The Strategy Unit.

Heart Failure Targeted Funding Programme 2023/24 Evaluation

Final Report

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Contents

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Executive summary

Introduction

The 2023/24 Heart Failure Targeted Funding Programme (HFTFP) was developed by the NHS England (NHSE) Clinical Policy Unit (CPU). The HFTFP provided non-recurrent indicative targeted funding of over £4.4 million (of £4.6 million available) to improve access to a HF specialist/specialist HF multidisciplinary team (MDT) in community settings and during admission. The programme aims were to support local systems to work towards delivering the NHS Long Term Plan aims and the broader Cardiac Transformation Programme ambition to reduce HF 30-day readmission rates through:

- Early detection of HF in community settings
- Providing rapid access to a HF specialist/MDT during admission and implementing robust discharge planning
- Early specialist HF MDT follow-up in the community.

The NHSE CPU commissioned the NHS Strategy Unit to evaluate the use of this funding. All funded projects were in scope for impact analysis and project delivery tracking. Project delivery was monitored through either a project tracker at three points in the year (51 projects), or an in-depth case study (nine projects) across four themes:

- Introducing digital tools to HF services
- Enhancing community detection of HF
- Patient education
- Rapid up-titration of HF medications.

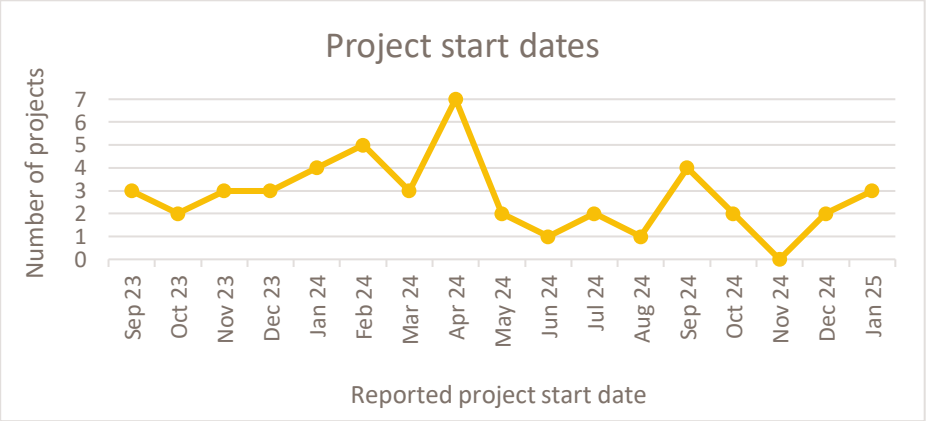
A further three unique projects were also included as case studies.

Project start dates and availability of evidence

NHSE provided the majority of 2023/24 HFTFP funding to ICBs in August 2023. However, on average, projects did not start substantive delivery for seven months.

Of the total 63 projects funded, eight confirmed that they would not proceed with their plans at all. Fifty-five projects have therefore been included in this evaluation.

Figure 0.1 HFTFP 2023/24 project start dates



The most common reasons reported for delays to delivery were the time required for funds to flow from ICBs to trusts and the time needed

for recruitment of staff. This meant that at the point of evaluation data collection, few projects had completed 12 months of delivery, and most were only part-way through delivery, or had not yet started.

This has affected the evidence available for the evaluation; the funding is expected to continue to impact services beyond the evaluation period as more projects complete delivery.

Changes to planned project delivery

40% (20/50[1]) of projects made changes to their planned project

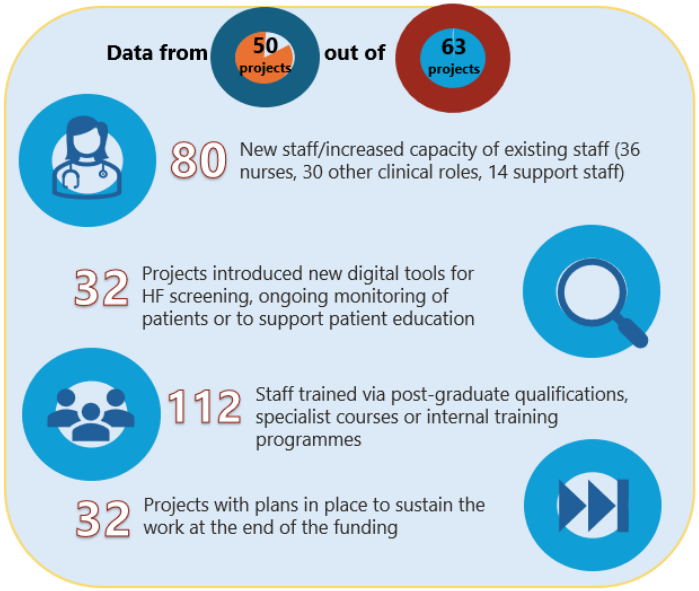
Project changes typically involved changing the types of staff recruited to support a project or reallocating the money to support a different aspect of HF service delivery.

The most common reasons for changes related to challenges recruiting to planned roles and revising plans once the funding was received (due to needing to accommodate funding delays or because the service's needs had changed).

What was the funding spent on?

Figure 0.2 provides a summary of how the HFTFP has been spent.

Figure 0.2 HFTFP outputs



Staffing and training

The majority of projects used the funding to recruit new staff or extend the hours of existing staff on a temporary basis. Some projects did not provide the exact number of staff posts so the actual recorded figure of 80 staff recruited, or given extended hours, is likely to be higher.

One third of projects which responded to the project tracker used some of the funding for staff training. A minimum of 112 staff received

[1] Not all 55 projects provided data

training delivered with the funding, though some projects did not report how many took place, so the actual total is likely to be higher.

Training types ranged from Master's-level courses to internally provided courses. Thirty-eight percent of all confirmed training places came from a joint project in Cheshire and Merseyside and Lancashire and South Cumbria. The project collaborated with Liverpool John Moores University to develop and deliver a HF Master's-course for primary care clinicians to improve diagnosis and management outside the hospital setting.

Enhancing multidisciplinary (MDT) working

Eighteen projects reported through the project tracker that they used the funding to establish a new HF MDT or to increase engagement with an existing MDT. The aim of these MDTs was to improve access to HF specialists for primary and community care.

Screening and digital tools

Thirty-two projects reported using the HFTFP funding for screening and other digital tools. Echocardiography and blood pressure monitoring tools were reported to be the most frequently used to support HF screening. Other digital tools introduced were designed to support data analysis, patient monitoring and staff training.

Sustaining changes introduced by the funding

Thirty-two projects reported that they expected to continue with the project after the 2023/24 funding cycle or that changes introduced by the project would support improvement after this funding cycle.

Table 0.1 shows the reported plans for sustaining the activities of the HFTFP funded projects.

Table 0.1 Reported plans to sustain HFTFP activities[2]

Status of plans	Reported plans	Number of projects
Plans approved: work to be adopted as business as usual	Substantive staff posts created	7
	Staff training embedded into practice	6
	Tools and equipment embedded into practice	7
	Data management processes embedded into practice	2

[2] Projects could report more than one sustainability plan

Status of plans	Reported plans	Number of projects
	Staff post extended for further 12 months	2
Plans in development	Developing business case for substantive staff posts	16
	Developing business case for wider redevelopment of HF service	6
	Developing business case to embed tools into practice	3

Impact of the funding

The impact analysis did not determine whether the funding programme caused an increase, decrease or no change at national level for any of the four outcome metrics for which sufficient data was available. However, there were challenges with projects being able to provide data; only 17 projects responded to the metrics data request. Due to most projects not starting until late in 2023/24, the amount of post-intervention data available has also been limited. Therefore, these results should be considered to be preliminary.

At the individual project level, two of the case study projects were able to provide data for the impact evaluation and returned statistically significant results: Luton and Bedfordshire (introducing a digital tool) and South Tees (increasing service capacity – 'other' project).

For the Luton and Bedfordshire project, which operated across two sites, the impact evaluation found that the project may have negatively impacted some aspects of HF delivery, specifically:

- Total number of patients seen by the community HF team (both sites)
- Patients seen within two weeks after an admission with acute HF (one site only)
- Patients that have been up titrated by 90-day follow-up (one site only).

However, it is important to recognise reported data capture and collection challenges for these metrics across the sites. This means the data provided and impact analysis results may not be an accurate reflection of the project's impact and outcomes. The findings may also be the result of increased use of remote monitoring facilitated by the digital tool introduced, reducing the need of patients to be seen face-to-face by community HF teams.

The impact analysis of the South Tees project revealed a significant change in two key metrics during the HFTFP period: 1) patients receiving ambulatory IV furosemide and 2) admitted HF patients that

were entered into the National Heart Failure Audit (NHFA)[3]. Statistically significant increases were observed, with an average of 4.5 additional patients receiving ambulatory IV furosemide per month, and 3.9 more patients being added to the NHFA per month. These improvements align with the primary use of the HFTFP funding in South Tees for increasing HF specialist nurse (HFSN) capacity to run the ambulatory IV diuretic lounge, as well as the focus identified by project stakeholders on enhancing data collection practices.

The impact analysis was undertaken at the latest possible point to meet reporting timetables. This analysis only used data from projects which were able to provide it, which introduced the potential of selected bias, and also reduced the total sample size. If a later analysis was able to access, through the NHFA, a more complete dataset which included data for all sites, both funded and unfunded, it would be able to run a more robust analysis. This would also allow for more pre-intervention data as well as control groups, which would help provide a more precise estimate of impact of the HFTFP.

Reflections on the HFTFP

Project teams were asked to provide their reflections on their experience of engaging with the HFTFP. Reflections included:

- The HFTFP and similar funding programmes are valuable in supporting services to make changes, test new ways of working and begin work they may have struggled to complete otherwise
- Despite challenges measuring the impact of funding, all project tracker responses reported actual or intended benefits of the projects, including increased capacity, improved quality of patient care and staff development. Some case study projects also described early benefits of their projects including improved post-discharge care processes, increased capacity within HF services and improvements in quality of life for patients
- Project stakeholders reported that expertise and capacity are required to develop proposals and associated project plans for funding schemes such as the HFTFP. There were concerns that this may mean the process is not equitable where services do not have

[3] The NHFA collects data on patients with an unscheduled admission to hospital in England and Wales who are discharged with a primary diagnosis of HF

access to support for proposal development. Staff have previously absorbed proposal writing into their roles, but this was reported to be increasingly challenging. Some project tracker responses requested more advance notice of non-recurrent funding schemes such as the HFTFP to allow extra time for developing proposals.

Cross-cutting recommendations

The key recommendations from the evaluation are structured around five themes:

- Project funding
- Project implementation and delivery challenges
- Stakeholder engagement
- Monitoring the impact of HFTFP projects
- Sustainability.

They are focused on supporting NHSE to design short-term funding programmes which maximise the value of the investments made in services and support robust evaluation, as well as offering guidance to funded projects in making best use of finite investments and navigating the challenges involved.

Recommendations specific to the case study themes are included in the final section.

Recommendations for NHSE

Project funding

- Two years was suggested as a more feasible time period for these kinds of projects. It is important that funding is available at the start of the financial year and projects are not subject to delays linked to processes for receipt of funding through their ICB or other routes
- NHSE should monitor and track funding distribution more closely to assess whether services have accessed the funds and how they have used them. There should also be clear routes for funding distribution and communication about this between the programme team and projects
- Releasing funding in stages may reduce the risk of money being distributed that cannot be spent. For example, allocating and releasing a proportion of the funding to set-up a project and, once it is confirmed as ready to deliver, releasing the remainder of the funding with agreement from local finance teams that this can be spent in full.

Project implementation and delivery challenges

- The HFTFP prioritised improving early detection of HF, enhancing provision of rapid access to a HF specialist during an admission and better post-discharge support for HF patients. Delivering transformation activities to support these ambitions is challenging

and requires detailed plans with evidence provided as part of proposals of support from relevant clinical, operational and system leads. As part of the funding process for this (and similar schemes) there should be further scrutiny on bids to assess the potential delivery risks and mitigations in place

- NHSE should review with proposal leads whether recruitment is necessary for short-term projects, or whether capacity for delivering pilot work can be secured from existing resources through training or offering additional hours to existing staff. If recruitment is essential, the time for this should be clearly identified in proposals and evidence requested of how these roles might be sustained beyond the funding
- NHSE should continue offering flexibility with project funding, allowing projects to overcome challenges and repurpose their resources if required
- NHSE should provide projects with structured opportunities for sharing learning with each other, particularly in the early stages of the programme when projects are being set-up, to support them to overcome challenges and mitigate delays.

Stakeholder engagement

- NHSE should request evidence of senior leadership support for the project within the project proposal, as well as expect that dedicated project management resource is costed into to the project (where required). The proposal process should provide advice and guidance for engaging senior 'project champions'.

Monitoring the impact of HFTFP projects

- Develop a minimum dataset when designing a funding scheme and require projects to identify which metrics they will collect data for as part of their proposals. Use existing metrics where possible, to allow for data to be available for the pre- and post-intervention period
- For a more complete impact evaluation, this could be conducted once NHFA data is available for the project delivery period (although with the recognised limitations of not including community HF data). This would allow for the use of control groups. The required data, however, will not be available for 18 months after projects have started, taking into account the processes for the NHFA to collect and report HF audit data
- National funding programmes with short timescales should focus on supporting projects which deliver interventions with an existing evidence base. This makes it more likely they will have existing data to demonstrate impact and be able to be delivered within the funding cycle. Innovation projects with no or limited evidence to suggest their impact might better be supported through a separate innovation-focused programme.

Sustainability

- Templates and guidance on how to sustain work through the development of a business case should be included as part of the support offer for projects accessing short-term funding schemes.

Recommendations for HF services

Project funding

- Project teams should link in with finance teams at ICB and Trust level to support efficient access to funding to support project delivery. For example, ensuring funding has been received and to confirm when it is expected to reach teams.

Project implementation and delivery challenges

- HF services should consider the likelihood of carrying short-term funding over to another financial year and the time needed to set-up projects when creating proposals
- Project leads should include how the capacity for project work will be protected as part of project planning. Using some funding for dedicated project management support should be considered
- Project teams should factor in additional time to complete governance processes (for example, completing DPIAs or data processing agreements) when planning their project
- Project plans should outline the governance processes that will need to be completed prior to projects commencing
- Services should determine whether recruitment is necessary for introducing a short-term project, or whether capacity for delivering this work could be ringfenced or secured in other ways that take less time
- Projects may benefit from exploring ways of using short-term funding to continue or build on work that has already begun or can be enhanced, to reduce the time required to set-up a project.

Stakeholder engagement

- Project teams should prioritise engagement with key stakeholders, including those in aligned services, in the design and proposal process to ensure buy-in is secured from the outset. This could be done by developing a communications plan with targeted messaging that addresses existing or potential concerns raised by these groups.

Monitoring the impact of HFTFP projects

- Design short-term projects with specific impact measures in mind (taken from the minimum dataset if provided). Ensure this data is available and complete prior to completing the project plan and associated proposal.

Sustainability

- Sustainability should be considered from the outset of project design. This includes being clear how measurement of impact will be undertaken and when. Services should also ensure that they have agreed plans with local commissioning decision-makers, including the evidence expected to be presented in support of any business case for sustained funding
- Explore ways that project activities may be embedded within services to become business as usual. For example, by upskilling teams to deliver project activities as part of their normal duties or building on work that already exists.

Case studies key findings and recommendations

Four case study themes were chosen based on interest from NHSE and other stakeholders. Learning from the case study projects should be shared with other services considering similar initiatives.

Introducing digital tools to HF services

Two projects were introducing digital tools to support their services. Luton and Bedfordshire used Doccla to enhance the use of remote monitoring (alongside other initiatives) to support HF patients post-discharge, optimise care within the community, allow earlier discharge and reduce the risk of hospital readmission. Kent and Medway ICS used Feebris for remote patient monitoring to allow community staff and carers to conduct health assessments to identify risks early and support appropriate escalation of HF patients. Findings for this theme were:

- Introducing new digital tools is likely to require IG approval and IT system integration. The case study projects in this theme both experienced challenges related to these requirements
- Accessing uptake and usage data for digital tools is important to demonstrate their potential impact, but there have been challenges with accessing monitoring data
- Both projects in this theme reported the benefits of building on existing work, rather than introducing a new tool, when only short-term funding was available. Where there was already familiarity with a tool, buy-in, and evidence of benefits from previous work this avoided delays in securing engagement from stakeholders, accessing data or setting up contracts from the beginning.

Recommendations for HF services

- Using a digital tool for HF services may require extra integration and set-up work to ensure that the right data sharing processes are in place. Services should build in time for this from the design stage and respond quickly to overcome delays
- HF services should outline how they will monitor the use of digital tools from the outset and agree as part of contracting arrangements how they will work with digital tool providers to

support data collection and evaluation. They should also consider what access or integration of the tools is needed to gain accurate and appropriate data to monitor their projects.

Enhancing community detection of HF

Two projects were seeking to enhance community detection of HF. Chelsea and Westminster NHS Foundation Trust focused on the identification of individuals at high risk for HF via GP registers, NT-proBNP point-of-care testing offered by a roaming clinic service and referrals made to the HF specialist team for diagnosis. University Hospitals Leicester NHS Trust were recruiting a specialist team of HF Champions to operate in primary care networks. These Champions would drive local service improvement initiatives aimed at enhancing awareness, screening, and management of HF. Findings from this theme were:

- Enhancing community detection of HF is likely to require a collaborative effort across primary and secondary care. This may require more time during the initiation phase to align project objectives, satisfying two (or more) sets of organisational procedures and requirements and securing stakeholder support
- Upskilling primary care colleagues in the detection and management of HF can be an efficient method for creating sustainable transformation in HF services, reducing the burden on hospital services and enhancing preventative measures
- A targeted approach to HF screening in primary care based on specified risk factors is likely to reduce healthcare inequalities by improving the identification of HF in underserved groups and those with multi-morbidities.

Recommendations for HF services

- Projects working across primary and secondary care organisations should include early activities to develop a shared vision and align project aims with organisational priorities. This is important to ensure projects receive wider stakeholder support. This is likely to require additional time than setting-up a single organisation project, which should be factored into project planning. Ideally it would be part of the process to develop a funding proposal
- Early evidence suggests that using targeted funding to upskill primary care colleagues in a clinical specialty may be a sustainable approach to improving the detection and management of specific conditions in primary care. The effectiveness and sustainability of this approach should continue to be monitored.

Recommendation for NHSE

- Continue to ensure primary care recipients of funding are mandated to address healthcare inequalities and have a clear plan for evidencing impact in this area.

Patient education

Two projects were focused on developing patient education around HF. Staffordshire and Stoke-on-Trent ICS developed personalised patient education content on a digital platform with input from a band 4 patient educator. The project also developed an education resource to enable patients to play an active role in medication titration. Yorkshire and Humber Heart Failure Academy were running a public and patient education campaign using paper-based posters, leaflets and social media messaging. The key finding from this theme was:

- Both projects in this theme encountered challenges with securing support from primary care. In both instances the project teams were directed to their Local Medical Committee where they spent considerable resource communicating the intervention's aims and securing agreement to participate, causing project delays.

Recommendation for HF services

- When developing a short-term project proposal involving primary care, hold early discussions to establish whether there is support for the proposed activities. Explore whether it may be necessary to direct some project funding to primary care engagement activities.

Rapid up-titration of HF medications

Two projects were developing an approach to rapid up-titration based on the STRONG-HF trial. King's College Hospital NHS Foundation Trust and several projects across Humber and North Yorkshire were using the trial approach to rapidly optimise both pre- and post-discharge medications for acute HF patients admitted to hospital. Findings from this theme were:

- Both projects have based their work on the STRONG-HF trial, and there have been challenges deciding the inclusion and exclusion criteria that determine which patients are appropriate for rapid up-titration
- In both projects in this theme, rapid up-titration was supported by dedicated HFSNs who did not have a prescribing qualification; they relied on their close relationships with the HF consultants to ensure prescriptions changes are made. Obtaining a prescribing qualification may make rapid up-titration more efficient
- One project intends to have multiple HFSNs involved in implementing rapid up-titration, some but not all have prescribing qualifications. This has resulted in the development of two standard operating processes (SOPs); nurse prescribers will write prescriptions and those without a prescription qualification will rely on pre-existing arrangements for making changes such as requesting prescriptions from GPs. It was acknowledged that this process will take longer and would likely lengthen the rapid up-titration process.

Recommendations for HF services

- Services should develop SOPs for medication optimisation led by nurse prescribers and non-prescribers; where non-prescribers are facilitating optimisation, services need to have efficient routes to access prescriptions and where possible, support HFSNs managing rapid up-titration to become prescribers
- STRONG-HF provides a useful starting point for determining inclusion and exclusion criteria for rapid up-titration, but as STRONG-HF was designed as a randomised controlled trial, exclusion criteria are strict and can limit the number of identified patients. Services should use clinical judgement to review and adapt the trial inclusion and exclusion criteria, ensuring they account for local context and the characteristics of their patients.

Glossary of key terms

Term	Description
BEAT-HF	Stands for 'Breathlessness, Exhaustion, Ankle swelling, Time for a simple blood test or Time to tell your GP or Nurse' – this is an acronym used for an awareness-raising campaign about heart failure symptoms by the charity Pumping Marvellous
CN or Networks	Cardiac network. The NHS has a series of regional cardiac networks covering different areas of England. These focus on sharing learning and working together to improve diagnosis, and management of cardiac conditions
CVD	Cardiovascular disease. A general term that describes conditions affecting the heart or blood vessels
Doccla	Doccla is a remote monitoring system which allows patients to be remotely monitored at home
ECG or echo	Echocardiogram. A scan that uses ultrasound to assess the functioning of the heart
Feebris	Feebris is a remote monitoring system which allows for point-of-care testing and monitoring in patient's homes or in the community
Focused echo	A focused echocardiogram is a more targeted version of an echocardiogram (see ECG or echo) with fewer images, reducing the amount of time needed
HF	Heart failure. A long-term condition where the heart is too weak or stiff to pump blood around the body adequately. It is associated with symptoms such as fatigue, shortness of breath, and fluid retention
Ejection fraction or EF	**Ejection fraction** compares the amount of blood in the heart to the amount pumped out of the heart. There are three types of ejection fraction measurement: • Heart failure with preserved ejection fraction (HFpEF), or diastolic heart failure, is a type of heart failure where the heart's left ventricle does not relax normally so the heart cannot properly fill with blood between each beat. With HFpEF the left ventricle pumps out *50% or less* of its blood every time it contracts • Heart failure with mid-range ejection fraction (HFmEF) is a type of heart failure where the left ventricle pumps out *between 40 and 49%* of its blood every time it contracts • Heart failure with reduced ejection fraction (HFrEF), or systolic heart failure, is a condition where the left ventricle is not contracting properly and so it cannot pump blood with enough force to push the blood into the circulatory system. With HFrEF the left ventricle pumps out less than or equal to 40% of its blood every time it contracts.
HFSN	Heart failure specialist nurse. A nurse who has undertaken specialist training to enable them to support HF patients
ICBs	Integrated Care Boards are responsible bodies for Integrated Care Systems (ICSs) in England. ICBs replaced Clinical Commissioning Groups (CCGs) in the NHS in England from 1 July 2022
IV diuretic lounge	Patients with HF may need to attend hospital to have an intravenous (IV) diuretic to help remove excess fluid from the body. An IV diuretic lounge is a community-based initiative where HF patients with water retention can be seen in a community setting

Term	Description
Managing Heart Failure @Home	Managing Heart Failure@Home is an initiative which focuses on supporting patients to manage their heart failure at home, instead of being admitted to hospital. This includes supporting patients via education and remote monitoring
NHFA	National Heart Failure Audit. Collects data on patients with an unscheduled admission to hospital in England and Wales who are discharged with a primary diagnosis of heart failure
NHS LTP	The NHS Long Term Plan. A plan for the organisation of NHS services in England, released in 2019, which includes targets for patients with cardiovascular disease
NICOR	National Institute for Cardiovascular Outcomes Research. Commissioned by NHS England and NHS Wales to collect and analyse data so hospitals and healthcare improvement bodies can monitor and improve the quality of care and outcomes for cardiovascular patients
NT-proBNP	N-terminal pro B-type natriuretic peptide testing can be used to identify patients with heart failure and to assess its severity
PCN	Primary care network. Groups of GP practices that work together, and with other healthcare services, to deliver various local health services to patients
Point-of-care testing	Point-of-care testing is a way of conducting medical tests where the patient is located, by specially trained healthcare professionals. Typical tests include blood and urine testing
Pumping Marvellous	Pumping Marvellous is a UK-based heart failure charity which produces resources about heart failure. See also BEAT-HF
QOF	Quality Outcomes Framework. A voluntary reward and incentive programme for GP practices. Best practice is rewarded and measured against several indicators. There are some clinical QOF indicators for heart failure
STRONG-HF	STRONG-HF was a clinical trial focusing on the safety, tolerability and efficacy of rapid up-titration of medication for heart failure. The trial showed an intensive strategy of rapid up-titration of guideline-directed-medical-therapy alongside close follow-up after acute HF admissions reduced symptoms, improved quality of life, and reduced the risk of 180-day all-cause death or HF readmission compared with usual care
SystmOne	SystmOne provides a single Electronic Health Record for every patient. This shared record is available across all healthcare settings to any staff who need it during a patient's care
Up-titration	Up-titration is the process of prescribing a low dose of a medication and slowly increasing the dosage over time to maintain or achieve a specific response, or to decrease the risk of adverse effects

1. Introduction

1.1 The Heart Failure Targeted Funding Programme

Access to specialist care for heart failure (HF) is recommended by the National Institute for Health and Care Excellence (NICE)[4]. The NHS Long Term Plan (LTP)[5] highlights the importance of better care for people with cardiovascular disease (CVD), including ensuring people with HF are better supported by multi-disciplinary teams (MDT). The National Institute for Cardiovascular Outcomes Research (NICOR) National Heart Failure Audit (NHFA) report that access to a cardiology ward and/or specialist HF care is linked to improved patient outcomes – lower in-hospital and out-of-hospital mortality.

The 2023/24 Heart Failure Targeted Funding Programme (HFTFP) was developed by the NHS England (NHSE) Clinical Policy Unit (CPU). The CPU has now become the Cardiovascular Disease and Respiratory (CVD-R) Programme. The HFTFP provided non-recurrent indicative targeted funding of over £4.6 million to improve access to a HF specialist/specialist HF MDT in community settings and during admission. Just over £4.4 million of this was allocated to projects following NHSE's review of proposals (see Table 1.1). The programme aims were to support local systems to work towards delivering the NHS LTP aims and the broader Cardiac Transformation Programme ambition to reduce HF 30-day readmission rates by:

- Increasing early detection of HF outside acute settings
- Providing rapid access to a HF specialist/MDT during admission
- Better personalised planning to reduce unnecessary length of stay in hospital and reduce HF readmission[6].

The HFTFP also aimed to improve service experience, outcomes, and quality of life for patients with HF by ensuring they have access to specialist care and a HF MDT across the patient pathway – where holistic management, evidenced-based therapies and interventions can be administered.

1.1.1 2023/24 HFTFP funding process

In 2021, 15 Cardiac Networks (hereafter, Networks) across England were established to support high-quality and integrated cardiac services. NHSE asked the Networks to coordinate provider-level

[4] National Institute for Health and Care Excellence (2021). Acute heart failure: diagnosis and management. Available at https://www.nice.org.uk/guidance/cg187 [accessed 10/12/2024]
[5] NHS England (2019). Better care for cardiovascular disease from the *NHS Long Term Plan*. Available at https://www.longtermplan.nhs.uk/online-version/chapter-3-further-progress-on-care-quality-and-outcomes/better-care-for-major-health-conditions/cardiovascular-disease/ [accessed 10/12/2024]
[6] NHS England (unpublished). Reducing heart failure readmission rates: access to heart failure specialists and MDTs from the *HFTFP specification*

proposals for the 2023/24 HFTFP funding. Proposals set out which of three priorities the provider would use the funding for to achieve the HFTFP's aims. These priorities were:

1. Early detection of HF in community settings

- Enabling development of community HF pathways and specialist triage to improve diagnosis and management of HF

2. Early diagnoses and treatment during admission with specialist input and robust discharge planning

- Timely access to appropriate investigation including natriuretic peptide (NP) testing and echocardiography
- Ensure inpatients with a (new or existing) HF diagnosis are seen and treated early by a HF specialist and relevant members of the HF MDT

3. Early specialist HF MDT follow-up in the community

- Improve discharge planning and continuity of care to optimise patients and reduce risk of readmission for example, integrated acute and community HF services, improve two-week follow-up, patient education and supported self-management
- Ensure people with HF are cared for by a specialist HF MDT led by a HF specialist and are given a single point of contact for the team. Access to a HF specialist should be offered in both hospital and community locations.

In addition, all proposals were required to identify and support Core20PLUS5 groups to access HF treatments and consider how HF services are integrated with existing aligned services, such as virtual wards for HF and frailty and cardiac rehabilitation.

Following the agreement of 2023/24 proposals by the NHSE CPU (with the support of HF clinicians and patient groups), funding was allocated to projects via Integrated Care Boards (ICBs).

1.2 The scope of this evaluation

The NHS Strategy Unit at NHS Midlands and Lancashire (hereafter the evaluation team) was commissioned by NHSE to evaluate the HFTFP.

All agreed proposals were reviewed by the evaluation team. 63 funded projects were identified across the Networks. A summary of projects and funding by Network is provided in Summary of 2023/24 HFTFP funding Network proposals.

Table 1.1 Summary of 2023/24 HFTFP funding Network proposals

Network	Number of funded projects	Total funding for the network area	Breakdown of projects
Cheshire and Merseyside	2	£226,932.79	One project at Network level combined with Lancashire and South Cumbria Network and one project across three Primary Care Networks (PCNs) in the Network
Lancashire and South Cumbria	2	£149,840.04	One project at Network level combined with Cheshire and Merseyside Network and one Network level project
South East	6	£677,610	All six projects are at Integrated Care System (ICS) level
Peninsula	4	£146,950.90	All four projects are at single providers. Two of these projects are at the same provider but cover different geographical areas – the East and the North
West of England	8	£307,329.28	Seven projects are at single providers and one is across multiple providers
West Midlands	5	£490,800.40	All five projects are at ICS level
East Midlands	6	£208,146	All six projects are at ICS level
East of England	6	£511,339.04	Two projects are at ICS level, three projects are at single providers and one project is across multiple providers
North East North Cumbria	3	£261,935.62	All three projects are at single providers
North London	7	£475,021.05	Three projects are across multiple providers and four projects are at single providers
Greater Manchester	1	£250,374.53	One project across multiple providers
Yorkshire and Humber[7]	10	£449,598.18	Multiple projects at various levels. For example, single providers, intra-Network, and inter-Network projects
South London	3	£264,032.02	All three projects are at single providers
Total	**63**	**£4,419,909.85**	

[7] Yorkshire and Humber contains three Networks but submitted a collaborative proposal

1.2.1 Challenges with funding distribution

In November 2023, NHS England directed all ICBs to provide budgets that showed they could meet system financial allocations, prioritising urgent and emergency care over the winter. Under this directive, some ICBs asked HF services to re-submit business cases to access their HFTFP funding allocation. This has meant that some projects have not received their funding from their ICB or experienced delays in receiving it. Two projects confirmed they would no longer proceed due to their funding being redistributed under the NHSE directive. A further six projects are also confirmed as not proceeding for other reasons, discussed in Project tracker findings (section 3).

Therefore, of the 63 projects originally funded by the HFTFP, 55 projects have been confirmed as proceeding and are included in this evaluation. For three of these projects, the funding was reallocated to another HFTFP project. The remaining five did not use the funding for HF activity. The total value of these five projects was £288,935.

1.3 Evaluation approach

This evaluation has included a process and impact analysis of the programme, with three main approaches to data collection.

1.3.1 Impact evaluation

The impact evaluation includes funded projects that have been able to begin delivery and provide quantitative data to the evaluation team in relation to specific programme metrics, described in full in Impact evaluation.

1.3.2 Project tracker

To provide the NHSE CVD-R Programme with comprehensive data on how the funding has been used during the evaluation period, the evaluation team requested that all projects complete a project tracker providing brief details of project progress. Further detail on the project tracker is provided in Project tracker.

1.3.3 Process evaluation case studies

The process evaluation focuses on exploring a sample of projects (case studies) in more depth. Following the proposal review, the evaluation team created a typology of projects. Project 'types' reflected the aims of the projects and how they were planning to use the funding. The typology was presented to the HF Steering Group[8] in September 2023 to select projects for the process evaluation. Project selection considered: value (£); focus on service transformation; start date; and

[8] The HF Steering Group was set-up to provide independent oversight to the evaluation, and includes clinical and non-clinical stakeholders in HF

novelty. This led the HF Steering Group and evaluation team to identify four project topic themes that formed the basis for selection. As well as the rationale for using these criteria, it was suggested to the HF Steering Group that ten to 15 projects were selected, to balance the depth of process data collection with the breadth of the programme within the evaluation resource available.

Twelve projects were selected with nine of these matching the four project themes identified by the HF Steering Group as most vital for national learning. These were:

- Introducing digital tools to HF services
- Enhancing community detection of HF[9]
- Patient education
- Rapid up-titration of HF medications.

Three other projects were also selected that could not be grouped into a theme but were viewed by the HF Steering Group as having the potential to provide useful learning. These projects focused on:

- Rapid in-hospital HF diagnosis
- Auditing HF patient pathways
- Building HF capacity.

1.3.3.1 Case study projects' status

Six of the 12 projects selected as case studies have been able to progress with delivery within the evaluation period, with one of these completed and several in early stages following delays. A further five projects have experienced significant delays that have prohibited them from starting before the end of the evaluation period. They do, however, still plan to proceed as planned and some set-up activities are underway or complete. One project is no longer proceeding due to the HFTFP funding being reallocated to the ICB budget baseline (Project 5 – Black Country ICS).

Case study projects provides an overview of the case study projects selected for the process evaluation.

Table 1.2 Case study projects

Theme	Network	Project
	East of England	**1. Luton and Bedfordshire** (Cambridgeshire Community Services

[9] This theme has been updated since the initial selection process following further scoping work with the project leads. The initial theme focus was 'upskilling primary care and early identification of HF in underserved areas.' Following this scoping work, one of the projects initially assigned to this theme has been moved to the 'other projects' category. Case study findings 4 provides more detail

Theme	Network	Project
Introducing digital tools to HF services		NHS Trust and Bedfordshire Community Health Services (part of East London NHS Foundation Trust))
	South East	**2. Kent and Medway ICS**
Enhancing community detection of HF	North London	**3. Chelsea and Westminster Hospital NHS Foundation Trust**
	East Midlands	**4. University Hospitals of Leicester NHS Trust**
	West Midlands	***5. Black Country ICS*** *(no longer funded)*
Patient education	West Midlands	**6. Staffordshire and Stoke-on-Trent ICS**
	Yorkshire and Humber	**7. Yorkshire and Humber Heart Failure Academy**
Rapid up-titration of HF medications	South London	**8. King's College Hospital NHS Foundation Trust**
	Yorkshire and Humber	**9. Humber and North Yorkshire ICS and West Yorkshire ICS**
	North London	**10. Barking, Havering and Redbridge University Hospitals NHS Trust** (pathway audit)
	East of England	**11. Norfolk and Waveney ICS** (rapid diagnosis)
	North East	**12. South Tees Hospitals NHS Foundation Trust** (building capacity)

1.3.4 Collating other project monitoring data

Two funded projects that are not included as part of the process evaluation have been requested to provide detailed progress reports to the evaluation team by the HF Steering Group. They are of interest to the HF Steering Group because of their high value but were not suitable for the process evaluation for the reasons described below. The information provided will not be analysed by the evaluation team and will be included in the report Annex. The two projects and reasons for non-inclusion in the process evaluation are:

- **Cheshire and Merseyside and Lancashire and South Cumbria** – high value project to upskill the local primary care workforce in HF detection, in partnership with Liverpool John Moores University. Project not included for the process evaluation due to the start date not being until September 2024 (therefore outside of the evaluation timelines)
- **Greater Manchester** – project investigating the redesign of echocardiogram services across multiple (up to 13) providers. The project was of interest due to its high value, however, the scale of providers involved meant it would not be possible to include it within the available evaluation resource. The project also intends to provide detailed reporting of its own, as its

primary aim is to support decision-making relating to the efficacy of redesigning echocardiogram services to facilitate earlier access for patients.

1.4 This final evaluation report

This final evaluation report provides: an overview of the evaluation aims and methodology; findings from the project tracker; findings from the case studies under the four themes (as well as the three unique projects); findings from the impact analysis; and conclusions and recommendations drawn from across the three components of the evaluation.

This report follows an interim report (delivered in July 2024) which set out early findings from the case studies and the first and second rounds of the project tracker.

1.4.1 The structure of this report

Section 1 this introduction.

Section 2 a summary of the methodology for the evaluation.

Section 3 findings from the project tracker, including: information on projects timelines and those that were unable to use the funding to deliver the project; challenges projects experienced; and a summary of project deliverables such as staff recruited, and training delivered.

Section 4 findings from the case study projects under the four themes and three unique projects, including: details of the projects' aims; level of progress made; challenges experienced and mitigations put in place; and plans to sustain project activities.

Section 5 findings from the impact analysis, including national and project level analysis across key metrics.

Section 6 conclusions from across the three components of the evaluation and targeted recommendations for NHSE and HF services.

2. Methodology

This section sets out the methodology for the 2023/24 HFTFP evaluation. There are three components:

- **The project tracker.** All funded projects, apart from those selected as case studies, have been asked to complete a project tracker at three points during the evaluation cycle to confirm how the 2023/24 HFTFP funding has been used and provide updates on progress
- **The case studies.** Nine projects across four themes (and three unique projects) have been selected for an in-depth process evaluation. As part of these case studies, we have included any delivery or impact data these projects have collected
- **The impact evaluation**. The impact of funded projects has been assessed via a standard set of impact measures (where data has been available).

Details of the methodology for these three components is provided below.

2.1 Project tracker

2.1.1 Aims of the project tracker

The project tracker provides an audit of the HFTFP funding for the 2023/24 funding cycle and presents evidence of the changes to HF services introduced as a result of the funding. The project tracker collected the following information from funded projects not included as case studies:

- How the 2023/24 HFTFP funding was used
- Any changes to project delivery from the proposals originally submitted to the HFTFP
- Plans to sustain the work delivered through the projects
- Overall reflections and learning.

2.1.2 Project tracker process

Two rounds of the project tracker were completed in December 2023 and April 2024, to collect data on interim progress with project delivery. These findings were presented in the evaluation interim report. The third and final project tracker was sent to projects in September 2024 to gather summative data for this final report. The full project tracker that was sent to sites is included in the report Annex. Data from the third round of the project tracker have been summarised and analysed and are reported in Project tracker findings.

The third round of the project tracker also requested data for specific metrics in the evaluation minimum dataset for some projects, to be included in the impact evaluation. Impact evaluation outlines this request in more detail.

2.2 Thematic case studies

2.2.1 Data collection and analysis

The case studies focus on nine projects across four themes, as well as three unique projects. There were three separate phases to data collection for the case studies.

2.2.1.1 Phase one – scoping

During the initial **scoping phase**, the evaluation team reviewed the project proposals and held informal discussions with project leads. Workshops with project leads and stakeholders were conducted and used to develop a logic model for each project and set of Key Lines of Enquiry (KLoE) for each theme (KLoE for the 2023/24 evaluation themes). Together, the logic models and KLoE provided the structure and focus for the evaluation. The logic models for each project are provided in the report Annex.

Table 2.1 KLoE for the 2023/24 evaluation themes

Theme	KLoE

Introducing digital tools to HF services	• What app or tool has the project chosen to introduce, and why have they chosen this option?
	• What were the challenges and enablers for introducing these tools to HF services?
	• Were there any difficulties with information governance or data protection?
	  o If so, what helped to overcome these difficulties?
	• What take up and engagement with digital tools have these services seen?
	  o If there is low take-up or engagement what are the reasons for this?
	  o What did services do to increase take-up or engagement, and did that work?
	• What is the staff experience of introducing these digital tools and supporting patients to use them?
	• Unintended consequences – increased workload due to device malfunction/frequent false negative alerts/incorrect alert settings etc.

Enhancing community detection of HF	• What model of HF diagnosis and management did the project focus on and why? • What were the barriers and enablers to engagement with primary care and how did the project exploit/overcome these? • How have practices in primary care changed as a result of this intervention? o Has this affected detection rates in the community?

Patient education	• What educational approaches did these projects put in place and why?
	  o What were the behaviours they were trying to change?
	  o Why did they choose these approaches to change those behaviours?
	• Were these approaches effective at influencing patient's behaviours?
	• Is there any evidence that these education approaches affected equity of access to HF services?

Theme	KLoE
Rapid up-titration of HF medications	• What infrastructure was put in place to support this project? • How has this project overcome existing challenges with supporting patients to optimise their HF medications rapidly? • How have hospital and community HF teams engaged with the project? • How has clinical safety been assured by the project?
Other	• How do different interventions affect HF diagnosis rates? • How do interventions affect equity of access and outcomes for different patient groups? • What interventions are effective in improving care coordination for HF patients? • Is the HFTFP providing sustained improvements to HF services?

2.2.1.2 Phase two – early learning

The **second phase** involved semi-structured qualitative interviews with key stakeholders in each project. Interview participants were HF service leads, project leads, service delivery staff or others with operational or strategic involvement in the project. Interviews took place from November 2023 to May 2024 except in instances where no progress had been made with delivery. In these cases, informal conversations took place with project leads to confirm projects' status and maintain engagement with the evaluation.

2.2.1.3 Phase three – summative findings

In the **third and final phase** of developing the case studies, the evaluation team returned to interview participants from the second phase as well as additional key stakeholders such as newly recruited staff. These final (summative) interviews were conducted between September and November 2024. They focused on the process of delivering the funded projects: how the projects had matured; what had been successful; and what challenges in delivery they had encountered.

To report findings anonymously, participants are referred to as 'project stakeholders' where findings from these interviews are included. Findings from these interviews build on the case studies developed for the interim report and are presented in Case study findings.

The number of interview participants that took part in each phase of the evaluation is presented in Interview participants by phase and project theme.

Table 2.2 Interview participants by phase and project theme

Theme	Project	Project status at time of final reporting	Number of participants in phase two	Number of participants in phase three
	1. Luton and Bedfordshire	**Completed**: began November 2023 and	5	5

Theme	Project	Project status at time of final reporting	Number of participants in phase two	Number of participants in phase three
Introducing digital tools to HF services	(Cambridgeshire Community Services NHS Trust and Bedfordshire Community Health Services)	finished October 2024		
	2. Kent and Medway ICS	**Project delayed but in progress:** set-up activities underway and expected to start within next few months	0	1
Enhancing community detection of HF	3. Chelsea and Westminster Hospital NHS Foundation Trust	**Project delayed but in progress:** set-up activities underway and expected to start within next few months	1	5
	4. University Hospitals of Leicester NHS Trust	**In progress:** began April 2024	2	4
	5. Black Country ICS	**No longer proceeding:** HFTFP funding reallocated to ICB budget baseline	N/A	N/A
Patient education	6. Staffordshire and Stoke-on-Trent ICS	**Project delayed but in progress:** activities primarily focused on staff education with patient education expected to start late autumn/winter 2024	0	3
	7. Yorkshire and Humber Heart Failure Academy	**In progress:** began summer 2024	0	2
Rapid up-titration of HF medications	8. King's College Hospital NHS Foundation Trust	**In progress:** began May 2024	2	3
	9. Humber and North Yorkshire ICS and West Yorkshire ICS	**In progress**: providers at various stages with first starting project in July 2024 and others not started	0	7

Theme	Project	Project status at time of final reporting	Number of participants in phase two	Number of participants in phase three
Other	10. Barking, Havering and Redbridge University Hospitals NHS Trust	**Not commenced:** HFTFP funding not confirmed	2	1
	11. Norfolk and Waveney ICS	**Project delayed but in progress:** set-up activities underway and expected to start January 2025	0	2
	12. South Tees Hospitals NHS Foundation Trust	**In progress:** began January 2024	4	4
		Total	16	37

2.2.2 Case study data limitations

Case study projects made varied progress. This was due to different challenges or delays, outlined in Case study findings. For some projects, evaluation activities (either the qualitative interviews, the quantitative impact analysis, or both) were limited by the progress made. For example, most had not carried out sufficient activity for outcomes to be realised and therefore did not contribute to the quantitative impact analysis.

2.3 Impact evaluation

This section provides an overview of how the impact evaluation metrics were identified through a minimum dataset (MDS), as well as the details on the method used and limitations to the analysis.

2.3.1 Impact evaluation objectives

The impact evaluation aimed to establish the impact that the HFTFP had on several identified metrics, explored at two levels:

- **National level**: the aggregated impact of the HFTFP for individual sites on average nationally (where data was available). Both significant and non-significant results are reported in the findings (Section 5).
- **Individual site-level**: the impact of the HFTFP on individual sites, grouped in the findings section by sites which are either part of case study projects (Section 5.3) or not (Section 5.4). For the individual site-level analysis, only significant results are reported i.e., results which show a positive or negative impact of the HFTFP. Narrative descriptions of impact findings are also provided in the relevant case study section where available, to present them in the context of the qualitative research findings.

2.3.2 Impact evaluation source data

Most HF services already collect specific HF data that is then submitted to the NHFA[10]. The evaluation team worked with the HF Steering Group, NHSE and NICOR – which manages the NHFA – to identify a subset of this data, to create a MDS for the impact analysis. Alongside the MDS, some additional bespoke metrics were also created and both sources (i.e., MDS and bespoke metrics) were used to determine the impact of the funding (for the final impact evaluation). Table 2.3 provides a summary of the MDS, which includes 14 metrics along with their corresponding descriptions and Table 2.4 outlines the bespoke metrics.

Not all projects were asked to report against all of the MDS metrics. Funded projects responded in different ways to the HFTFP aims (see Section 1.1) and, depending on their focus, could only be expected to impact on some of the metrics from the MDS. Therefore Table 2.3 further outlines which data was requested from which projects (and whether that data was received). The last column of Table 2.3 and Table 2.4 shows how each metric was analysed within the impact evaluation, this is discussed in more detail in Section 2.3.5. Further, it is worth noting that some projects did not report on key demographic information (for example, gender).

There were 54 projects that participated in the HFTFP, but data was only requested from 36. Data was not requested from 20 projects because it had been agreed with the HF Steering Group that ten of these were not expected to influence the metrics in the MDS and the remaining ten had either only just started, not yet started or the data would be collected at a later date. As a result, data was requested from 36 projects with 16 projects providing data and 20 projects not providing data. The reasons projects gave for not providing data include: the project had not yet started, the project determined that not enough progress had been made to collect data and challenges created by using a new IT system. Of the 16 projects that provided data, only 14 projects provided sufficient baseline data to be included in this impact evaluation. Of the 14 projects, ten projects delivered their project at one site and four projects delivered their project at two sites each. All data has been analysed by site rather than by project.

The data collection period was for 12 months before the start of projects (i.e., baseline data) and until August 2024 (to fit within evaluation reporting timelines). Baseline data was obtained directly from project teams alongside the post-intervention data. Following discussions with the NICOR it was established that data from the NHFA could not be extracted for the period of analysis within the timeframe of the impact evaluation.

[10] The NHFA collects data on patients with an unscheduled admission to hospital in England and Wales who are discharged with a primary diagnosis of HF

The number of patients diagnosed with HF (i.e., metric 1 in Table 2.3) was used as the denominator (the figure used to calculate the patient population) in the metrics that were calculated as percentages and not analysed directly. The percentage of patients who during their admission were seen by clinical staff members (metric 5) was collected as separate count data for each staff type. Therefore, to avoid double counting, the staff type which had seen the most patients was used to calculate the percentage. Further technical details linked to the metrics can be found in the Annex.

The aim of the HFTFP was to increase all of the metrics outlined in the MDS (Table 2.329).

Table 2.3 MDS summary

Metric name	Description	Number of projects requested	Number of projects received	How the metric was analysed
1. Patients diagnosed with HF	Number of patients that have received a diagnosis of HF (based on NICOR definition)	All	13	Not analysed – used as denominator in other metrics
2. Patients receiving N-terminal pro B-type natriuretic peptide (NT-proBNP) testing	Number of patients that have received NT-proBNP testing	3	1	Not analysed – insufficient time points to analyse
3. Patients seen by community HF team	Numbers of patients seen by community HF team	3	1	Site-level analysis – case study project
4. Patients seen by specialist pharmacist	Number of HF patients that have been seen by a specialist pharmacist	1	0	Not analysed
5. Percentage of patients who, during their admission were seen by a:	The number of patients, as a proportion of the total number of patients that have received a diagnosis of HF who were seen by the following staff during their admission: a. consultant cardiologist b. consultant, not a consultant cardiologist, but with a remit for HF patients	12	7	National level – meta-analysis
a. consultant cardiologist				
b. consultant, not a consultant cardiologist, but with a remit for HF patients				

Metric name	Description	Number of projects requested	Number of projects received	How the metric was analysed
c. cardiology specialty registrar d. HF specialist nurse (HFSN) e. HF pharmacist	c. cardiology specialty registrar d. HFSN e. HF pharmacist			
6. Patients who had a discharge management plan in place prior to discharge from hospital	The number of patients who were given a discharge management plan, which was in place prior to their discharge from hospital	12	6	National level – meta-analysis
7. Percentage of patients who received an echocardiogram (ECG) during their admission, or within the preceding 12 months	The number of patients who have received an ECG during their admission, or within the preceding 12 months	1	0	Not analysed
8. Percentage of patients referred to follow-up with a HFSN	The number of patients referred to follow-up with a HFSN, as a proportion of the total number of patients that have received a diagnosis of HF	16	10	National level – meta-analysis
9. Number of patients seen within the two - six week NICE guidelines	The number of patients that were seen within the two – six week NICE guidelines	3	1	Not analysed – insufficient time points to analyse
10. Patients that have been up-titrated	The number of patients that have been up-titrated by 90-day follow-up	10	2	Site-level analysis– case study project and site-level

Metric name	Description	Number of projects requested	Number of projects received	How the metric was analysed
				analysis – non-case study project
11. Patients receiving ambulatory intravenous (IV) furosemide	The number of patients receiving ambulatory IV furosemide	2	1	Site-level analysis – case study project
12. Patients receiving ambulatory IV iron	The number of patients receiving ambulatory IV iron	2	0	Not analysed
13. Admitted HF patients entered into NICOR NHFA	The total number of admitted HF patients, entered into NICOR NHFA with: a. HF with preserved ejection fraction (HFpEF) b. HF with mid-range ejection fraction (HFmrEF) c. HF with reduced ejection fraction (HFrEF)	2	2	Site-level analysis – case study project
14. Patients seen within two weeks after an admission with acute HF (In NICOR NHFA)	The number of patients seen within two weeks after an admission with acute HF (in the NICOR NHFA)	10	5	National level – meta-analysis

2.3.3 Bespoke metrics outside of the MDS

Metrics outside of the MDS were also requested and are summarised in Table 2.4. The aim of the HFTFP was to reduce the bespoke metrics outlined in Table 2.4.

Table 2.4 Bespoke metrics outside of the MDS

Metric Name	Description	Number of projects requested	Number of projects received	How the metric was analysed
15. Emergency HF admission	The number of emergency HF admissions	1	1	Site-level analysis non-case study project
16. Length of stay	The average length of stay in days, weighted by the number of patients diagnosed with HF	1	1	
17. Readmission within 28 days	The number of patients that experienced a readmission within 28 days of a previous admission, with HF in the primary category	1	1	

2.3.4 Identifying final metrics for impact evaluation

Table 2.3 summarises how many projects provided data for each metric, which informed the type of analysis that was conducted on the metric (as shown in the final table column labelled *'how this metric was analysed'*).

Where a sufficient number of projects provided data for a particular metric, a meta-analysis was performed to estimate the aggregated impact of the HFTFP for individual sites on average nationally, captured in the table column as *national level meta-analysis*. A meta-analysis is a statistical method for combining a number of estimates to produce an overall average, which accounts for the relative amount of uncertainty in each estimate (see the Annex for more information). For the purposes of this analysis, a sufficient number was defined as having data for five sites or more, as meta-analyses with numbers less than this can lead to biased estimates. Otherwise, the analysis was carried out at a site-level, broken down into either '*site-level – case study project*' or '*site-level – non-case study project*'.

Table 2.3 also highlights several metrics that have not been analysed. This is either due to the metric being used as denominator (metric 1), data not being received by projects (metrics 4, 7, 12) or where data was only received for the post-funding time period, meaning there were insufficient time points available to run the impact analysis (metrics 2, 9) which relies on predicting trends using pre-intervention data (see Section 2.3.5).

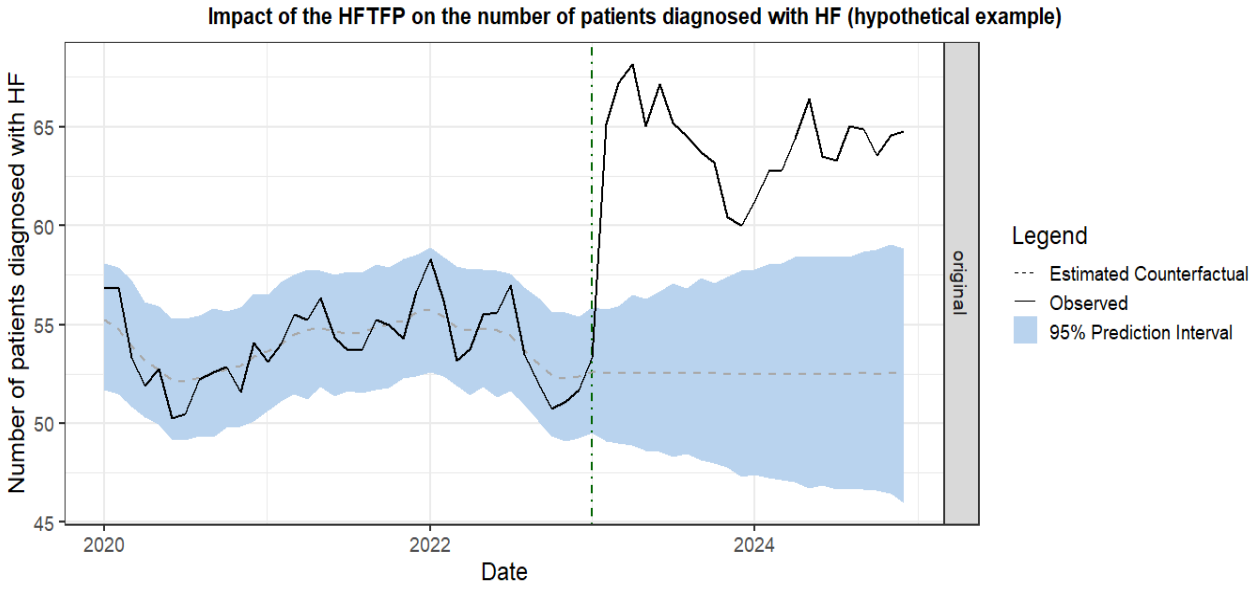
2.3.5 Methodological approach

An Interrupted Time Series (ITS) was selected as an appropriate methodology to estimate the causal impact of the HFTFP because it can identify the causal impact of the HFTFP for every project individually, using only its pre-intervention data. For this evaluation, data from potential 'control' projects (i.e., sites which had not been funded) was not available for use. Therefore, the only viable methodology to employ was an ITS.

This involved running separate ITS analyses for several metrics across individual sites. For the national level analysis of selected metrics, individual site-level ITS analyses were aggregated together using meta-analysis[11] (random effects model) to create an estimate of the national average effect of the HFTFP for four metrics. At the level of any individual site, there is a large amount of uncertainty, but there is comparatively less uncertainty about the national average effect across aggregated sites. This is because the national average effect calculation uses more data points (i.e., aggregated data from all the individual sites).

An example ITS is shown in Figure 2.1. The vertical (y-axis) shows the relevant outcome, which in this hypothetical case is named the number of patients diagnosed with HF, with time along the horizontal (x-axis). The vertical dashed green line shows when the intervention happened (i.e., the interruption period), with the timepoints to the left of this being the 'pre-intervention period' and the points to the right being the 'post-intervention period'.

Figure 2.1 Example ITS of the HFTFP on the number of patients diagnosed with HF



For this hypothetical case, to determine whether the HFTFP has had a causal impact on this outcome, the counterfactual prediction of what would have happened in the absence of the HFTFP (i.e., dotted grey line) is compared to the observed data for the outcome (i.e., black solid line), during the post-intervention period. The difference between these two lines is the estimate of the HFTFP impact. Figure 2.1 shows that the black solid line is much higher in the post-intervention

[11] This aggregation process was conducted using the meta package. Full details of this are provided in the Annex

period than the counterfactual prediction (i.e., dotted grey line) and is much higher than the uncertainty range (the shaded blue area). This indicates that for this hypothetical example, the HFTFP caused an increase in the number of patients diagnosed with HF. See the Annex for further detail on the ITS method and packages used to conduct the analysis.

2.3.6 Impact evaluation limitations

It is important to recognise the limitations and assumptions surrounding the ITS method used in the impact evaluation. A fuller description of limitations can be found in the Annex; the key limitations are:

- ITS only accounts for variation over time and it does this using only a moderate amount of pre-intervention time points. If the performance of projects is very variable over time and is not well-explained by temporal trends, then there will be a large amount of uncertainty in the counterfactual, and subsequently a large amount of uncertainty in the estimate of the average effect of funding. Importantly, this by itself *will not* lead to bias, but it does increase the possibility of having results which have so much uncertainty that they have limited use. Further, as the ITS only controls for time, this means that it cannot control for any other factors that might have affected the outcome and happened at the same time as the intervention. For example, if any other interventions aimed at improving the same metrics were delivered alongside the HFTFP, then it is not possible to identify which intervention had the impact
- Requiring data to be submitted directly by project teams was a limitation; a large amount of project data requested was not received, meaning that it could not be included in analyses. Projects that provided a reason for non-compliance stated they did not collect this data or could not provide it in the format required. For instance, the national level impact analysis (i.e., meta-analysis) is based on calculating the effect for an average project, but this was calculated using data from only five-ten projects, depending on the metric. It is unclear to what degree these projects are representative of all funded projects nationally, meaning that it is unclear how well these findings provide a generalisable result
- The core output of our analyses provides an estimate of the impact of the HFTFP at only one point in time – i.e., the point of evaluation. This is important to note, because at this timepoint different funded projects had been running for different amounts of time, and only one project was able to provide a full 12 months of post-intervention data. On average, projects provided eight months of post-intervention data, and some provided substantially less data than this. In such cases, it unlikely that they would show statistically significant impact, even if the funding was, in fact, highly effective. Consequently, this evaluation does not directly inform us about what the impact is likely to be if the projects were continued, or if the evaluation had been conducted at a different point in time.

3. Project tracker findings

Project tracker key findings

The project tracker provides an audit of projects that received HFTFP funding and have not been included as case studies. Projects responded to three rounds of project trackers during the evaluation. The third and final project tracker was sent to 44 projects in September 2024 and was returned by 91% (40/44) of projects. Seven of the initial 51 funded projects included in the tracker confirmed they were unable to make use of the HFTFP funding.

Project start dates varied across projects. The average length of time taken to start a project from the release of HFTFP funding in August 2023 was seven months. Projects reported delays with access to funding and challenges with recruitment and operational set-up. At the time of writing, many projects were still being delivered and some were about to start delivery. Only eleven projects had been completed.

Project benefits: projects reported actual or intended improvements to service capacity, quality of care, staffing, multidisciplinary working, treatment, hospital care, post-discharge care, service delivery and diagnosis. Some projects reported positive feedback from patients.

Use of HFTFP funding:

- Staffing: reported by 32 projects. 63 staff roles were recruited using HFTFP funding. The majority of projects used funding to recruit nurses and temporary appointments were used widely across projects
- Staff training: reported by 13 projects. 108 staff completed training. 58 staff completed Master's-level HF modules/courses
- MDT working: reported by 18 projects. Eight projects established a new HF MDT; five projects built on existing MDTs; and eight projects enhanced MDT working
- Screening tools: reported by 11 projects. Echocardiography and blood pressure monitoring tools were the most frequently reported
- Digital tools: reported by 11 projects. Data analysis tools were the most frequently reported
- Materials, equipment and resources: reported by eight projects.

Changes to planned project delivery: 18 projects changed the plans detailed in their project proposals. Changes included: revised staffing and recruitment plans; reallocation of funding to alternative HFTFP use; reallocation of funding within planned HFTFP use; and change of provider. Reported reasons for changes included: recruitment challenges; revised staffing offering an improved staff skill mix; funding delays; revised plans having a better fit with local need and existing service provision; and actual costs exceeding budgeted costs.

Sustainability: 27 projects reported plans to sustain the work delivered through projects once the HFTFP funding is used.

Suggested improvements to the HFTFP process included: clearer information on the reporting required by the national team; more interaction between projects, the national team and Networks; opportunities to share learning across projects; and support to sustain work beyond the 2023/24 HFTFP funding cycle.

3.1 Overview

The project tracker provides an audit of the projects that received HFTFP funding and have not been included as case studies (Case study findings). It was intended to provide an overall assessment of the extent to which the HFTFP has affected changes to HF services and in what ways. It does not provide in-depth findings relating to project delivery, which was the focus of the case studies.

There have been three project tracker rounds over the course of the evaluation: the first two rounds collected data on interim progress with project delivery relating to the plans set out in project proposals submitted to NHSE. The third and final tracker gathered summative data for this final report.

The first tracker request was sent to 51 projects in December 2023. The second tracker request was sent to 46 projects in April 2024; five projects had confirmed in the first round that they were not intending to progress. Two further projects confirmed in the second round that they were not intending to progress. The final request was therefore sent to 44 projects.

The third and final project tracker was sent to project and Network leads in September 2024 and requested that projects provide data on: how the HFTFP funding was used; any changes to project delivery from the proposals originally submitted to the HFTFP; plans to sustain the work delivered through the projects; and overall reflections and learning on the HFTFP.

Projects were supported to complete the project tracker through guidance notes, online drop-in sessions and responses to individual queries.

3.2 Final project tracker completion rate

The final project tracker had a completion rate of 91% (40/44 projects). Table 3.1Final project tracker completion summary provides a summary of returns by Network; a comprehensive breakdown by project is included in the report Annex.

Table 3.1 Final project tracker completion summary

Network	Project trackers sent	Project trackers returned	Project trackers not returned
Cheshire and Merseyside	2	2	0
Lancashire and South Cumbria	2	2	0
South East	4	4	0
Peninsula	3	3	0
West of England	7	6	1
West Midlands	3	3	0

Network	Project trackers sent	Project trackers returned	Project trackers not returned
East Midlands	4	2	2
East of England	4	4	0
North East and North Cumbria	2	1	1
North London	5	5	0
Greater Manchester[12]	1	1	0
Humber and North Yorkshire	1	1	0
South Yorkshire	4	4	0
South London	2	2	0
Total	**44**	**40**	**4**

Most of the returned project trackers were fully completed, but some had missing data. This is reported in Project delivery.

3.3 Projects unable to make use of the 2023/ 24 HFTFP funding

Seven projects (five from the first round of the tracker; two from the second round[13]) reported that they would not be progressing. Table 3.2Projects confirmed as not being delivered: funding not used provides a summary of four projects that were unable to make use of the HFTFP funding.

Table 3.2 Projects confirmed as not being delivered: funding not used

Network	Location	Description	Funding	Outcome
East Midlands	Sherwood Forest	Clinical psychology input for HF team	£26,612	Funding not used: project removed from Network proposal
Peninsula	Plymouth	Streamline referral pathway with consultant vetting	£36,738	Funding not used for HF: project has not progressed
West of England	Salisbury	Support early detection for HF	£30,733	Funding not used: project could not be supported
South East	Frimley ICS	Increase specialist HFSN capacity	£57,870	Funding not used: reallocated to ICB baseline
Total			**£151,953**	

[12] The Greater Manchester project is focusing on acute echo redesign of transthoracic echocardiography provision across 12 different sites. For the purpose of this report, it is being counted as one project. Further detail of this project is included in the report Annex

[13] Hillingdon Hospitals advised in the second tracker that the project had not progressed due to funding delays. This was reported in the interim report. The project lead subsequently advised that the project would progress, so it was included in the third round of the project tracker and is not shown in Table 3.2

Table 3.3Projects confirmed as not being delivered: funding reallocated to other HF projects provides a summary of three projects that did not progress, and funding was reallocated to other HF projects within a Network.

Table 3.3 Projects confirmed as not being delivered: funding reallocated to other HF projects

Network	Location	Description	Funding	Outcome
West Yorkshire	Cross-service	HF virtual support programme	£5,000	Funding reallocated to other West Yorkshire projects
	Cross-service	Community day case IV diuretic services	£28,000	
	Calderdale HF team	Purchase of Kardia ECG devices	£1,000	

Reported reasons for projects not progressing included delays in receipt of funding and funding being reallocated to the ICB baseline to support 2023/24 winter pressures (outlined in Section 41.2.1 Challenges with funding distribution).

3.4 Project delivery

This section presents findings from 39 out of the 40 projects that completed the third round of the project tracker. The HF Steering Group asked for additional data for the Greater Manchester projects than that requested in the tracker. This project is therefore not included in these findings and reported on separately in the Annex.

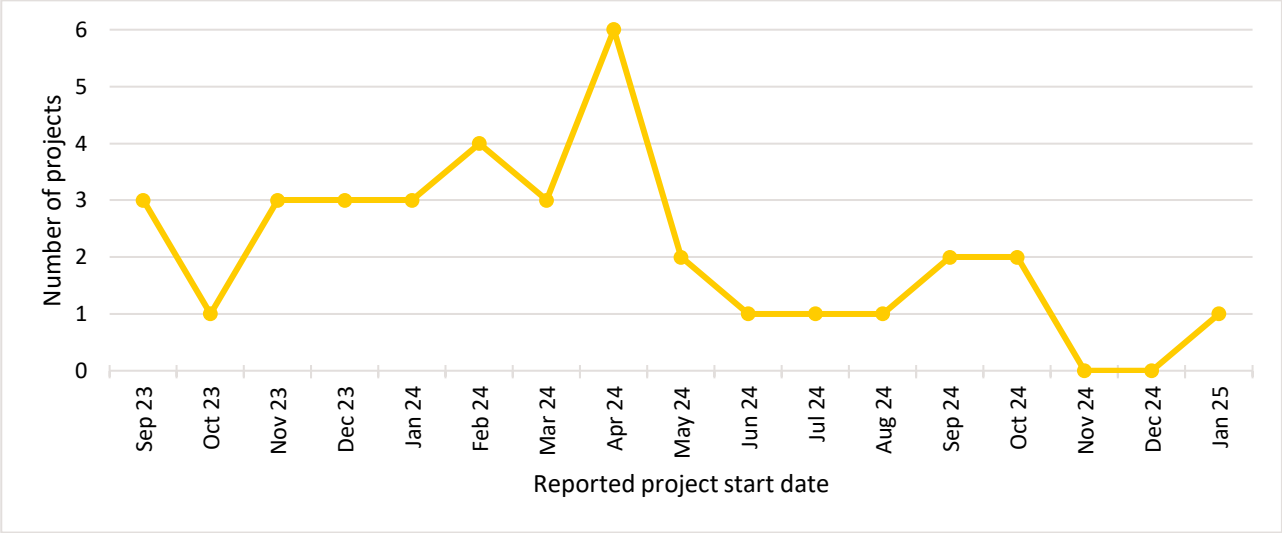
3.4.1 Project start dates

Project start dates are based on when a project reported it was able to commence delivery of the planned intervention (for example, when new staff were in place). 90% (35/39) of projects reported a start date for project delivery. 10% (4/39) of projects reported they are yet to start delivery: one of these projects plans to start delivery in January 2025; the other three projects are in the process of confirming start dates.

Figure 3.1 shows the range of confirmed project start dates, from September 2023 to January 2025, with a peak in April 2024. The average length of time taken to start a project from the release of HFTFP funding was seven months[14].

[14] The majority of HFTFP funding was released in August 2023, however, three Networks received all their funding in July 2023, and specific projects in two Networks received the funding in September and October

Figure 3.1 Reported start dates for project delivery



Reported reasons for delays to project delivery included:

- Delayed access to the funding at a local level
- Recruitment challenges
- Prolonged IT, information governance (IG) and contractual processes
- Operational delays in setting up new services.

At the time of final trackers being returned, many projects were still being delivered and some were about to start delivery. Project trackers therefore reported either retrospectively on what had taken place during a project so far, or prospectively on what projects expected to take place once they started.

3.4.2 Delivering the programme aims

The HFTFP had three programme aims:

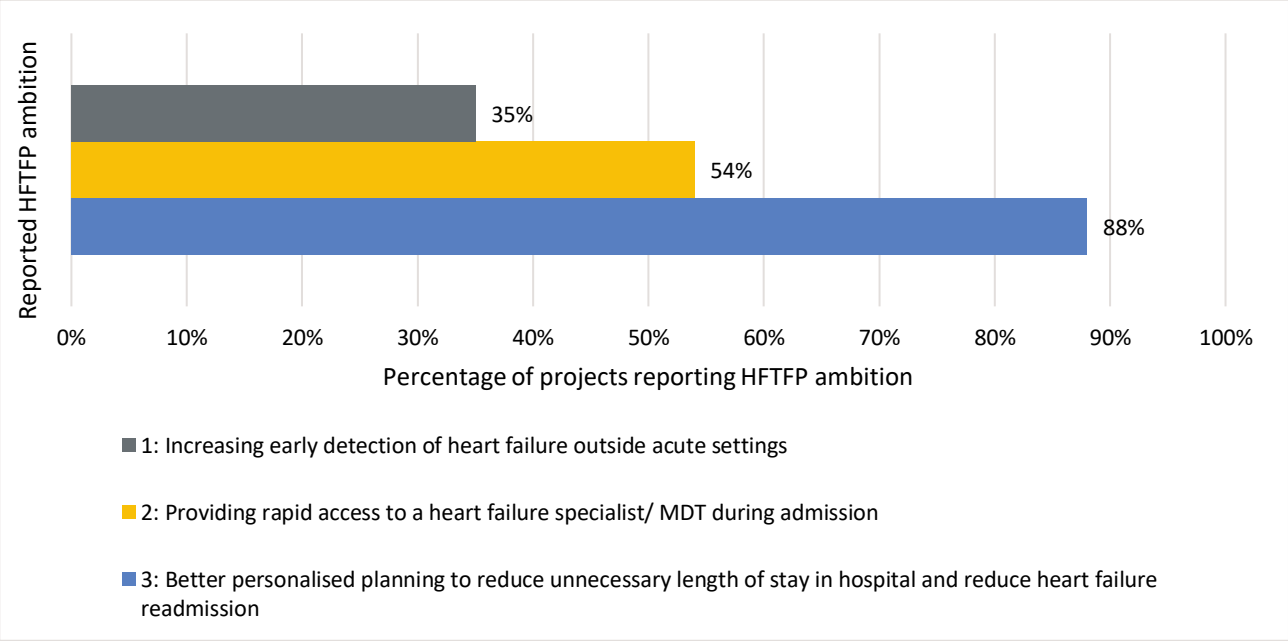
1. Increasing early detection of HF outside acute settings
2. Providing rapid access to a HF specialist/MDT during admission
3. Better personalised planning to reduce unnecessary length of stay in hospital and reduce HF readmission.

Projects were asked to report which programme aims their work had delivered against (or was intended to deliver against). 67% (26/39) of projects reported on HFTFP aims (28% (11/39) of

following a request to revise their proposals. The average start date is calculated using August as the funding release date

projects reported that it was too early in project delivery to provide this information). Projects were able to report delivery of more than one of the programme aims. As shown in Figure 3.2: 35% (9/26) reported delivery of aim one; 54% (14/26) reported delivery of aim two; and 88% (23/26) reported delivery of aim three.

Figure 3.2 Reported delivery of programme aims



3.5 Project benefits

100% (39/39) of projects reported benefits achieved (or intended to be delivered but as yet unconfirmed) as a result of the HFTFP. Table 3.4 shows the reported benefits grouped by theme and the number of projects that reported each benefit. Projects could report multiple benefits.

Table 3.4 Reported benefits of programme funding

Reported benefits (delivered or intended)	Number of projects that reported benefits
Service capacity: *increased service capacity*	24
Quality of care: *improved patient care and safety*	21
Staffing: *staff development*	19

Multidisciplinary working: *improved communication and collaboration for patient care between primary, community and secondary services; consultant-led care delivered by multiple staff disciplines through MDT; improved staff skill mix*	18
Treatment: *improved patient access to appropriate care pathway; improved medication titration*	17
Hospital care: *reduced admissions; reduced length of stay; increased use of virtual wards*	16
Post-discharge care: *improved follow-up post-discharge; improved patient monitoring and triage*	15
Service delivery: *improved service efficiency; reduction in workload; improved working environment; improved use of data for service improvement*	11
Diagnosis: *increased patient access to screening; increased diagnosis; reduced time for diagnosis*	9

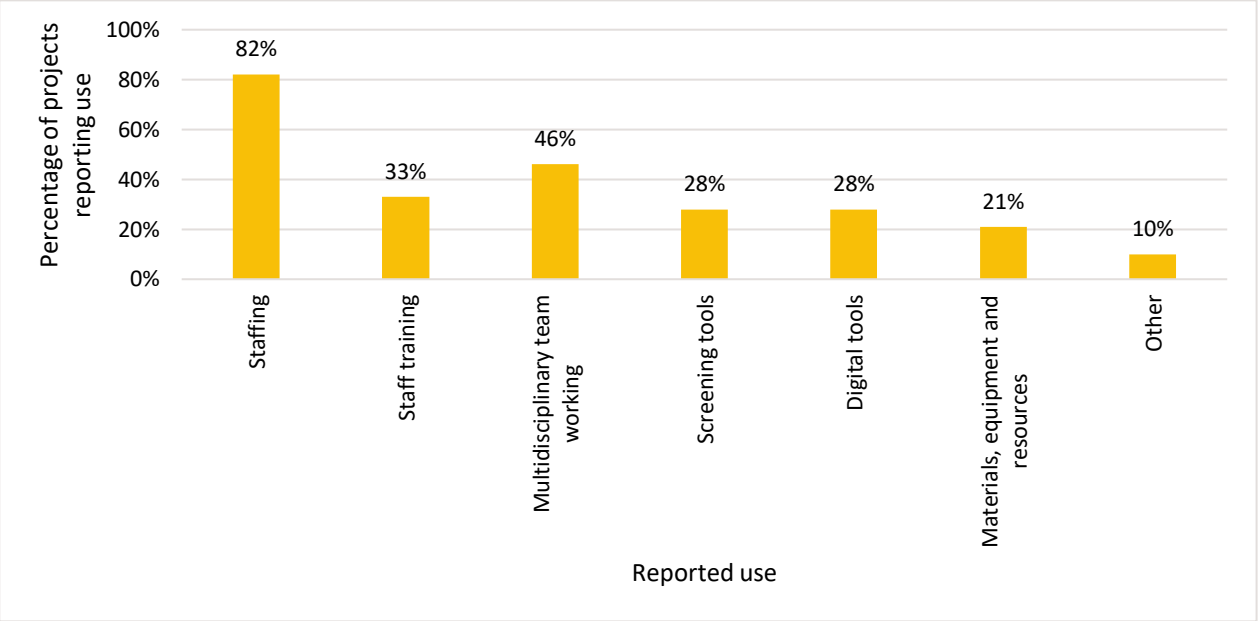
Eight projects reported feedback collected from patients on their experience of projects funded by the HFTFP. Patients reported benefits related to:

- The quality of care received from HFSNs, including earlier diagnosis; medicines optimisation; continuity of care; and prevention of hospital admission or crisis
- Access to specialist care at home or in the community, including post-discharge support at home; remote monitoring and care; and receiving care at home at the end of their life
- More joined-up care and communication between primary, community and secondary care.

3.6 How the HFTFP funding has been used

100% (39/39) of projects reported how HFTFP funding had been used (or was expected to be used). Projects could report multiple uses of funding. Figure 3.3 shows the percentage of projects that reported each use of HFTFP funding. The ways HFTFP funding had been used is described in more detail in Sections 3.6.1 to 3.6.7.

Figure 3.3 Reported use of HFTFP funding



3.6.1 Staffing

82% (32/39) of projects reported using HFTFP funding for staffing. Table 3.5 shows the number of staff recruited through projects and the breakdown of staff by role, recruitment method and type of appointment.

Table 3.5 Reported staff roles funded by the HFTFP

Staff roles	Newly recruited staff		Existing staff		Breakdown not reported	Total number
	Temporary	Permanent	Temporary	Permanent		
Nurse	16	2	8	0	3	**29**
Consultant	0	0	8	0	0	**8**
Pharmacist	5	0	2	0	0	**7**
Other healthcare professionals	2	0	1	0	6	**9**
Non-clinical staff*	4	0	2	0	4	**10**
Totals	**27**	**2**	**21**	**0**	**13**	**63**

* Non-clinical staff includes management, administrative and data science staff.

The majority of projects reported recruiting nurses. Temporary appointments were used widely across projects; these arrangements included extension of hours for existing staff, secondments and the use of agency staff. Seven projects reported using HFTFP funding to backfill substantive posts, so that existing staff could be released to deliver projects.

One further project that had not yet started delivery reported that funding would be used for staffing, but the specific staff post was still to be finalised.

3.6.2 Staff training

33% (13/39) of projects reported using the HFTFP funding for staff training. Table 3.6 shows the type of training reported by projects and the number of staff that completed training (some projects only reported the type of training and not the number of staff that completed it, so the figure is likely to be higher than stated).

Table 3.6 Reported staff training

Training	Number of projects that reported training	Number of staff that completed training
Master's-level HF modules/courses	8	58
Undergraduate level HF modules/courses	2	7
Internal training	4	22
Conference	4	9
Other training	3	12
Total	**21**	**108**

58 staff completed Master's-level HF modules/courses. 43 of these staff were reported by a joint project in Cheshire and Merseyside and Lancashire and South Cumbria Networks. The project collaborated with Liverpool John Moores University to develop and deliver a HF Master's-course for primary care clinicians to improve diagnosis and management outside the hospital setting. This project is reported on further in the Annex.

Projects reported that staff in a wide range of roles completed (or would complete) training. Some projects reported that they did not use HFTFP funding directly for staff training, but that staff completed induction and on-the-job training as part of the project.

3.6.3 Multidisciplinary team working

46% (18/39) of projects reported using HFTFP funding to support MDT working. Eight projects established a new HF MDT, focused on improved access to HF specialists for primary and community care. Five projects built on existing MDTs by engaging a wider range of staff in MDTs. Eight projects reported that they had not developed new or existing MDTs, but had enhanced MDT working in everyday practice, through the addition of new staff posts and increased collaboration across teams.

3.6.4 Screening tools

28% (11/39) of projects reported using HFTFP funding for screening tools. Table 3.7 shows the purposes and types of screening tools and the number of projects that reported use of the tools. Echocardiography and blood pressure monitoring tools were reported to be the most frequently used.

Table 3.7 Reported screening tools

Purpose of screening tool	Type of screening tool	Number of projects that reported use of tool
Echocardiography	Echocardiography monitors for use in patients' homes and in primary and acute settings; mid-range echo assessment of left ventricular ejection fraction within patients' homes	4
Blood pressure monitoring	Blood pressure monitors for use in patients' homes and in acute settings	4
Hormone testing	NT-proBNP blood tests for use in patients' homes and in acute settings	2
Other monitoring	Electrocardiography monitors and cholesterol monitors for use in patients' homes; bedside monitor for use in acute setting	3
Other	Prevalence improvement searches for use in primary care	1

3.6.5 Digital tools

28% (11/39) of projects reported using HFTFP funding for digital tools. Table 3.8 shows the purposes and types of digital tools and the number of projects that reported use of the tools. Data analysis tools were reported to be the most frequently used.

Table 3.8 Reported digital tools

Purpose of digital tool	Type of digital tool	Number of projects that reported use of tool
Data analysis	Data analysis tools to support risk stratification, pathway management, medication titration and audit	4
AI diagnostics	AI analysis of echocardiography monitoring using Us2.ai; HF diagnostics using Lenus Health AI tool	2
Staff communication and collaboration	Platform for staff collaboration and information sharing using Microsoft Teams	2

Purpose of digital tool	Type of digital tool	Number of projects that reported use of tool
Patient monitoring and communication	Remote monitoring, communication and medication titration for patients, using Ortus i-Health tool	1
Staff training and guidance	'Top tips' HF management tool for primary care staff	1

One project reported that funding would be used for a digital tool, but that the specific tool was still to be finalised.

3.6.6 Materials, equipment and resources

21% (8/39) of projects reported using HFTFP funding for materials, equipment and resources. Computer equipment, mobile phones, a community nurse bag, a key safe and flash cards were purchased to support project delivery.

3.6.7 Other: any other deliverables

10% (4/39) of projects reported using HFTFP funding for 'other' deliverables. Staff travel, consultancy, licensing and other costs were reported.

The project tracker included a section for projects to report any use of HFTFP funding for venue hire. No projects reported this, however three projects reported securing venues to support project delivery without charge.

3.7 Changes to planned project delivery

46% (18/39) of projects reported changes to the plans detailed in their project proposals. Projects could report multiple changes. Table 3.9 shows the changes grouped by theme and the number of projects that reported each change.

Table 3.9 Reported changes to project delivery

Change area	Reported changes	Number of projects that reported change
Revised staffing	Changes to staff roles, bands and hours	10
Revised recruitment plans	Extension to hours of existing staff rather than newly recruiting staff	4
Reallocation of funding to alternative HFTFP use	Community MDT established, rather than hospital at home service/development of acute HF unit; reduced expenditure on screening/digital tool and reallocation to staffing and staff training	4

Change area	Reported changes	Number of projects that reported change
Reallocation of funding within planned programme use: MDT	Community MDT established, rather than planned virtual MDT; additional MDT sessions provided and planned outreach service scaled back	2
Reallocation of funding within planned programme use: screening/digital tools	Use of alternative screening tool/digital tool	2
Change of provider	Project delivered with alternative provider	2

Projects reported several reasons for the above changes to planned project delivery:

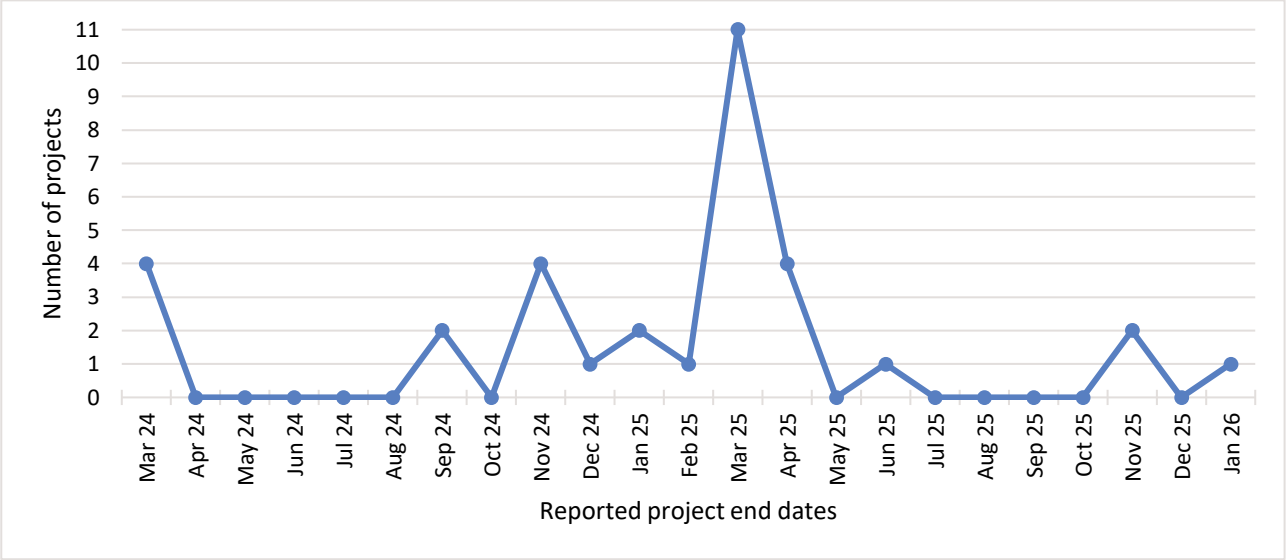
- Recruitment challenges made it difficult to fill the roles described in project proposals
- Revised staffing offered an improved staff skill mix
- Delays in access to funding resulted in a revised project plan
- Revised plans were a better fit with local need and existing service provision
- The cost of the planned screening tool exceeded the planned budget.

3.8 Project completion

85% (33/39) of projects reported an actual or expected end date for project delivery. 10% (4/39) of projects reported that they were unable to confirm an end date as they are yet to start delivery. 5% (2/39) of projects did not confirm an end date.

Figure 3.4 shows the range of project end dates, from March 2024 to January 2026. The anticipated peak of 11 project end dates in March 2025 corresponds with the peak in project start dates in April 2024 (with the HFTFP providing 12 months of funding) in Figure 3.1. 28% (11/39) of projects were reported as complete in the final tracker request.

Figure 3.4 Reported end dates for programme funded delivery



3.8.1 Sustaining HFTFP funded projects

69% (27/39) of projects reported plans to sustain work when the HFTFP funding ends. Table 3.10 shows the reported plans and their status and the number of projects that reported each plan. Projects could report multiple plans.

Table 3.10 Reported plans to sustain work

Status of plans	Reported plans	Number of projects that reported plans
Plans approved: work to be adopted as business as usual	Substantive staff posts created	6
	Staff training embedded into practice	6
	Tools and equipment embedded into practice	6
	Data management processes embedded into practice	2
	Staff post extended for further 12 months	1
Plans in development	Developing business case for substantive staff posts	13
	Developing business case for wider redevelopment of HF service	6
	Developing business case to embed tools into practice	2

Projects reported plans as either approved or in development. Some projects reported risks to plans to sustain the work, including lack of funding and recruitment challenges.

8% (3/39) of projects reported that it was too early to state whether or not the work would be sustained. 15% (6/39) of projects reported that projects would not be sustained. Reported reasons

included: project delivery not going to plan, making it difficult to prepare a business case for further funding; lack of ICB funding to support ongoing delivery; and plans to review and revise the format and structure of the work before any further funding is sought.

3.9 Reflections on the HFTFP

92% (36/39) of projects provided general feedback on their experience of project delivery and the HFTFP.

3.9.1 Benefits of the programme

The HFTFP funding enabled many projects to develop new ways of working, improve HF services and develop evidence for longer term plans to sustain service improvements.

3.9.2 Enablers to project delivery

Stakeholder engagement across HF care pathways was as an enabler for project development and delivery.

3.9.3 Challenges with project delivery

The short-term nature of the HFTFP presented several challenges for projects:

- Recruiting staff to temporary roles: external candidates were difficult to attract to short-term roles and internal secondments took staff away from other services. It was challenging to allow sufficient time for recruitment, induction and training within a short-term project
- IT, IG, contractual and operational arrangements took a long time to set-up
- Funding projects for a longer period would have allowed more time to evidence impact and to develop plans to sustain the work.

The HFTFP funding resourced some staff time for the projects, but project delivery was often reliant on other staff that were not budgeted for. It was challenging for these staff to contribute to the project alongside other commitments.

3.9.4 Suggested improvements to the HFTFP process

Projects reported that the HFTFP funding process was straightforward and the broad funding criteria enabled innovation and encouraged collaboration across HF care pathways. Some would have liked more advance notice of the HFTFP funding scheme and experienced issues in accessing funding at a local level.

Communication between the national team and projects was limited. Some projects would have liked: clearer information on the reporting required by the national team; more interaction between projects, the national team and Networks; opportunities to share learning across projects; and support to sustain work beyond the 2023/24 HFTFP funding cycle.

4. Case study findings

Case study key findings

Six of the 12 projects selected as case studies have been able to progress with delivery. There was wide variation: at the time of writing, one had completed and several were in their early stages. One project is no longer proceeding due to the HFTFP funding being reallocated. The final five projects have experienced delays but still plan to progress in future, with some set-up activities completed or underway.

Introducing digital tools to HF services

- The two projects in this theme, Kent and Medway ICS (K&M) and Luton and Bedfordshire (L&B) are building on existing work using digital tools to improve HF care and management in the community
- At the time of writing, the L&B project has completed their project with K&M's project delayed due to funding access and governance issues, such as finalising contracting and data sharing processes
- Teams in both projects reported challenges including: accessing the HFTFP funding; difficulties with data collection and demonstrating project impact; limited capacity to deliver activities; and challenges engaging wider system stakeholders in project delivery. Building on existing work and collaboration between project teams and colleagues has supported progress
- Only L&B has been able to provide evidence for the impact evaluation. Results indicate key outcomes for the project have not been met yet. However, this may be linked to reported difficulties in collecting accurate data and more time required to evidence impact. Project stakeholders reported the project has led to improvements in the use of the digital tool and post-discharge care for HF patients, including better integration and collaboration
- Both teams plan to sustain their projects in different ways; L&B have embedded project activities into usual service delivery and K&M will look to secure ongoing funding once the project has begun, and impact can be evidenced.

Enhancing community detection of HF

- Three projects focusing on improving early identification and management of HF in primary care settings were selected for the evaluation. However, Black Country ICS's project is no longer proceeding and has been removed from the evaluation
- Chelsea and Westminster Hospital NHS Foundation Trust and University Hospitals of Leicester NHS Trust have made progress with set-up and implementation, although delays have hindered progress meaning neither has delivered planned activities
- Challenges reported across projects include: delays accessing funding; the time required to establish new pathways and IG processes, particularly with primary care; and stakeholder and patient engagement
- Strong leadership support, collaboration between stakeholders including primary care and building on existing work or relationships, have supported project delivery so far
- Neither project had progressed enough to submit data for the impact evaluation, but both expect to be able to demonstrate a positive effect on the number of patients diagnosed with HF

- There is confidence the projects will continue following the HFTFP, with plans to submit business cases. Stakeholders across both projects reported that evidencing impact of the activities will be important to build support for ongoing delivery.

Patient education

- Patient education was the focus of two projects chosen as case studies: Yorkshire and Humber's HF academy (Y&H HFA) and Staffordshire and Stoke-On-Trent ICS (SSoT)
- Y&H HFA's project was paused in March 2024 until summer to allow for greater clinician engagement; project activities resumed in June. Progress has been made with SSoT's project; however, activities have focused on primary care education rather than the recruitment of a patient educator role and enhancing of patient education resources
- Projects under this theme have experienced challenges accessing funding and engaging with primary care colleagues, which has required considerable resource and time
- As the projects have made limited progress, their impact cannot be measured. However, both hope to improve knowledge of HF amongst patients; Y&H HFA through raising public awareness of HF symptoms to support timely diagnosis and SSoT through improving patient management of HF
- Y&H HFA's project was designed as a time-limited activity, with hopes the impact of raising awareness of HF will last. SSoT plan to continue delivering patient education activities by embedding them into a permanent staff role.

Rapid up-titration of HF medications

- Two projects focusing on rapid up-titration of HF medication were selected as case studies; King's College Hospital Foundation Trust's project began delivery in May 2024 and providers delivering Humber and North Yorkshire ICS and West Yorkshire ICS's project are at various stages of progress, with some delivering project activities and others still setting them up
- The importance of straightforward prescribing processes, senior leadership and/or project management support and determining appropriate inclusion and exclusion criteria for clinics was recognised across projects as enablers to delivery
- A key challenge both projects experienced was navigating recruitment processes. There have also been difficulties with data collection and monitoring of the projects
- The impact of the projects is presently unknown due to delays in starting and the timeframe required to effect changes. However, where delivery has started, some early benefits for patients have been reported, including improved quality of life. Rapid up-titration is also expected to reduce hospital readmission rates
- Project stakeholders discussed plans to sustain activities which would focus on: using data to demonstrate the impact of the projects and submitting business cases based on this; and embedding project work into the HF service's business as usual activities.

Other projects

Three unique projects have also been included as case studies:

- Barking, Havering and Redbridge University Hospitals NHS Trust planned to conduct an audit of the HF patient journey using hospital and community HF service's data. The hospital

team leading the audit are yet to access the HFTFP funding as it was not allocated for the work until December 2024

- Norfolk and Waveney ICS is expanding a focused echo pilot. The project has experienced delays due to challenges accessing funding, completing clinical governance processes, and system restructures. The project is expected to start in January 2025
- South Tees Hospital NHS Foundation Trust began delivery of their project in January 2024. It has recruited band 6 HFSNs to improve capacity within the existing HF service. Impact data shows the project has influenced key project metrics such as an increase in the number of patients receiving ambulatory IV furosemide and admitted HF patients entered into the NICOR NHFA.

4.1 Overview

This section presents the findings from 12 case study projects, nine of which have been grouped by four themes:

- Introducing digital tools to HF services
- Enhancing community detection of HF
- Patient education
- Rapid up-titration of HF medications.

Three additional projects are also included as case studies that are unique but represent novel initiatives.

The introductions to each section below set out why that theme is important to HF service delivery. Each section broadly follows broadly the same structure, providing: an overview of each project; how the project has progressed with delivery over the evaluation period; any evidence of impact of the project; challenges experienced; and plans for sustaining project activities. There are some differences in the structure of these sections to reflect variations across themes and projects, and the level of progress they have made. Impact findings from Impact evaluation findings are included only where this data has been provided (Luton & Bedfordshire and South Tees Hospital NHS Foundation Trust) and the results were significantly significant i.e., demonstrate a positive or negative finding within the analysis credible intervals.

4.2 Introducing digital tools to HF services

Digital transformation is a key aim of the NHS LTP. This includes increasing the range of digital tools and services the NHS uses and for digitally enabled care to become mainstream across the

NHS[15]. The NHS LTP suggests that using technology will provide people with more control over their care and help them manage their health conditions[16]. In 2022, The British Heart Foundation (BHF) conducted a survey with healthcare professionals which explored various ways digital health technologies are used for HF patients. The majority of respondents reported that the main purpose of the technology they used was for avoidance of hospital admission, for example, by supporting self-management of HF[17]. In addition, the use of digital tools are a key part of the Managing Heart Failure @Home initiative, which began in 2021. This supports patients to recognise escalation or deterioration in their symptoms through remote monitoring, and seek appropriate help in a more timely way, to reduce the chance of hospital admission.

The HFTFP aimed to improve HF management in non-acute pathways, discharge planning and continuity of care to reduce the risk of readmission for HF patients. Aligning with this and the broader NHS goal to make better use of technology, some HFTFP projects have used digital tools to support and monitor HF patients, enhance community care, and avoid readmission to hospital.

Two projects using digital tools to improve HF care and management in the community were selected as case studies. Table 4.1 provides a summary of the projects and approaches used. Both are building on existing work which the targeted funding is being used to expand.

At the time of writing, only L&B (Project 1) has been able to make progress with its project (and has now completed it). The reasons for the delay of the project in K&M ICS (Project 2) are described below.

Table 4.1 Summary of digital tools being introduced across the theme

Service/provider	Digital tool	Purpose	Main features of approach and activities
1. Luton and Bedfordshire (Cambridgeshire Community Services and Bedfordshire	Doccla	Enhancing use of remote monitoring (alongside other initiatives) to support HF patients post-discharge, optimise	**Development of Doccla pathway and creation of HF care passport** Doccla includes a blood pressure machine, weighing scales, oximeter, alive call/mini-echocardiogram and

[15] NHS England (2019). Chapter 5: digitally-enabled care will go mainstream across the NHS from the *NHS Long Term Plan*. Available at www.longtermplan.nhs.uk/online-version/chapter-5-digitally-enabled-care-will-go-mainstream-across-the-nhs/ [accessed 10/12/2024]

[16] NHS England (2019). Digital transformation from the *NHS Long Term Plan*. Available at www.longtermplan.nhs.uk/areas-of-work/digital-transformation/ [accessed 10/12/2024]

[17] British Heart Foundation (2022). Digital Health Technologies for Heart Failure Survey – Summary of Key Results. Available at www.bhf.org.uk/-/media/images/for-professionals/healthcare-professionals/innovation-in-care/digital-innovation/digital-health-survey-results.pdf?rev=bc45cef2b96a42d0b214dc045cc076ca&hash=120E08713139189377120F44054A9245 [accessed 10/12/24]

Service/provider	Digital tool	Purpose	Main features of approach and activities
Community Health Services (part of East London NHS Foundation Trust))		care within the community, allow earlier discharge and reduce risk of hospital readmission	tablet that patients enter readings into for clinician review
2. Kent and Medway ICS	Feebris	Using remote monitoring to allow community staff and carers to conduct health assessments to identify risks early and support appropriate escalation of HF patients	**Rollout of Feebris to care homes** Feebris uses wearable medical sensors such as digital stethoscopes and echocardiograms to capture blood oxygen saturation, respiratory rate, blood pressure, temperature and weight – this data is shown on a dashboard for clinician review

4.2.1 Project 1: Luton and Bedfordshire

Table 4.2 Luton and Bedfordshire proposal summary

Service/provider	Project outline	Project budget	Planned investment
Cambridgeshire Community Services and Bedfordshire Community Health Services (part of East London NHS Foundation Trust)	Improving discharge planning for HF patients through pathway development and expanding the use of the remote monitoring system Doccla	£184,567	Funding used to secure staff time including: • Band 6 HF specialist nurse (HFSN) (1.0 WTE secondment) • Band 3 nursing healthcare assistant (HCA) (1.0 WTE ring-fencing existing capacity) • Band 3 nursing HCA (1.0 WTE ring-fencing existing capacity) • Band 5 pharmacy technician (1.0 WTE ring-fencing existing capacity)

4.2.1.1 Project background and aims

Cambridgeshire Community Services (CCS) and Bedfordshire Community Health Services (BCHS) provide community HF services in the East of England. BCHS serve patients across Bedfordshire, excluding those in Luton which is covered by the CCS team. The two services collaborated for the HFTFP after identifying a need to improve discharge planning for HF patients admitted to hospital across Luton and Bedfordshire. They aimed to do this by improving early discharge care and enhancing the use of a remote monitoring system Doccla, reducing the risk of hospital readmission. The project was jointly-led by the CCS and BCHS service managers, with the project team consisting of the leads and HFSNs from each service delivering the pathway. The funding was shared between both services based on their resourcing needs.

4.2.1.2 Project status

Initial project activities began in October 2023 and the enhanced post-discharge pathway was ready for patients from November 2023. Resourcing plans set out in the proposal changed (detailed in Section 4.2.1.3) and the band 7 HFSNs (recruited from the NHS staff bank) started their roles on the project at various points since January 2024. The HFTFP funding came to an end and the project finished in October 2024. However, there are still some project activities the team plan to build on and complete, including further enhancing the use of Doccla to support post-discharge care and medicine optimisation (see Section 4.2.1.6).

4.2.1.3 How the project has enhanced post-discharge care and use of the digital tool

As the services were delivering a joint project, they used the same approach to improving post-early discharge care and refining the use of Doccla. Doccla provides patients with equipment including:

- A blood pressure machine
- Weighing scales
- An oximeter
- An alive call which provides a mini-echocardiogram
- A tablet the patient uses to enter readings and answer health questions.

Data captured on the tablet is automatically uploaded to a dashboard for clinicians to review and will create alerts if readings fall outside of expected parameters.

Doccla had already been funded for two years prior to the HFTFP project. The HFTFP funding was used to secure staff capacity to support, standardise, and integrate its use to monitor HF patients in the community and deliver other activities to support post-discharge care. The project team used a combination of ringfencing existing staff time, secondments and recruitment to deliver the pathway and backfill existing staff capacity. The funding was split between the services according to where staff resource is managed. However, some roles funded by, and sitting within, one service supported project delivery across both BCHS and CCS, with costs shared between the services.

The resourcing plan outlined in the proposal (Table 4.2) changed due to difficulties both securing capacity and recruiting to roles. It was developed throughout project delivery to overcome challenges that emerged (see Section 4.2.1.5). The planned and actual resourcing of the project is outlined in Table 4.3.

Table 4.3 Project 1: Luton and Bedfordshire planned and actual resourcing

Service	Planned resourcing	Actual resourcing
CCS and BCHS	Band 6 HFSN (1.0 WTE secondment)	Four band 7 HFSNs recruited on bank contracts (1.0 WTE) – supporting project delivery across both sites

Service	Planned resourcing	Actual resourcing
BCHS	Band 3 nursing HCA (1.0 WTE ring-fencing existing capacity)	Upskilled existing band 6 clinicians that review ambulance stack via the single point of access to monitor Doccla dashboard
CCS	Band 3 nursing HCA (1.0 WTE ring-fencing existing capacity)	Ringfenced capacity of a band 3 nursing HCA and bank staff to support use of Doccla and monitor dashboard
CCS	Band 5 pharmacy technician (1.0 WTE ring-fencing existing capacity)	Band 5 pharmacy technician capacity ringfenced to review patient medication – supporting delivery across the services

Recruited and existing bank staff supported project delivery across both services by backfilling existing HFSN time so they could work on the project as well as working on project activities directly themselves. One bank HFSN led various activities on the project, working one day a week in the usual HF service and using one day a week focusing on project activities.

Key project activities included developing ways to enhance Doccla use. For example, establishing more refined criteria for Doccla to ensure it is used consistently across both services to allow for equity of access. The way Doccla was monitored also changed, with ring-fenced staff monitoring the dashboard to review and respond to acute alerts and pass non-urgent alerts to HFSNs. The project team also completed an audit of patients using Doccla to understand ways the pathway could be improved (see Section 4.2.1.6).

Other project activities supporting the developments in post-discharge care included:

- Setting-up weekly MDT and virtual ward meetings and creating MDT care plans for patients
- Creating a HF care passport designed to let clinicians know a patient is under community care if they are admitted to hospital for unrelated conditions. This provides assurance it is safe to discharge the patient as they can be remotely monitored through Doccla and assessed within two-weeks post-discharge
- Reviewing and clarifying discharge criteria for patients from the services to create capacity for new patients, particularly those discharged from hospital early
- Launching '*Live well with HF*' education and support groups for patients following hospital discharge. A pilot for the education group was delivered over three 90-minute sessions by a bank HFSN with support from the co-production team and a volunteer. Content included recognising and managing symptoms. This was then followed by a support group, which focused on wellbeing and offered patients a chance to talk to peers.

Project stakeholders identified factors that supported progress. Building on existing work using Doccla was reported to facilitate progress as it was already funded and embedded into the service; teams were familiar with it (meaning time was not needed to secure support for a new tool). The

project team's expertise and enthusiasm, strong leadership from management and collaboration between the two services was highlighted as a positive influence on the project. This supported implementation, allowing teams to prioritise the work, drive it forward and overcome challenges.

The flexible approach to resourcing by primarily ringfencing and backfilling existing staff time, sharing tasks between the teams and working with bank HFSNs was highlighted as facilitating delivery. It helped the team mitigate capacity issues and allowed them to complete project tasks alongside day-to-day delivery of the HF service.

4.2.1.4 Impact of the project

The impact evaluation found that the project may have negatively impacted some aspects of HF delivery, specifically:

- Total number of patients seen by the community HF team (both sites)
- Patients seen within two weeks after an admission with acute HF (BCHS only)
- Patients that have been up titrated by 90-day follow-up (BCHS only).

However, it is important to recognise reported data capture and collection challenges for these metrics across the services. This means the data provided and impact analysis results may not be an accurate reflection of the project's impact and outcomes. The findings may also be the result of increased use of remote monitoring reducing the need of patients to be seen face-to-face by community HF teams.

Reasons for these findings may also be related to challenges reported by project stakeholders (described in more detail in Section 4.2.1.5). These include difficulties collecting hospital admission, discharge and referral data for their services and the time taken to familiarise new staff with Doccla and other new initiatives. This may create a lag in project impact. Project stakeholders also reflected that some outcomes, such as improved medicine optimisation for HF patients, may require more work (as outlined in Section 4.2.1.6) and will take longer to have an effect, with some initiatives not having been in place that long. There were also engagement challenges with the hospital, which may affect referral numbers. Continued monitoring of these metrics beyond the evaluation will provide a clearer indication of the influence of the project on these outcomes (data available to the end of August 2024). The full impact analysis results are provided in Sections 5.3.1 and 5.3.2.

In the interviews, project stakeholders reported improvements due to the project (outside of the impact measures.) The project team reported that collaboration throughout the project has resulted in strong relationships and improved integration of community HF services across the system. This has led to further partnership work, such as shared clinical supervision between CCS and BCHS teams to support standardisation of patient care across the region. The project was also

reported to have allowed teams to be more confident in their decision-making around patient care within the community, especially when liaising with hospital teams.

Although the amount of patients using Doccla naturally rises and falls and is limited to a set number, project stakeholders also reported use of the tool had increased (at the time of writing, 18 patients were using Doccla across both services). It was reported that staff:

- have a better understanding of which patients are appropriate for Doccla, using it more frequently for those discharged from hospital rather than stable patients
- use Doccla to identify and rectify issues with patients more
- are more conscious of optimising medication and ensuring patients are reviewed within ten days of referral (although this can be a challenge with limited capacity).

The new approach to monitoring Doccla was reported to work well and means HFSNs only receive appropriate non-urgent alerts and unnecessary hospital admissions can be avoided as patients can be seen in the community for non-acute issues. Reported benefits of using Doccla in general were:

- patients feeling supported by the team
- staff being able to notice deterioration in patient condition earlier
- patients not having to attend in-person clinics for review as frequently.

The HF care passport has been provided to all patients across both services since it was finalised in May 2024. The team have had positive feedback from patients about this resource. Project stakeholders also reported education and support sessions had been received positively, with an average of eight patients attending the three pilot education sessions and six attending the support group. Feedback about the sessions indicates they are valuable and have reduced isolation for patients. This is expected to lead to patients managing their conditions better and reducing the burden on other NHS services. However, engagement with sessions was not as high as expected and the team plan to refine the offer to improve this (see Section 4.2.1.6).

4.2.1.5 Challenges, mitigations and solutions related to project delivery

Challenges reported by the project team, and mitigations/solutions for them, are provided in Table 4.4.

Table 4.4 Project 1: L&B challenges, mitigations and solutions

Challenge theme	Challenge detail	Mitigation/solution
Access to funding	Project funding was made available to the delivery team later than expected. The process was reported to be complicated, with confusion over where the funding would be sent, and the services had to negotiate	Due to the non-recurrent nature of the funding and time needed to set-up the project, it was suggested that distributing funding at start the of the financial year would provide time for project set-up, resolve delays and

Challenge theme	Challenge detail	Mitigation/solution
	carrying the funding over into the next financial year	overcome challenges around carrying funding over
Stakeholder engagement	Project stakeholders reported a lack of collaboration between secondary care and the community HF services to be a challenge. This includes hospital HF teams dropping out of the initial project proposal. The project team are reliant on hospital staff to discharge patients to the service and low engagement was recognised as a risk to this and, as a result, the impact of the project. For example, project stakeholders reflected that hospital staff do not always respond to requests and no hospital colleagues have helped or championed the project, which would support referrals, early discharge and use of Doccla There were also reports there can be reluctance from stakeholders and staff to use Doccla and time is required to build their confidence so they can start using or use it in a different way. For example, HF clinicians have to familiarise themselves with the tool and alert parameters, which means it can increase their workload in the short-term	The project team have regular meetings with the main feeder hospitals to their service and plan to continue raising awareness of their work through this. Referral pathways into the service were viewed as straightforward and the team are also encouraging patients to take ownership of their HF care passports and share them with hospital staff Another mitigation suggested to support staff use of Doccla included ensuring clinicians having a better understanding of the technology as well as patient parameters, so unnecessary alerts, and extra work, are avoided
Recruiting and securing resource	Recruitment of specialist HF staff to support temporary initiatives is challenging and resulted in changes to the initial resourcing plan. For example, the project team were unable to recruit a band 6 HFSN on secondment and have instead recruited the equivalent of a WTE band 7 HFSN with bank staff, which has been more expensive. As the project has progressed, resourcing has continued to present challenges, with a lack of engagement from some bank staff and the HCA ringfenced to monitor Doccla at CCS leaving their role	The project team have continued to work flexibly to secure capacity as delivery progressed. They viewed recruitment of bank nurses as an investment and offset the extra cost by repurposing their work, absorbing activities into existing staff resource and upskilling team members to support the project instead. For example, training band 6 clinicians to monitor the Doccla dashboard as part of their roles rather than ringfencing HCA capacity to do this
Capacity challenges	Linked to securing resource, a lack of capacity to complete project activities was identified as an early challenge and has persisted throughout delivery. Project stakeholders reported difficulty balancing project work with usual service delivery, which can take priority. For example, the HFSN acting as the project's clinical lead stepped down from this role due to a lack of capacity to do both	The team have worked to support staff and optimise capacity across the team throughout delivery. This has included sharing activities and workload between team members and services; using both existing and recruited bank staff to support service delivery and project work; and recruiting volunteers to help with

Challenge theme	Challenge detail	Mitigation/solution
	project work and service delivery. There were also reports that the project has grown and become broader as it progressed, requiring additional work and capacity beyond what was expected	various elements of the project, including the support and education sessions
Patient engagement	Project stakeholders reported some challenges encouraging patients to use Doccla. They recognised the patient response to Doccla is mixed, with some finding it anxiety-provoking to be monitored. There is also a risk of digital exclusion, especially for elderly patients who may need more support to become comfortable with its use A lack of patient engagement was also highlighted as a challenge for the support and education groups	Through the project, the team have refined criteria for using Doccla and are making efforts to ensure patients are only on it for an appropriate amount of time. The team is exploring the possibility of training HCAs to introduce, explain and support patients to use the tool to overcome digital exclusion. The Doccla technical team arrange phone calls with elderly patients to collect readings, rather than asking them to use the tablet. The team plan to improve engagement with education and support groups in line with feedback by reducing their length, encouraging clinicians to inform patients about them during appointments and creating an online version
Data collection, monitoring and sharing	Collecting data to monitor the project has been a challenge throughout delivery and has resulted in difficulty demonstrating the impact of the project. Patient data collected by Doccla can be useful to all providers across the patient pathway, but different IT systems and data reporting processes means this is not straightforward. Although there were plans to integrate Doccla with IT systems at BCHS, this has not been possible during project delivery and has created an additional administrative burden for staff The project team also highlighted difficulty assessing the impact of the project due to data quality issues. For example, it was reported that referral data does not capture patients contacting the community team directly and the team no longer receive alerts when patients have been discharged early from hospital, so this is challenging to record	Throughout implementation, the project team have been adapting their data collection plans to work around issues. They have been liaising with their local data management teams to understand the way data is recorded and what metrics can be used to assess impact. Doccla should be integrated with SystmOne at BCHS soon and project stakeholders reported the use of templates to manually upload between SystmOne and Doccla has improved the process. Finally, project teams suggested more time was needed to show an impact of the project on key metrics

4.2.1.6 Sustaining the project activities and changes

Project funding came to an end in October 2024 with the ring-fenced resource and bank staff no longer being used to support delivery of the project. However, project stakeholders are confident activities will continue and plan to sustain and embed them as business as usual within the team's normal work. Although it was thought that this could be achieved without additional funding, there were reflections from the interviews that extra capacity within teams would these support activities in the future.

There are also plans to build on work completed through the project. This includes further enhancing the use of Doccla by exploring how to integrate it with virtual wards and establishing a virtual clinic to assess patients and further support medication optimisation. The team also plan to continue delivering and refining the patient education and support sessions by increasing engagement and accessibility. This will involve delivering virtual sessions, expanding to other geographical locations, and translating resources into different languages.

4.2.2 Project 2: Kent and Medway

Table 4.5 Kent and Medway ICS project proposal summary

Service/provider	Project outline	Project budget	Planned investment
Kent and Medway ICS	Implementation and expansion of the digital platform Feebris to remotely monitor HF patients in 50 care homes across Kent and Medway ICS	£133,127[18]	• Feebris licences: £29,500 • Logistics: £22,560 • Feebris kits: £34,546

4.2.2.1 Project background and aims

There is a history of inequity in community HF service provision across K&M ICS. In 2022, a collaborative working group of HF service providers in the system worked with the Integrated Cardiac Delivery Network (ICDN) to re-design and update their community HF service specification. This work identified insufficient HFSNs for the population size and limited community provision in some areas.

The HFTFP project aims to improve management of HF patients in the community by implementing and expanding the use of remote monitoring in care homes across K&M. They plan to use the digital tool Feebris, to support HF services to identify and manage cardiac symptoms and

[18] Note that the £133,127 total amount awarded to K&M ICS also includes £10,000 contingency, £19,200 for a patient education and peer support project which is separate to the Feebris project and £17,321 in VAT.

deterioration more quickly in care homes and the community, with a focus on existing HF patients, and allow teams to care for patients in their place of residence.

4.2.2.2 Project status

At the time of writing, this project has not started. The project lead is currently finalising launch plans and clinical pathways with Feebris following delays accessing the HFTFP funding and establishing governance processes (outlined in Section 4.2.2.5). The project team received the HFTFP funding in September 2024 and there are plans to launch the project within the next few months using a phased approach.

4.2.2.3 How the project plans to expand use of the digital tool

K&M's project will build on an existing frailty pilot that implemented Feebris to monitor residents in 30 care homes. The HFTFP funding is being used to expand this to 20 additional care homes and provide extra equipment to monitor HF patients in the 30 care homes already using the tool.

Feebris will allow community staff and carers to conduct health assessments to identify risks associated with HF early and support appropriate escalation. The kits will be used for patients that are relatively stable and not under a community HFSN or going through periods of crisis. The technology captures diagnostic information such as blood oxygen saturation, respiratory rate, blood pressure, temperature and weight from medical sensors including digital stethoscopes, scales and echocardiogram devices. This information can be used for triage at the point-of-care and shared via a dashboard with clinicians, such as GPs, to inform follow-up care. The HFTFP funding has been used to purchase Feebris licences and equipment, fund the onboarding and training of staff, set-up the patient app and clinical dashboard and pay for delivery and collection of the kits.

To support implementation, the project team have been preparing for launch and establishing plans for evaluating the project with contacts at Feebris. Following confirmation of the funding, the project lead finalised the contracting with Feebris and data protection impact assessment (DPIA). The team have established plans to launch the project in three to five care homes using a 'Plan, Do, Study, Act' approach to refine it before rolling out more widely. The first care homes have been identified using Red, Amber and Green (RAG) ratings based on how they responded to the previous Feebris frailty project, with those most engaged being selected for initial roll-out. The project team have engaged with community HF teams and GPs that support these homes and are currently developing clinical pathways and Standard Operating Procedures (SOP) with clinicians to establish escalation protocols. This will be slightly different depending on the care home. Once these protocols are confirmed, the project will be ready to launch.

Although there have been delays in receiving the funding, now this is in place some enablers were reported as having facilitated progress towards launching the project:

- Building on existing work with Feebris has been helpful and has made set-up processes more straightforward. For example, when finalising contracting and securing buy-in, there was already evidence the tool can support care home residents and have a positive impact on key metrics, such as reducing conveyance and ambulance callouts
- Support from the Feebris team was also recognised positively. Feebris colleagues have been working closely with the project lead to get the project ready for launch and will oversee monitoring and evaluation of the project
- System working was reported to have helped project set-up so far, with local authority colleagues facilitating the finalisation of contracts and clinicians from different system providers supporting problem solving.

4.2.2.4 Impact of the project

As the project has not yet started, it is too soon to report any impact. However, the project team are currently developing their monitoring and evaluation plans and hope to reduce hospital conveyance, hospital admissions and re-admissions, and length of stay for HF patients.

4.2.2.5 Challenges, mitigations and solutions related to project delivery

Challenges reported by the project team, and mitigations/solutions for them, are provided in Table 4.6.

Table 4.6 Project 2: K&M challenges and mitigations

Challenge theme	Challenge detail	Mitigation/solution
Accessing funding and timelines	Following the directive from NHSE (outlined in Section 0), K&M's project was paused in December 2023 whilst awaiting confirmation of whether the funding would be reallocated to the ICB baseline. The project lead had to complete processes to carry the funding over into the next financial year, after which there was another investment freeze. The team finally received funding for the project in September 2024. It was also noted that having the funding for only a year can create challenges as there is not always enough time to complete activities or secure contracts	The project team ensured they completed preparation activities, including contracting, whilst waiting for confirmation of the funding to allow them to make progress quickly once it was received. They now plan to launch the project over the next few months
Governance processes	Finalising the DPIA and contract with Feebris was challenging and caused delays. Completion of the DPIA was reported to be complicated, and limited IG capacity at K&M ICS meant this took longer than anticipated. The team also	The established relationship with Feebris allowed the team to secure buy-in, evidence the impact of working with them and identify them as the only organisation on their framework that could provide what

Challenge theme	Challenge detail	Mitigation/solution
	planned to use the existing Feebris contract set-up for the roll-out of the frailty pilot. However, this was not possible and resulted in more delays, as the project team had to complete unexpected commissioning processes	was required for the project. This meant they did not have to complete commissioning processes from the beginning or research additional quotes from other providers, which would have delayed the project launch further
Organisational change and capacity	Restructures within K&M ICB have resulted in less resource to support delivery, with only the project lead primarily working on the project alongside their usual role. This means other workstreams have been prioritised over the project when required and this limited capacity was reported to have impacted the project's progress	The project lead has balanced project work with other tasks and has collaborated with colleagues to share workload. They have also been working with Feebris closely, who have supported various preparation activities such as identifying care homes for implementation
Stakeholder engagement	Some system stakeholders, such as GPs, were initially cautious about engaging with the project due to concerns it would create more work. For example, concerns they would receive additional alerts for Feebris patients that need addressing. Based on the previous frailty pilot, there are also concerns that success of the project can be dependent on care home staff engagement, which can be difficult to secure	The project lead has tailored communications to ensure they are clear and take stakeholder concerns into account. This includes reassuring clinicians they will only receive alerts for patients if escalations are required. To overcome potential care home engagement challenges, the project team plan to work with Feebris to monitor and address reductions in engagement
Data collection and monitoring	There are some challenges with data collection, including the quality of data available for monitoring the project. For example, ambulance call-out data only shows 'cardiac problem' as a reason for call-out, rather than HF specifically. This means there may be difficulty demonstrating the impact of the project using the ambulance service data	The project lead will ensure communication about what data is needed from care homes will be clear and Feebris will support data analysis. Again, they will build on what has been completed for the frailty pilot, and using the evaluation completed for this to inform data collection for the HF project and using established access to appropriate data sources

4.2.2.6 Sustaining the project activities and changes

The project will run for one year from its start date. The project team plan to collect data to monitor the impact of the project and use this to secure ongoing funding, which was viewed as vital to ensuring it can continue. There is confidence the project can be sustained once launched as there is enthusiasm within K&M ICB to do so, given the positive results from the previous Feebris pilot and this project's potential to reduce hospital length of stay and 30-day readmissions.

4.3 Enhancing community detection of HF

Most people with HF are diagnosed in hospital, often after experiencing symptoms for several years. HF diagnosis following hospital admission is associated with poorer clinical outcomes compared to earlier diagnosis in the community[19]. HF prevalence is often under-reported due to low detection rates, while people living in the most deprived areas face the highest rates of unscheduled HF-related hospital admissions[20]. The NHS LTP emphasises the importance of detecting CVD earlier in the community to improve clinical outcomes and reduce emergency hospital admissions.

Chelsea and Westminster Hospital NHS Foundation Trust (CWHFT) (Project 3) and University Hospitals of Leicester NHS Trust (UHoL) (Project 4) are focusing on improving early identification and management of HF in primary care settings. At the time of writing, both projects have made progress with set-up and implementation, although substantial delays have hindered progress. Further detail is provided in this section. Table 4.7 provides a summary of the projects and their approaches.

Table 4.7 Summary of projects: enhancing community detection of HF

Service/ provider	Approach	Purpose	Main features of approach and activities
3. Chelsea and Westminster Hospital NHS Foundation Trust	Primary care HF education, support and testing in the community	Earlier detection of HF in underserved groups	Identification of individuals at high risk for HF via GP registers, NT-proBNP point-of-care testing offered by a roaming clinic service, and referrals made to the HF specialist team for diagnosis
4. University Hospitals of Leicester NHS Trust	Service improvements at PCN level led by appointed HF Champions	Earlier detection and improved management of HF in underserved groups	HF specialist team providing HF education and mentoring to support ten-15 HF Champions from PCNs to drive local service improvement initiatives aimed at enhancing awareness, screening, and management of HF

[19] Bachtiger, P. et al (2023). Survival and health economic outcomes in heart failure diagnosed at hospital admission versus community settings: a propensity-matched analysis. *BMJ Health Care Inform*. Available at https://informatics.bmj.com/content/30/1/e100718 [accessed 10/12/24]

[20] BHF. How inequalities contribute to heart and circulatory diseases in England. Available at https://www.bhf.org.uk/what-we-do/our-research/heart-statistics/health-inequalities-research/inequalities-in-heart-and-circulatory-diseases-in-england [accessed 03/12/2024]

4.3.1 Project 3: Chelsea and Westminster Hospital NHS Foundation Trust

Table 4.8 Chelsea and Westminster Hospital NHS Foundation Trust proposal summary

Service/provider	Project outline	Project budget	Planned investment
Chelsea and Westminster Hospital NHS Foundation Trust	Identification of individuals at high risk for HF via GP registers, NT-proBNP point-of-care testing offered by a roaming clinic service, and referrals made to the HF specialist team for diagnosis	£91,200[21]	• HCA for outreach work: £34,000 • Specialist nurse support: £35,000 • NT-proBNP point-of-care testing machines: £6,000 • NT-proBNP testing strips: £12,500 • Additional expenses: £500

4.3.1.1 Project background and aims

The HF specialist service for CWHFT – based at the West Middlesex University Hospital – is well-established with both in-reach (hospital based) and outreach (community facing) teams. By working with colleagues in primary care, the HF specialist service plans to shift from reactive to proactive care by enabling earlier HF diagnosis and initiating timely treatment, to improve patient outcomes. The project also aims to address health inequalities by targeting deprived areas in Hounslow with low recorded HF prevalence and high emergency admissions.

The majority of the HFTFP funding has been allocated to repurpose an existing converted ambulance – referred to as a roaming clinic – to deliver NT-proBNP point-of-care tests. This clinic, which currently provides NHS Health Checks[22] across the five PCNs in Hounslow, will now also provide HF screening for eligible individuals (identified from GP registers). Eligibility criteria include being over 65 years of age, without a prior HF diagnosis, and with a diagnosis of diabetes, hypertension, or chronic kidney disease. The project team plans to run six clinic slots per week over 12 months. Individuals with elevated NT-proBNP levels will be referred to the specialist HF service for diagnosis via echocardiogram.

4.3.1.2 Project status

The project began implementation in early 2024 but has faced various delays during set-up (see Section 4.3.1.5). At the time of writing, patient appointments at the roaming clinic had not yet

[21] Note that the total £91,200 includes VAT, whereas investment costs do not

[22] NHS Health checks are free health checkups for people aged 40 to 74 who do not have pre-existing conditions that would otherwise be monitored via other NHS routes. All eligible people are invited to an NHS Health Check by their GP or local authority every 5 years

begun. The first invitations were sent out in December 2024, with the project aiming to run for 12 months from the first patient visit. Procurement of equipment is complete and funding is expected to be used as planned.

4.3.1.3 How the project plans to enhance community detection of HF

Led by the HFSN clinical lead from the HF outreach team, with oversight from a cardiology consultant, the specialist HF service is collaborating with the team from the GP practice currently running the roaming clinic for NHS Health Checks across Hounslow. This primary care team includes a GP, a service manager, and a team lead who oversees the HCA team in the roaming clinic. By reviewing GP registers, the primary care team has identified approximately 6,000 eligible patients for HF point-of-care testing across the five PCNs in Hounslow. The primary care team has also been responsible for the logistical arrangements, including co-opting the roaming clinic for one day a week when it is not being used for NHS Health Checks and identifying the most appropriate community locations for the clinic. They have also been developing an invitation strategy to encourage people to take part, which includes following up invitation letters with a personal phone call. In addition to patient identification and invitation, initial set-up has focused on:

- Procurement of testing equipment
- Establishing a clinical protocol for point-of-care testing
- Determining training needs for the HCAs working in the roaming clinic, and subsequently delivering phlebotomy training
- Developing a referral pathway to secondary care
- Establishing appropriate governance structures.

Significant delays have been experienced during the set-up phase. The procurement of testing equipment required a lengthy internal procurement process, while a changeover in the primary care services provider delayed approval for using the roaming clinic for HF screening and required data-sharing agreements to be renewed. At the time of writing, the project team were finalising the electronic referral template in SystmOne that will be used for referring patients to the specialist HF team in secondary care. They were also conducting quality control checks on the clinical protocol. Establishing clinical governance and responsibility will streamline referrals from primary to secondary care and ensure smooth transitions back to patients' GPs after discharge.

Several project stakeholders highlighted that collaboration between the HF specialist service and primary care has been strengthened by strong leadership and established relationships. For example, the project has benefitted from the input of a senior clinical lead with significant experience in improvement work and setting-up a community HF service. This has helped to secure buy-in across all PCNs in Hounslow, building on already strong relationships with GP practices resulting from previous involvement in service improvement projects. Additionally, primary care

project stakeholders noted that the project's alignment with the HF Quality Outcomes Framework (QOF)[23] targets has provided staff with a clear rationale for the project and aligns with an existing culture of innovation and change within the Hounslow primary care team.

4.3.1.4 Impact of the project

As the project has not started, no impacts have been reported. The project intends to influence: the number of patients diagnosed with HF; the number of patients receiving NT-proBNP testing; the number of patients who received an echo during their admission, or within the preceding 12 months; the number of patients seen within two and six weeks, as per NICE Guidelines.

4.3.1.5 Challenges, mitigations and solutions related to project delivery

Challenges reported by the project team, and mitigations/solutions for them, are provided in Table 4.9.

Table 4.9 Project 3: CWHFT challenges, mitigations and solutions

Challenge theme	Challenge detail	Mitigation/solution
Initiation delays	The changeover in the primary care provider caused a delay in project approval and required the renewal of data-sharing agreements Timeframes were also negatively impacted by an initial delay in receiving funding from the ICB	Final approval for the project by the primary care provider was secured in August 2024. Ongoing collaboration has helped to ensure continued progress despite the initial delays
Patient engagement	Project stakeholders are concerned that uptake of the screening invitation may be low, particularly as the target population includes individuals who may not typically engage with healthcare services	To boost attendance, the primary care team plans to send text message invitations followed by a telephone call. This approach will allow them to explain the service and address any questions or concerns. The roaming clinic will be stationed in familiar, accessible community locations and is expected to be recognisable to the target communities due to its use for NHS Health Checks
Additional resource strain on primary care	Project stakeholders are concerned about the potential increase in GPs' workload if patients contact their	Telephoning patients during the invitation process will help manage their expectations about the screening. At the appointment,

[23] NHS England (2024). Quality Outcomes Framework 2024/25. Available at: https://www.england.nhs.uk/wp-content/uploads/2024/03/PRN01104-Quality-and-outcomes-framework-guidance-for-2024-25.pdf [accessed 03/12/2024]

Challenge theme	Challenge detail	Mitigation/solution
	surgeries with questions or issues related to the screening or results	patients will receive clear guidance and explanations regarding potential next steps
Additional resource strain on secondary care	The project faces uncertainty around the proportion of people invited for screening who will have elevated NT-proBNP levels and require specialist follow-up. This makes it difficult to predict demand on the already understaffed echocardiography team, which is dealing with waiting lists of approximately six months	The project team has decided that people referred with elevated NT-proBNP levels (but below the urgent referral level, as per NICE guidance) will not jump the waiting list queue for echocardiograms as they are asymptomatic The hospital cardiology team has been actively involved in the project set-up and sees it as an opportunity for professional development. They are motivated by the prospect of enabling earlier initiation of treatment for patients

4.3.1.6 Sustaining the project activities and changes

Project stakeholders emphasised that sustainability of the service depends on diagnosis rates and the ability to demonstrate impact on hospital admissions and clinical outcomes. Given the existing long wait times for echocardiograms, it is unlikely that the project will be able to assess diagnosis rates until closer to the end of the 12-month period. There was some confidence the HF screening service would continue beyond the HFTFP period if they can identify patients with HF earlier. Project stakeholders expressed caution, however, noting that if diagnosis rates are low, raising awareness of HF could be achieved more cost-effectively through alternative methods rather than a targeted screening programme. One suggestion was to roll-out an education programme for GPs to incorporate routine HF screening for this patient cohort. Several project stakeholders also raised concerns about the lack of budget to support a local evaluation and have applied for additional funding from a charity to support this.

4.3.2 Project 4: University Hospitals of Leicester NHS Trust

Table 4.10 University Hospitals of Leicester NHS Trust proposal summary

Service/provider	Project outline	Project budget	Planned investment
University Hospitals of Leicester NHS Trust	HF specialist team providing HF education and mentoring to support ten-15 HF Champions from PCNs to drive local service improvement initiatives aimed at enhancing awareness, screening, and management of HF	£60,600	• Band 7 Transformation Programme Manager: £12,600 • HF champions: up to £48,000 • Education/training: funded through ongoing work

4.3.2.1 Project background and aims

HF stakeholders from the East Midlands Cardiac Network and Leicester, Leicestershire and Rutland (LLR) ICB identified a gap between expected and recorded prevalence of HF in more than 50% of its 25 PCNs. These populations have lower rates of elective CVD admission and take-up of cardiac rehabilitation, but higher rates of emergency care. The project aims to address this gap by appointing ten-15 HF Champions from clinical professions in target PCNs. HF Champions will receive mentoring from a member of the HF specialist team, which includes HFSNs and Cardiology Consultants. They will also have access to the HF MDT based at UHoL to support their clinical practices in improving early detection, referral to specialist care, and HF management for people living with multiple conditions.

HF Champions will be compensated for one programmed activity (PA) per month, equivalent to half a day. A HFSN, acting as the clinical lead, will provide initial training and education to the Champions and arrange access to the specialist HF MDT at UHoL. The project is supported by a Transformation Programme Manager (0.2 WTE).

4.3.2.2 Project status

The project is scheduled to run from April 2024 to March 2025. Recruitment of HF Champions has been slower than expected, with only two appointed from April 2024 to June/July 2024. A more targeted approach to HF Champion recruitment, involving telephoning known primary care contacts, has been more successful, resulting in six additional HF Champions being appointed and one more expressing interest. The project team anticipates that a second wave of targeted recruitment will result in between ten and 15 HF Champions, although the exact timescales for recruitment remain unclear; this is expected to be challenging over the winter period. HF Champions currently in post have made progress in planning their targeted improvement initiatives

and enhancing their clinical knowledge, skills and confidence in HF. At the time of writing, one HF Champion had commenced the implementation of service changes and HF clinics.

4.3.2.3 How the project plans to enhance community detection of HF

For HF Champions, the process for joining the programme involved submitting an Expression of Interest (EOI) and attending an informal meeting with the HF clinical lead at UHoL for advice and guidance on how to use their time. This support was reported to be highly valuable. The selection process has been non-competitive due to the limited number of EOIs from the target PCNs. The three HF Champions who participated in interviews were motivated to join the project to fulfil an existing clinical need in their practice to upskill in the area of CVD, in addition to the opportunity to improve HF QOF targets.

Clinical training for the HF Champions has involved the HF MDT providing ongoing mentoring. Mentoring was initially delivered by the HFSN clinical lead, but as more HF Champions have been recruited, this responsibility has been delegated to the four HF consultants, each of whom will ultimately be responsible for supporting two HF Champions. This has allowed for tailored support based on the differing levels of experience of the HF Champions and the specific goals of their individual improvement initiatives, while freeing-up time for the clinical lead. Additionally, HF Champions have been attending a weekly MDT, which they can access either virtually or in person. These sessions offer opportunities to discuss patients and receive education on specific topics. HF Champions are also required to complete a clinical competency pack compiled by the HF specialist team; however they can begin seeing patients before being fully signed off, as the competencies are linked to specialty-level knowledge. Several project stakeholders highlighted that this support from the HF specialist team has helped to foster greater integration between primary care and secondary care management of HF patients.

HF Champions have been tasked with designing approaches to meet local needs within their PCNs. Due to the flexibility in the project design, the approaches taken by different HF Champions vary. For example, two initiatives led by clinical pharmacists aim to improve the management of HF patients in primary care by running HF clinics focused on medicines optimisation, up-titration, and HF education. These clinics will invite patients with HF who are not currently attending specialist services, as well as patients with HF symptoms or those at risk of HF who may be incorrectly coded in their patient registers. One of these initiatives plans to upskill a group of ten pharmacists working across the 12 practices in their PCN to deliver HF clinics, with two pharmacists having already received training.

4.3.2.4 Impact of the project

As the project has made limited progress, no project impacts have been reported. However, project stakeholders expect to influence the HF QOF targets and reduce the number of unscheduled admissions for HF.

4.3.2.5 Challenges, mitigations and solutions related to project delivery

Challenges reported by the project team, and mitigations/solutions for them, are provided in Table 4.11.

Table 4.11 Project 4: UHoL challenges, mitigations and solutions

Challenge theme	Challenge detail	Mitigation/solution
Funding allocation to HF Champions	One PA per month (half a day) for training, project planning, and running project activities (such as HF clinics) has proven inadequate to make intended progress, leading to delays in implementation. Lack of dedicated time is preventing more junior colleagues being involved in projects in a supporting capacity Additionally, funding does not appear to have been received by all PCNs to reimburse HF Champions for their time, leaving some HF Champions working additional hours and preventing them from engaging with more project work or delegating tasks to other colleagues	Each HF Champion has been assigned a HF consultant as a mentor to support the project. The project team may need to consider allocating more funding to a smaller number of HF Champions or providing extra resources to assist with project planning and implementation
Stakeholder engagement	There has been a low response rate to communications from some PCN areas regarding the HF Champion project, likely due to their busy workloads, which has limited the number of HF Champions recruited to date	The project lead has adopted a more targeted approach to recruiting HF Champions by directly contacting PCN leads and asking them to identify a designated person for the project. This has resulted in increased interest and engagement
Initiation delays	The lack of a clear project plan or blueprint for targeted initiatives has been a challenge for some HF Champions, leading to uncertainty and extended project planning phases and delays in initiation	More support has been provided to HF Champions, with each having a dedicated HF consultant mentor
Competition with other clinical priority areas	Concurrent implementation of a quality improvement programme in primary care focused on chronic kidney disease (CKD) is impacting the availability of resources for HF Champion projects	Several HF Champions have taken the opportunity to integrate their proposed HF clinics with the CKD clinics, as these are often comorbidities. This approach enhances care for patients with multiple health conditions while also reducing the impact on primary care resources by consolidating services

Challenge theme	Challenge detail	Mitigation/solution
		and streamlining patient management

4.3.2.6 Sustaining the project changes

The project is scheduled to conclude in March 2025. There was some confidence that the project will continue beyond the initial 12 months, relating to its strong alignment with the ICB strategy aimed at enhancing integration between specialists and primary care for improved management of long-term conditions. The HF specialist team plans to incorporate training and mentoring of HF Champions into normal working practice. While HF Champions noted that their initiatives are sustainable as they focus on acquiring and sharing knowledge to improve care, they also indicated that ongoing funding may be required to support others to upskill and to further cascade service improvements throughout their PCN.

The project lead expects to develop and submit a business plan to the ICB to support the work of the HF Champions into the 2025/2026 financial year, based on: expected improvements to HF QOF targets; and reductions in unscheduled and scheduled hospital admissions for HF, resulting from better identification and management in primary care.

4.3.3 Project 5: Black Country ICS

The HFTFP funding has not been released by the ICB to the project teams following the NHSE directive (outlined in Section 0). This project will not be progressing and has been removed from the evaluation. A summary of the planned project is included in Table 4.12 for reference.

Table 4.12 Black Country ICS project summary

Service/provider	Project outline	Project budget	Planned investment
Sandwell and West Birmingham Hospital Trust, Walsall Healthcare Trust, Royal Wolverhampton Trust, Dudley Integrated Health and Care NHS Trust	Target geographical areas of low prevalence of HF and high deprivation through collaboration with local acute Trust and community teams across Black Country ICS	£136,982	N/A

4.4 Patient education

Patient education is an important intervention for supporting people living with long-term conditions to self-manage. HF patients often lack good information about their HF diagnosis, treatment options and support needs. The aim of HF patient education interventions is to empower

them to take an active role in their care. Following discharge from hospital, HF patients are particularly prone to deterioration of their physical and mental health and access to timely and accurate information about how to self-manage can enable them to avoid a readmission. Self-management for patients is not exclusive to clinical self-management but also the management the patient can employ themselves to improve their quality of life.

HF education typically focusses on improving patient knowledge and understanding of:

- Behavioural and lifestyle changes to improve symptom control
- Helping patients live with their condition, enabling them to make the correct decisions
- Medication management including the benefits of medication, potential side-effects and the importance of adherence and achieving the optimal dose
- Early recognition of the signs and symptoms of deterioration and how to respond.

The use of digital tools has been an increasing trend in patient education; expedited by the COVID-19 pandemic which resulted in many education programmes being provided online and via digital platforms. Some of the key benefits of digital patient education materials include:

- Giving patients choice about how they access education conveniently
- Consistent delivery of course content
- Ease of revising and updating content
- The ability to customise content to meet individual patients' educational needs
- The ability to monitor access of educational materials
- Freeing-up clinical time for other tasks.

Two HFTFP projects were selected as in-depth case studies for the process evaluation due to their patient education component: the Yorkshire & Humber HF Academy (Y&H HFA); and Staffordshire and Stoke-on Trent ICS (SSoT), jointly-led by University Hospitals of North Midlands (UHNM) and Midlands Partnership Foundation Trust (MPFT).

While progress has been made with the SSoT project (Project 6), this has been in the data collection and primary care education elements of the project rather than the patient education activities that are the specific interest for this evaluation theme. In March 2024 the patient education project in Y&H HFA (Project 7) was paused; work resumed in June 2024. Table 4.13 provides a summary of the projects and approaches used.

Table 4.13 Summary of projects: patient education

Service/provider	Approach	Purpose	Main features of approach and activities

6. Staffordshire and Stoke-on-Trent ICS (University Hospitals of North Midlands/Midlands Partnership Foundation Trust)	Personalised patient education content on digital platform with input from a band 4 patient educator. Development of an education resource to enable patients to play an active role in medication titration	To support patients to gain knowledge about HF and empower them to self-manage their care	Educational resources
7. Yorkshire and Humber Heart Failure Academy (West Yorkshire ICB and Pumping Marvellous on behalf of West Yorkshire, Humber and North Yorkshire, and South Yorkshire ICBs)	Public and patient education campaign using paper-based posters, leaflets and social media messaging	To raise awareness of the symptoms of HF and empower people to raise concerns with healthcare providers	Educational resources

4.4.1 Project 6: Staffordshire and Stoke-on-Trent ICS

Table 4.14 Staffordshire and Stoke-on-Trent ICS proposal summary

Service/provider	Project outline	Project budget	Planned investment
University Hospitals of North Midlands and Midlands Partnership Foundation Trust in Staffordshire and Stoke-on-Trent ICS	Agreement of a minimum criteria for education and development of a HF education syllabus. Development of an education resource to enable patients to play an active role in medication titration	The total project budget is £75,000; with £42,500 allocated for the patient education components of the project	• Band 4 patient educator: £35,000 • Multimedia library curation: £1,500 • Enhancement of multi-media patient education materials: £6,000

4.4.1.1 Project background and aims

UHNM is a regional centre for cardiology and cardiothoracic care. The cardiology service has six cardiologists and seven band 7 nurses. As well as providing inpatient care, the service runs a cardiac rehabilitation programme and a nurse-led rapid access HF clinic. MPFT is the community provider for HF patients and has a cardiac nursing service that provides care for HF patients across Staffordshire, receiving referrals from four secondary care hospitals. The service has nine HFSNs, far

fewer than the recommended allocation suggested by Getting it Right First Time[24] (a ratio of four per 100,000 of the population, which would equate to 45 nurses for the 1.2 million people living in Staffordshire).

The overarching aim of the project has been to establish and promote a community model of HF care[25], with a wider range of community-based professionals (not just HFSNs) able to contribute to the management of HF in the community. A patient education component was developed as one element of a wider set of activities in support of this aim. The educational content would enable patients to self-manage and stay well in the community, avoiding hospital admissions and readmissions.

This project built on previous innovation work undertaken in SSoT to enhance the patient education offer in cardiac rehabilitation, including the development of a patient education barometer[26] and a HF patient education library on the Recap Health platform[27]. Some of the HFTFP funding was allocated to enhancing the digital training materials on the app and aligning content with the patient education barometer.

4.4.1.2 Project status

At the time of writing, the project had not progressed as originally planned.

With support from Pumping Marvellous, the project lead and lead nurse at MPFT have developed the hand-held patient education tool Optimise Me, Optimise My Medications[28] (a paper-based guide to support patients in self-initiating titration of their HF medications). Copies of the tool have been printed and will be ready for distribution to patients during consultant HF outpatient appointments from late autumn/winter 2024.

However, the patient educator and work on enhancing the training materials on the Recap Health app HF education platform have not begun, due to:

- The project lead and SSoT HF telehealth service (that the project's patient educator role is linked to) moving from UHNM to MPFT. The move will enable greater integration of

[24] Getting it Right First Time. (2021). Cardiology GIRFT Programme National Specialty Report. Available at: https://gettingitrightfirsttime.co.uk/medical_specialties/cardiology/ [accessed: 10/12/24]
[25] A community model of HF care is an approach that seek to provide as much support to people in their communities as possible, rather than in secondary care hospitals
[26] The patient education barometer is a checklist of 28 HF education criteria that HF patients use to indicate their education needs and to later assess change in their knowledge
[27] The Recap Health platform in an online app that contains a library of HF education materials for patients
[28] Pumping Marvellous (2024). Optimise Me: Optimise My Medications. Available at: https://pumpingmarvellous.org/community-hub/support-guides/ [accessed 10/12/24]

community HF services and pre-existing community and primary care pathways, but has led to delay with the project

- An early decision to concentrate project resources on providing training in HF management to primary care clinicians and extracting primary care data – other components of this project (though not the focus of this evaluation theme). This activity required more resource than was anticipated
- The need to recruit a new patient educator
- Delays in recruiting a telehealth co-ordinator for the MPFT HF service (that the project's patient educator role was intended to work alongside).

At the time of writing, the telehealth co-ordinator and patient educator role had been amalgamated to create two posts with shared responsibilities related to telehealth co-ordination and patient education. Recruitment to these two new band 4 roles in the MPFT community HF service was underway.

4.4.1.3 How the project plans to introduce patient education

Once in post, the band 4 roles will supplement the pre-existing educational content on the Recap Health app (made available through the UHNM cardiac rehabilitation service) by providing a combination of telephone and face-to-face education and support, minimising the potential risk of digital exclusion.

The hand-held patient education tool Optimise Me, Optimise My Medications is designed to educate patients about their medications and enable them to take an active role in their titration. Patients will be encouraged to take their hand-held tool to all their healthcare appointments (even those not focused on HF management) and initiate a conversation with healthcare professionals about whether it would be appropriate for their HF medications to be optimised as part of the healthcare interaction.

4.4.1.4 Impact of the project

Once implemented, it is intended that the project will improve patients' knowledge of HF and their ability to self-manage their condition, potentially resulting in reduced readmission rates. From a service perspective, it is anticipated that the band 4 patient educator roles will address patients' HF education needs, freeing up HFSN's time to attend to clinical tasks, improving the efficiency of the service and reducing patient waiting times. However, in the context of growing demand for the community nursing HF service, this might not translate into a reduction in the service's waiting list.

4.4.1.5 Challenges, mitigations and solutions related to project delivery

Challenges reported by the project team, and mitigations/solutions for them, are provided in Table 4.15.

Table 4.15 Project 6: SSoT challenges, mitigations and solutions

Challenge theme	Challenge detail	Mitigation/solution
Accessing funding	There were difficulties in identifying a colleague in the ICB who knew about the HFTFP funding and was able to sign-off its release to the project	NHSE supported the project to identify the appropriate ICB contact and the funding was released
Stakeholder engagement	Support from colleagues in primary care was essential to implementing the primary care education and data collection elements of the project. This activity required more resource than was anticipated and delayed progress on the patient education element of the pilot. Initially, the Local Medical Committee (LMC) expressed concerns that the project would add to the growing demand being experienced in primary care, highlighting that the project was an unfunded primary care activity that some GPs felt they would be unable to support	The project lead spent a considerable amount of time engaging with GPs through the LMC and established a relationship with colleagues from three PCNs who agreed to support the project. The funding allocated to recruiting the patient educator was repurposed to enable primary care staff in these PCNs to participate in the project. Alternative arrangements have been made for the project's patient educator role, by combining the patient educator duties with those of a new band 4 role in the MPFT community HF service that will support a text message-based virtual ward service for people on the community HF waiting list

4.4.1.6 Sustaining the project changes

The project lead and staff at MFPT remain committed to transforming the community HF offer in SSoT, including by continuing with plans to implement the patient education innovations described in the project's proposal.

MFPT have managed to incorporate the duties of the planned patient educator role with those of a new, permanent band 4 role in the MPFT community HF telehealth service. Once in post, the two new members of staff will support a text message-based virtual ward service to support people on the community HF waiting list and provide HF patient education. Combining the two roles has resulted in a complementary set of duties and responsibilities in a way that will provide HF patients with holistic support.

Current plans are for the Optimise Me, Optimise My Medications handheld tools to be introduced and explained to HF patients during HF consultant appointments. This activity will continue beyond the timescale of the project. Planned next steps to support the implementation of the tool involve providing education to clinicians about the rationale behind the tool and how they can support HF medication titration in the community.

4.4.3 Project 7: Yorkshire and Humber Heart Failure Academy

Table 4.16 Yorkshire and Humber Heart Failure Academy proposal summary

Service/ provider	Project outline	Project budget	Planned investment
West Yorkshire ICB and Pumping Marvellous on behalf of West Yorkshire, Humber and North Yorkshire, and South Yorkshire ICBs	The patient education components of the project include: • An education campaign to raise public awareness of HF symptoms • Providing HF patients with education materials about the signs and symptoms of deteriorating HF	£36,000 for the whole project, of which £10,000 is dedicated to the Pumping Marvellous education component	£10,000 will be used to purchase paper-based education materials and fund a social media campaign

4.4.3.1 Project background and aims

The West Yorkshire, Humber and North Yorkshire Cardiac Network and the South Yorkshire Cardiac Network have created the Y&H HFA. This project aims to improve knowledge of HF among healthcare professionals, patients, and the public in the Y&H region.

The objectives of the patient education component of this project were to:

- Increase awareness of HF symptoms among the public – using the Pumping Marvellous BEAT (Breathlessness, Exhaustion, Ankle swelling, Time for a simple blood test or Time to tell your GP or Nurse) acronym
- Improve HF patients' awareness of the signs and symptoms of progressive HF – by providing them with a Pumping Marvellous My Marvellous symptom checker[29].

4.4.3.2 Project status

At the end of March 2024, the three Y&H Cardiac Networks were disbanded, and the management of the HFTFP projects was transferred to ICBs. WY ICB became responsible for managing the Y&H HFA project and took the decision to pause it until the autumn of 2024, when it was anticipated

[29] Pumping Marvellous. My Marvellous symptom checker. Available at: https://pumpingmarvellous.org/community-hub/support-guides/symptomchecker/ [accessed 10/12/24]

clinicians would be better able to engage with the healthcare professional education and training component of the project (outside the scope of this evaluation theme).

In September 2024, the four-week BEAT HF public awareness social media campaign went live. Pumping Marvelous BEAT posters and My Marvelous symptom checkers were delivered to GP practices across the ICB in October 2024.

4.4.3.3 How the project has introduced patient education

The patient education components of the Y&H HFA project have been delivered by Pumping Marvellous in collaboration with WY, HNY and Health Innovation Yorkshire and Humber (HIYH), and included:

- Running a four-week BEAT HF social media campaign on Facebook to raise awareness of HF with members of the public in Yorkshire
- Printing and distribution of Pumping Marvellous educational materials (three BEAT promotional posters and 20 My Marvellous symptom checkers for HF patients) to each GP practice in WY and HNY. The posters will be displayed in GP practices to raise awareness of HF symptoms among visiting patients and clinicians. The My Marvellous symptom checkers will be distributed to HF patients by primary care staff during routine appointments.

4.4.3.4 Impact of the project

It is hoped that the social media campaign will increase awareness of HF symptoms and support timely diagnosis by prompting people to consider whether their symptoms (or those of their friends and family) might be an indication of HF. The social media campaign was due to end in October 2024, when Pumping Marvellous planned to analyse social media impressions, engagements and comments to understand the campaign's reach and reception.

To assess the impact of the BEAT posters and My Marvellous symptom checker primary care staff in GP practices across the ICBs will be invited to complete an online survey accessed via a QR code. Pumping Marvellous planned to draft the survey in October 2024.

4.4.3.5 Challenges, mitigations and solutions related to project delivery

Challenges reported by the project team, and mitigations/solutions for them, are provided in Table 4.17.

Table 4.17 Project 7: Y&H HFA challenges, mitigations and solutions

Challenge theme	Challenge detail	Mitigation/solution
Network being disbanded	Following the disbanding of the Y&H Cardiac Networks, WY assumed responsibility for the Y&H HFA project and took the decision to pause work on the project until	HIYH was asked to support the HNY and WY HFTFP projects from April 2024 onwards. As part of this work, colleagues at HIYH supported the Y&H HFA project, producing the clinician education element of the project by developing

Challenge theme	Challenge detail	Mitigation/solution
	the autumn of 2024, delaying the project	an online webpage and curating training content. They also supported the dissemination of the BEAT posters and My Marvellous symptom checkers
Additional resource strain on primary care	Some colleagues in primary care raised concerns that the public promotion and patient education elements of the project would place additional demand on GPs, by increasing the number of patients seeking GP appointments (through raised awareness of HF symptoms created by the social media campaign) and creating the expectation that GPs would need to provide My Marvellous symptom checkers to all HF patients. These concerns were raised following the British Medical Association (BMA) announcing GP collective action on the 1 August 2024[30]	Members of the project team attended LMC meetings to explain the rationale of the project and provide reassurances that the project's activities were supportive of primary care and were not in breach of the BMA's ten proposed collective actions[30]. Being clear in the messaging was important; explaining the focus of the project was ensuring patients were more aware of HF symptoms and were on the right pathway. HF patients frequently experience a delayed diagnosis and start their care journey by going down a different clinical pathway (for example: chronic obstructive pulmonary disease (COPD) instead of HF)[31]. These patients were already likely to be known to GPs so this would not increase GP's workload

4.4.3.6 Sustaining the project changes

Pumping Marvellous will continue to work with patients, the public, healthcare professionals and NHS organisations to improve HF patient education. However, their involvement and the patient education element of the project were designed as one-off activities. The social media campaign to raise public awareness of HF was scheduled for completion in October 2024. Once shared with GPs, the My Marvellous symptom checkers will be disseminated until supply runs out, while the intention is that the BEAT posters remain on display in general practices indefinitely.

[30] NHS England (2024). Collective action by GPs: supporting guidance. Available at: https://www.england.nhs.uk/long-read/collective-action-by-gps-supporting-guidance/ [accessed 10/12/24]

[31] Kwok et al. (2022). A Critical Evaluation of Patient Pathways and Missed Opportunities in Treatment for Heart Failure. Journal of Cardiovascular Development and Disease, 9 (12). Available at: https://doi.org/10.3390/jcdd9120455

4.5 Rapid up-titration of HF medications

Titration refers to initiating therapy or medicine at a lower dose and increasing the dose over time to maintain or achieve a specific response, or to decrease the risk of adverse effects[32]. Monitoring, reviewing and the titration of various medicines for HF patients form part of NICE guidelines for the diagnosis and management of chronic HF in adults. In 2022, the Safety, tolerability and efficacy of up-titration of guideline-directed medical therapies for acute heart failure (STRONG-HF) trial showed that an intensive strategy of rapid up-titration of guideline-directed-medical-therapy alongside close follow-up after an acute HF admission reduced symptoms, improved quality of life, and reduced the risk of 180-day all-cause death or HF readmission compared with usual care.

One of the HFTFP priorities has been to improve discharge planning in the community and reduce risk of readmission to hospital for HF patients. Two projects selected for the process evaluation were designed to meet this aim through providing rapid up-titration of HF medicines and optimisation of therapy for HF patients. These projects are being delivered by King's College Hospital NHS Foundation Trust (KCHFT) (Project 8) and providers within Humber and North Yorkshire and West Yorkshire ICSs (HNY and WY) (Project 9). They both intended to base their approach on the STRONG-HF trial; with the protocol adapted to suit local context where necessary.

At the time the writing, two of the providers involved in rapid up-titration projects had progressed to providing patient facing activity. KCHFT began delivering their project and working with patients in May 2024 and the project in Northern Lincolnshire & Goole NHS Foundation Trust (HNY) began patient facing activity in July 2024. In WY's project at Leeds Community Healthcare NHS Trust, some HFSNs were offering rapid up-titration to patients accessing the community service (as was the case prior to the project), while the four other providers involved in the WY project had not started offering rapid up-titration to patients. Table 4.18 provides a summary of the projects and approaches used.

Table 4.18 Summary of projects: rapid up-titration of HF medications

Service/provider	Approach	Purpose	Main features of approach and activities
8. King's College Hospital NHS Foundation Trust	Adapting STRONG-HF trial approach to rapidly optimise both	Aim to improve discharge planning with timelier	Recruiting band 7 HFSN who will complete pre-

[32]Caffrey R. and Borrelli E. (2020). The art and science of drug titration. Therapeutic Advances in Drug Safety. Available at: www.ncbi.nlm.nih.gov/pmc/articles/PMC7967860/#:~:text=Up%2Dtitration%20is%20characterized%20by,the%20risk%20of%20adverse%20effects/ [accessed 10/12/24]

Service/provider	Approach	Purpose	Main features of approach and activities
	pre- and post-discharge medications for acute HF patients admitted to hospital	optimisation of HF therapies, improving patient experience and reducing unplanned hospital admissions	discharge medicine optimisation and post-discharge review at outpatient clinic within two weeks of discharge
9. Humber and North Yorkshire ICS and West Yorkshire ICS (Northern Lincolnshire & Goole NHS Foundation Trust in Humber and North Yorkshire ICS and five providers in West Yorkshire ICS)	Using STRONG-HF trial approach to rapidly optimise both pre- and post-discharge medications for acute HF patients admitted to hospital	Aim to improve access to HF care in the community and optimisation of HF oral medications	Recruiting band 7 HFSN (WY) or band 6 nurse (HNY) who will review patients in the community and undertake medicine optimisation

4.5.1 Project 8: King's College Hospital NHS Foundation Trust

Table 4.19 King's College Hospital NHS Foundation Trust proposal summary

Service/providers	Project scope	Project budget	Planned investment
King's College Hospital NHS Foundation Trust	Completing rapid pre-and post-discharge optimisation of medications for HF patients admitted to hospital	£67,034	All funds used for the recruitment of band 7 HFSN who will complete pre- and post-discharge optimisation of medication

4.5.1.1 Project background and aims

KCHFT has a clinical team of consultant cardiologists and HFSNs that deliver HF services in hospital. They also provide outreach in the community, working with community-based HFSNs that are managed by St Thomas' Hospital. The team at KCHFT identified a lack of integrated follow-up in the community for patients within their HF service. The referral process for patients admitted to hospital with acute HF to community care can cause delays and according to local NHFA data for 2021/22 only 27% of patients with HF received the recommended two-week post-discharge review. KCHFT 's HFTFP project aimed to overcome this by improving access to specialist follow-up for HF patients within two weeks of discharge from hospital. This would be achieved by providing rapid up-titration and optimisation of medication and therapies for acute HF patients admitted to, and recently discharged from, hospital. The expectation was the project would provide patients with optimal treatment sooner, reduce unplanned hospital admissions and improve patient experience.

4.5.1.2 Project status

Project work began with planning and recruitment activities in October 2023. The advert for the band 7 HFSN role was posted in November 2023 with successful recruitment in January 2024 and the band 7 HFSN starting their role in February 2024. Following a period of induction, the band 7 HFSN began identifying and working with patients for the project from May 2024. The project will run for one year.

4.5.1.3 How the project has introduced rapid up-titration

The project team have designed a new SOP for the discharge process protocol. The aim is for all patients admitted to hospital for acute HF to be on at least half the doses of medication they should be on prior to discharge, with rapid post-discharge follow-up to up-titrate their medications to the optimal dose. They have used the band 7 HFSN to complete both pre-discharge and post-discharge optimisation of medications for a target group of inpatients. The HFSN identifies inpatients by working with hospital colleagues and attending inpatient HF ward rounds. The STRONG-HF criteria are being used to identify appropriate patients, but the team have adapted it as it was felt to be restrictive. For example, they have expanded the BNP cut-off point. The HFSN completes post-discharge optimisation by inviting patients to a new outpatient clinic for a follow-up two weeks after they are discharged from hospital. After this, they are referred to community HF care or other appropriate teams, such as psychological therapies teams or cardiac rehabilitation.

Senior management and the wider HF team were reported to have supported the project in various ways as it has progressed. This includes senior staff advocating for the work and providing clinical oversight of patients. The wider cardiology clinical team have also helped the new HFSN embed into the service, implement the project and recruit patients, and administrative staff have helped with operational tasks, such as booking clinics. The project team have also drawn on support and learning from another Trust that has implemented a similar initiative.

4.5.1.4 Impact of the project

At the time of writing, the HFSN delivering the project had reviewed 15 patients in the rapid up-titration clinic, with numbers increasing more quickly as project implementation has progressed. Fewer patient numbers than expected have undergone a review so far and project stakeholders reported it was therefore too soon to see full impact of the project in relation to influencing the key metric of up-titrating patients within 90 days. The additional and targeted capacity is expected to influence this metric as the project continues.

The clinic was reported to be providing patients with support and referrals onto other services they may need. It was also reported that there is a noticeable difference in patients from the clinic when on the correct dosage of medication, with an increase in their quality of life and confidence. No patients seen in the clinic had been readmitted to hospital at the time of writing and there are

expectations that the project will increase the number of patients who have received a two-week follow-up in the longer-term.

4.5.1.5 Challenges, mitigations and solutions related to project delivery

Challenges reported by the project team, and mitigations/solutions for them, are provided in Table 4.20.

Table 4.20 Project 8: KCHFT challenges, mitigations and solutions

Challenge theme	Challenge detail	Mitigation/solution
Accessing funding	There were challenges receiving and accessing the funding from NHSE via the ICB, which impacted project timelines and caused delays	Project leads raised the issue of accessing funding with NHSE and Trust senior managers who advocated for the project. The funding was released, and the project was able to commence
Recruitment delays	The project team planned for the band 7 HFSN to start their role in October 2023, however, the job advert was not live until November 2023. Local financial pressures at KCHFT created additional barriers to advertising and recruiting the role and various administrative steps in the recruitment process caused more delays. It was reflected that this meant the recruitment process was more rushed, which was a challenge as a high level of skill is required for this role	Persistence when following-up with HR colleagues was reported to be helpful as well as support from KCHFT senior managers who worked with project leads and HR to expediate the advertisement of the role
Capacity challenges	It has taken some time for project activities to get underway following recruitment and the level of input required from senior leads and the wider team for the project was reported to be higher than expected. As a result, this has impacted capacity. For example, the recruited band 7 HFSN does not have a prescribing qualification, which means they must rely on colleagues who can prescribe to support them to deliver the project	Strong relationships between the HF team and cardiology consultants have supported the issuing of prescriptions. Project stakeholders also reflected it might be useful to support staff in this role to gain a prescribing qualification or requiring it for the role during recruitment in future It is also hoped that less input from the wider team will be required as the project progresses
Identifying appropriate patients	There have been some challenges identifying appropriate patients for the new clinic. It was reported to take time for staff to understand the criteria and some patients have been	The project team plan to screen patients more thoroughly to avoid inappropriate referrals. They are also reviewing the STRONG-HF criteria used to identify patients, with plans to further adapt it to

Challenge theme	Challenge detail	Mitigation/solution
	referred to the clinic inappropriately. This includes those already optimised or with other conditions that need addressing first. The band 7 HFSN has also seen fewer patients than expected, with project stakeholders reflecting that the current STRONG-HF exclusion criteria may be too restrictive and missing patients that may benefit from being referred	suit HF patients at KCHFT and expand the project's reach
Data collection and monitoring	Local data collection and IT challenges that have affected delivery were also reported by project stakeholders. This includes KCHFT switching to a new IT system which has made it harder to access data and monitor the impact of the project. At the beginning of the project, KCHFT was also affected by a cyber attack, which caused delays for project progress as blood tests could not be requested to support clinic delivery	Although the cyber attack caused some delay, it was resolved, and the project has been able to progress. The project team are also getting used to the new IT system and continuing to monitor the project in different ways

4.5.1.6 Sustaining the project changes

The project will run for one year and patients will continue to be identified and recruited to the clinic until the fixed-term contract for the HFSN ends in Spring 2024. The team plan to refine their processes and address challenges before reviewing the impact of the project and decisions about its future are made. There is some confidence that a business case would successfully secure additional HFSN capacity but there are concerns that financial challenges in the Trust may mean funding will not be available for dedicated resource in future. In this case, it is expected the project will continue in some way, particularly as the process needed to deliver an additional optimisation clinic is now in place. For example, there are suggestions of absorbing the activity into every HFSN's role or requiring the nurse assigned to the daily inpatient ward round identifying patients are part of this role.

4.5.2 Project 9: Humber and North Yorkshire ICS and West Yorkshire ICS

Table 4.21 Humber and North Yorkshire ICS and West Yorkshire ICS proposal summary

Service/providers	Project scope	Project budget	Planned investment
Northern Lincolnshire and Goole NHS	Replication of the STRONG-HF trial, with	HNY: £51,000	HNY: Funds are being used to recruit a band 6 nurse who will support optimisation of therapy

Service/providers	Project scope	Project budget	Planned investment
Foundation Trust in Humber and North Yorkshire ICS Five provider organisations[33] in West Yorkshire ICS	prompt starting and optimising of oral HF medications following diagnosis or discharge from hospital	WY: £145,000	WY: Funds are being used to: • Recruit a band 7 HFSN: £60,000 (Bradford Teaching Hospitals NHS Trust) • Recruit 2x HCAs: £30,000 (Locala and Calderdale and Huddersfield NHS Trust) • Buy clinical monitoring devices: £15,000 (Locala and Leeds) • Cover consultant time required for the MDT meetings: £40,000

4.5.2.1 Project background and aims

The aim of this project was to provide equitable access to evidence-based, rapid up-titration of oral HF medication across HNY and WY.

In HNY, inequalities in access to community care have arisen between the ICB's two acute hospitals (Princess of Wales Hospital in Grimsby and Scunthorpe General Hospital in Scunthorpe, part of Northern Lincolnshire and Goole NHS Foundation Trust). Historically, at Princess of Wales Hospital a considerable proportion of patients have not received their post-discharge HF review appointment within the recommended two weeks, with the data indicating that the provider is underperforming in this metric. The STRONG-HF project was designed to introduce rapid up-titration across the ICB and reduce pre-existing inequalities in receiving timely access to community-based HF care.

In WY, Leeds Community Healthcare NHS Trust was the only provider of community HF services where a rapid up-titration protocol was being used, with some HFSNs incorporating it into their usual clinical practice prior to the project (in response to the favourable findings of the STRONG-HF trial). However, rapid up-titration had not been adopted as usual practice across the service and was not being implemented by other community HF services. The project was designed to establish rapid up-titration of HF medications across all community HF services in WY.

[33] In WY, the five provider organisations involved in the STRONG-HF trial are: Bradford Teaching Hospitals NHS Trust; Calderdale and Huddersfield NHS Trust; Leeds Community Healthcare NHS Trust; Locala Community Partnership; and Mid Yorkshire Hospital NHS Trust

Six provider organisations have been involved in the project; five in WY[34] and one in HNY[35]. Each developed rapid up-titration models that complement their pre-existing nurse-led community HF service.

4.5.2.2 Project status

In HNY, clinical activity started in July 2024 when the funded band 6 nurse took up their post. At the time of writing, 45 patients had been supported by the service.

Progress has varied across the WY providers:

- At Leeds Community Healthcare NHS Trust, rapid up-titration of HF medications is still being practiced by some HFSNs, but it has not been rolled out across the service
- Locala had appointed their band 3 HCAs and were drafting their up-titration referral processes and SOP
- At Calderdale and Huddersfield NHS Trust, the project-funded band 3 HCAs had been in post for a week with the service yet to commence up-titration of HF medications
- Mid Yorkshire Hospital NHS Trust had not started implementation activities.

4.5.2.3 How the providers have introduced or plan to introduce rapid up-titration

The six provider organisations designed rapid up-titration models that were complementary to their pre-existing nurse-led community HF services; each are briefly described below.

NLAG designed an up-titration intervention that starts when HF patients are admitted for treatment on an inpatient ward. Patients who are eligible for medication optimisation are identified by ward staff or the project-funded band 6 nurse, who uses their initial contact with a patient to provide education and information about HF and HF medications. Where appropriate, the nurse works with the HF consultants to commence rapid up-titration prior to their discharge from hospital[36]. Patients are then followed-up in a hospital outpatient setting (ideally within two weeks of their discharge) where up-titration is continued until their medication is optimised and they are discharged from the service.

[34] In WY, the five provider organisations involved in the STRONG-HF trial are: Bradford Teaching Hospitals NHS Trust; Calderdale and Huddersfield NHS Trust; Leeds Community Healthcare NHS Trust; Locala Community Partnership; and Mid Yorkshire Hospital NHS Trust

[35] In HNY the provider organisation involved int the STRONG-HF trial is Northern Lincolnshire and Goole NHS Foundation Trust

[36] The new band 6 nurse works across two hospital sites at NLAG: Diana, Princess of Wales Hospital in Grimsby and Scunthorpe General Hospital in Scunthorpe

At Bradford Teaching Hospitals NHS Trust, the HFSNs will manage the rapid up-titration of HF medications through a combination of face-to-face and telephone outpatient appointments.

Calderdale and Huddersfield NHS Trust will deliver a community-based approach to rapid up-titration. Patients will receive an initial home visit from a HFSN; subsequent up-titration appointments will be over the phone. The HCA will conduct follow-up home visits to gather blood pressure (BP) readings and phlebotomy to support clinical decision making about changes to patients' prescriptions.

At Locala, a mixed team of a band 7 HFSN, a band 5 nurse and the new HCA will support patients through a personalised up-titration protocol. Like the model at Calderdale and Huddersfield NHS Trust, initial home visits will be undertaken by the HFSNs who will oversee rapid up-titration with follow-up telephone calls. Where needed, the band 5 nurse will conduct follow-up home visits, with the HCA undertaking follow-up phlebotomy. Where appropriate, the approach will be supported by patients taking their own BP readings using mobile BP monitors (purchased with project funding) loaned out to patients.

The community HF service at Leeds Community Healthcare NHS Trust has designed a project that will support rapid up-titration of HF medications for patients referred via any route (for example: from primary care and the hospital) who are not currently on optimised HF medication doses and for whom it is not contraindicated. Up-titration will be delivered through a combination of face-to-face and telephone outpatient appointments. Where appropriate, clinical decision making in these appointments will be supported by BP readings recorded by patients using mobile BP monitors (from the service's pre-existing BP monitor loaning service) and the Airmid app[37]. The approach taken will be responsive to the needs of each patient and will consider their preferences, ability to attend face-to-face appointments and level of digital literacy.

At the time of writing, a model for delivering rapid up-titration had not yet been determined for Mid Yorkshire Hospital NHS Trust.

4.5.2.4 Impact of the project

Due to their early stage of implementation, neither the HNY nor WY project had quantitative outcome data available to support the impact analysis. However, all six providers anticipate seeing improvements in individual patient outcomes in-line with those reported by the STRONG-HF trial[38].

Staff at NLAG expect their project will improve their two-week post-discharge review performance within six months, but it will take longer for any impact on readmission or mortality measures to

[37] The Airmid app is an electronic personal health record where BP readings can be self-recorded

[38] Patient outcome demonstrated the STRONG-HF trial include: reduced HF symptoms, improved quality of life, reduced the risk of 180-day all-cause death, and reduced HF readmission rates compared with usual care

emerge. The project is also expected to lead to improved staff satisfaction, resulting from the knowledge that more patients are being seen in a timely manner. The service intends to collect patient experience data.

At Leeds Community Healthcare NHS Trust staff delivering rapid up-titration have reported that patients are seeing medication-related benefits such as improvements in their ability to carry out activities of daily living and overall wellbeing.

At the time of writing, Locala, Calderdale and Huddersfield NHS Trust, and Mid Yorkshire Hospital NHS Trust were unable to comment on outcomes as clinical activity had not started.

4.5.2.5 Challenges, mitigations and solutions related to project delivery

Challenges reported by the project team, and mitigations/solutions for them, are provided in Table 4.22.

Table 4.22 Project 9: HNY and WY challenges, mitigations and solutions

Challenge theme	Challenge detail	Mitigation/solution
Recruitment delays (NLAG, Bradford Teaching Hospitals NHS Trust, and Calderdale and Huddersfield NHS Trust)	Of the four providers that recruited staff to support delivery of rapid up-titration, three described facing difficulties in recruiting. Locala (the only non-NHS provider) was the only provider that did not NLAG experienced delays in the initial stages of the recruitment processes. A bespoke job description had to be developed and the new post agreed by the Trust's recruitment panel, both activities took approximately five months to complete Bradford Teaching Hospitals NHS Trust faced challenges in securing Trust agreement that funds could roll-over to next financial year. At Calderdale and Huddersfield NHS Trust, a recruitment freeze meant that it took time to agree that recruitment of a band 3 post could proceed as planned	The senior nurses at NLAG worked closely with HR to develop their HFSN job description and take it through a job matching panel and workforce process, minimising delays Through consistent communication with the Trust's finance board and with the backing of the ICB, the Bradford and Calderdale recruitment was able to proceed with the HFTFP funding
Capacity challenges	The projects at all six providers have been predominantly led by senior clinicians and/or managers. All reported points where they have struggled to progress plans as intended. Several providers explicitly identified limited project management support and operational	Limited operational capacity remains a challenge across the projects

Challenge theme	Challenge detail	Mitigation/solution
	capacity as a barrier to making progress with project implementation	
Data collection and monitoring (WY)	In WY, five different providers (and community HF services) were involved in the project. Each record and code their clinical activity differently, according to pre-existing SOPs. This has made designing a standardised electronic clinical notes template to record and support reporting on up-titration activity incredibly complex. A further issue came to light when the process of extracting and analysing data was considered. For the majority of the providers, community HF notes are in the primary care-based records system SystmOne, a record system primary care organisations are the asset owner of. GP collective action was a barrier to establishing a data sharing agreement for the purposes of evaluating the project – as current guidance suggests practices cease data sharing activities unless they support direct patient care[30]	At the time of writing, the challenges with collecting and extracting clinical data were ongoing. Solutions for establishing a consistent approach to recording up-titration activity were being pursued with support from electronic patient record teams. A solution was found for extracting the data held in SystmOne. This involves including plans for sharing up-titration project data in a system-wide data sharing agreement that is in the process of being updated. Initial indications were that primary care colleagues would support this solution as it would require minimal additional resource

4.5.2.6 Sustaining the project changes

In HNY, NLAG will use the remaining programme funding to deliver the rapid up-titration service and will put forward a business case for a permanently funded band 6 post to enable the activity to continue.

In WY, all providers intend to adopt rapid up-titration as their standard approach to providing patient care. The HFTFP funding gave the five providers the resource to initiate the transition in approach. Three of the five providers (Locala, Calderdale and Huddersfield NHS Trust, and Bradford Teaching Hospitals NHS Trust) requested project funding to employ additional staff. At the time of writing, Locala and Calderdale and Huddersfield NHS Trust had already managed to secure funding to sustain rapid up-titration activities, by incorporating these into the job descriptions of complementary posts that had their business cases approved.

4.6 Other projects

Three projects selected for inclusion as case studies are not linked to one of the project themes. They were selected as they were novel, and therefore provided an opportunity for shared learning.

South Tees Hospital NHS Foundation Trust (STHFT) (Project 12) began in January 2024. At the time of writing however, the other two projects had not begun delivery. Barking, Havering and

Redbridge University Hospitals NHS Trust (BHRUT) (Project 10) is yet to access the HFTFP funding, and the proposed project has no expectation of progressing. The project at three trusts in Norfolk and Waveney (N&W) ICS (Project 11) has experienced lengthy delays but is expected to deliver from January 2025. Learning from these two projects is therefore limited.

4.6.1 Project 10: Barking, Havering and Redbridge University Hospitals NHS Trust

Table 4.23 Barking, Havering and Redbridge University Hospitals NHS Trust proposal summary

Service/provider	Project outline	Project budget	Planned investment
Barking Havering and Redbridge University Hospitals NHS Trust	Audit of 300 patients' journey through the HF pathway	£61,913	• Staff resource: £15,112 • Dissemination and training: £46,801

4.6.1.1 Project background and aims

BHRUT HF service provides inpatient non-elective ward-based care and hospital-based outpatient services. This includes a rapid access suspected HF diagnostic pathway and a team of HFSNs providing inpatient education and outpatient support, such as the two-week post-discharge check following an admission.

There are three community HF teams that work with the BHRUT HF service. An existing pilot is running with the objective of standardising care across these teams in line with NICE guidance. A gap was identified in the capacity of these teams to meet the target for a patient two-week post-discharge check. Data analysis of readmission rates for HF patients also found that the Trust had higher than average rates of patients being readmitted within 30 days of discharge.

The BHRUT project team planned to investigate the possible causes of this through an audit of 300 HF patients; tracking their journey in, out, and back into hospital. The focus was to understand whether limitations in advanced care planning and/or community prescribing were factors in high readmittance rates, and to plan an appropriate response. This may be submitting a business case for increasing community HF capacity and/or upskilling community teams.

This project was expected to identify and improve the patient pathway between hospital and community-based HF teams.

4.6.1.2 Project status

At the time of writing, this project had not progressed as planned. The HFTFP funding was going to be used to engage the community HF teams in the audit, to understand the full patient pathway. Although these teams initially engaged in the project, commenting on the pro forma to be used to assess patient notes, the release of the funding to employ staff time to take part in the audit was

delayed until December 2024 and so further progress has not been made. North East London Foundation Trust - which manages the community HF teams - confirmed in January 2025 that they had scheduled advanced communication training for staff with the funding and were planning to engage with the BHRUT project team to support the audit work.

4.6.1.3 How the project has adapted the patient audit in the absence of the funding

The BHRUT project team has been able to conduct an internal audit of 300 patient notes (although this has been done within existing resources). About two-thirds of these patients were rejected for inclusion in the pathway analysis on first screening due to their admission not being HF related, or they were re-admissions with HF more than three months after initial admissions. This internal audit has provided the BHRUT team with intelligence relating to: the demographic breakdown of their HF patients; length of stay; type of HF diagnosed; medications used; specialist input into treatment; and discharge plans. Findings from the audit include that:

- One-year mortality at BHRUT is higher than the national average
- There is no post-discharge follow-up service provision for patients with HFpEF and HFmEF
- Where there is post-discharge follow-up, this often happens more than four weeks post-discharge.

Issues with coding have also been identified that make reporting of HF data challenging.

4.6.1.4 Sustaining the project activities and changes

Although the BHRUT project team will continue their internal audit of hospital HF data, a full audit of the pathway as planned in the HFTFP proposal will require access to community HF team patient data and it has not yet been established whether this will be possible. The portion of the funding allocated for dissemination and training activities has now been allocated and these are planned for early 2025. The Trust intends to use its audit findings to submit a business case for a HF nurse to work across wards to optimise management and arrange for timely follow up for rapid up-titration for HF patients. The Trust is also intending to expand and set up the HF follow-up clinics for rapid up-titration and close monitoring of high-risk patients.

4.6.2 Project 11: Norfolk and Waveney ICS

Table 4.24 Norfolk and Waveney ICS proposal summary

Service/provider	Project outline	Project budget	Planned investment
Joint bid for Norfolk and Norwich University Hospitals; James Paget University Hospitals;	Expansion of pilot using focussed echocardiograms for HF patients referred by GPs	£93,933 Additional funding has also been provided by NHS East of England to	Staff resource to run weekend focused echocardiogram clinics

Service/provider	Project outline	Project budget	Planned investment
and Queen Elizabeth Hospital King's Lynn		implement the pilot across all three sites	

4.6.2.1 Project background and aims

The N&W HF Board identified a challenge in the echocardiogram (hereafter, echo) capacity in the system, delaying HF diagnosis of patients following a referral. The capacity challenge was twofold: the time taken to conduct an echo; and lack of sufficient qualified staff to undertake these echos. An existing pilot to provide focused echos (FEs) at James Paget University Hospitals (JPUH) was proposed to be extended to all three acute providers in N&W. The HFTFP funding would contribute one third of the overall cost of this pilot; the remainder provided by NHS East of England (EoE).

The pilot is using FEs for HF patients referred by GPs who meet set eligibility criteria (see Section 4.6.2.3). An FE is a targeted scan with fewer images, reducing the amount of time taken. The initial pilot took place at JPUH in 2023 and the planned expansion was intended to increase the evidence base for long-term use of FE, as well as reduce the system's waiting list for a full echo. Data from the JPUH pilot suggested that the use of FE increased the number of scans that could take place per day and reduced the waiting time for patients.

4.6.2.2 Project status

The project was initially expected to start at the end of 2023 but has experienced significant delays. This was initially due to senior leaders at N&W ICB requesting further analysis of patient outcome data from the initial JPUH pilot, to assess the clinical risks associated with FE, before widening it out to the other sites. Although this data was provided in February 2024, other delays were subsequently experienced. These are detailed in Section 4.6.2.5.

Having overcome these delays, the project is now expecting to go live in January 2025.

4.6.2.3 How the project plans to introduce focused echos

Once implemented, the HFTFP and NHS EoE funding will pay for weekend FE clinics at the three acute sites, targeting working age patients. Patients are determined as appropriate for an FE by an experienced clinician (for example, consultant cardiologist or cardiac nurse specialist) at each of the three trusts. These clinicians will review current echo waiting lists and determine suitable patients based on agreed criteria: they have not previously had an echo; no evidence of a heart murmur was found in the patient's clinical evaluation; patient has a high NT-proBNP test result as detailed in NICE guidance. The overall objective of qualifying patients for the FE is to target patients with suspected HF.

Each clinic will be staffed by a band 7 clinician or cardiology registrar with administrative support. All funding is going towards these staffing costs and staff will receive additional training to provide

the FE. The clinics will run for 12 months. The clinicians running the clinics have discretion to conduct a full echo if they consider it necessary having reviewed the patient.

4.6.2.4 Impact of the project

The N&W FE pilot is monitoring the performance of the project through three (quality requirements) metrics reported quarterly by each participating Trust. The metrics have been agreed based on findings from the initial JPUH pilot. These are provided in Table 4.25. Project performance will be reviewed by the ICB CVD, diabetes, respiratory, renal and long-term conditions (CVDR) board and the clinical transformation performance oversight (CTPOG) group.

The FE project is expected to significantly reduce waiting times for patients. Currently, patients can wait up to a year for an echo following a referral, and the pilot is aiming to reduce this to eight weeks. Although this is still longer than NICE guidance for patients with high NT-proBNP levels, it would represent a large improvement for the system.

Table 4.25 Quality requirements for FE pilot

Metric	Threshold	Method of measurement
Improved time to echo from Point of Referral (PoR)	100% of eligible FE patients seen within eight weeks from PoR	Spreadsheet reporting detailing referral dates and appointment dates
Comparable outcomes for patients of focused vs standard echo scans	<10% of patients are called back for a repeat scan	Spreadsheet documenting if patients have to be recalled for a standard scan due to insufficient information
Increase in speed of HF diagnoses	Time from referral to diagnosis of HF versus average diagnosis time of standard echo in the six months preceding FE clinic inception – minimum of three months faster	Spreadsheet report detailing number of HF diagnosis, time from referral to FE scan, versus average HF diagnosis time from standard echo clinic in the preceding six months before FE clinic inception

4.6.2.5 Challenges, mitigations and solutions related to project delivery

Challenges reported by the project team, and mitigations/solutions for them, are provided in Table 4.26.

Table 4.26 Project 11: N&W challenges, mitigations and solutions

Challenge theme	Challenge detail	Mitigation/solution
Clinical governance	It took time to agree the clinical governance of the project at the ICB level. This was in part due to senior leaders at the ICB wanting to review evidence of clinical safety from the JPUH	Each of the three trusts provided the ICB with written confirmation that the FE project had been through their own clinical governance process, which satisfied

Challenge theme	Challenge detail	Mitigation/solution
	pilot, but also because it took time to establish where accountability for clinical risk would be held at the ICB level	the ICB leadership that the clinical risk of FEs had been reviewed by senior clinicians. Each of the three trusts has signed a contract to deliver FEs which includes a service specification, clinical safety processes and quality requirements
Accessing funding	ICB funding plans faced increased scrutiny to address a national deficit for 2024/25. N&W had a 'triple lock' on new spending and had to seek approval from NHSE to spend the HFTFP funding on the FE project	No solution was identified and this was outside of the project's control, although permission to proceed with the FE project was granted following this process
System restructure	N&W ICB was undergoing a restructure at the same time as the project was trying to confirm contracts to deliver FE clinics with each Trust. This slowed down approval processes	No solution identified, this was outside of the project's control
Capacity challenges	The FE clinics will rely on qualified staff to take on additional locum shifts at weekends	The project team has put in place monitoring processes to ensure clinics are staffed. The three trusts are able to run the clinics to a schedule that suits their staff, and this arrangement is flexible and able to test different schedules
Treatment times	Although the FE can reduce the length of time to a HF diagnosis, there are also challenges in N&W with the time taken for identified HF patients to be put on appropriate medications	There are plans at JPUH to put on additional HF nurse clinics so newly diagnosed patients can be started on medications more quickly

4.6.2.6 Sustaining the project activities and changes

Given the difficult financial position of N&W ICB, the project team have suggested that it is unlikely the pilot will receive local funding to continue with the FE clinics beyond the 12 months provided for by the HFTFP and NHS EoE region. However, the project team plan to evaluate the pilot at the end of funding cycle. This will provide trusts with the performance data detailed in Table 4.25 and recommendations for whether the service should be continued. The team has also suggested they could look at readmission data for patients who have received an FE, which may indicate potential cost savings for trusts of continuing the FE clinics.

4.6.3 Project 12: South Tees Hospital NHS Foundation Trust

Table 4.27 South Tees Hospital NHS Foundation Trust proposal summary

Service/provider	Project outline	Project budget	Planned investment
South Tees Hospital NHS Foundation Trust	Enhance the existing hospital and community HF service offer by increasing capacity	£103,068	1.8 WTE band 6 HFSN (progressive secondment)

4.6.3.1 Project background and aims

STHFT has been experiencing a rising number of referrals to its HF specialist service at James Cook University Hospital, reportedly driven by an ageing population and increasing obesity rates, as well as a growing caseload as more patients require follow-up on new medications. The HF service operates as an MDT of band 7 and band 8a HFSNs supported by cardiology consultants. Prior to the HFTFP funding, the HFSN team were responsible for holding community-based clinics for education, medication titration, supporting earlier diagnosis in front-of-house settings (emergency department and same-day emergency care), managing inpatients, providing a telephone helpline for urgent advice, and running an outpatient IV furosemide lounge (based at James Cook University Hospital).

HF clinical network and provider leads cautioned that without investment to expand the over-stretched HFSN team, there was a risk of increasing hospital admissions, poorer patient care, and staff burnout. To address this, the North East and North Cumbria Cardiac Network supported STHFT to submit a proposal for 2023/24 HFTFP funding to employ 1.8 WTE band 6 HFSN through developmental-focused secondments. This additional support is intended to free-up time for band 7 and band 8a staff to focus on service improvement, particularly by enhancing front-of-house support to ensure adherence to HF assessment pathways and by expanding the number of clinics in underserved areas to reduce follow-up waiting times for discharged patients. The overall goals are to improve patient outcomes, reduce hospitalisations, and enhance quality of life for HF patients.

4.6.3.2 Project status

The two band 6 HFSNs (1.8 WTE) joined the specialist HF service in January 2024. In summer 2024, one of the band 6 nurses was promoted to fill a band 7 vacancy. This has freed-up some of the HFTFP funding which the team now plan to use to extend the remaining band 6 HFSN's role beyond the funding period.

4.6.3.3 How the project has tried to increase HF service capacity

The two band 6 HFSNs quickly integrated into the team. Project stakeholders agreed that the additional capacity has significantly helped to reduce pressure on band 7 HFSNs, with the band 6s managing the outpatient IV diuretic lounge, overseeing the helpline, and ensuring newly diagnosed admitted patients are assessed by the team. Project stakeholders highlighted that these tasks were not optimally or routinely managed prior to the funding due to the shortage of staff. The band 6 HFSNs, alongside a cardiology consultant, have recently arranged for a patient transport service to expand the IV diuretic lounge to HF patients located further away from James Cook University Hospital or who were unable to arrange their own transport.

The additional time provided by the band 6 HFSNs has also enabled the HF specialist service to increase the number of community clinics provided, strategically adding slots in deprived and underserved areas located further away from James Cook University Hospital. One project stakeholder acknowledged that clinic expansion is a work in progress, with the service gradually increasing clinic slots to ensure they remain deliverable within current capacity, while also monitoring their placement to ensure they serve the most at-need patient populations.

Within the hospital, the band 7 and 8a HFSNs have been able to spend more time raising awareness of their service and the HF pathway, particularly in front-of-house settings where they advise on admission decisions, conduct comprehensive assessment, prescribe medication and refer patients directly to the IV diuretic lounge where necessary.

The funding has also enabled the HF service to turn to broader service improvements. For example, one project stakeholder described how the additional time afforded to them following appointment of the band 6 HFSNs has allowed them to prepare a successful application for funding to develop a Hospital at Home service for HF patients; planning is currently underway with the relevant community services.

Project stakeholders attributed the success of the new roles to a combination of a highly supportive team environment, opportunities for upskilling and professional development, and the high calibre, expertise, and experience of the recruited band 6 HFSNs using the developmental secondment approach.

4.6.3.4 Impact of the project

The impact analysis revealed a significant change in two key metrics during the HFTFP period: 1) patients receiving ambulatory IV furosemide and 2) admitted HF patients that were entered into the NICOR NHFA. Statistically significant increases were observed, with an average of 4.5 additional patients receiving ambulatory IV furosemide per month, and 3.9 more patients being added to the NICOR NHFA per month. These improvements align with the primary use of the HFTFP funding in STHFT for increasing HFSN capacity to run the ambulatory IV diuretic lounge, as well as the focus identified by project stakeholders on enhancing data collection practices. Project stakeholders

added that qualitative and quantitative patient experience data, collected through a patient survey and case study, has highlighted the benefits of the IV diuretic lounge to patients and carers. Reported benefits include reduced anxieties about hospital-acquired infections and the convenience of avoiding hospital admission. These benefits have been particularly valued by elderly and palliative care patients and their families. Survey data is not yet ready for dissemination.

Other impacts of the funding were reported by stakeholders, although quantitative data was not made available. One project stakeholder highlighted that increased HFSN visibility in front-of-house settings has led to more efficient referrals for echocardiograms or other treatment, as well as reducing admissions through direct referral to the IV diuretic lounge. As a result of an increased number of community clinics, several project stakeholders reported that waiting times from discharge to follow-up have decreased.

All project stakeholders involved in delivery reported that the additional funding had enhanced their job satisfaction. This improvement has largely been due to their ability to spend more time with patients, enabling them to deliver optimal management of HF symptoms and person-centred care. They also valued having the time to proactively improve the service, rather than merely responding to issues as they arose.

4.6.3.5 Challenges, mitigations and solutions related to project delivery

Challenges reported by the project team, and mitigations/solutions for them, are provided in Table 4.28.

Table 4.28 Project 12: STHFT challenges, mitigations and solutions

Challenge theme	Challenge detail	Mitigation/solution
Data collection and monitoring	The HF specialist service has not historically held a caseload of patients and has found it challenging collecting and collating necessary data to inform service improvement and evaluation. Clinical systems are reportedly not set-up to record all required data, for example community clinic waiting times	The evaluation has highlighted to the HF specialist team the need for sufficient data, making it a priority area for improvement. An administrative support role has helped the team to compile a patient caseload and liaise with relevant services to collate data

4.6.3.6 Sustaining the project activities and changes

Project stakeholders identified three funding strategies to sustain the band 6 role beyond January 2025:

1. Extending the band 6 contract using funds freed up by the promotion of one band 6 nurse to a vacant band 7 position
2. Aligning band 6 activities with the virtual ward funding programme by expanding the IV diuretic lounge to the community

3. Using industry funding from a retrospective HF patient study.

With these strategies, the project lead is confident that the band 6 role and the IV diuretic lounge will be maintained for at least two years (from October 2024). The HF specialist team is proactively gathering data for a business case to demonstrate the lounge's impact on hospital admissions, clinical outcomes, and patient experience.

4.7 Summary

The case study projects have made varied progress. Six of the 12 projects have been able to progress with delivery in the evaluation period. One has finished and several are in their early stages due to delays. One project is no longer proceeding due to the ICB reallocating the HFTFP funding to their baseline. Five projects have experienced delays but still plan to progress in the future, with some set-up activities completed or underway. Due to delays and the short delivery period for many projects, there is limited evidence to date of impacts on metrics. However, all themes provide learning for implementing HF service improvement projects. Section 6 discusses the conclusions and recommendations from across these case studies, as well as the project tracker and impact analysis.

5. Impact evaluation findings

Impact evaluation key findings

National level findings

Four metrics had sufficient data to estimate a national average impact of the HFTFP:

- Patients seen by specialist clinical staff
- Patients discharged with a discharge management plan
- Patients referred to follow-up with a HFSN
- Patients seen within two weeks of admission.

Of these four metrics, none showed a statistically significant impact for the HFTFP. The analysis findings reflect a large amount of uncertainty in the data.

For the number of patients referred to follow-up with a HFSN, the impact could range from a large increase to a very small reduction. For the number of patients discharged with a discharge management plan, the impact could range from a very large increase to a moderate decrease. For the other two metrics the impact could range from a large increase to a large decrease.

Project-level analysis

At the project level, there was lots of variation in the findings, with the identified impact varying by metric and site. In most cases the impact was not statistically significant. Where it was, it often did not align with a clear narrative relating to the type of intervention (in some cases because the data submitted did not directly link to the key aims of the intervention).

One clear exception was South Tees Hospital NHS Foundation Trust which ran a very targeted intervention, aimed at increasing activity at its IV diuretic lounge. The data showed a significant increase in the number of patients receiving ambulatory IV furosemide. This suggests that similar funding programmes could better support impact evaluation by agreeing targeted metrics with projects as part of the funding proposal process.

Recommendations for further analysis

An impact evaluation conducted at a later date (when there is more of a complete dataset to use) may be able to more precisely identify the impact of the HFTFP. For instance, many of the sites were not hosting projects that had been implemented for a sustained period to allow for the effects of the intervention to be demonstrated in the data (see Section 3.4.1 and Section 4 for project start dates).

5.1 Overview

The impact evaluation aimed to establish the impact that the HFTFP had on identified metrics and was explored at two levels:

- **National level**: the aggregated impact of the HFTFP for individual sites on average nationally (where data was available)
- **Individual site-level**: the impact of the HFTFP on individual sites, grouped in the results section by sites which are either part of case study projects or not.

The findings are presented as:

- **National analysis:** these are the results from the meta-analyses which were performed to determine the impact of the HFTFP on the four metrics which had sufficient data. All findings, either significant or non-significant, are reported in this section
- **Site-level analysis – case study projects:** these are the results from the individual case study sites which had sufficient data: the Luton and Bedfordshire (L&B) project (which has two sites: Bedfordshire Community Health Services and Cambridgeshire Community Services NHS Trust); and the South Tees Hospital NHS Foundation Trust (STHFT) project, which is one site. Only significant findings are reported here.
- **Site-level analysis – non-case study projects:** these are the results from the non-case study project sites. Only significant findings are reported here.

In total, across all outcomes and all projects, 46 ITS analyses were performed. Thirty-five contributed to the four meta-analyses, and 11 did not (due to lack of data).

For individual sites, only statistically significant results were reported, because the non-significant results were not informative (i.e., it was unclear whether it had a positive, neutral or negative impact). Across all analyses conducted, there was additional uncertainty in the findings due to issues with data quality (for example, incomplete datasets for some metrics).

Of the case study sites, 11 analyses were performed in total, of which six showed a statistically significant impact.

Of the non-case study sites, five analyses were performed in total, of which two showed a statistically significant impact.

5.2 National analysis

5.2.1 Patients seen by specialist clinical staff (metric 5)

This metric is defined as the total number of patients seen by the following specialist clinical staff, as a proportion of the total number of patients that have received a diagnosis of HF:

- Consultant cardiologist
- Consultant, not a consultant cardiologist, but with a remit for HF patients
- Specialty registrar
- HFSN
- HF pharmacist.

The aim of the HFTFP was to cause an increase in this metric. Data was requested for this metric from 12 projects. Seven projects returned data, which included a total of nine sites (because two projects had two sites each). The best estimate result from the meta-analysis was that the effect of the HFTFP, on average, caused a decrease in the percentage of patients seen by specialist clinical staff by 2.12 percentage points. However, the 95% confidence intervals (CIs) indicate that the true effect could range from a decrease of 14.89 percentage points to an increase of 10.65 percentage points, indicating that this result is not statistically significant.

This means that it is unclear what impact the HFTFP had on the percentage of patients seen by specialist clinical staff.

5.2.2 Patients discharged with a discharge management plan (metric 6)

This metric is defined as the number of patients who were given a discharge management plan, prior to their discharge from hospital, as a proportion of patients that were diagnosed with HF. The aim of the HFTFP was to cause an increase in this metric.

Data was requested from 12 projects. Six projects returned data, which covered a total of six sites (see Annex for further information on the one site which was excluded). The best estimate from the meta-analysis was that the effect of the HFTFP, on average, caused an increase in the percentage of patients discharged with a discharge management plan by 8.17 percentage points. However, the 95% CIs indicate that the true effect could range from a decrease of 4.81 percentage points to an increase of 21.15 percentage points, indicating that this result is not statistically significant.

This means that it is unclear what impact the HFTFP had on the percentage of patients discharged with a discharge management plan.

5.2.3 Patients referred to follow-up with a HFSN (metric 8)

This metric is defined as the number of patients who were referred for a follow-up with a HFSN as a proportion of patients that were diagnosed with HF. The aim of the HFTFP was to cause an increase in this metric.

Data was requested from 16 projects. Ten projects returned data, which covered a total of 12 sites. The best estimate from the meta-analysis was that the effect of the HFTFP, on average, caused an increase in the percentage of patients referred to follow-up with a HFSN by 8.88 percentage points. However, the 95% CIs indicate that the true effect could range from a decrease of 0.79 percentage points to an increase of 18.56 percentage points, indicating that this result is not statistically significant.

This means that it is unclear what impact the HFTFP had on the percentage of patients referred to follow-up with a HFSN.

5.2.4 Patients seen within two weeks after an admission with acute HF (metric 14)

This metric is defined as the number of patients seen within two weeks after an admission with acute HF as a proportion of all patients admitted with acute HF. The aim of the HFTFP was to cause an increase in this metric.

Data was requested from 10 projects. Five projects returned data, which included a total of seven sites. The best estimate from the meta-analysis was that the effect of the HFTFP, on average, caused an increase in the percentage of patients seen within two weeks after admission with acute HF by 4.73 percentage points. However, the 95% CIs indicate that the true effect could range from a decrease of 7.26 percentage points to an increase of 16.72 percentage points, indicating that this result is not statistically significant.

This means that it is unclear what impact the HFTFP had on the percentage of patients seen within two weeks after an admission with acute HF.

5.3 Site-level analysis – case study projects

5.3.1 Project 1: Luton & Bedfordshire – Bedfordshire Community Health Services site

Cambridgeshire Community Services (CCS) and Bedfordshire Community Health Services (BCHS) collaborated for the HFTFP after identifying a need to improve discharge planning for HF patients admitted to hospital across Luton and Bedfordshire (areas covered between them). Although the services are distinct sites, they are delivering one project together with HFTFP funding shared between both services and the project jointly-led by CCS and BCHS service managers and HFSNs from each service. The data for this project has been analysed as two separate sites to reflect their variation.

This section highlights the results of any significant findings from the BCHS site. For this site, the HFTFP was found to significantly impact three metrics: 1) the total number of patients seen by the community HF team (metric 3); 2) patients that have been up titrated by 90-day follow-up (metric 10); and 3) patients seen within two weeks after an admission with acute HF (metric 14).

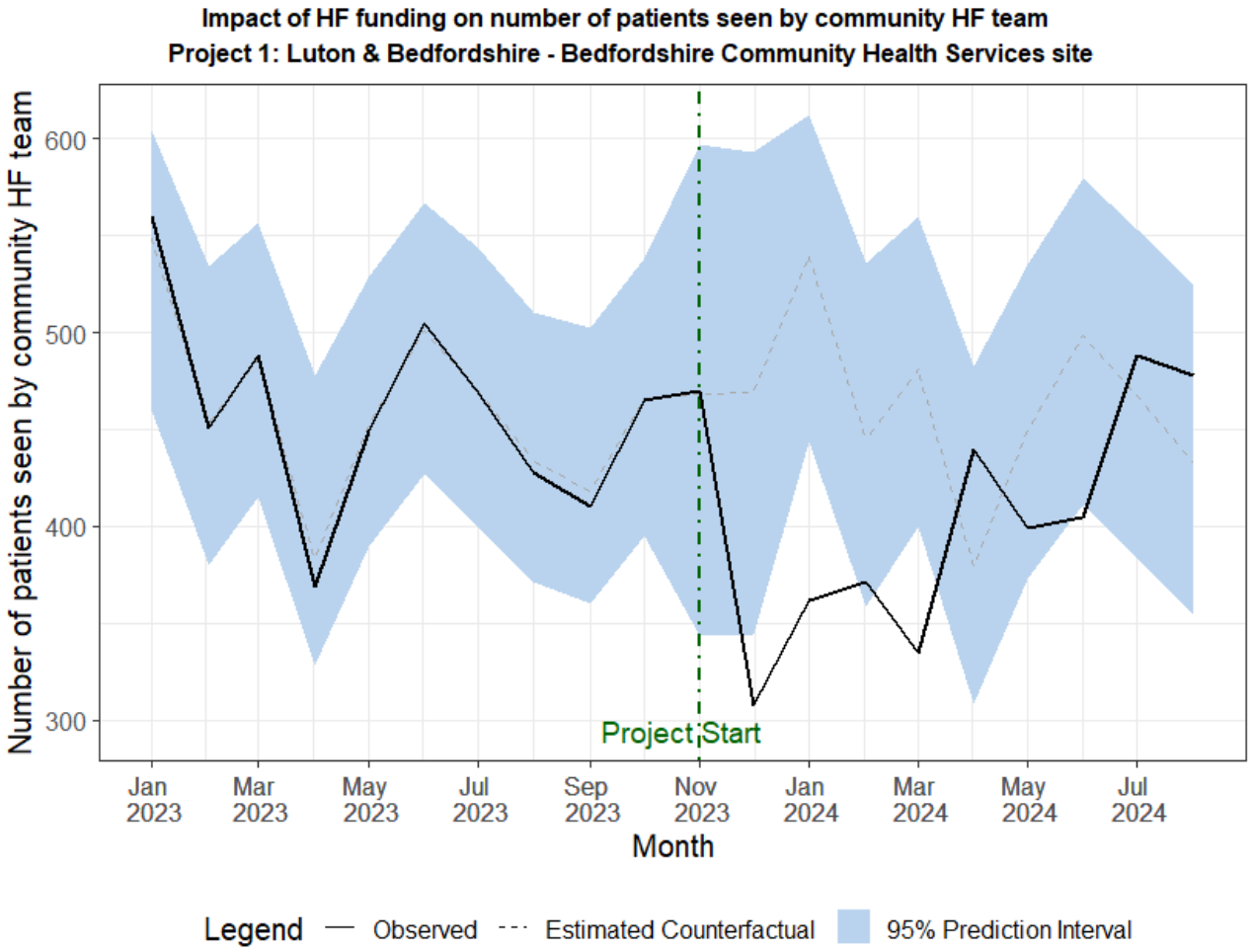
It is important to recognise that there are data capture and collection challenges across these metrics for BCHS. This means the data provided and impact analysis results may not present an accurate reflection the project's impact and outcomes. Further monitoring and analysis of this data would be beneficial to confirm or contest these findings.

5.3.1.1 Patients seen by the community HF team (metric 3)

This metric is defined as the total number of patients seen by the community HF team. The aim of the HFTFP was to cause an increase in this metric. However, it is noted patients that are already known to the service and returning to caseloads are not recorded as new patients and therefore not reflected in these numbers. Additionally, projects that aim to use or enhance use of remote

monitoring may result in less patient contact with community HF teams. The best estimate of the model was that the HFTFP, on average, caused a statistically significant decrease of 57 patients per month (see Figure 5.1). The 95% CIs indicate that the true effect could range from a decrease of 99 to 17 patients per month.

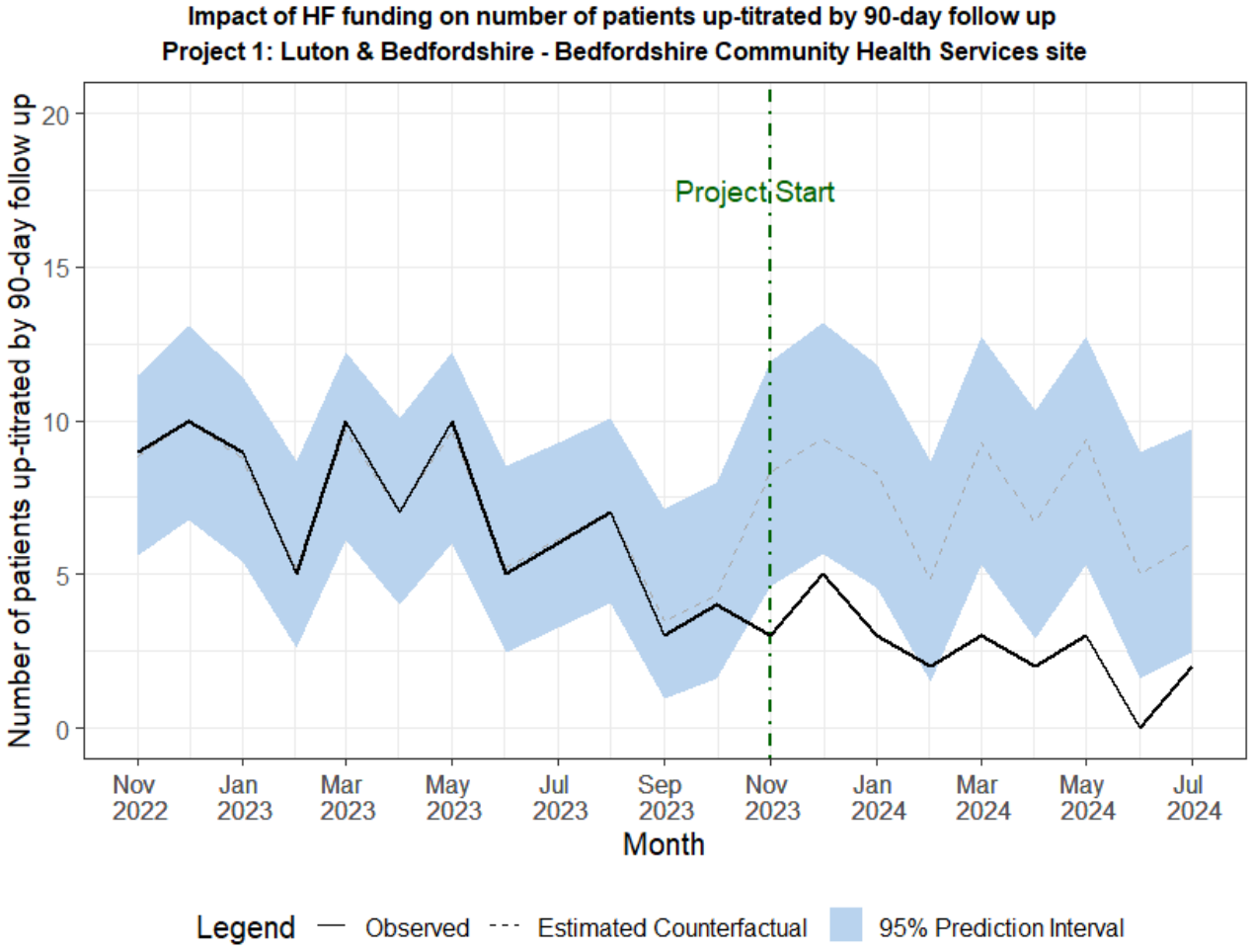
Figure 5.1 ITS plot for the impact of HFTFP on the number of patients seen by the community HF team (Bedfordshire Community Health Services)



5.3.1.2 Patients that have been up titrated by 90-day follow-up (metric 10)

This metric is defined as the total number of patients that have been up-titrated by the 90-day follow-up. The aim of the HFTFP was to cause an increase in this metric. The best estimate of the model was that the HFTFP, on average, caused a statistically significant decrease of 4.9 percentage points (see Figure 5.2). The 95% CIs indicate that the true effect could range from a decrease of 6.7 to 3.1 percentage points per month. The data for the month of August 2024 was excluded from analysis due to because it was an anomalous data point due to data quality issues.

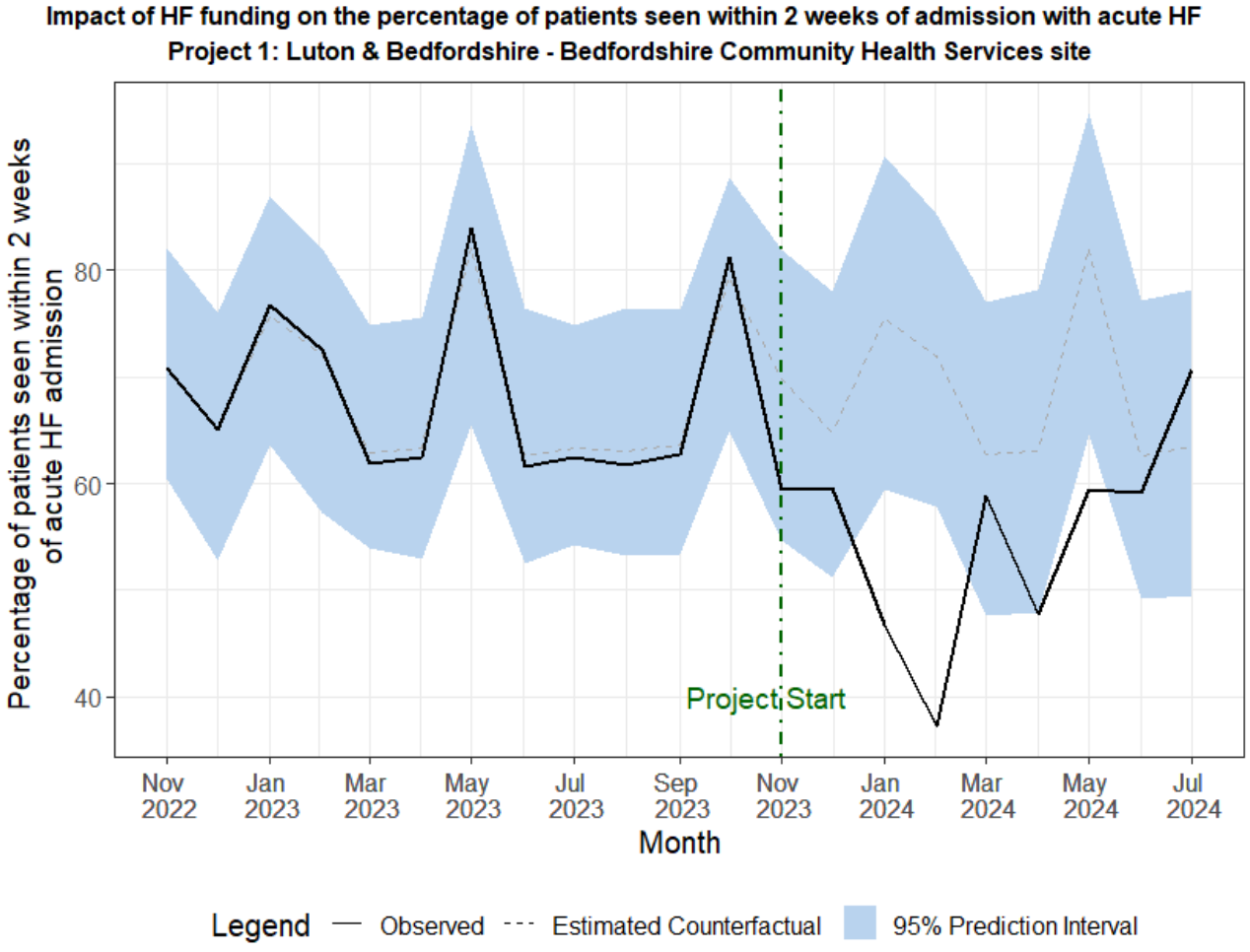
Figure 5.2 ITS plot for the impact of HFTFP on the number of patients up-titrated by the 90-day follow-up (Bedfordshire Community Health Services)



5.3.1.3 Patients seen within two weeks after an admission with acute HF (metric 14)

This metric is defined as the number of patients seen within two weeks after an admission with acute HF, as a percentage of the total number of patients diagnosed with acute HF. The aim of the HFTFP was to cause an increase in this metric. However, only data for new patients and not those already known to the service were provided for this metric, which means this may not be an accurate reflection of the project's total impact. The best estimate of the model was that the HFTFP, on average, caused a statistically significant decrease of 18 percentage points (see Figure 5.3). The 95% CIs indicate that the true effect could range from a decrease of 23 to 12 percentage points per month.

Figure 5.3 ITS plot for the impact of HFTFP on the percentage of patients seen within 2 weeks (Bedfordshire Community Health Services)



5.3.2 Project 1: Luton & Bedfordshire - Cambridge Community Health Services site

This section highlights the results of any significant findings from for this site. For the CCS site, the HFTFP was found to significantly impact one metric, the total number of patients seen by the community HF team (metric 3).

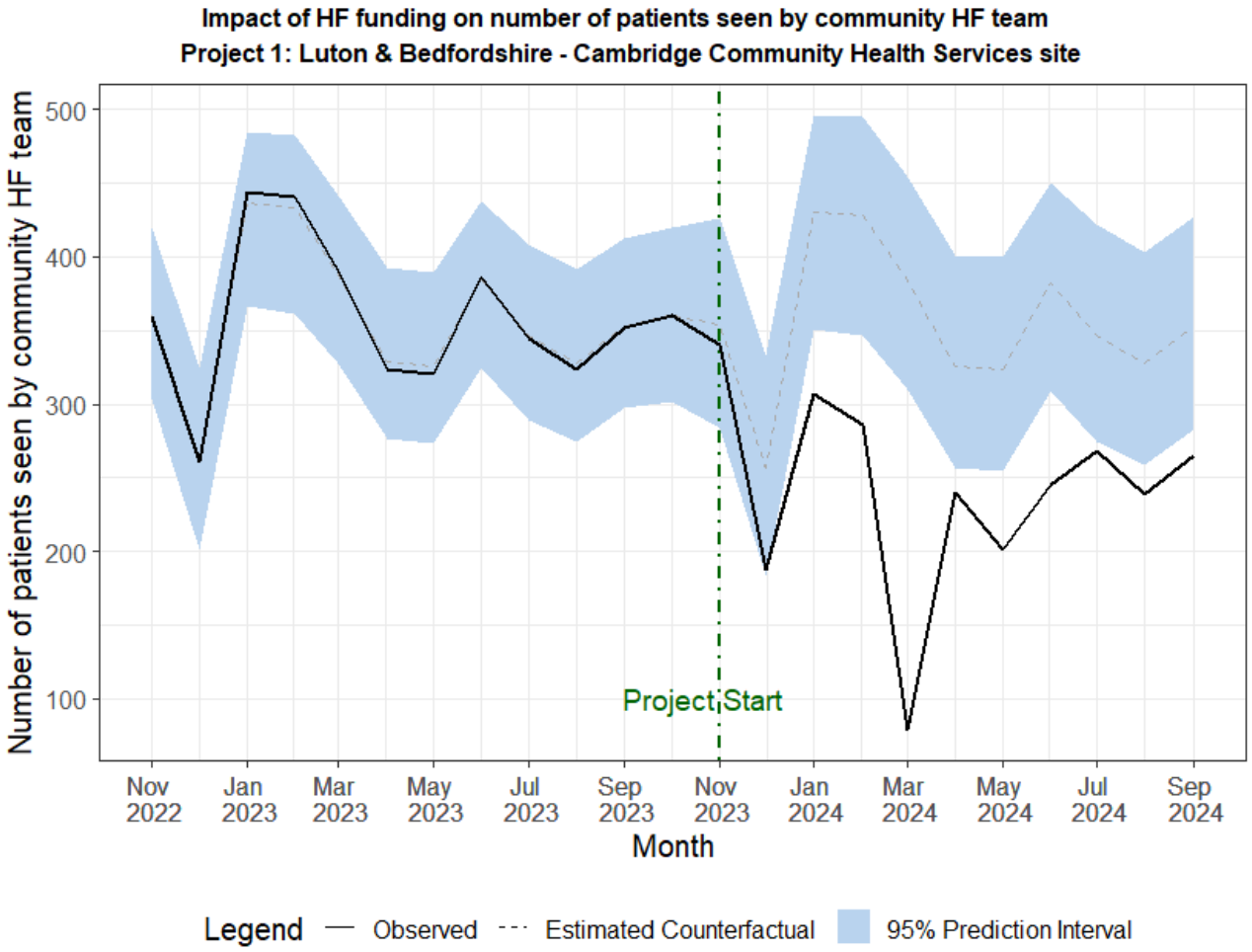
Again, it is important to recognise that there are data capture and collection challenges across these metrics for CCS. This means the data provided and impact analysis results may not present an accurate reflection the project's impact and outcomes. Further monitoring and analysis of this data would be beneficial to confirm or contest these findings.

5.3.2.1 Patients seen by the community HF team (metric 3)

This metric is defined as the total number of patients seen by the community HF team. The aim of the HFTFP was to cause an increase in this metric. However, it is noted patients that are already known to the service and returning to caseloads are not recorded as new patients and therefore not reflected in these numbers. Additionally, projects that aim to use or enhance use of remote

monitoring may result in less patient contact with community HF teams. The best estimate of the model was that the HFTFP, on average, caused a statistically significant decrease of 57 patients per month (see Figure 5.4). The 95% CIs indicate that the true effect could range from a decrease of 99 to 18 patients per month.

Figure 5.4 ITS plot for the impact of HFTFP on the number of patients seen by the community HF team (Cambridge Community Health Services)



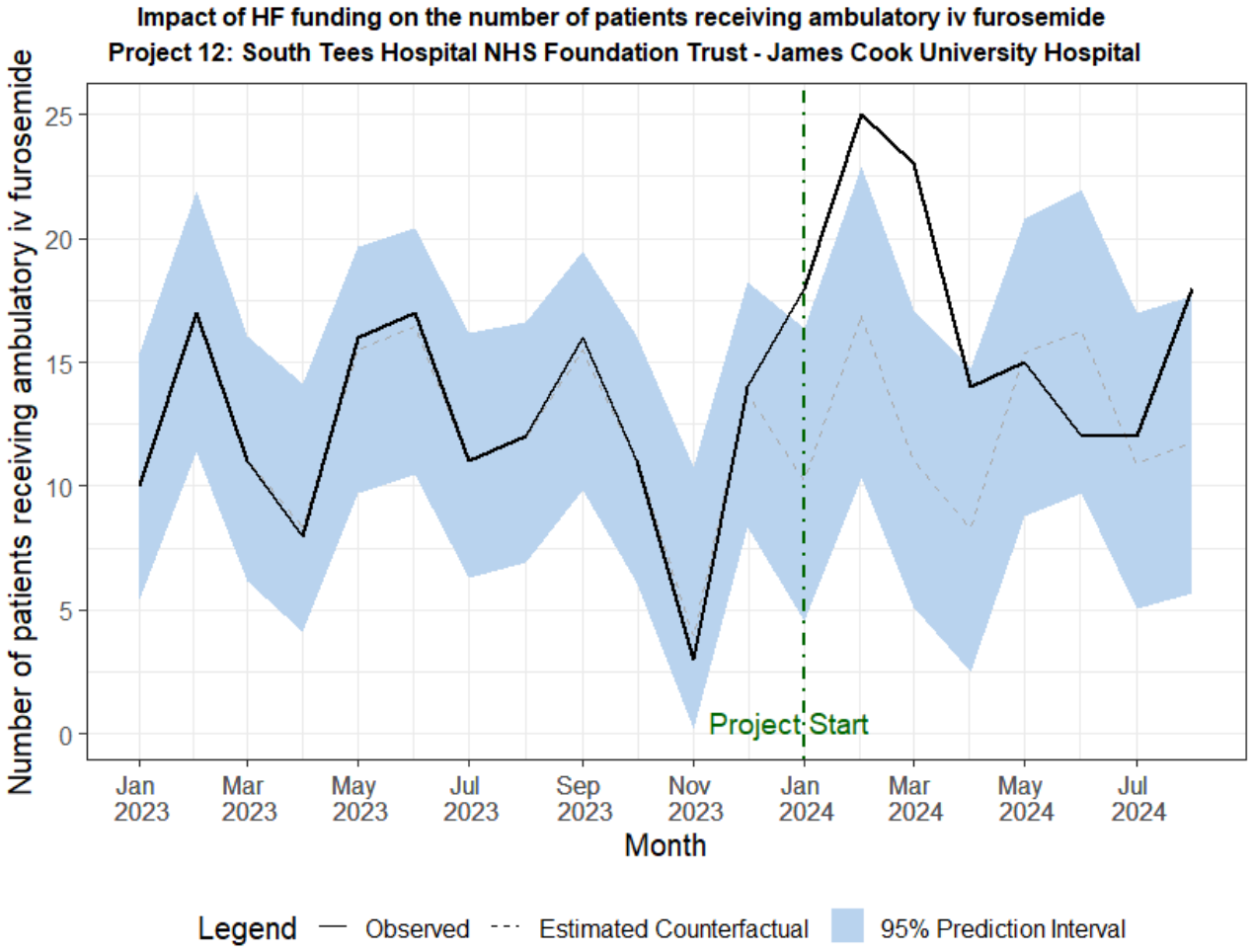
5.3.3 Project 12: South Tees Hospital NHS Foundation Trust - James Cook University Hospital

This section highlights the results of any significant findings for this project. For the South Tees Hospital NHS Foundation Trust project (1 site), the HFTFP was found to significantly impact two metrics: 1) patients receiving ambulatory IV furosemide (metric 11); and 2) the number of admitted HF patients that were entered into the NICOR NHFA (metric 13).

5.3.3.1 Patients receiving ambulatory IV furosemide (metric 11)

This metric is defined as the number of patients that received ambulatory IV furosemide during their admission for HF. The aim of the HFTFP was to cause an increase in this metric. The best estimate of the model was that the HFTFP, on average, caused a statistically significant increase of 4.5 patients receiving ambulatory IV furosemide per month (see Figure 3.5). The 95% CIs indicate that the true effect could range from an increase of 1.6 to 7.6 patients per month.

Figure 5.5 ITS plot for the impact of HFTFP on the number of patients receiving ambulatory IV furosemide (South Tees Hospital NHS Foundation Trust)



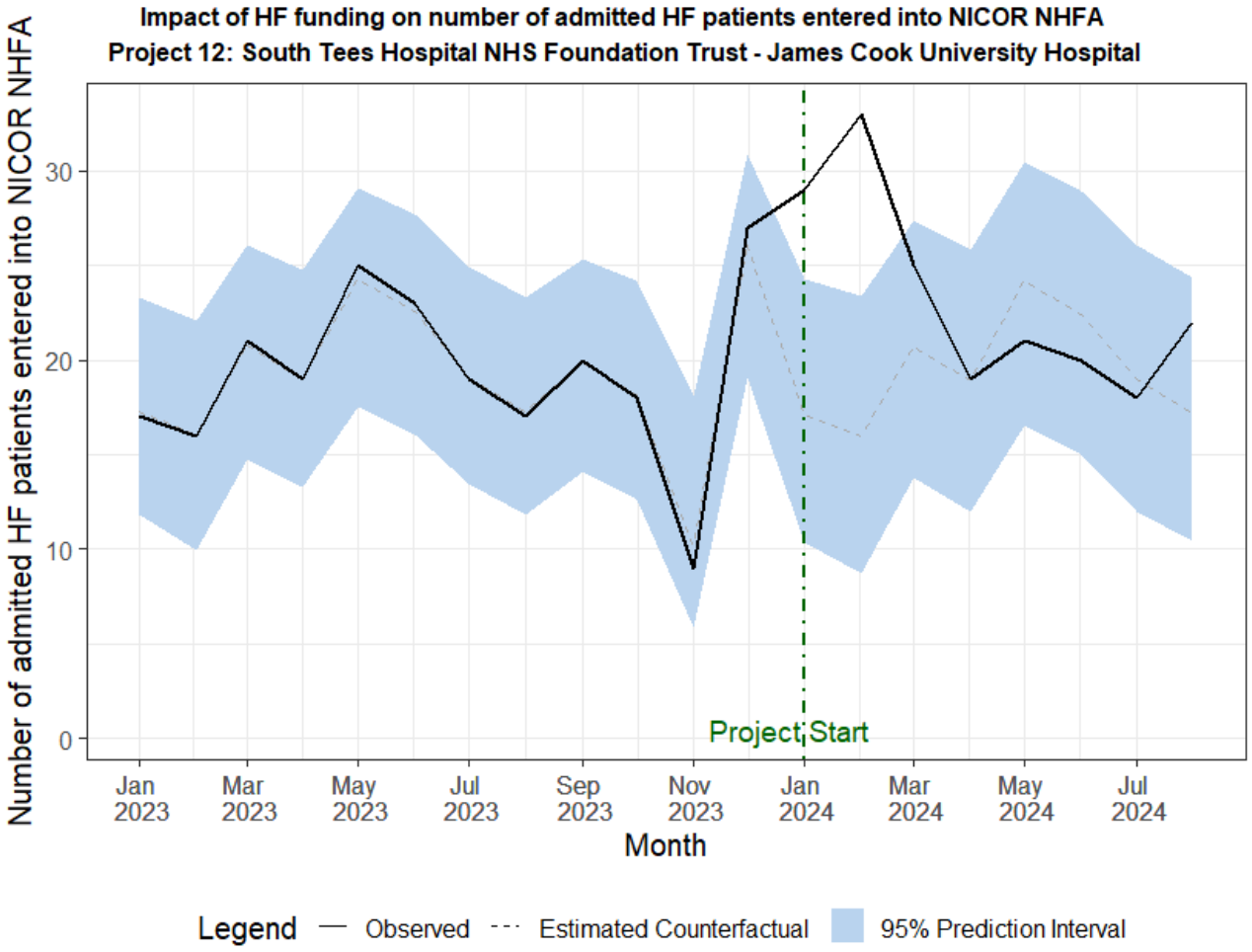
5.3.3.2 Admitted HF patients that were entered into the NICOR NHFA (metric 13)

This metric is defined as the number of patients that met the following criteria:

- HF with HFpEF
- HF with HFmrEF
- HF with HFrEF.

The aim of the HFTFP was to cause an increase in this metric. The best estimate of the model was that the HFTFP, on average, caused a statistically significant increase of 3.9 patients being added to the NHFA, per month (see Figure 5.6). The 95% CIs indicate that the true effect could range from an increase of 0.61 to 7.4 patients per month.

Figure 5.6 ITS plot for the impact of HFTFP on the number of admitted HF patients that were entered into the NICOR NHFA (South Tees Hospital NHS Foundation Trust)



5.4 Site-level analysis – non-case study projects

Where there was insufficient data to conduct national level analysis (i.e., meta-analysis) for a metric, then site-level analyses were also conducted for any non-case study projects. Table 5.1 highlights the results of any significant findings from this analysis.

Table 5.1 Table summarising the significant results of additional individual site-level analyses, for bespoke metrics

Metric	Project Site	Effect Size	Lower CI	Upper CI
Up-titrated by 90-day follow-up (metric 10)	George Eliot Hospital (Coventry and Warwickshire ICS project)	16	6.3	26
Emergency HF Admissions (metric 15)	Yeovil District Hospital	-32	-16	-48

5.4.1 Patients that have been up-titrated by 90-day follow-up (metric 10) – Coventry and Warwickshire project

This metric is defined as the number of patients that were up-titrated by the 90-day follow-up. The aim of the HFTFP was to cause an increase in this metric. The best estimate of the model was that the HFTFP, on average, caused a statistically significant increase of 16 patients per month at George Eliot Hospital (Coventry and Warwickshire project). The 95% CIs indicate that the true effect could range from an increase of 6.3 to 26 patients per month.

5.4.2 Emergency HF admissions (metric 15) – Yeovil District Hospital project

This metric is defined as the number of admissions with HF in the primary category of admissions. The aim of the HFTFP was to cause a decrease in this metric. The best estimate of the model is that the HFTFP, on average, caused a statistically significant decrease in emergency HF admissions by 32 per month, at Yeovil District Hospital. The 95% CIs indicate that the true effect could range from a decrease of 16 to 48 HF admissions per month.

5.5 Recommendations for future impact analysis

An impact evaluation conducted at a later date, using a more complete dataset, may be able to more precisely and robustly identify the impact of the HFTFP. In particular, if data was available from unfunded projects, this would mean other methodologies (such as synthetic control or comparative ITS) could be used which are likely to offer a more precise estimate of impact.

Many of the sites were not hosting projects that had been implemented for a sustained period to allow for the effects of the intervention to be found in the data (see Section 3.4.1 and Section 4 for project start dates) meaning that an evaluation done at a later date may be better able to identify impact.

This analysis only used data from projects which were able to provide it, which introduces the potential of selected bias, and also reduced the total sample size. If a later analysis was able to access, through the NICOR, a full complete dataset which included data for all sites both funded

and unfunded, it would be able to run a more robust analysis. This would also allow for more pre-intervention data as well as control groups, which would help provide a more precise estimate of impact.

There are likely to be difficulties associated with accessing a full dataset from NICOR due to the type of research question being asked. If the emphasis is solely on estimating the national level impact of the HFTFP, then potentially this analysis could be done through aggregated national audit data provided that it ensured no output names or identified any specific sites. However, if the research question is focussed on identifying the site-level impacts, this would almost certainly require a more complex information governance process between the NICOR (as data controller) and the analytical team (as data processor) due to the potential for sites being identified.

It is also worth noting that NICOR do not collect data on all of the metrics used in this report (for example, number of patients up titrated by 90-day follow-up), and they do not collect data on any community services meaning that any evaluation based on NICOR data would have to focus exclusively on in-hospital activity.

The code underpinning this analysis can be made available to support any future analysis, although it is likely an analysis based on the full dataset could be more effectively performed using a more complex statistical method that, for example, used unfunded sites as a control group. This would require access to the national NHFA data.

6. Conclusions and recommendations

6.1 Introduction

The 2023/24 HFTFP provided non-recurrent targeted funding of c. £4.4 million (out of a total funding pot of £4.6 million) to Networks to enhance HF services across England. The programme aimed to fund projects which: increased early detection of HF outside acute settings; provided rapid access to a HF specialist/MDT during admission; and/or offered better personalised planning to reduce unnecessary length of stay in hospital and reduce HF readmission. It also aimed to improve service experience, outcomes, and quality of life for patients with HF by ensuring they have access to specialist care and a HF MDT across the patient pathway.

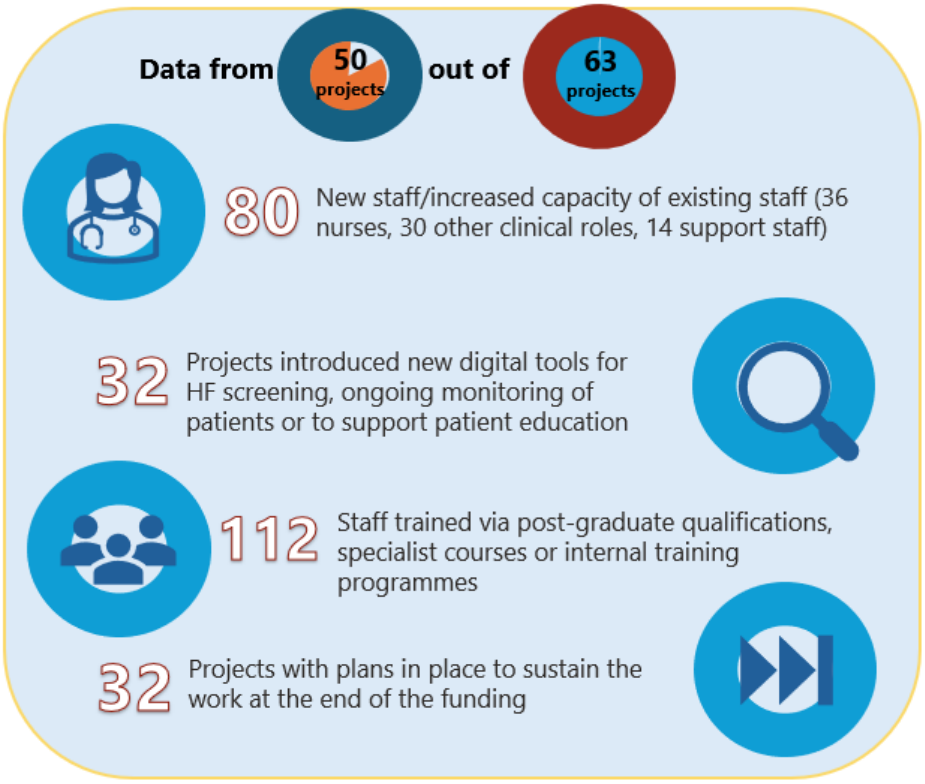
The evaluation collected data from projects that received funding via a project tracker (44 projects, of which 40 submitted a project tracker), in-depth case studies (11 out of 12 projects selected as case studies and not included in the project tracker) and impact analysis (14 projects were able to provide sufficient impact data for inclusion in the analysis).

This section provides an overview of what has changed in HF services as a result of the funding and reflections from those who have led HFTFP projects on the programme as a whole. This is followed by specific conclusions and recommendations organised by those that are relevant across HF services, and those that are relevant to findings in case study themes. Recommendations are provided for both NHSE and HF services in response to the conclusions.

6.2 What has the HFTFP changed?

The HFTFP has facilitated investment in HF services in a variety of ways including staffing, training and digital technologies. Figure 6.1 provides a summary of what is new in HF services as a result of the funding. This includes things that have been confirmed as delivered, as well as those that are still planned to be delivered but have experienced delays. These changes will not necessarily be sustained, given the short-term nature of the HFTFP funding. Further discussion is provided in the subsequent sections.

Figure 6.1 Summary of changes in HF services from funded projects from all project data



6.3 Reflections on the HFTFP

Project stakeholders were asked to provide their reflections on their experience of engaging with the HFTFP. Reflections included:

- The HFTFP and similar funding programmes are valuable in supporting services to make changes, test new ways of working and begin work they may have struggled to complete otherwise
- Despite challenges measuring the impact of funding, all project tracker responses reported actual or intended benefits of the projects, including increased capacity, improved quality of patient care and staff development. Some case study projects also described early benefits of their projects including improved post-discharge care processes, increased capacity within HF services and improvements in quality of life for patients
- Project stakeholders reported that expertise and capacity are required to develop proposals and associated project plans for funding schemes such as the HFTFP. There were concerns that this may mean the process is not equitable where services don't have access to support for proposal development. Staff have previously absorbed proposal writing into their roles, but this was reported to be increasingly challenging. Some project tracker responses requested more

advance notice of non-recurrent funding schemes such as the HFTFP to allow extra time for developing proposals.

6.4 Cross-cutting conclusions and recommendations

The following section presents conclusions drawn from across all three parts of the evaluation and provides recommendations for NHSE and HF services.

6.4.1 Project funding

Conclusions

- Project stakeholders reported issues caused by the funding being non-recurrent, lasting only a year and being released part way through the financial year, with several projects having to be paused while awaiting confirmation the funding would still be available and could be carried over into 2024/25
- Seven projects confirmed they were no longer delivering their projects in the project tracker. Some of these projects are no longer proceeding due to funding being reallocated to other projects or returned to the ICB baseline. One case study project is also no longer proceeding with the HFTFP funding reallocated to the ICB baseline
- Projects in receipt of non-recurrent funding, such as the HFTFP, experience sustainability challenges, with trusts and/or ICBs unable to provide ongoing financing, particularly where they have a financial deficit.

Recommendations for NHSE

- Two years was suggested as a more feasible time period for these kinds of projects. It is important that funding is available at the start of the financial year and projects are not subject to delays linked to processes for receipt through their ICB or other routes
- NHSE should monitor and track funding distribution more closely to assess whether services have accessed the funds and how they have used them. There should also be clear routes for funding distribution and communication about this between the programme team and projects
- Releasing funding in stages may reduce the risk of money being distributed that cannot be spent. For example, allocating and releasing a proportion of the funding to set-up a project and once it is confirmed as ready to deliver, releasing the remainder of the funding with agreement from local finance teams that this can be spent in full.

Recommendation for HF services

- Project teams should link in with finance teams at ICB and Trust level on agreement of the funding to support efficient access to funding and support for project delivery. For example, ensuring funding is located and to confirm when it is expected to reach teams.

6.4.2 Project implementation and delivery challenges

Conclusions

- Many funded projects have experienced delays with implementation, with some not yet started at the time of writing. For example, 10% (4/39) of projects reported in the tracker that they are yet to start delivery, and four case study projects had also not formally started. This has led to project delivery extending well past the 2023/24 HFTFP funding cycle and evaluation period in most cases
- Project tracker findings suggest the average length of time taken to start a project from the release of the HFTFP funding was seven months.

Recommendation for NHSE

- The HFTFP has prioritised improving early detection of HF, enhancing provision of rapid access to a HF specialist during an admission and better post-discharge support for HF patients. Delivering transformation activities to support these ambitions is challenging and requires detailed plans with evidence provided as part of proposals of support from relevant clinical, operational and system leads. As part of the funding process for this (and similar schemes) there should be further scrutiny on bids to assess the potential delivery risks and mitigations in place.

Recommendation for HF services

- HF services should consider the likelihood of carrying short-term funding over to another financial year and the time needed to set-up projects when creating proposals.

- Capacity to deliver has continued to be a challenge throughout implementation for several projects. This includes teams lacking operational or project management capacity and having to balance projects alongside usual HF service delivery.

Recommendation for HF services

- Project leads should include how the capacity for project work will be protected as part of project planning. Using some funding for dedicated project management support should be considered.

- Projects have experienced challenges navigating local governance processes to secure approval to proceed with plans. These include: gaining IG approvals where data sharing was

required; clinical approvals to adopt a new intervention; and contracting processes, particularly for projects using new tools or infrastructure. The time required to navigate these processes has led to delays and limited progress for some projects.

Recommendations for HF services

- Project teams should factor in additional time to complete governance processes (for example, completing DPIAs or data processing agreements) when planning their project
- Project plans should outline the governance processes that will need to be completed prior to projects commencing.

- The time taken to recruit staff to support projects has been a common challenge to delivery. Project teams have developed various ways to overcome recruitment challenges. These include: using funding to increase the hours of existing staff; building project activities into existing roles; or working with bank staff. Having the flexibility to adapt funding plans was reported to be helpful for some projects. Using existing staff has also supported plans for sustaining project activities as it has meant they can more easily be absorbed into existing roles.

Recommendations for NHSE

- NHSE should review with proposal leads whether recruitment is necessary for short-term projects, or whether capacity for delivering pilot work can be secured from existing resources through training or offering additional hours to existing staff. If recruitment is essential, the time for this should be clearly identified in proposals and evidence requested of how these roles might be sustained beyond the funding
- NHSE should continue offering flexibility with project funding, allowing projects to overcome challenges and repurpose their resources if required.

Recommendation for HF services

- Services should determine whether recruitment is necessary for introducing a short-term project, or whether capacity for delivering this work can be ringfenced or secured in other ways that take less time.

- Using HFTFP funding to build on existing work and initiatives was reported to support progress, and overcome challenges, across several projects. Projects that have done this reported they have not had to spend as much time securing buy-in, completing governance processes, or developing new pathways for their projects.

Recommendation for HF services

- Projects may benefit from exploring ways of using short-term funding to continue or build on work that has already began or can be enhanced, to reduce the time required to set-up a project.

- Project stakeholders suggested that sharing learning would have been helpful throughout the programme, giving them the chance to meet colleagues delivering similar initiatives and helping them to problem solve delays or challenges.

Recommendation for NHSE

- NHSE should provide projects with structured opportunities for sharing learning with each other, particularly in the early stages of the programme when projects are being set-up, to support them to overcome challenges and mitigate delays.

6.4.3 Stakeholder engagement

Conclusions

- Stakeholder engagement was highlighted as key to project delivery in both case study projects and the project tracker. This included project teams needing to secure buy-in from external stakeholders, such as primary care or hospital staff in aligned services
- Collaboration, enthusiasm and support from project and wider HF teams as well as leadership has also facilitated project progress and driven activities forward. However, projects that have not had project management support or been supported by senior staff within their organisations reported this as a limiting their ability to make progress
- Some projects overcame these challenges by adopting targeted communication strategies to highlight the potential benefits of the project with key stakeholders and addressing additional pressures linked to the project on other services.

Recommendation for NHSE

- NHSE should request evidence of senior leadership support for the project within the project proposal, as well as expect that dedicated project management resource is costed into to the project (where required). The proposal process should provide advice and guidance for engaging senior 'project champions'.

Recommendation for HF services

- Project teams should prioritise engagement with key stakeholders, including those in aligned services, in the design and proposal process to ensure buy-in is secured from the outset. This can be done by developing a communications plan with targeted messaging that addresses existing or potential concerns raised by these groups.

6.4.4 Monitoring the impact of HFTFP projects

Conclusions

- Monitoring the impact of the HFTFP has been a challenge for both funded projects and the evaluation. NICOR do not currently collect any data from community HF services, therefore this

limits the amount of nationally collected data that can be provided for an impact analysis of projects involving these services. With national data unavailable for the evaluation period from the NHFA, the evaluation team have relied on local data collection for the impact analysis

- In responding to local data requests, many projects reported difficulty collecting appropriate data to monitor their projects and evidence outcomes
- The outcome of this has meant the quality of data provided for the impact evaluation has varied and has not always been appropriate or available for analysis; overall, 14 projects provided sufficient baseline data to be included in the impact analysis.

Recommendation for NHSE

- Develop an MDS when designing a funding scheme and require projects to identify which metrics they will collect data for as part of their proposals. Use existing metrics where possible, to allow for data to be available for the pre- and post-intervention period.

- In addition, the delays projects experienced shortened the post-intervention data collection period. This means the amount of data required to measure impact has not been available during the evaluation period and has resulted in limited impact analysis results.

Recommendation for NHSE

- For a more complete impact evaluation, this could be conducted once NHFA data is available for the project delivery period (although with the recognised limitations of not including community HF data). This would allow for the use of control groups. The required data, however, will not be available for 18 months after projects have started, taking into account the processes for the NHFA to collect and report HF audit data.

- Projects that are designed with a clearly associated impact measure are more likely to be able to demonstrate impact, which can support business cases for sustaining activities following short-term funding. Projects which rely on enhancing an existing offer, or delivering new interventions which have an existing supporting evidence base, rather than introducing untested innovative practices, may be more suitable for short-term funding arrangements. The case studies have shown that innovation projects can take longer to deliver where new processes, stakeholder support and recruitment are often required. Innovation should be supported by commitment to evaluation and oversight to share learning and NHSE resources may not be sufficient to provide this in wide ranging schemes such as the HFTFP.

Recommendation for NHSE

- National funding programmes with short timescales should focus on supporting projects which deliver interventions with an existing evidence base. This makes it more likely they will have existing data to demonstrate impact and be able to be delivered within the funding

cycle. Innovation projects with no or limited evidence to suggest their impact might better be supported through a separate innovation-focused programme.

Recommendation for HF services

- Design short-term projects with specific impact measures in mind (taken from the MDS if provided). Ensure this data is available and complete prior to completing the project plan and associated proposal.

6.4.5 Sustainability

Conclusions

- Plans for sustainability vary by project. 69% (27/39) of project tracker projects reported plans for sustaining their work, either by integrating the activities into business as usual or developing business cases to secure further funding. This was also reported by case study projects, with reflections that collecting data and evidencing the impact of projects is key to developing plans for the future and securing additional funding
- Some projects reported risks to plans to sustain the work, including a lack of funding locally and recruitment challenges.

Recommendation for NHSE

- Templates and guidance on how to turn a project into a business case should be included as part of the support offer for projects accessing short-term funding schemes.

Recommendations for HF services

- Sustainability should be considered from the outset of project design. This includes being clear how measurement of impact will be undertaken and when. Services should also ensure that they have agreed plans with local commissioning decision-makers, including the evidence expected to be presented in support of any business case for sustained funding
- Explore ways project activities may be embedded within services to become business as usual. For example, by upskilling teams to deliver project activities as part of their normal duties or building on work that already exists.

6.5 Conclusions and recommendations for the case study themes

6.5.1 Introducing digital tools to HF services

6.5.1.1 Integrating digital tools

Conclusions

- Introducing new digital tools is likely to require IG approval and IT system integration. The case study projects in this theme both experienced challenges related to these requirements
- Accessing uptake and usage data for digital tools is important to demonstrate their potential impact, but there have been challenges with accessing appropriate monitoring data.

Recommendations for HF services

- Using a digital tool for HF services may require extra integration and set-up work to ensure that the right data sharing processes are in place. Services should build in time for this from the design stage and respond quickly to overcome delays
- HF services should outline how they will monitor the use of digital tools from the outset and agree as part of contracting arrangements how they will work with digital tool providers to support data collection and evaluation. They should also consider what access or integration of the tools is needed to gain accurate and appropriate data to monitor their projects.

6.5.1.2 Building on existing use of digital tools

Conclusions and recommendations

- Both sites reported the benefits of building on existing work, rather than introducing a new tool. For example, L&B had already secured funding for Doccla so were able to use HFTFP funding to provide additional capacity. Both sites identified that there was already familiarity, buy-in and evidence of benefits from previous work which avoided further delays securing engagement from stakeholders, accessing data or setting up contracts from the beginning. In K&M there are also hopes previous experience of using the tool will support a future business case for ongoing funding, as it has already been evidenced to improve patient outcomes and impact on key metrics.

Recommendation for HF services

- Using short-term funding to set-up and introduce new digital tools may be challenging given the timeframes. Services already using digital tools should consider how short-term funding can enhance or adapt their use, for example by expanding them out to new patient cohorts or improving pathways around them.

6.5.2 Enhancing community detection of HF

Conclusions

6.5.2.1 Aligning project goals across primary and secondary care

- Collaborative service improvement projects across primary and secondary care may require more time during the initiation phase to align project objectives; satisfying two sets of organisational procedures and requirements and securing stakeholder support
- For example, despite a strong collaborative environment between the HF specialist outreach team and primary care colleagues, the CWHFT roaming screening clinic project has faced several clinical governance-related delays, broadly due to a changeover in the primary care services provider and the need to clarify organisational clinical responsibilities and processes when patients are transferred between service providers
- For the UHoL HF Champion project, a period of education and upskilling facilitated by the HF specialist team has enabled primary care colleagues to develop the knowledge and confidence needed to formulate local service improvement plans. This extended project planning phase means that, despite the first HF Champions being appointed in June/July 2024, all targeted initiatives remain in the planning phase at the time of writing. Due to these delays, neither project has progressed enough to submit data for the impact evaluation, but both expect to be able to evidence change within six to 12 months.

Recommendation for HF services

- Projects working across primary and secondary care organisations should include early activities to develop a shared vision and align project aims with organisational priorities. This is important to ensure projects receive wider stakeholder support. This is likely to require additional time than setting-up a single organisation project, which should be factored into project planning. Ideally it would be part of the process to develop a funding proposal.

6.5.2.2 Providing specialist supervision for primary care colleagues to support sustainable transformation

- For the UHoL project, current HF Champions reported that education and mentoring from the HF specialist team has enhanced their knowledge, clinical skills and confidence in detecting and managing HF in primary care settings. The project encourages sharing of learning and service improvements, enabling the impact of the funding to be spread across the PCN
- Although the CWHFT project is likely to increase detection rates of HF in underserved areas during the funding period, its focus on detection without corresponding upskilling in primary care may limit its long-term benefits. Currently, the project is not investing resources to also improve the management of HF in primary care and may unintentionally place additional strain on secondary care services as a result.

Recommendation for HF services

- Early evidence suggests that using targeted funding to upskill primary care colleagues in a clinical specialty may be a sustainable approach to improving the detection and management of specific conditions in primary care. As the UHoL project is in its early phases, the effectiveness and sustainability of this approach should continue to be monitored.

6.5.2.3 Addressing health inequalities

- The self-selection of HF Champions using a non-competitive process for the UHoL project may have unintentionally discouraged participation from colleagues working in PCNs in more deprived areas, which may have competing priorities and fewer resources
- A targeted approach to HF screening based on specified risk factors, as part of the CWHFT project, is likely to reduce health inequalities by improving the identification of HF in underserved groups and those with multi-morbidities.

Recommendation for NHSE

Programme funders should continue to ensure primary care recipients of funding are mandated to address health inequalities and have a clear plan for evidencing impact in this area.

6.5.3 Patient education

Conclusions

6.5.3.1 Consultation with primary care when planning a short-term project

- Both projects encountered challenges with securing support from primary care. In both instances the project teams were directed to their local LMC where they spent considerable resource communicating the intervention's aims and securing agreement to participate, causing project delays
- In SSoT, primary care engagement was secured through the repurposing of some of the project funding.

Recommendation for HF services

- When developing a short-term project proposal involving primary care, hold early discussions to establish whether there is support for the proposed activities. Explore whether it may be necessary to direct some project funding to primary care engagement activities.

6.5.4 Rapid up-titration of HF medications

Conclusions

6.5.4.1 Importance of routes for prescribing medication

- At KCHFT and NLAG, rapid up-titration is supported by dedicated HFSNs who do not have a prescribing qualification; they rely on their close relationships with the HF consultants to ensure prescriptions changes are made
- Several of the WY community HF nursing teams intend to have multiple HFSNs involved in implementing rapid up-titration, some but not all have prescribing qualifications. This has resulted in the development of two SOPs; nurse prescribers will write prescriptions and those without a prescription qualification will rely on pre-existing arrangements for making changes such as requesting prescriptions from GPs. It was acknowledged that this process will take longer and would likely lengthen the rapid up-titration process.

Recommendation for HF services

- Services should develop SOPs for medication optimisation led by nurse prescribers and non-prescribers; where non-prescribers are facilitating optimisation, services need to have efficient routes to access prescriptions and where possible, support HFSNs managing rapid up-titration to become prescribers.

6.5.4.2 Rapid up-titration inclusion and exclusion criteria

- Both projects have based their work on the STRONG-HF trial, and there have been challenges deciding the inclusion and exclusion criteria that determine which patients are appropriate for rapid up-titration
- At KCHFT, the team originally expanded the STRONG-HF criteria. Since delivery began, there have been limited patient numbers being referred for rapid up-titration and one reason for this was reported to be the inclusion criteria. There were suggestions this be expanded further to better reflect the profile of patients accessing support from KCHFT's service. There have also been challenges with referrals for patients who are not appropriate and do not meet the criteria
- Determining appropriate inclusion and exclusion criteria has also been a key consideration in WY and HNY, with MDT discussions taking place to identify appropriate patients. In WY, stakeholders from Leeds Community Healthcare NHS Trust are considering offering rapid up-titration to all patients whose medication is not optimised, not just those recently discharged from hospital.

Recommendation for HF services

- STRONG-HF provides a useful starting point for determining inclusion and exclusion criteria for rapid up-titration, but as STRONG-HF was designed as a randomised controlled trial, exclusion criteria are strict and can limit the number of identified patients. Services should use clinical judgement to review and adapt the trial inclusion and exclusion criteria, ensuring they account for local context and the characteristics of their patients.

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