced low uptake due to reluctance among their clients and their families to take part.

The headline pilot findings found that the majority of participants reported taking medicines more consistently after the pilot. Contact with emergency, outpatient, admission and primary-care services fell on average. Clients provided positive feedback and may continue with the service, provided aids are affordable or costs are covered.

The team reported that the T4BC programme helped to keep them focused. Core team members participated in training modules focused on embedding the service, as well as community sessions. The team also reported that the programme structure and flexibility around timelines and approaches helped to sustain the pilot. For example, it allowed partners to hire project staff with good time to take part. The application process for each of the programme funding phases scrutinised the team's pilot plans, inclusion of partners, focus on relational and proactive care, and ongoing use of client feedback to learn from and course correct.

“You provided a supportive learning environment, light touch support through the project, touch bases and friendly feedback. [This] helped us to make sure we didn't go down rabbit holes.” Pilot team member

Local evaluation

The team ran an impact evaluation alongside delivery across its delivery partners. It captured data on users at baseline and end-of-study in a pseudonymised database. The primary outcome was medication adherence using the MARS-5 questionnaire (scored from 5 for best adherence to 25 for worst). Secondary outcomes included self-reported health care use over the preceding three

months using the modRUM tool (covering accident and emergency, outpatient visits, overnight stays and primary care), device reliability logs, usability and satisfaction scores on a 1–5 scale, and intention to continue using the aid. Alongside this, qualitative research drew on weekly project-worker meetings and user/carer feedback and transcripts were thematically analysed.

The evaluation results showed an improvement in medication adherence and signals of reduced hospital use. Among 109 participants with paired adherence data, the average MARS-5 score improved by 3.95 points, indicating a meaningful shift toward taking medicines as prescribed; three in four improved by at least two points. Improved adherence was associated with fewer hospital interactions overall. In the utilisation sample of 82 participants, self-reported accident and emergency attendances and outpatient appointments each fell by about two-fifths, overnight hospital stays fell by more than half, and primary care contacts fell by about one-fifth.

Users rated the support they received, product performance and their sense of independence highly. Just over half reported that they would like to continue with the technology. Feedback on continuation was highest for those users of Memrabel at about 85 percent and Myhomehelper (a digital tablet which presents reminder prompts to users) at about 75 percent, and lower for some of the other technologies. The qualitative work highlighted that simple tools with clear benefits were well received. Other factors for success included trust in project workers and NHS legitimacy, good personalisation, and attention to barriers such as carer gatekeeping, subscription costs, privacy and digital confidence. While the results are based on a relatively small user group, the evaluation provides early evidence this model of care can improve adherence and may reduce hospital interactions.

Assessment of the model of care

The pilot showed that a personalised medicine support service could be delivered in peoples' homes in a way that integrated services across BNSSG, offered technology that wasn't previously available, and met a wide range of peoples' needs across different referral routes and communities.

A key learning was that, while processes such as consent were standardised, worker engagement was tailored to make it relational. Caafi Health adjusted its outreach with phone introductions, joint visits alongside carers, and tailored conversations where users were uneasy.

“I think each of the partners has identified a slightly different methodology and different patient base as well.” Pilot team member

To secure a pilot sample, large scale recruitment via SMS invitations were used. However, this was labour-intensive with a low rate of conversion. One partner noted that tailored GP invitations will work better in future and make clear how PMSS connects with them.

The service has been proactive through the use of early referrals, home assessments and follow-on visits. Workers monitored for signs of non-use and could offer to substitute aids. Their contact with users was highly relational too, however this contact was often designed for the pilot.

Learning and recommendations

The team met its goals to develop, prototype and pilot a personalised medication support service. At a small scale, this has provided insights into peoples' support needs, preference for medication aids, feedback on the service and its early impact.

The work showcases learnings for designing and piloting a service. For example, building partner engagement, overcoming governance barriers and carrying out user acceptance interviews. The Health Foundation also has opportunities to evaluate how technologies can work in a NHS or care setting, and how an effective service wraps around these to have an impact. Both the Health Foundation and BNSSG ICB will need to consider how these learnings are mobilised over the next year.

Once the evaluation of the project is complete the BNSSG ICB team will, with other partners, look to develop business cases for the ICB and partners to commission or pilot the service at a larger scale, and eventually embed it. In doing so, there are multiple live considerations:

- Many participants expressed a preference for low-complexity aids and although this was not predicted, may make future commissioning models possible to fit within current financial constraints. This may set the tone for future piloting. However, the team will need to consider that future pilots also include wider groups of people, including many who were not referred. For this reason, the PMSS will need to maintain open discussions with users.
- Barriers for the model will become more prominent outside of the pilot. These include technology subscription costs, Wi-Fi access, privacy concerns and digital confidence. Where people do not engage with PMSS, reasons for non-use will be important to reflect on.
- Project workers worked effectively with users during the pilot. They considered peoples' needs, provided trusted routes for contact and followed up. At scale, the project still needs to consider how relational aspects of this care are maintained, while helping manage pressure in the system.
- Alongside funding, the ICB must make calls about roles among the partners to host PMSS. Early impressions are that primary care partners, and Sirona Care and Health could embed the service. As part of this, PMSS would need to integrate closely with the neighbourhood health agenda, the partners' abilities to find eligible users, and link in with closely with community pharmacies and technology-enabled care teams.

The team will also take opportunities through the ICB to share findings with a range of stakeholders locally and nationally to see if there are opportunities to drive change. As part of

driving change, they will explore opportunities to embed or commission the technology through existing (such as NHS App) or planned digital platforms where reminders could be set.

NHS Lanarkshire's 'No Need to Fall' and 'Tell My Story Once' services

Summary

The Lanarkshire team included staff at the NHS board, North and South Lanarkshire (via their Health and Social Care Partnerships – HSCPs), University of Strathclyde and Digital Health and Care Innovation Centre (DHI). The team designed and tested a digitally-enabled falls prevention service.

Through co-design with older adults, informal carers, staff and VCSE organisations, this concept included a front door and portal for people to self-assess their falls risk and find evidence-based support. It also prototyped a personal data store so people can share their data by consent to staff.

By the end of the T4BC programme, the team had carried out extensive workshops and primary research to ensure the concepts were acceptable to their intended users. These raised learnings such as the need for carer-mediated access to the tools, clarity in language on falls, and accessible onboarding. It also supported the team to consider policy routes to mobilise learning and sponsor the service further.

Context

Falls are increasingly frequent and harmful to older adults in Lanarkshire and across the UK. One in three people over 65 experience a fall yearly. Fractures and falls injuries need a long recovery with increased support needs, and tools like falls alarms are not linked to preventative support. Poorly designed digital offers also risk deepening exclusion for those least likely to seek help online

Despite strong evidence for exercises or environmental changes that reduce falls risk, few eligible people access preventative support. Adults aged 50–64 are often missed out. The project set out to develop inclusive support that occurs earlier and is strengthened through peoples' relationships.

Phase one: Idea testing

The project team carried out research to understand how falls risks are identified, how data on falls moves across services, and what currently occurs after a fall in North and South Lanarkshire. Workshops and one-to-ones with professional carers and alarm receiving staff helped to map out the current pathway.

The team also gathered older adults' and carers' experiences with falls and attitudes to technology and prevention. This includes how relationships with carers and families shape their preferences. A partner also launched an online survey, and a digital panel focus group.

Some partner members set out that this was a new experience for them and spoke about the wider benefits. One noted that they would also like to ensure they took learnings away from the project in how they conduct participatory research. Feedback from interviews were seen to be in depth and richer.

“[Our goal is to explore solutions that] the social care workforce, and people in receipt of social care [...] think is realistic and think is important.” Pilot team member

“I’ve always wanted to do participatory design. This is my first opportunity to really get into the nitty-gritty of it.” Pilot team member

“Something I’m really keen on is the legacy of this work... the idea that we will develop a methodology for involving people actively, that participatory design piece.” Local partner

From the discovery work, they confirmed:

- Older adults often do not see prevention as ‘for them’, treating falls as an inevitable part of ageing. Some were reluctant to use technologies they associated with getting old. Families wanted to help, but tensions around safety and independence were frequent.
- Staff who worked outside of specialist teams were unsure how and when to escalate support after a fall and did not have access to timely information.
- People regularly repeat their falls story due to disjointed systems and data sharing barriers. This includes when they fell, how they move around, key-safe access and their contacts.

This research grounded the team’s offer. For example, recognising that family or informal carers often initiate and sustain the use of a falls portal, meaning the service concept must include them in self-referral and onboarding. The data store concept was also sharpened to capture ‘about me’ and falls history details, reduce duplication and encourage relational conversations. The research enabled this, though the team noted that their wide-ranging experience brought knowledge too. DHI as a new partner for this project brought relevant expertise and skills from its wider work.

“DHI who are helping us with the participatory design bit of this have got some experience in developing, what they call, patient held records.” Pilot team member

Phase one gave the team space to focus on discovery. Teams described the programme support as well structured, thoughtfully designed, and directly relevant. However, the team also experience capacity constraints and short notice with training slots limited their attendance.

“The sessions that have been offered looked super interesting to me and I’d probably quite like to attend all of them. In fact, I’ve got no capacity to attend any of them at this point.” Local partner

Phase two: Prototype development

Across phase two, the team developed artefacts and tested how these would land with older people or carers using them. This included a prototype for a plain-language “front door”, adapted

guidance for layperson use, and a tool to support alarm responders. The team worked up scenarios to show how these artefacts might be used in day-to-day settings. To inform these artefacts, they ran:

- Interviews with informal carers to explore views on confidence with digital tools, and how to make conversations with those they care for or family members easier.
- Two workshops with older adults and carers to assess their needs before, during and after a fall using scenario prompts and participatory methods such as “think aloud” and “keep, lose, change” to prioritise front door and data store features.
- Sessions with alarm response teams and falls specialists focused on data a first response should capture, when to escalate, and how the data would be useful downstream.
- Expert by experience consultations to guide decisions between workshops.

Each funded partner carried out roles which aligned with their experience. DHI led prototype development and participatory research, while the University of Strathclyde developed an evaluation protocol to test user acceptance for the services. Other VCSE and care sector partners continued to help recruit people for consultations.

By the end of phase two the prototypes, technical specifications and scenarios showing how people, carers and staff might use these were completed. These kept and refined the direction taken in phase one rather than introducing a new direction, though did actively build carers into the service.

Support from the programme partners continued to be described as “incredibly helpful,” stretching the team’s thinking and backing more complex co-production with people who are digitally excluded. The team welcomed the opportunity to run phase two over a slightly longer period, which better suited iterative design and wider engagement. They also noted that the phased set-up kept scope tight and productive, though designers would have asked for a little more time.

Phase three: Further testing and refinement

Over phase three, the team focused on refining and testing the front door and datastore concept but did not run a live pilot. Over twelve months, they organised co-design workshops across North and South Lanarkshire, scenario walkthroughs, prototype demonstrations. They also ran additional workshops with ethnic minority groups outside Lanarkshire to broaden the feedback.

Two versions of the front door were developed and presented. In one locality, the team configured a falls module within an existing self-management platform to build on an established brand and user base. In the other they created a co-designed front door from scratch. In both cases, the front door intended to help people reflect on fall risk in plain language and find evidence-based support.

A prototype personal data store was presented, to show how it connects older people, carers and local services. It captured “about me” information, falls history and practical details in one place. Presentations focused on how the front door, data store and alarms work together, letting people share information sooner or for staff to see it.

Alongside iteratively working on the service prototypes, the Lanarkshire team found that:

- Focus needed to move even further away from expecting individuals to self-navigate or sign-up for falls support, with prompts needed via existing community services.
- Further points around language and accessibility were surfaced as make-or-break qualities for the service.
- Risks around digital exclusion persisted, with greater depth of feedback from older adults and carers on their ability to use the service.
- Professionals felt that the datastore would reduce duplication and improve data sharing but still felt that its adoption still depended on integration with current workflows and on alignment with clinical need (in this case, falls and frailty priorities).

“We came back with some softened language, more person-centred language, and broadly speaking it was very well received.” Pilot team member

“I think the co-design really made it clear how much people don’t feel they have agency over their ageing; it really helped to emphasise the inequalities piece.”
Pilot team member

As in previous phases, outputs were a multi-partner effort. Health and social care partners held governance, safety and delivery roles and began to brief their teams on piloting or embedding the service. Design and prototyping was led by the DHI. VCSE partners continued to support lived-experience participation. Project management came through the regional innovation hub, and evaluation on product acceptability was provided by the University of Strathclyde. A team member noted that they learned a huge amount about service design from working in the partnership, which they want to take back to wider work.

The programme structure helped maintain a phased discipline and provided external challenge on the service design and evaluation. The staged funding, in the team’s view, allowed them to work more efficiently.

“It wouldn’t have happened without The Health Foundation support: the challenge process and time gates created some of those checks and balances.” Pilot team member

The team actively participated in training sessions, community learning, and one-to-one sessions with Social Finance and Ipsos, which all, focused on business case development and pitching, and

modelling costs savings. The team has drawn on this training to develop cases for funding further development and piloting of the service.

Local evaluation approach

The University of Strathclyde ran a co-design-led, mixed-methods evaluation to check acceptability, usability and implementation fit across North and South Lanarkshire. Older adults and unpaid carers were recruited through Lanarkshire Carers and Carers Together. Activities included short baseline and follow-up surveys during workshops, guided walkthroughs and scenario exercises of each locality's front door and the personal data store, plus additional sessions to broaden feedback from seldom-heard groups. In parallel, the team completed interviews with 10 professionals (physiotherapy, occupational therapy, general practice, geriatrics, technology-enabled care and management) guided by the Consolidated Framework for Implementation Research, a structured implementation framework used to surface enablers and risks. A scoping review mapped adoption factors for older adults' personal health records. A live pilot was not undertaken within the programme, so more formal usability testing is scoped for a later phase.

Findings across these activities supported the rationale for a relational model enabled by carer-mediated access and assisted onboarding for many users. The service must be clear and accessible, using plain, non-stigmatising language and simple journeys that meet recognised web accessibility standards. It must also be well connected, with consented, role-based sharing and safeguards, clear next steps after adverse events, strong links to local evidence-based services, and integration with existing systems and workflows. Professionals asked for clear communication about the offer and small, staged pilots to demonstrate patient benefit and service efficiencies. The review and interviews highlighted groups most at risk of digital exclusion, including people aged 75 and over, rural and lower-income populations, and those with lower digital and health literacy, and pointed to what helps. This included clinician endorsement, accurate person-centred content, visible privacy protections and practical support. There is clear appetite to test the model further through targeted pilots embedded in routine workflows.

Assessment of the model of care

While it did not undertake a pilot, the team tested acceptability of the falls prevention model with potential users. While only walkthroughs, older adults engaged readily where language was clear and the prototype journey was simple. Several self-reported that they, at the end of workshops, had a better understanding of falls risk and greater confidence to act. Many participants also said that they would need help to use digital tools, usually from a family carer or voluntary-sector.

The model was explicitly relational. It placed carers at the centre of access and ongoing support for falls prevention, recognised that conversations about ageing and risk need careful handling, and used the data store to make available key information to suit conversations with carers and professionals.

Likewise, the model became more proactive through moving effort upstream and meeting people where they already are. Rather than expecting individuals to search for falls offers, the team aims now to insert prompts to access ‘No Need to Fall’ within existing community services.

“This isn’t an app for someone to use in isolation [...] whether it’s an unpaid carer or an advocate [helping the person who needs care to use it] that is the right thing to do here.” Pilot team member

“People are not going to stumble upon falls prevention on its own and we need to link it to other health care interactions. For example, community assessment days, tech-enabled care, vaccination hubs and carers organisations.” Pilot team member

Learning and recommendations

As part of any ongoing work, the team will strengthen non-digital routes and begin to actively embed and test the service with partners. They sought additional funding for limited real-world deployment and to sustain the shared infrastructure. In terms of next steps, they also seek to:

- Run small, staged tests by piloting or embedding the falls portal in routine community services such as vaccination and musculoskeletal hubs, with assistance from health and care teams in North and South Lanarkshire to provide or recommend this.
- Run ongoing consultations and acceptability tests with professionals across Lanarkshire for the datastore concept.
- Consider how it supports both frailer, older cohorts (who without a carer are much less able to use a digital tool) alongside the 50–64 age group, which are overlooked in other ways.
- Provide a social care case for NHS Scotland’s digital front door.

While many learnings can still be taken and shared from the project, the work is having word of mouth benefits which are leveraged through DHI’s work across Scotland. For example, it is now supporting related work in Moray and there is knowledge exchange with NHS Lothian. Even where the focus is not falls, the principles of the work translate to other areas and self-management issues.

“We could happily be the first place to pilot the non-NHS specific components of the digital front door.” Pilot team member

“This work is repeatable. We could do it in other places, not just Scotland... It very much speaks to the priorities around prevention and hospitals to community”. Local partner

Sutton PCNs – Sutton Virtual Community

Summary

The Sutton Virtual Community was developed to address the unmet health and social needs of individuals experiencing loneliness. The model proactively identified at-risk patients and connected them through facilitated virtual peer support groups, creating a supportive, person-centred environment. The initial proposal was for this intervention to be focused on housebound people. However the team had challenges recruiting and supporting this group to be involved within the project timeframes, so they pivoted to include a broader loneliness cohort and a specific group for adults with type 2 diabetes. The pilot reported improved outcomes for users, particularly with the diabetes group who had measurable clinical improvements. Piloting this service model highlights that while technology provides the platform, the model's effectiveness stems from the human-led, relational elements like empathetic onboarding and skilled facilitation.

Context

Sutton Virtual Community was developed to address the unmet health needs of lonely people. The pilot recognised that social and emotional issues significantly influence how people manage their health, yet clinicians' time is often focused on medical factors. Many individuals, particularly those experiencing loneliness or living with long-term conditions, feel isolated and unsupported by existing services.

“A lot of people have complained about lack of services, lack of support [...] Lots of people are feeling disconnected and really isolated and I'm not sure there is a service currently that reaches those people.” Pilot team member

“I feel that often we see [people] in practice and give them a diagnosis that might not kill them but is certainly going to limit them and affect their lives. And we start them on medication and we have a short 20-minute appointment [...] what we don't often do is then get them to come back and say, how is that affecting you emotionally? How's it affecting your family? How are you managing that?”

Local partner

The model sought to create a systematic approach for primary care organisations to proactively and holistically support people from the health impacts of loneliness. It combined population health data to identify at-risk individuals, a structured and empathetic onboarding process, and facilitated virtual peer support groups. This approach allowed the service to connect people with shared experiences and foster a supportive environment where they can learn from one another and normalise their challenges. This provided opportunities for people with unmet health needs to receive peer-led, person-centred support to complement and reinforce medical advice.

The aim of the T4BC-funded project was to determine if a virtual peer support model was acceptable and accessible to people who are housebound and lonely. The pilot team sought to test if this service model could address unmet health needs, improve self-management and improve

health and wellbeing outcomes, and create a more efficient model of care by optimising clinical time.

The project was open to all adults registered with a Sutton GP practice, focusing specially on adults experiencing loneliness or social isolation, and adults with poorly controlled type 2 diabetes.

Phase one: Idea testing

The initial concept was for a 'virtual day centre' to address the unmet health needs of housebound people experiencing loneliness. It was based on the understanding that loneliness affects health outcomes yet it is not treated as a structured pathway in primary care. Housebound adults, who are often from socioeconomically disadvantaged backgrounds, face social isolation, unmet care needs, higher mortality, and limited access to proactive, holistic support. Health and care services focus on acute issues and lack capacity for ongoing clinical and psycho-social care. The vision for the service was influenced by the team recognising the deficit in existing applications of tech-enabled care. Virtual wards were an example of applying technology to enable out of hospital care, but as they discharge people when their acute medical needs are met, they were not being used to better support people at home with their ongoing health and wellbeing needs.

The idea was to develop a technology-enabled, peer-support service that could provide wraparound support to improve outcomes for people experiencing loneliness. The service aimed to combine relational and proactive care by connecting people with clinicians and community-based services in an engaging and creative way to create opportunities for mutual support, conversation and learning. It aimed to join up communications, data sharing and remote monitoring technology to create an integrated and responsive neighbourhood team.

Phase one involved developing a better understanding of the need for this type of concept and co-producing a blueprint of the proposed intervention. The phase one funding supported co-design workshops, community-based engagement and testing of recruitment approaches. A key insight from this phase was that the initial target group of housebound people proved too difficult to engage through the virtual model. These individuals often had complex needs, lacked digital confidence, or were resistant to a new, non-clinical offer. However, the project team learnt that loneliness affected a wide cohort of their patient populations. This learning led to them pivoting their idea to be more encompassing of a wider population of people experiencing loneliness and social isolation. In broadening the scope, the team recognised it was a more operationally viable and commissionable model as it could have different clinical and community use cases.

Phase two: Prototype development

Based on the initial findings, the service model was refined for the prototyping phase. This phase focused on defining loneliness as a condition and developing a prototype of the online platform.

The scope expanded to include adults (not just the housebound) who had indicators of loneliness needs and a cohort of patients with poorly controlled diabetes. This made the pilot more relevant to primary care priorities and improved its potential for sustainability.

Phase three: Pilot

During this phase, the team expanded to develop the prototype digital platform and matching process before piloting the service model with its target cohorts. The core operational features of the model that were developed included:

- Identification: Using population health tools, practice-level data (EMIS searches), referrals and targeted outreach to find patients with indicators of loneliness.
- Onboarding: A structured interview process to understand individual needs and enable matching to appropriate groups.
- Group delivery: Facilitated virtual peer groups, convened for a fixed period to enable supported self-management.
- Digital platform: Partnering with an external software developer to provide the digital infrastructure for case management and planning group sessions.

The pilot was focused on testing the service model on two cohorts, a loneliness group and a diabetes group. The diabetes group had a more clinical structure, involving a diabetes nurse and use of continuous glucose monitors supplied by a partner Dexcom. The loneliness cohort was more needs-led, facilitated by a health coach/expert facilitators. This model was also tested for community-based delivery in partnership with a local mental health charity.

“It's very much created with the participants so there's no topic or agenda [...] at each session we decide what they would like to speak more about in the next session.” Pilot staff team

The team worked closely with a technology partner to develop their prototype in phase two and for the early round of user testing during the pilot. This was based on tailoring an existing digital communications platform used by a wide range of health and social care organisations for telephone befriending services, group telephone and video call services. However, this platform could not be developed to meet their needs so they had to change provider mid-pilot. This led to them switching to a less bespoke, open-source platform. This issue caused delay to the pilot's progress but at the end of the pilot, the team felt more confident that this digital solution had better potential to be 'plugged in' to existing health and care operational infrastructures.

Despite the time lost from the changes to the digital platform, the pilot provided the team the opportunity to test different recruitment approaches, run co-design workshops and iterate the service in response to user feedback and different clinical/health use cases. In total, 118 people took part across 15 groups (nine for loneliness, six for diabetes).

“We actually listened to patients, we heard them, what they wanted, and we made changes based on that. It was not a tick a box exercise.” Pilot team member

The pilot suggests that a proactive recruitment approach to people with indicators of loneliness works well when it is done in a relational way. As a collaborative of four PCNs in Sutton, Sutton PCNs has the infrastructure and ability to run central recruitment across practices and PCNs. However, from co-design workshops and research with people who declined the offer, they learnt that communication was more trusted when it came from a patient's own practice.

A one-to-one onboarding interview, focused on non-clinical health and wellbeing needs and building confidence in the technology platform, was a key part of the model, building trust and enabling effective group matching. While this used an AI tool to support the staff undertaking the matching process and note taking, the person-to-person interaction was recognised by project staff as essential for a positive patient experience. This aspect of the service model was offering people an interaction with their primary care service that was the opposite of people's usual experience of a rushed clinical appointment. The service model created a space for better quality conversation and connections as a result of proactively contacting people with identified needs, the conversation was led by their non-clinical health and wellbeing needs, and it was not limited by a 10- or 20-minute clinic appointment.

“We spoke to people on a more personal level to get to know them a bit better and also to find out if they did have any fears in going into an online support group and basically what it would look like.” Delivery partner

“They've appreciated the hour of the time, and they've been really grateful. And that's been their main focus [...] 'I've had this space to just talk and share.’” Pilot staff team

Skilled facilitators were recognised as important for providing evidence-based support while also leaving space for a peer-led support intervention. Their role was to manage group dynamics and ensure conversations remained safe and supportive. Staff reported that these facilitated sessions enabled participants to open up to each other, support and motivate each other.

“They have shared things quite early on that I was really surprised that they brought to a group setting, like, really personal stories [...] they say that they feel safe, that for the first time, that they feel listened to and that they've never experienced that before.” Pilot team member

“Just having that informal discussion between the patients of, ‘have you tried 10 minutes’ walk after lunch? You'll really see a difference’. And then the following week ‘I did that and that really, really worked’. So that sharing of the motivation and also sharing of tips and tricks between the group, that it's also destigmatised [having diabetes].” Delivery partner

Local evaluation

The team worked with the Health Innovation Network South London and used internal evaluation expertise to undertake a mixed-methods evaluation to run alongside the delivery. This included monitoring recruitment uptake, attendance and experience feedback through interviews, surveys and feedback in sessions, and outcomes related to loneliness using the UCLA loneliness scale and on diabetes using the diabetes distress scale and data on average blood glucose levels.

Over the course of the pilot, 118 people took part across 15 groups (9 for loneliness, 6 for diabetes). This resulted in a total of 747 attendances.

For the 76 people in the loneliness cohort the qualitative measures evidenced outcomes relating to increased confidence, a greater sense of connection, and reduced feelings of isolation. Almost half of the participants described making tangible changes in their lives, such as leaving the house more, reconnecting with friends and family, and engaging with other local services. However, the outcomes were not evidenced through the quantitative data collection using the UCLA loneliness scale. While the average baseline score was 6.05, indicating the service was reaching people with a genuine need, the average reduction was only 0.24 points. The team's experience suggests that the brief scale may not have fully captured the profound changes participants described in their interviews.

For the 42 people in the diabetes cohort, the qualitative evidence highlighted that the combination of peer support, nurse facilitation, and real-time glucose data to be “practical, motivating and empowering”. They reported feeling more in control of their condition and making concrete changes to their diet, exercise, and medication adherence. The clinical data collected using the continual glucose monitors showed statistically significant improvements. Average blood glucose levels fell by approximately 1.3 mmol/L, which is about an 11% reduction from their starting point. There was a 42% improvement in the amount of time participants spent within their target glucose range. The baseline score on the diabetes distress scale was 3.63, confirming that the pilot was engaging patients experiencing high levels of distress. Full follow-up data for distress and 12-week HbA1c levels were not yet available at the time of the report.

Assessment on the model of care

Overall, the pilot demonstrated that the model was effective when it combined careful onboarding with facilitated, conversation-based groups. Technology enables the model, but its success depends on the people involved having the skills and time to “make people feel seen, heard, valued” and supported to improve their own health and wellbeing.

The diabetes cohort showed the clearest and most immediate quantitative outcomes: the end of pilot evaluation reported a statistically significant average reduction in blood glucose; improved confidence; better medication adherence, and changes in diet and exercise. It successfully engaged patients who were not attending regular diabetes appointments and had poor diabetes control.

“Some of the patients on this group don’t attend their appointments. But they are interestingly turning up every week for an hour on Teams to talk to other people with diabetes, to listen to me. And I just find that interesting.” Pilot delivery team

For the loneliness cohort, the end of pilot evaluation reported a small average reduction on the UCLA loneliness score. Participant feedback provided qualitative evidence of social and wellbeing outcomes including participants making tangible changes in their lives, such as getting out more or connecting with other people. The regular sessions and peer-led discussions provided people an opportunity to improve their confidence and understanding about their own health and wellbeing.

“It just helps us to connect people with comorbidities who can’t otherwise [...] engage in a community setting. Some of the participants in my group, they are wheelchair users or, have chronic fatigue.” Pilot delivery team

The pilot shows promise for this service model for a range of different patient groups experiencing loneliness to improve motivation, understanding and confidence to improve their health and wellbeing. Several groups decided to self-organise and continue after the session had ended. However, the teams’ testing suggested that targeting women living in a domestic violence refuge did not work as they had more complex and urgent needs that did not suit the virtual group model.

By creating a proactive pathway for people with psychosocial needs, and cultivating trust through supported onboarding and group facilitation, the pilot suggests the technology-enabled service model is acceptable to both patients and health and care professionals.

“I think for me the key is in people. It’s not the AI and technology, it’s trust. It’s not what tools we’re using in a service; it’s do they trust the service? And if we can instil trust in people, then they’re open to the tools that we’re exploring with them [...] So it’s how do we build people’s trust.” Pilot team member

As an NHS-led, community-supported model, it provides a blueprint for a relational model of care that changes the way people access care and address their unmet needs. The team recognised how this created a new way for people to engage both with health and care services and people in their wider community.

“Especially as it’s coming from NHS and having that space within NHS where they can discuss these things. It really gives them that sense of trust back to the NHS again.” Pilot team member

“It disrupts the pattern [of standard care] because it’s about people speaking from experience, it’s about people having a longitudinal relationship from which they can build trust.” Pilot team member

Feedback from all stakeholders was positive. Participants valued the safe and welcoming support and the opportunity to hear from peers with similar experiences. Local partners support the holistic, user-centred focus of the intervention and are positive about its future potential to meet

the needs of people currently not accessing appropriate support. The feedback suggests that the pilot created a core, consistent service model with features that can be tailored to suit different needs (e.g. the clinical application for people with diabetes and the community-based delivery with a mental health charity). This suggests that the model could be applied as a tool for integrated neighbourhood teams, supporting proactive care for different populations. While the pilot was unable to fully embed an AI-supported matching process due to the changes with the technology platform, the use of AI for note taking and planning was reported to save facilitator time to be used for patient-facing activities. However, they found that engaging with practices to support with recruitment was a challenge due to time constraints and scepticism about an externally delivered project.

“It's saving us a lot of admin time [...] this way it captures all the information and it's all there. We just have to ask the right prompts so I can then capture the data and analyse it and make sure that when I create something the next time it's very much in accordance with what was discussed.” Pilot team member

Learning and recommendations

The T4BC programme provided protected time and team capacity for the Sutton PCNs to undertake user engagement and co-design to test their assumptions about a new model of care for people experiencing loneliness. The funding allowed for extra team and partner capacity, ensuring delivery was led by expert facilitators and a project management team with local connections and experience of an innovation process. The one-to-one onboarding interview is critical for building trust, understanding needs, and ensuring effective group matching.

The model needs to be adapted for different populations. The structured nature of the diabetes intervention yielded clearer quantitative results, while the more subjective nature of loneliness required a focus on qualitative and behavioural outcomes. However, securing long-term funding is a primary barrier, and this affected the initial focus on the housebound population which was less attractive for a commissionable model.

Appendix B: evaluation method and learning from the approach

This appendix details the evaluation methodology used for the Tech for Better Care (T4BC) programme and reflects on its application.

Evaluation approach and rationale

The Health Foundation commissioned a developmental, theory-based evaluation for the T4BC programme. This approach was chosen because the programme was, by design, experimental and evolving. A developmental evaluation is well-suited for innovative contexts where the intervention is not fixed and is expected to adapt throughout in response to learning. The purpose was to provide real-time feedback to inform the programme's journey, rather than a traditional, retrospective assessment of fixed outcomes.

The evaluation and support activities were designed to meet three objectives:

1. To capture the story of the programme.
2. To provide independent, timely feedback that could inform the Health Foundation's decision-making as the programme progressed.
3. To support the funded teams by helping to build their own evaluation capabilities.

Methodological framework

The evaluation was anchored by a co-developed Theory of Change (ToC) and contribution analysis.

- Theory of change: A programme-level ToC was co-developed with the Health Foundation at the outset and revisited at the beginning of phase three (as set out in Figure 1 below). This outlined how the programme's inputs and activities were expected to lead to its intended outcomes and long-term impact. It provided a shared understanding of the programme's goals and anchored the evaluation's focus on key areas, including the development of user-centred service concepts, the formation of cross-sector partnerships and the generation of learning to inform wider models of care.
- Contribution analysis: To assess progress against the ToC, the evaluation applied contribution analysis. This method is used to determine the extent to which a specific programme has contributed to observed results, especially in complex situations where it is not possible to draw a direct comparison elsewhere. The evaluation established eight contribution hypotheses derived from the ToC (as set out in Table 1 below). Evidence was then gathered to test these hypotheses using a series of tests (an approach called process-

tracing¹²) to assess the strength of the programme's contribution and consider alternative explanations.

Data collection and engagement

The evaluation was embedded within the programme through regular learning cycles and structured meetings with all key stakeholders. Data sources for the evaluation included:

- Programme and team documents: Application forms (both successful and unsuccessful), end-of-phase reports from funded teams, ad hoc updates and materials from local evaluators, and team-level Theories of Change.
- Learning sessions: Regular weekly sessions with the core programme team, strategic workshops with internal stakeholders, monthly check-ins with funded teams (phase one), quarterly check-ins (phase three), and peer learning sessions.
- Interviews: Start and end-of-phase interviews with project leads, interviews with delivery teams and local partners (phase three).

In addition to gathering at regular meetings, the evaluation team was also able to discuss T4BC's delivery, raise findings about its progress and barriers emerging for the project teams, and provide advice to the programme team, as part of their role as a developmental evaluator. Further details of this are set out below.

Embedding the approach

The developmental evaluation involved regular learning cycles with the programme team including weekly sessions, retrospectives and more strategic-focused workshops including stakeholder and system mapping and aligning to policy priorities. The theory of change and contribution hypotheses were co-developed and reviewed throughout the evaluation.

It also included structured meetings with funded teams (monthly check-ins, end-of-phase interviews, quarterly workshops, show-and-tells). The offer to the funded teams included capability-building and advice and guidance on evaluation design. Examples of support provided include economic evaluation consultancy support, development of theories of change and evaluation design, and feedback on evaluation data collection. This was integrated with the support offer delivered by Social Finance which focused on user-centred design and technology development.

¹² Collier, David, Understanding Process Tracing (June 1, 2011). Political Science and Politics, Vol. 44, No. 4, pp. 823-830, October 2011, Available at SSRN: <https://ssrn.com/abstract=1856702>

Learning from the developmental approach

What worked well

Throughout the programme, the following aspects of the developmental evaluation ran smoothly and supported the team to draw evaluation conclusions as well as gather wider learning:

- The evaluation drew on, but sought not to duplicate, local teams' evaluations. Some local evaluation work, and considerations for next steps, were underway at the time this report was prepared, which restricts some opportunities to compare evidence.
- The co-creation of the programme-level ToC took place at the outset of T4BC, and the development and refinement of contribution hypotheses began shortly after the completion of phase one. Both of these materials anchored the evaluation team's decisions and evidence needs. A proactive core programme team at the Health Foundation applied emerging learning to ongoing programme design and decision making.
- The structure of the programme supported the evaluation team's work. The phased stages helped the Health Foundation take stock of what they wanted the programme to achieve, in terms of who they decided to continue to fund and why. This in turn influenced the focus for the evaluation, and ensured the activities adapted to respond to emerging learning priorities. Findings from the programme and individual projects were available to the Foundation on a more routine basis and allowed for more regular involvement of key internal, and in some cases external, stakeholders at events or to make connections with other programmes. Regular meetings allowed for 'check and challenge', both with the programme team and funded teams. This created a collaborative working culture to address emerging opportunities and problems. It also allowed the evaluation to pivot to respond to emerging needs and changing contexts, including undertaking an applications analysis of all applications.
- For funded teams with emerging needs which were not met by local evaluation providers, the external evaluation advice and guidance provided a responsive and needs-led offer. For example, the development of a ToC for each project – something which local evaluators did not provide – helped the programme evaluation to assess progress being made and provided a useful tool for funded teams. For example, in one case, a project team asked for assistance for economic cost modelling which complemented the formative evaluation their local evaluator was carrying out, which was based on the assumption and one of the main outcomes specified in the ToC.

Challenges and limitations

The way in which the developmental evaluation and capability building support was structured meant that some recurring challenges were observed that shaped evaluation delivery and the strength of the evidence base. The bullets summarise these:

- There were cases where the support offer delivered by Social Finance for funded teams and the evaluation support duplicated one another. The overlap arose when presenting different concepts and used different language (such as ‘theory of change’ and service blueprint) as seeking funding to develop and embed the service concepts was a widely sought support request from teams, which by its nature required advice to be provided on demonstrating evidence of progress and impact.
- For some of the funded teams, the Ipsos evaluation support provided limited added value of external evaluation expertise beyond locally commissioned evaluation teams, who were better placed to focus on specific local evaluation questions (rather than programme-level focus).
- The evaluation evidence is largely observational due to the early phases of the pilots. Evaluation fieldwork to explore the programme-level evaluation questions was limited as the evaluation team sought to avoid duplicating local efforts by project teams and local evaluators, for example to gather evidence from their network of partners and stakeholders.
- Evaluating programme support in an independent manner has presented challenges as evaluation capability building was an intrinsic part of the offer. The evaluation team needed to take care in how they made conclusions about their own contribution to the programme. Additionally, evidence comes from each project team’s feedback, with these teams also facing difficulties when speaking openly about their experience. For much of T4BC, teams were seeking additional phases of funding or sought to explore long-term funding options with guidance from the programme team. While some were open in their feedback, and feedback was encouraged, there have been reservations to challenge the programme. The small number of participating projects also meant that anonymous feedback could not be guaranteed. This was, to some degree, mitigated through exit and end of programme interviews, though could not be completely eliminated.
- The developmental approach had limited value after phase two once programme design and funding decisions had been made. A change in strategic direction within the Health Foundation reduced their internal capacity for engaging with emerging insights and using the evaluation to support influencing activities. The appetite for emerging insights across the Health Foundation was limited, as more robust evaluative assessments were considered important.

Implications for future developmental evaluations

Based on this experience, future developmental evaluations of this nature should consider the following:

- Front-load the developmental evaluation input to inform programme design. Be clear on the intended strategic application of the emerging insights, and how a programme-level evaluation capacity complements local evaluation efforts.
- Test assumptions on what the funded teams' evaluation capabilities and support needs are. Front-load generic skills, then tailor quickly, including segmenting support by team maturity and innovation type.
- Establish a collaboration infrastructure internally across the Health Foundation's teams and externally across the funded projects. This includes shared resources, peer clinics, more in-person sessions. For the Health Foundation, this infrastructure should include an assigned senior owner and cross-organisation representation.
- Prioritise support for local evaluation design, consider what distinct areas of focus the local evaluations cover to meet each team's needs, and conduct programme-level synthesis after piloting to fully make use of the local outputs.

Figure 1. Co-developed Theory of Change applied during phase three of the programme

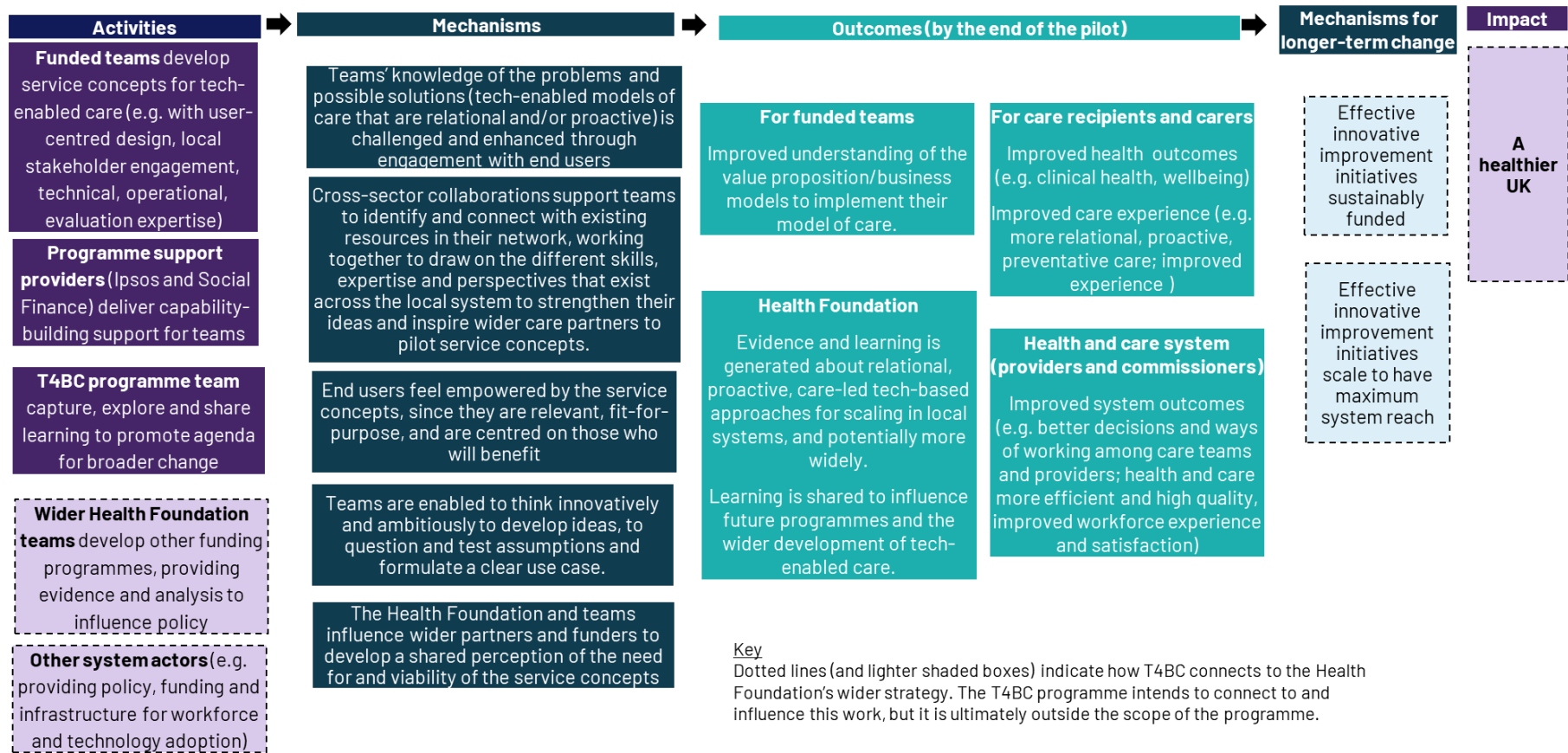


Table 1. Contribution hypothesis developed for the programme evaluation

Contribution hypothesis	Relevant ToC activities and mechanisms	Relevant ToC outcomes
1. User engagement supports teams to strengthen service concepts in ways they otherwise would not have been able to.	<p>Activities</p> <ul style="list-style-type: none"> Funded teams develop service concepts for tech-enabled care (e.g. with user-centred design, local stakeholder engagement, technical, operational, evaluation expertise) <p>Mechanisms</p> <ul style="list-style-type: none"> Teams' knowledge of the problems and possible solutions is challenged and enhanced through engagement with end users End users feel empowered by the service concepts, since they are relevant, fit-for-purpose, and are centred on those who will benefit 	For funded teams: Improved understanding of the value proposition/business models to implement their model of care.
2. The programme design and support enables teams to strengthen the design of their service concepts in ways they otherwise would not have been able to.	<p>Activities</p> <ul style="list-style-type: none"> Programme support providers (Ipsos and Social Finance) deliver capability-building support for teams Health Foundation T4BC programme team capture and share learning to promote agenda for broader change <p>Mechanisms</p> <ul style="list-style-type: none"> Teams are enabled to think innovatively and ambitiously to develop ideas, to question and test assumptions and formulate a clear use case. 	For funded teams: Improved understanding of the value proposition/business models to implement their model of care.
3. Cross-sector partnerships support teams to strengthen their service concepts in ways they would not otherwise have been able to.	<p>Activities</p> <ul style="list-style-type: none"> Funded teams develop service concepts for tech-enabled care (e.g. with user-centred design, local stakeholder engagement, technical, operational, evaluation expertise) <p>Mechanisms</p> <ul style="list-style-type: none"> Cross-sector collaborations support teams to identify and connect with existing resources in their network, working together to draw on the different skills, expertise and perspectives that exist across the local system to strengthen their ideas and inspire wider care partners to pilot service concepts. 	For funded teams: Improved understanding of the value proposition/business models to implement their model of care.
4. Cross-sector partnerships increase the	Activities	For funded teams: Improved understanding of the value

<p>possibility that the service concepts can be embedded in their local systems and potentially more widely.</p>	<ul style="list-style-type: none"> Funded teams develop service concepts for tech-enabled care (e.g. with user-centred design, local stakeholder engagement, technical, operational, evaluation expertise) <p>Mechanisms</p> <ul style="list-style-type: none"> Cross-sector collaborations support teams to identify and connect with existing resources in their network, working together to draw on the different skills, expertise and perspectives that exist across the local system to strengthen their ideas and inspire wider care partners to pilot service concepts. The Health Foundation and teams influence wider partners and funders to develop a shared perception of the need for and viability of the service concepts 	<p>proposition/business models to implement their model of care.</p> <p>For health and care system (providers and commissioners): Improved system outcomes (e.g. better decisions and ways of working among care teams and providers; health and care more efficient and high quality, improved workforce experience and satisfaction)</p>
<p>5. The service concepts developed through T4BC enable technology to be used in care to be more relational and/or proactive.</p>	<p>Activities</p> <ul style="list-style-type: none"> Funded teams develop service concepts for tech-enabled care (e.g. with user-centred design, local stakeholder engagement, technical, operational, evaluation expertise) <p>Mechanisms</p> <ul style="list-style-type: none"> Teams' knowledge of the problems and possible solutions is challenged and enhanced through engagement with end users End users feel empowered by the service concepts, since they are relevant, fit-for-purpose, and are centred on those who will benefit 	<p>For funded teams: Improved understanding of the value proposition/business models to implement their model of care.</p>
<p>6. The service concepts developed through T4BC and piloted with end users add value to previous or existing services and address a real need in care [related to quality, efficiency, experience, equity, health outcomes.</p>	<p>Activities</p> <ul style="list-style-type: none"> Funded teams develop service concepts for tech-enabled care (e.g. with user-centred design, local stakeholder engagement, technical, operational, evaluation expertise) <p>Mechanisms</p> <ul style="list-style-type: none"> Teams' knowledge of the problems and possible solutions is challenged and enhanced through engagement with end users End users feel empowered by the service concepts, since they are relevant, fit-for-purpose, and are centred on those who will benefit 	<p>For care recipients and carers: Improved health outcomes (e.g. clinical health, wellbeing), Improved care experience (e.g. more relational, proactive, preventative care; improved experience).</p> <p>For Health and care system (providers and commissioners): Improved system outcomes (e.g. better decisions and ways of working among care teams and providers; health and care more</p>

		efficient and high quality, improved workforce experience and satisfaction)
7. Learning captured through T4BC informs future programmes and the wider development of tech-enabled care.	<p>Activities <i>(including activities happening externally to T4BC)</i></p> <ul style="list-style-type: none"> Health Foundation T4BC programme team capture and share learning to promote agenda for broader change <i>Wider Health Foundation teams develop other funding programmes, providing evidence and analysis to influence policy</i> <i>Other system actors (e.g. providing policy, funding and infrastructure for workforce and technology adoption)</i> <p>Mechanisms</p> <ul style="list-style-type: none"> The Health Foundation and teams influence wider partners and funders to develop a shared perception of the need for and viability of the service concepts 	<p>For The Health Foundation: Evidence and learning is generated about relational, proactive, care-led tech-based approaches for scaling in local systems, and potentially more widely. Learning is shared to influence future programmes and the wider development of tech-enabled care.</p>
8. T4BC enables teams to develop service concepts that work towards a vision of care which transforms the wider system of health or social care.	<p>Activities <i>(including activities happening externally to T4BC)</i></p> <ul style="list-style-type: none"> Funded teams develop service concepts for tech-enabled care (e.g. with user-centred design, local stakeholder engagement, technical, operational, evaluation expertise) Programme support providers (Ipsos and Social Finance) deliver capability-building support for teams Health Foundation T4BC programme team capture and share learning to promote agenda for broader change <i>Wider Health Foundation teams develop other funding programmes, providing evidence and analysis to influence policy</i> <i>Other system actors (e.g. providing policy, funding and infrastructure for workforce and technology adoption)</i> <p>Mechanisms</p> <ul style="list-style-type: none"> Teams' knowledge of the problems and possible solutions is challenged and enhanced through engagement with end users Teams are enabled to think innovatively and ambitiously to develop ideas, to question and test assumptions and formulate a clear use case. The Health Foundation and teams influence wider partners and funders to develop a shared perception of the need for and viability of the service concepts 	<p>For The Health Foundation: Evidence and learning is generated about relational, proactive, care-led tech-based approaches for scaling in local systems, and potentially more widely. Learning is shared to influence future programmes and the wider development of tech-enabled care.</p>

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