



Integrated Care Pilots Evaluation: Final Report

British Heart Foundation

July 2015





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British Heart Foundation

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Contents

Glossary of Terms	1
Executive summary.....	3
1 Introduction to the pilots and the evaluation	7
1.1 The Integrated Care Pilots set out to test new approaches to integration	7
1.2 Aims and objectives of the evaluation.....	9
1.3 Evaluation methods.....	10
1.4 Report structure	11
PART 1: INTEGRATED CARE PILOTS IN ENGLAND.....	12
2 Context to integrated care in England	13
2.1 Integration in England has been supported by various policy developments; notably the NHS Five Year Forward View	13
3 Project level findings: NHS Bristol	15
3.1 Update since the last visit	15
3.2 Implementation.....	16
3.3 Outcomes and impacts	18
3.4 Sustainability	21
3.5 Monitoring and evaluation	22
4 Project level findings: East Cheshire NHS Trust	23
4.1 Update since the last visit	23
4.2 Implementation.....	24
4.3 Outcomes and impacts	25
4.4 Sustainability	29
4.5 Monitoring and evaluation	29
4.6 Concluding points.....	29
5 Project level findings: North Somerset CCG	31
5.1 Update since the last visit	32
5.2 Implementation.....	32
5.3 Outcomes and impacts	33
5.4 Sustainability	35
5.5 Monitoring and evaluation	36
5.6 Concluding points.....	36
6 Project level findings: Oxleas NHS Foundation Trust	37
6.1 Update since the last visit	37
6.2 Implementation.....	38
6.3 Outcomes and impacts	39
6.4 Sustainability	42
6.5 Monitoring and evaluation	42
6.6 Concluding points.....	43
PART 2: INTEGRATED CARE PILOTS IN WALES	44
7 Context to integrated care in Wales	45
7.1 Integration is becoming a more prominent theme in Welsh policy	45
8 Project level findings: Abertawe Bro Morgannwg University Health Board	47
8.1 Update since the last visit	47
8.2 Implementation.....	48
8.3 Outcomes and impacts	49

8.4	Sustainability	54
8.5	Concluding points.....	54
9	Project level findings: Betsi Cadwaladr University Health Board	55
9.1	Update since the last visit	56
9.2	Implementation.....	56
9.3	Outcomes and impacts	58
9.4	Sustainability	60
9.5	Monitoring and evaluation.....	61
9.6	Concluding points.....	61
PART 3: INTEGRATED CARE PILOTS IN SCOTLAND	62	
10	Context to integrated care in Scotland	63
10.1	Integration is a core theme in Scottish policy	63
10.2	CVD recommendations and standards support integrated care in Scotland.....	63
11	Project level findings: NHS Fife	65
11.1	Update since the last visit	65
11.2	Implementation.....	65
11.3	Outcomes	66
11.4	Sustainability	67
12	Project level findings: NHS Lanarkshire	68
12.1	Update since the last visit	68
12.2	Implementation.....	68
12.3	Outcomes and impacts	70
12.4	Sustainability	71
13	Project level findings: NHS Tayside	72
13.1	Update since the last visit	72
13.2	Implementation.....	72
13.3	Outcomes and impact	74
13.4	Sustainability	75
14	Analysis of project monitoring returns	77
14.1	Inputs and outputs.....	77
14.2	Patient level outcomes	83
14.3	Service and system level outcomes.....	89
14.4	HCP level outcomes.....	92
14.5	Risks identified and lessons learnt.....	93
15	Conclusions and recommendations	95
Annex 1	References	99
Annex 2	Interview topic guides	101
Annex 3	Detailed evaluation questions	110

Glossary of Terms

- ABMU – Abertawe Bro Morgannwg University Health Board
- AF – Atrial Fibrillation
- AFEQT – Atrial Fibrillation Effect on Quality of life questionnaire
- BACPR - British Association for Cardiovascular Prevention and Rehabilitation
- BCUHB – Betsi Cadwaladr University Health Board
- BHF - British Heart Foundation
- BME – Black and Minority Ethnic
- CCG – Clinical Commissioning Group
- CCM – Chronic Conditions Management
- CHD – Coronary Heart Disease
- CIED – Cardiac Implantable Electronic Device
- COPD - Chronic obstructive pulmonary disease
- CR - Cardiac Rehabilitation
- CRTD / CRT-D – Cardiac Resynchronisation Therapy with Defibrillators
- CSU – Commissioning Support Unit
- CVD - Cardiovascular Disease
- ECG – Electrocardiogram
- EoL – End of Life
- FTE – Full-Time Equivalent
- GPwSI - GP with a Special Interest
- HCP – Health Care Professional
- HF – Heart Failure
- HITS - Home Intravenous Therapy Service
- ICC – Inherited Cardiac Conditions
- ICT – Implantable Cardioverter Defibrillator
- IV – Intravenous
- KPI – Key Performance Indicator
- LES – Local Enhanced Service
- LTC – Long Term Condition
- LVSD – Left Ventricular Systolic Dysfunction
- MAU – Medical Assessment Unit
- MCN – Managed Clinical Network
- MDT – Multi-Disciplinary Team
- MI - Myocardial Infarction
- NBT – North Bristol Trust
- NICE – The National Institute for Health and Care Excellence
- NICOR – The National Institute for Cardiovascular Outcomes Research

- NSCP – North Somerset Community Partnership
- NYHA – New York Heart Association
- OFT – Oxleas Foundation Trust
- PAM – Patient Activation Measure
- PCT – Primary Care Trust
- POS – Patient Outcome Survey
- QOF - Quality and Outcomes Framework
- WTE – Whole Time Equivalent

Executive summary

In December 2012, the British Heart Foundation (BHF) commissioned ICF to undertake an evaluation of the Integrated Care Pilots programme. A Baseline Report was produced for this study in September 2013. This was followed by an Interim Report, which was produced in August 2014. This is the summary of the Final Report from the study.

BHF is promoting the management of cardiovascular disease (CVD) as a long-term condition (LTC). Better integration between services is widely seen as fundamental to the effective management of LTCs. The Integrated Care Pilots programme therefore acts as a contribution to the evidence base on 'what works' in integrating and coordinating services. Over £1 million was invested in nine pilot projects in three of the home nations - shown in the Figure below:

Figure 1: Projects were implemented in Scotland, Wales and England



The funding was predominantly to support new posts for healthcare professionals (HCPs). Four overarching outcomes were set at programme level:

- improved service quality by improving referral pathways and care coordination;
- improving patient quality of life;
- up-skilling HCPs in improved identification of care needs for patients; and,
- implementing preventative measures including improved identification and diagnosis.

The overall aim of the evaluation was to: *“Evaluate the different approaches taken by the projects, creating an evidence base and set of recommendations of service redesign that can influence those commissioning and providing services for heart patients, improving outcomes for people with heart disease.”* To meet this aim, the evaluation tracked progress around the programme cycle, looking at: the rationale for intervention / service design; implementation; and outcomes achieved and lessons for future efforts.

A mixed-methods approach was used to gather evidence. This included: policy and literature reviews to scope the topic of 'integration'; repeating rounds of site visits – including interviews with post-holders, patients and local stakeholders; analysis of monitoring information submitted by sites; two rounds of expert interviews (on integration); and economic analysis of two sites' data.

Overall, findings from the evaluation are very positive: there is much to celebrate in terms of outcomes achieved at the patient level, and in terms of sustainability of the new approaches piloted. Going forward, it will be valuable for BHF to capitalise on these achievements through its ongoing development work.

The main **conclusions** from the evaluation are therefore that:

BHF's work on integrated care will continue to benefit from a supportive policy context

The programme was delivered within a favourable policy context. All three nations regard integrated care as a 'solution' for improving the patient journey for those with long term conditions, as well as a possible efficiency solution for increasingly restricted public sector funding. The push towards better integrated care has continued to grow in the three years that the programme has been implemented. The scene is therefore set for a continued focus on integrated care in policy and practice.

The programme has prioritised service development and CVD management systems

Projects within this programme have focussed on two main areas: 1) the extension of existing services or the implementation of new services for CVD patients; and 2) the improvement of CVD patient management systems in primary care. Projects have therefore been designed to address inequalities of access and gaps in patient care. Whilst this has been the primary focus, projects have also built in activities for improving HCP knowledge and awareness. Integration has been largely approached by improving coordination across secondary, primary and community healthcare.

Integration takes time – it depends on relationship building

Successful integration in the programme was dependent on positive relationships being built. These relationships took time to develop, and project challenges reflected this: engagement with primary care was reported as a common challenge. A substantial amount of time was also required in setting up the project – delays or changes in staffing often presented challenges in this respect. This has meant that projects were only starting to mature in the later stages of the programme.

The programme has evidenced strongest impact at the patient level

Data reporting has varied across projects, with some sites submitting far higher quality returns than others. Site visits identified challenges with reporting for some projects. Nonetheless, the programme has been able to show impact at the patient level in terms of an increased number of patients being offered a new/improved service over the course of the programme; patients perceiving that their care was integrated; patients reporting improvements in health outcomes; and patients reporting that they were more empowered as a result of the programme interventions. Patient interviews have also shown outcomes in relation to better coordination of care; their satisfaction with services received; improved knowledge, understanding of condition, and confidence; and in some cases physical, psychological/emotional, and social outcomes being reported.

Impact at the HCP level has been in terms of improved knowledge, confidence and clinical practice

There were over 200 teaching sessions delivered across the programme. Impact at the level of HCPs has been reported in terms of improved CVD related knowledge, confidence and clinical practice. Postholders have also identified a number of benefits resulting from the opportunity to be funded by the BHF for this programme. These benefits include the opportunity to work in an area of patient care which they are passionate about, as well as the learning gains from being in the job, formal and informal training, and access to programme and other BHF events.

Conclusive evidence on service and system level outcomes has not been generated

In part because of the heightened analytical difficulties of doing so, evidence of impact at the system level has been weaker, with many projects not reporting on key indicators (e.g. reduced hospital utilisation and cost savings). Whilst three projects have been able to report a reduction in unplanned admissions (total of 198), and one project an impact on average length of hospital stay (reduction of 3 days), it is perhaps too early to make significant programme-level conclusions based on this limited

evidence. Impact at the system level was also reported in terms of knowledge transfer, improved medical management and improved integration resulting in more holistic patient care. The economic evaluation of two projects has also shown promise with potential savings outweighing project costs

The programme has successfully led to sustainable change

Project visits have indicated that the ‘pump priming’ model adopted by BHF has been successful. Of the nine projects piloted through the programme, five have been sustained locally, and two had substantial plans for sustainability in place at the time of visits. The two remaining projects planned for sustainability in terms of utilising the learning generated – these projects were never intended to be sustained in their current form since they were audits of existing practice.

Elements of the programme could usefully be replicated

Nine pilots were established under the broad theme of ‘integration’. Pilots interpreted this to address local needs and priorities, setting up services to improve perceived local deficiencies in services, patient experience and outcomes. The programme was not focused on the implementation of a single ‘integrated care’ model, but was deliberately permissive in allowing local areas to address local needs. It was therefore characterised by heterogeneity, making more general conclusions difficult. Nonetheless, and accepting all the limitations implied by the diversity within the programme, common elements of good practice can be seen. These include: the use of in-reach to actively identify patients following admission; supported discharge to ensure that care is integrated in the transfer from secondary to primary / community care; nurse-led follow-up clinics in community settings, providing specialist care closer to home for patients; and support to improve systems for record keeping / identification in primary care, alongside the provision of evidence-based advice and nurse-led clinics to improve patient management.

Building on these conclusions, the main **recommendations** from the evaluation are that:

BHF has an important role to play in supporting integrated care

Integration is a strong theme in current policy. The question facing health and social care systems is not ‘whether’ integration, but ‘how’ to do it. Systems therefore need examples, models, evidence and guidance. This programme has demonstrated that BHF is a key player in this regard – providing an example of stimulating innovative practice in integrated care for patients with CVD. BHF should continue to drive forward this agenda since it has much to contribute in terms of advancing knowledge and practice, and building on the learning generated here. In particular the new BHF ‘House of Care’ programme stands to benefit from learning in relation to ‘what works’ in implementing change in this area.

Longer investment in programmes may yield greater impacts

Providing integrated care requires substantial system-level change. This is no easy task, and the programme has shown that more time was often required than initially anticipated – both to set up the project, but also to engage with different sectors and organisations. BHF should therefore consider whether future programmes should be designed with this in mind. A programme with a longer lead-in time and overall duration would provide the opportunity to observe more fully the outcomes and impacts achieved by mature projects. This would also benefit sustainability plans: projects which have been sustained more easily were those which planned for this at an early stage by engaging with commissioners and gathering evidence which showed impact. A longer programme would allow for greater impact to be observed as project staff become better skilled in both their delivery and data collection.

Future efforts in this area should consider how changes implemented can be ‘scaled up’

Going forward, the learning should be used to ‘scale up’ or extend on the sorts of changes supported by this programme. ‘Scaling up’ in this sense is not necessarily about increasing scale in terms of extending services, number of patients, or widening geographies, but is about working more fully across the local system. For example, by implementing relevant interventions for patients and HCPs, as well as working to improve infrastructure to support change, and by working across healthcare, social care, and the voluntary sector in order to embed change. The House of Care programme offers an opportunity to address this, and learning garnered from this new programme should include reflections on ‘what works’ in this type of scaling up.

Monitoring and evaluation arrangements for future programmes should be refined

The programme has also generated important learning in relation to the management of the programme, particularly in terms of monitoring and evaluation. Capacity and skills for self-evaluation and reporting varied greatly across the projects. Particular ways in which refinements to processes could be made include: balancing a standardised approach to indicator setting against a more tailored approach (i.e. 'top-down' versus 'bottom-up'); setting realistic expectations of what can be achieved with data collection within the project resources (measuring a few things well); and improving the reporting systems used – for example by allowing inputters to re-access/print off their completed template.

Learning from the programme should be disseminated widely

As highlighted above there is much to celebrate in terms of the achievements of the programme. A three-year programme is relatively short for change to be properly embedded. Yet impact – certainly at the level of patients – has been observed, and sustainability has been achieved for the majority of projects. BHF should therefore seek to disseminate findings as widely as possible. This should include showcasing exemplar projects both internal and external to the BHF. Whilst other BHF programmes could benefit from this, so too could BHF benefit in its capacity of seeking influence amongst policymakers, service developers, and commissioners. There is also valuable learning to be shared across health charities who are involved in similar work, (e.g. Macmillan, Age UK, Kings Fund, The Health Foundation).

Good practice from the programme should be replicated at the level of the service or – perhaps more powerfully - the system

Any of the common elements of good practice noted above would merit replication in themselves. Even where there are differences in national context / system, there are reasons to think that practice is transferable (e.g. the core of the primary care development work in Scotland does not seem particular to that context). Local areas considering improving the integration of care between secondary and primary settings therefore have models and lessons to choose from within this programme. Yet it should also be noted that these models can be combined to improve systems of care; BHF should also therefore consider how they might advocate approaches at a system (rather than single model or service) level to improve integration. Again, the House of Care programme provides a means of taking this forward.

1 Introduction to the pilots and the evaluation

In December 2012, the British Heart Foundation (BHF) commissioned ICF (then ICF GHK) to undertake an evaluation of the Integrated Care Pilots programme. A Baseline Report was produced for this study in September 2013. This was followed by an Interim Report, which was produced in August 2014. This document contains the final evaluative output from the study – the Final Report.

1.1 The Integrated Care Pilots set out to test new approaches to integration

BHF is promoting the management of cardiovascular disease (CVD) as a long-term condition (LTC). Better integration between services is widely seen as fundamental to the effective management of LTCs. The Integrated Care Pilots programme therefore acts as a contribution to the evidence base on ‘what works’ in integrating and coordinating services. Over £1 million was invested in nine projects across the UK (shown in Figure 1.1).

Figure 1.1 Projects were implemented in Scotland, Wales and England



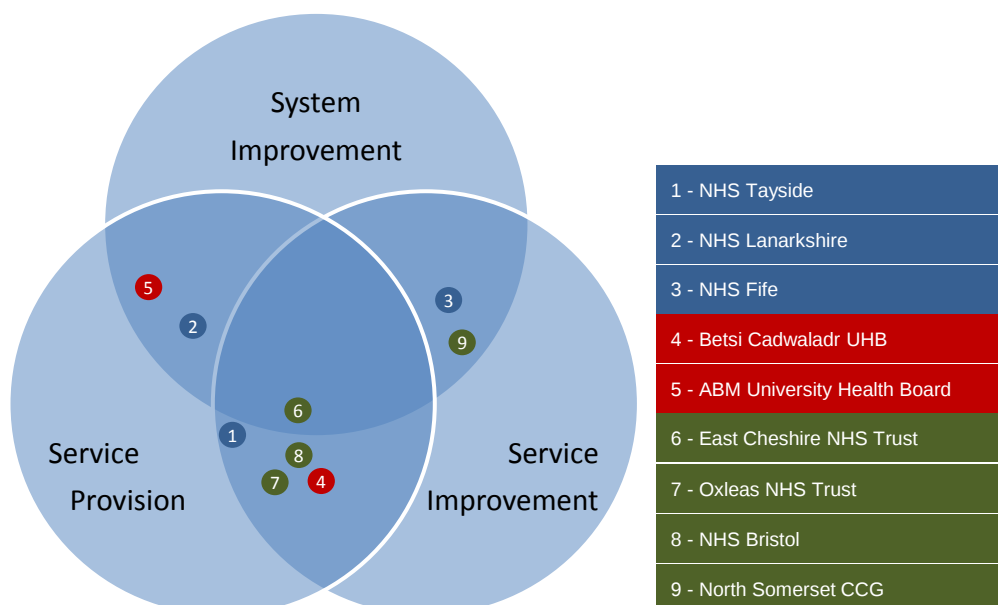
The funding was predominantly to support new posts. Four overarching outcomes were set at programme level:

- improved service quality by improving referral pathways and care coordination;
- improving patient quality of life;
- up-skilling HCPs in improved identification of care needs for patients; and,
- implementing preventative measures including improved identification and diagnosis.

As shown in Figure 1.2, project activities were varied: each implemented a locally-tailored service to address the challenge of integration. Service improvement and expanding service provision were core features of the projects. Seven of the projects delivered an extension of

service provision; two of these also targeted system improvement, and one delivered all three types of activity. Seven projects also delivered service improvement – four in combination with extended service provision, and two in combination with system improvement. There are a total of five projects which delivered some form of system level improvement.

Figure 1.2 Service improvement and service expansion were core features

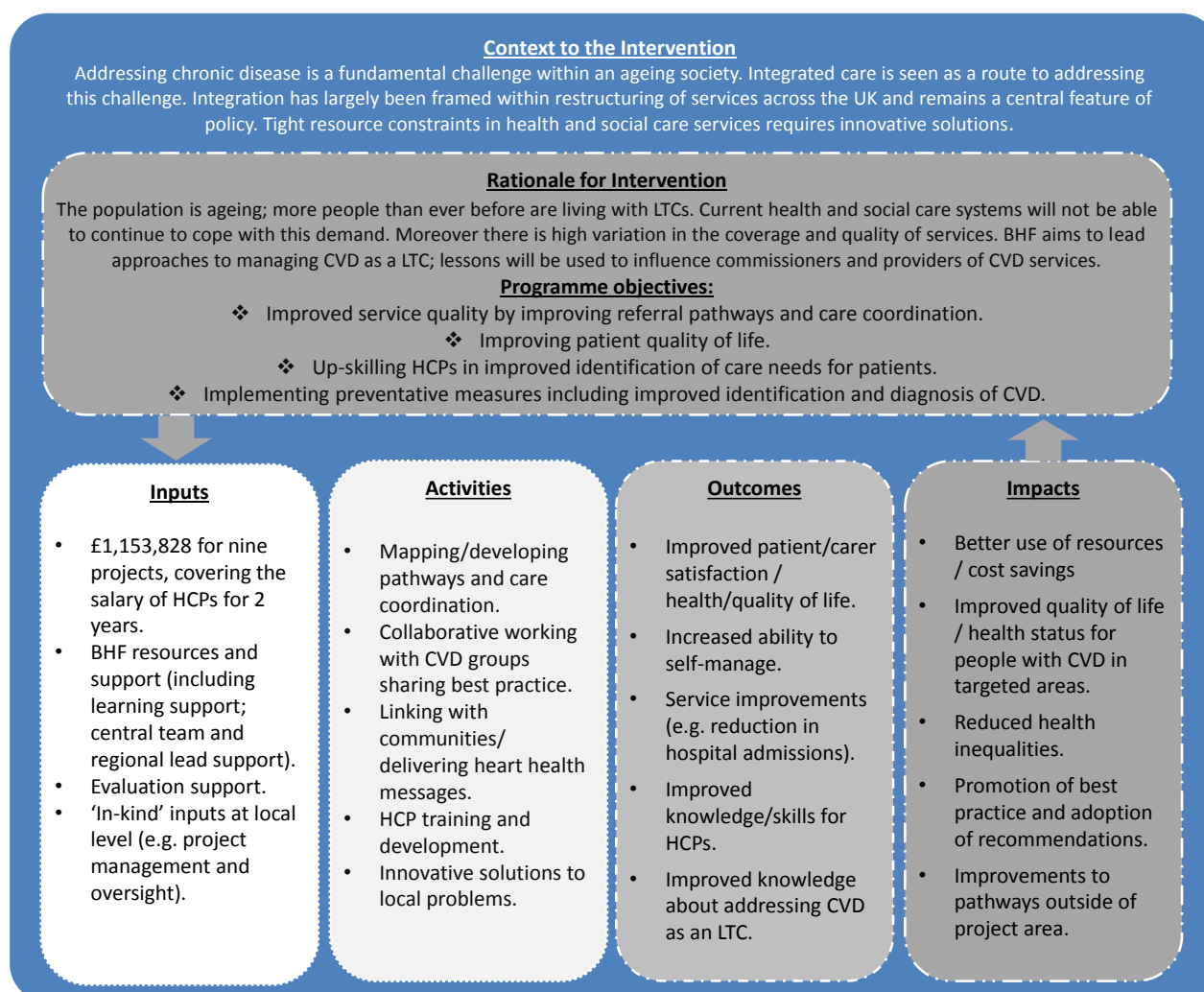


System improvement – focussed work on systems within and/or between sectors and organisations, for example audits and IT system improvements;
Service improvement – work to improve the functioning of existing services / pathways;
Service provision – establishing new services / extension of existing / reinstatement of previously existing services.

This report contains information and analysis relating to each pilot. Readers wanting further detail on each of the models used – and their evolution over time – are also kindly referred to the Baseline and Interim Reports from the evaluation.

The programme logic model summarises the main common elements across the pilots; it is presented below.

Figure 1.3 Programme logic model



1.2 Aims and objectives of the evaluation

The overall aim of the evaluation, as given in the terms of reference, was to:

“Evaluate the different approaches taken by the projects, creating an evidence base and set of recommendations of service redesign that can influence those commissioning and providing services for heart patients, improving outcomes for people with heart disease.”

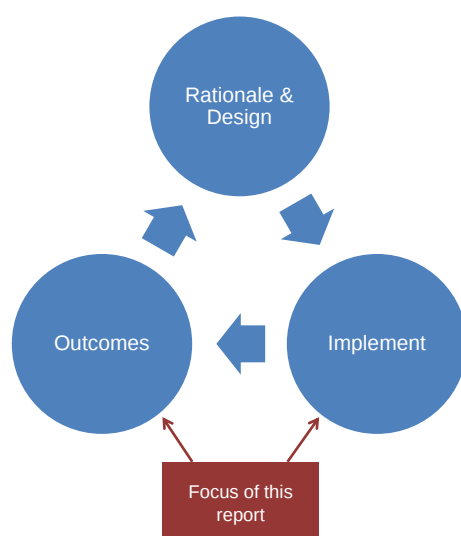
A detailed series of research questions underpinned this aim (presented in Annex 3). These questions cover a wide range of themes and issues that span the policy / programme / project cycle, in that they cover issues relating to the:

- Rationale for intervention / service design;
- Implementation; and
- Outcomes achieved and lessons for future efforts.

The evaluation was therefore designed to track progress around this cycle. The Baseline Report examined early issues relating to rationale, design and implementation; the Interim Report moved a stage around the cycle and concentrated on implementation and outcomes, this Final Report examines outcomes more fully, whilst also describing the implementation ‘story’ for each project (illustrated in Figure 1.4).

The method for the evaluation also maps onto the programme cycle. It is described in more detail below, and comprises of three stages: baseline, interim and final.

Figure 1.4 The evaluation has been designed to track progress around the programme cycle



1.3 Evaluation methods

Evidence gathered at this final stage came from five sources:

- A third series of day visits to each of the nine funded sites, (leading on from the first and second visits during the baseline and interim stages). These visits comprised: interviews with project management staff, Healthcare Professionals (HCPs); local stakeholders involved in the project; patients; and reviews of the project bids / any other documentation provided by the project. During these visits and follow-up telephone calls we interviewed: 22 BHF post-holders funded by the programme; 31 other HCPs/staff involved in the projects; nine partners to the projects (such as local commissioners and GPs); two BHF Area Development Managers; and nine patients.

Fieldwork was conducted in November 2014 -February 2015; information in this report reflects projects' development at that time;

- A review of policy on 'integration' to provide contextual information;
- Interviews with four national experts (Don Redding, National Voices; Jon Glasby, Health Services Management Centre; Chris Bruce, Joint Improvement Team; Tim Warren, The Scottish Government);
- Data from two sites (East Cheshire and Abertawe Bro Morgannwg University ABMU) for economic analysis; and
- Data from projects' quarterly and annual monitoring returns. Templates for these returns were designed in collaboration with BHF, taking as indicators the outputs and outcomes specified in the programme logic model above.

1.4 Report structure

The remainder of this report is structured in the following sections:

- PART 1 – Sections 2-6 present an examination of the four English pilots in the programme. The context of integrated care and national policy drivers is summarised in Section 2, and Sections 3-6 present project level findings from qualitative and quantitative analysis of fieldwork and monitoring returns submitted by projects. The focus of project level findings is on implementation and outcomes achieved to date, as reported in qualitative interviews during the visits. In addition, Section 4 contains the economic analysis for East Cheshire. Quantitative data from the project returns is presented separately in Section 14;
- PART 2 – Sections 7-9 examine the two Welsh pilots in the programme, with Section 7 summarising the policy context, and Sections 8 and 9 presenting the project specific findings. Section 8 also contains the economic analysis for ABMU;
- PART 3 – Sections 10-13 examine the three Scottish pilots in the programme. Section 10 presents a summary of the Scottish policy context, and Sections 11-13 present the project specific findings;
- Section 14 then provides some analysis at programme level, presenting findings from the project returns. It draws out common themes and issues emerging across the projects; and
- Section 15 draws the above together into a series of conclusions and recommendations.

The main body of the report is supported by the following Annexes:

- Annex 1 – References used in the report.
- Annex 2 – Research tools used in the fieldwork.
- Annex 3 – Detailed questions for the evaluation

PART 1: INTEGRATED CARE PILOTS IN ENGLAND

2 Context to integrated care in England

This section contextualises the programme. It updates the policy context described in the Interim (August 2014) and Baseline (September 2013) reports. A description of the main policy initiatives is augmented by national stakeholder views on progress with integration in practice.

2.1 Integration in England has been supported by various policy developments; notably the NHS Five Year Forward View

As highlighted in previous reports, policy measures in recent years have created the 'integration agenda' in England. These have focused on supporting both horizontal (integration across health and social care), and vertical (integration across primary, secondary, and community healthcare) integration. For example:

- *The Health and Social Care Act* (HM Government 2012) sets out duties for the health care system including how it should work in a more integrated way with social care. Within the Act, integration was presented as a means of improving quality and outcomes as well as a way to reduce inequalities.
- A mandate from the Government to the NHS (2012) promotes integration as important for managing ongoing conditions *"so that we, our families and our carers can experience a better quality of life; and so that care feels much more joined up, right across GP surgeries, district nurses and midwives, care homes and hospitals."* (Department of Health, 2012, pg 5).
- *Integrated Care and Support: Our Shared Commitment* (Department of Health 2013a) identifies integrated care as a solution to major pressures placed on the health care system and the large change needed to achieve better health and experiences for people: *"Our shared vision is for integrated care and support to become the norm in the next five years."* (pg 8). This includes efforts to support local areas to develop models of integrated care which use these coordinated networks and will assemble people who have experience of delivering such care to provide assistance and expertise.

More recent policy developments extend the integrated care agenda further:

- Better integration is a specific area in which NHS England, in its role as system lead, is promoting at the national and 'regional' level (Department of Health 2012). In the *NHS five year forward view*, NHS England sets out its ambitions for the future. A core part of this vision involves greater integration of health and social care in order to deliver better care to patients, including acute hospitals working more closely with other forms of care, and more multidisciplinary teams operating in the community (NHS England 2014).
- *The Better Care Fund* is an investment (drawn largely from NHS funding) which is described as: *"a single pooled budget for health and social care to work more closely together in local areas, based on a plan agreed between the NHS and local authorities."* (Local Government Association and NHS England 2013, pg 1). Implementation formally began in April 2015, and recent estimates expect the fund to pool around £5.3bn in investment (House of Commons 2015).
- *The Care Act 2014* (HM Government 2014) builds on recent government reforms, replacing past laws, to establish a new approach to adult social care. The Act introduces new duties for local authorities, partners and rights for carers and service users. In addition, the Act promotes integration by introducing statutory requirements for local authorities to ensure *"the integration of care and support provision with health provision and health-related provision"* (HM Government, 2014, pg 3).

2.1.1 Integration is a proposed solution for improving CVD outcomes in England

The Government has also set out specific policy related to CVD and the integration of care.

- *Cardiovascular Disease Outcomes Strategy* (Department of Health 2013b) identifies ten key measures for action which can be grouped into five main areas: Prevention; Integration; Management; Life with CVD; and Intelligence. In relation to integration specifically, the strategy stresses the importance of integrating health and social care services to address the spectrum of conditions related to CVD. It states that, to achieve this, there must be further integration of care across the CVD pathways, including the development of new service models and a re-alignment of the interactions between acute, primary and social care services.

The recommendations outlined in the Government's CVD Outcomes Strategy add to existing NICE quality standards and guidelines on CVD prevention and treatment. In these, NICE propose approaches to reduce the incidence of CVD through a wide range of preventative actions, including the implementation of local and regional prevention programmes (NICE 2010). NICE has also issued guidance for commissioners which includes a greater focus on integrated approaches for prevention of CVD, and pooled budgets for the implementation of local CVD strategies (NICE 2012).

2.1.2 English stakeholders indicate more needs to be done to take integration forward

Interviews with national stakeholders paint a mixed picture of the progress of integration in England. There is acknowledgement that *"the drive towards integrated care is going to continue"* in the years to come, but that present and future circumstances pose a significant challenge to integration. For example, interviewees stated that the financial restrictions and structural changes that have occurred in the health and social care sectors in recent years have left many services fragmented and that this poses a barrier to integration. Comments also included that in general HCPs across different roles still fail to engage with one another; this can negatively affect working relationships when attempting to integrate services.

Nevertheless, stakeholders noted that health professionals working in single condition teams were aware of the importance to work across conditions in the future, particularly as *"people are not getting what they should get from condition specific professionals"*. One interviewee commented that where integration has worked well, professional stability has been key, as well as teams which include dedicated people who champion integration.

Looking forward, interviewees stated that the biggest issue for integration will continue to be financial. With this in mind, stakeholders thought that it was important to demonstrate the cost savings involved in integration to commissioners.

3 Project level findings: NHS Bristol

The project was established to meet growing demand for Heart Failure (HF) services, to tackle inequitable provision of community services in the north and south of the NHS Bristol area, and to improve identification and diagnosis of HF patients. In addition, the project was established to provide education and awareness-raising to primary care HCPs to support early identification of HF patients and to ensure that patients are referred onto the appropriate pathway.

The project delivers an in-reach service to acute hospitals to facilitate early discharge and provide community follow-up care. The process includes specialist nurses meeting patients in hospital and working with secondary care staff to ensure that appropriate discharge plans are in place. They then follow-up patients within a couple of days after discharge in the community setting - titrating onto the correct medication, embedding self-care through information provision and advice, and making referrals (e.g. to social care). Home visits and longer appointment times are important features. Patients are also offered the option of using an established telehealth service¹ to facilitate self-care (although it is recognised that this is not appropriate for all patients).

The project received £194,671 in funding over two years to employ the following HCPs:

- one Band 6 specialist HF nurse (this is a job share, two part-time members of staff are employed);
- one Band 4 assistant practitioner.

The BHF-funding is the only cash input; there are significant in-kind contributions in the form of line management of the BHF-funded HCPs and the contribution of venues for community clinics.

3.1 Update since the last visit

At the time of the last visit, the project was delivering all components of the project. The in-reach function was perceived to be working well, community follow up was taking place and the specialist nurses had spent time providing clinical advice and guidance to other HCPs on how to most effectively manage HF.

Since then, referral rates to the service have increased. This is attributed to a combination of factors including: a reduction in beds in the cardiac ward of the hospital; increased pressure on hospital beds over the winter months; increased awareness of the service and its benefits; and new practice within the hospital that means all cardiology admissions are seen by a cardiologist. As planned, most referrals have come from in-patient wards (a combination of the general medical ward and cardiology ward).

As a result of the increased referrals and larger caseloads, there has been a steady increase in the number of clinical contacts the specialist nurses have had with patients per month². As caseloads have increased, there has been a focus on ensuring cases are appropriately prioritised and there is now a triage process in place. The HCPs' line manager has overseen this process.

The role of the assistant practitioner has continued to evolve, although the purpose of the role remains to "support the productivity of the team". At the time of the last visit, the assistant practitioner's responsibilities included: recording ECG results, conducting basic assessments of patients, preparing all clinical records for doctors and the specialist nurse to look at, and

¹ All heart failure telehealth patients are given a small mobile device, blood pressure cuff, scales and a questionnaire about their symptoms. They are taught to take measures and input information, which is sent directly to a lead nurse, who can then monitor remotely and recognise deterioration early so that proactive care can be offered.

² According to analysis of data from the Bristol Community Health electronic system (RIO)

monitoring the telehealth returns in order to alert the specialist nurses to any risky cases. Since then, as the caseloads of specialist nurses have increased, she has started to undertake some of the in-reach work as well.

Although not originally planned as a component of the project, a peer support group has recently been established. Two meetings of around eight patients have taken place. It is intended that the group will be patient-led, with support from a nurse as required. It is likely that the nurse will arrange for a range of other HCPs to attend the peer support sessions, including occupational therapists, dieticians and physiotherapists. The patients will decide on the topics that they would like information on. The HCPs consider the peer group will be very beneficial:

“As a healthcare professional, you can say something until you are blue in the face. But ultimately you haven’t lived the experience. It has greater resonance coming from someone who has”.

Processes for clinical supervision have continued and been developed further. HCPs are required to participate in four formal sessions per year.

3.2 Implementation

The main aspects of the project that are considered to have worked well are:

- Building links with secondary care HCPs. Both nurses worked in secondary care in their previous roles and so had existing links with secondary care HCPs, including cardiologists, which has helped to establish the service quickly. They recognised the difficulty of engaging secondary care HCPs (*“Even if they can see the benefits of the service you’re offering, at the end of the day, you’re another person asking them to fill out another form”*) but felt that their previous experience meant they were well-positioned to overcome the challenges:

“We knew perhaps the right people to influence. We’ve really had to use relationships built over time. If someone had been appointed without those relationships it would have been even harder”.

Other stakeholders saw these links as being pivotal to the project’s successful implementation.

- Having strong line management support for the new community team. While the nurses’ secondary care background has been crucial, their lack of previous community nursing experience has meant that both specialist nurses have required strong line management support. Having the support of the line manager to provide clinical guidance was cited as having been fundamental to building the nurses’ confidence and ability to work autonomously and has been a significant in-kind input. There was also recognition that making the transition from secondary care to community nursing requires time:

“[It] does not happen in three months, it takes a long time to do”.

The main challenges experienced have been:

- Increasing awareness and knowledge among HCPs of the new service in order to generate referrals:

“It has taken time for other HCPs to become confident in the service. This comes with time. Initially, referrals were definitely slow”.

As noted above, it has helped that the specialist nurses had existing links with secondary care HCPs and, over time, referral rates have increased. Recently, the service has started receiving referrals from the cardiologist outpatient clinic, which was not originally anticipated and indicates growing confidence in the new service. Similarly, there have been an increasing number of referrals from the medical admissions unit.

- Achieving sustained up-skilling of ward staff. There are currently a lot of vacancies on hospital wards and a relatively high reliance on agency staff. This makes it difficult for project staff to build relationships and means that they rarely see the same staff more than once.
- Strategic governance. The CCG's Heart Failure Steering Group has not been meeting and so the project has not benefited from strategic guidance or had the opportunity to share learning with key stakeholders. This is considered to have affected the project's ability to influence and embed the service fully within the hospital pathway.

The planned merger of the Frenchay and Southmeads Hospital took place during 2014. Over the months when the merger took place (March to August 2014), referrals to the service reduced significantly. Project staff considered this to be because of staff changes (some of the staff who knew about the service and were referring to it left the organisation) and also because the efforts of hospital staff were focussed on adjusting to the re-structure. As a consequence of the hospital merger, stakeholders considered that it has been difficult to *“embed the new service fully in the hospital pathway”*.

The main lessons learned are that:

- It is important to ensure that clinical staff who will be responsible for managing and delivering new services and projects are sufficiently involved at the project development, bidding and inception stage.
- The in-reach visits to hospital are effective in maintaining the profile of the service among hospital staff, but not for providing more intensive patient information or education. Most patients are too ill to be able to retain information. The project nurses considered that it is helpful to meet with patients in hospital to reassure them that they have a designated point of contact on discharge and to ease their anxiety. The in-reach visits also provide an opportunity to look at patient medical notes to obtain information missing from the discharge summary sent to the community team. There was recognition among project stakeholders that a more cost-effective model that makes better use of nurse time might be for the assistant practitioner to carry out the hospital in-reach role on a less frequent basis.
- When establishing a new early supported discharge service, recruiting staff with *“a solid background in cardiology and secondary care”* helps to build links with hospital-based HCPs and to build confidence in the service. Nurses without community experience are likely, though, to require significant oversight at first to support them to develop as community nurses. As well as the relevant clinical knowledge, staff need good relationship building and stakeholder engagement skills.
- A lead-in time of at least six months is required to allow time for training and development of staff, promotion of the service to other HCPs and refining of operational processes.
- Band 4 Assistant Practitioners can play an important role in a nurse-led community HF team and free up the time of specialist nurses to focus on more complex cases. The role appears to have strong potential to be a cost-effective way of providing high quality patient education and *“taking on work that nurses traditionally do but are way too skilled to do”*.
- High-quality patient education takes time; providing information and advice on one occasion is unlikely to be sufficient:
“When they have an admission to hospital, it's a catastrophic event. We can forget the impact it has [...] People don't necessarily take all the information in in one go. It needs to be repeated”.
- Allocating resources within the budget for administrative support is important. Delivering an integrated service means a lot of time is spent sharing information and communicating between different primary, community and secondary care services. This must be factored into budgets and resource allocation.

- Defining the intended outputs and outcomes of a service and developing a monitoring and evaluation framework should be *“introduced at inception, because you need this information to present to commissioners”*. As part of this, staff who manage patient databases should be included in project planning and development so that the data which is available to support service evaluation can be ascertained early.

3.3 Outcomes and impacts

Patients

The project staff considered that patients have improved ability to manage their condition. Previously, housebound patients would not have received specialist community care. As a result they would not necessarily have received information and guidance on how to effectively self-manage. The project team spend considerable time supporting patients to understand how to monitor and manage symptoms. One nurse commented:

“It’s about giving them the key things they need to look for. I’m amazed at how quickly they can pick it up. I had a patient who rang me at the weekend and said, ‘I hope you don’t mind, my weight went up and so I took an extra water tablet’”.

This is confirmed by data from telephone interviews with a small sample of 24 patients, which indicates that before receiving care from the project nurses, 4% of patients felt confident to self-manage their condition; this increased to 96% by the end of the treatment.

As well as ensuring patients are supported to self-manage and are on optimised drug treatment, the new nurse-led clinics means that it is more likely wider health issues are identified early on. The slightly longer appointment times (in the nurse-led community clinics, compared to previous hospital-based appointments) and the home visits mean *“there are things you pick up on when you are there and we can coordinate care – for example, we can refer to a psychologist if someone is really depressed”*.

There is evidence to suggest that the service has led to an improvement in quality of life and function among patients. According to data from the Dartmouth Coop Patient Reported Outcome Measure there has been a mean improvement in score across measured domains (physical fitness, feelings, daily activities, social activities, change in health and pain)³.

HCPs also consider that patients are more satisfied with the care they receive. Key aspects of this are:

- Not having to travel to hospital and being able to receive care at home or closer to home. One nurse commented:

“They all say it’s so nice not to have to go to hospital, there is less waiting, parking is easier, there is less of a walk”.

- Having a designated point of contact who can coordinate secondary, primary and community care. The nurses reported:

“We are getting very positive feedback from patients. They really value having someone to phone who can contact the consultant directly for them. It speeds things up because they don’t have to wait for the GP to refer them to the cardiologist”. This was recognised also by a consultant: *“The nurses are the lynch pin in the management and coordination”*.

Patients interviewed confirmed these views. They emphasised that the guidance they have received has been helpful and that they value being able to access specialist care in the community. Their experiences and views are presented in the blue boxes below.

³ This is based on information presented in the service evaluation conducted by Bristol Community Health. The report does not state the sample size.

'Moira' was diagnosed with HF about two years ago. She was initially admitted to hospital after showing signs of a severe chest infection, but was later diagnosed with HF. Over a year after the diagnosis, she was referred to the community clinic by her cardiologist in order for her to get more support with monitoring her condition and received a letter from the nurse inviting her to attend an appointment at a local clinic.

Moira described her initial experience of the service as "*far less frightening*" than when she dealt solely with the hospital because everything was explained to her more clearly. She now has regular contact with the nurse, via the telephone or when she visits the clinic. The regular contact is made possible by the closer location of the clinic (in comparison to the hospital) to her home and the fact that Moira has a direct number that she can call to speak to the nurse whenever she wants. In particular, she prefers the length of time she has with the nurse compared to the short amount of time she gets with a doctor:

"You don't feel pressured for time like you do at the hospital...they are willing to talk to you about all the little things on your mind and you don't feel like you're wasting their time".

She also values the instructions the nurse has given her for taking her medication:

"What the nurse has done with my medication – tweaking it to its optimum level; my heart condition has improved...before seeing her I wasn't feeling great physically but since I have been using the service I feel much better in my health".

In addition, Moira feels more confident should anything change or any complications arise with her medication because she knows she is able to contact the nurse directly over the phone and get a quick resolution.

Moreover, Moira has noted additional impacts of the service. The support that she has received from the nurse has improved her knowledge and understanding of the condition as well as her ability to self-manage her health:

"I am no longer living with the fear of not knowing as much as I can about my condition".

This support has had a positive impact on her quality of life and mental wellbeing, and she feels more positive about her condition since attending the service.

Prior to accessing the service Moira had to put in a lot of work to organise the care she was receiving:

"When I first got diagnosed with heart failure I had to do a lot of chasing people around all the time...I had no idea what was going on".

She noted that the service has been able to better coordinate the care she receives with minimal input from her:

"The nurse does all the communicating on my behalf, contacting my GP and the specialist; it's much more effective and I don't have to worry about it".

Moira felt that if there was one way the service could be improved, it would be to get people involved in the service much earlier, as soon as they are diagnosed with heart failure.

'Edwin' has a history of HF, having suffered his first stroke in 2000. After attending regular visits to the hospital for many years, his cardiologist suggested that he attend the community clinic to reduce the distance he had to travel and to enable better day-to-day monitoring of his condition. This was the first time he was offered specialist care in the community.

Edwin explained that after his initial contact with the nurse at the community clinic, they quickly developed a good relationship and she has made regular visits to see him over the

last four to five months. During these visits, the nurse *“monitors your physical condition, carries out blood tests and performs an ECG whenever she feels it’s necessary”*.

He is very happy with the care he receives and feels the level of coordination between the community clinic and the hospital has improved:

“The nurse has regular conversations each week with my consultant which makes me feel confident that I will be OK should any complications occur”.

He explained that due to the length of time he has been on his current medication, it was starting to have a negative impact on his kidneys:

“The nurse has helped by monitoring the situation and taking regular blood tests to see if a change of medication is needed...if I need to change, she will arrange for me to have a consultation with the specialist”.

Edwin prefers the care he has received since joining the clinic because *“...you realise somebody is monitoring me more closely than when I was just visiting the hospital”*.

Working with the nurse has improved his understanding of his condition, he commented that *“...she is thorough in her approach and tells me everything I ought to know”*. The support he has received has also helped him emotionally improve how he feels about his condition. Reflecting on how he felt before accessing the service compared to how he feels now, he stated:

“I had gotten to the point where I thought they weren’t going to be able to stabilise my condition for much longer...but the nurse is not a doom person. She never says to me you have ‘X’ amount of time to live...it gives you confidence to carry on”.

Organisation / pathways

There is a general view that discharge from hospital to the community is *“smoother and safer now”* and that *“patients are getting better care than they would have before”*. Previously, patients would have been discharged from hospital into the care of their GP and would not have had access to a specialist community clinic. Any follow up was via consultant outpatient clinics, which led to waiting times for patients. Follow-up care was not always systematically put in place whereas now *“they have our contact details on discharge and we speak to them within a couple of days”*.

The project HCPs consider that the project has been successful in preventing some unplanned admissions as a result of the new service:

“I’ve got two or three patients in nursing homes who would probably have kept bouncing in and out of hospital. We’ve been teaching the staff in the nursing home what to do and what to look out for”.

Qualitative interviews with patients as part of the Bristol Community Health service evaluation also confirmed this, with several patients confirming that they had previously been in hospital on multiple occasions but that since being in the care of the community HF team, had not been re-admitted. In general, project staff and HCPs considered that there will be increasing evidence of reduction in admissions and re-admissions in the longer term.

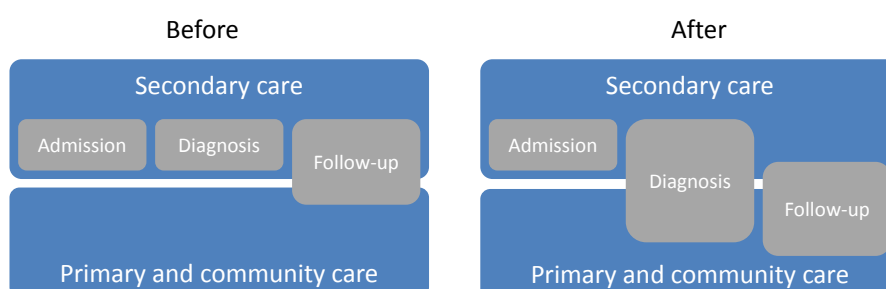
They also consider that in some cases there may be a reduction in length of stay as a result of early supported discharge. One HCP commented, *“I think staff on the medical admissions unit are more confident about discharging because they know we’ll pick them up in the community”*. This was also confirmed by a consultant cardiologist:

“We know patients’ drugs will be titrated...This reduces chances of readmission and helps improve systems. This gives us confidence to discharge earlier than prior to the in-reach being set up”⁴.

The HCPs also perceived that many patients are making fewer GP appointments as a result of the service. *“They contact us because it’s quicker than waiting for an appointment and they know we will be able to help them”. “They’ve built up such a good relationship with patients that they are undoubtedly the first port of call”.* Data on GP appointments is not available.

The main changes to the patient pathway – increased diagnosis and follow-up care in primary and community care – are summarised in Figure 3.1.

Figure 3.1 The project has increased follow-up and diagnosis in community settings



Healthcare professionals

All project HCPs reported that they have learned a lot as a result of participating in the BHF project. The specialist nurses have learned about community health and now feel confident working as community nurses; the Assistant Practitioner also reported increased knowledge and ability to support patients with lifestyle change. HCPs identified that the Glasgow Caledonian University module on HF has provided helpful underpinning knowledge:

“It’s really improved our confidence and knowledge. Now I feel confident to give advice to patients – I used to feel more anxious about it”.

Both nurses plan to build on knowledge gained in the course and progress to completing a prescribing course. Project HCPs also consider that there has been learning among other HCPs about how to effectively manage HF. Despite the challenges of staff turnover on wards, there is a view that secondary care staff with non-cardiology backgrounds are learning about effective treatment of HF through informal discussions and joint working with the project HCPs.

3.4 Sustainability

The focus to date has been on establishing the project and ensuring the new service is operating smoothly. Over coming months the project hopes to focus its attention increasingly on collecting data to evaluate outcomes achieved in support of its case for sustainability to the CCG. While the CCG clinical lead for LTCs has been involved with the project from the start and the Head of Community Commissioning (and the BHF contract lead) is also well-informed about the project, the CCG’s HF Steering Group has not been meeting and so there has been little opportunity to disseminate learning. The CCG expects to commission a community heart service in two years’ time so learning and evidence from the BHF pilot is expected to inform the service specification.

If ongoing funding is secured, there is a commitment among senior managers to maintain the Band 4 Assistant Practitioner role, which reflects the learning about the benefits of this role.

⁴ Quote taken from the service evaluation conducted by Bristol Community Health and provided as written feedback as part of a questionnaire sent out by the Clinical Services Manager.

3.5 Monitoring and evaluation

During the second case study visit, monitoring and evaluation was identified as a major area of development for the project. Since then, the project has made much effort to improve processes and the Clinical Services Manager for Long Term Conditions led a small-scale service evaluation. The evaluation included: semi-structured telephone interviews with a sample of 24 patients (conducted by a nurse who was independent of the project); feedback from two GPs and a cardiologist; analysis of referral data; and analysis of data from the Dartmouth Coop Patient Reported Outcome Measure. The evaluation report was submitted to the CCG as part of a bid for ongoing funding. The service has also started using the Meridian patient feedback system.

4 Project level findings: East Cheshire NHS Trust

Within the context of a growing elderly population and better survival of CVD conditions, this project aimed to support patients to remain in the community for as long as is clinically possible.

The service is based at Macclesfield District General Hospital (DGH). It is expanding an innovative new model, where a generic cardiology nurse-led service has been developed in order to allow admitted patients to be proactively identified, seen more quickly, and where appropriate discharged from hospital sooner. The model involves nurses in clinical roles making initial diagnosis of common cardiac conditions using clinical guidelines, and treatment decisions, much like consultants would normally do. Key to this model is the generalist role of the cardiac nurses, which will eventually see them all trained in three of the main cardiology conditions: chest pain, atrial fibrillation (AF), and heart failure (HF). 'Generalist' in this sense refers to cardiac nurses training in multiple cardiac specialities to move out of 'specialism silos'. The overall aim is therefore to provide continuity of care for patients with an integrated CVD service, which supports patients to remain in the community for as long as is clinically possible.

The project has contributed to integrated care by providing a more holistic service across the hospital, and better supporting patients with co-morbidities. Working closely with other teams in the hospital and in the community, the service helps to prevent admissions and to discharge patients from hospital sooner. The project fits well with the wider local context, where there is a particular interest in care coordination, care planning, and risk stratification:

"Part of a package of care for somebody, whether they have one long term condition or three or four, will be put together to enable them to maintain their life at home...for me the BHF are a big part of that – for people who have CVD – because [the nurses] may [act] as care coordinators and it's about integrating this role across the health economy...it's about finding the best person who can act as care coordinator...the integrated care agenda is at the forefront of this".

BHF funding of £154,847 was provided to support two WTE Band 7 nurses for two years. Three part-time nurses held these posts. The project lead and consultants have provided in-kind support throughout the project.

4.1 Update since the last visit

The project has continued to deliver the main activities it was delivering last year (described further below), with the focus being on hospital in-reach and clinics in the hospital and community. The number of patients seen by the service has increased this year, with the numbers seen in hospital in-reach seeing a slight increase, and the numbers being seen in clinics increasing more substantially.

The main change this year has been in terms of sustainability; the service has been fully sustained since the initial BHF project funding ended earlier this year. Sustainability has been dependent on cost saving outcomes demonstrated (see below) and the way in which the in-reach service in particular has become embedded across the hospital:

"We've become part and parcel of the fabric of the way the Trust is managed now."

The key challenge reported for the year was staff capacity:

- The service has been faced with staff absence, with one of the nurses going on maternity leave in July 2014, and another on long term sick leave.
- The service has lost its administrative support this year, which means that the amount of time spent on administrative tasks has increased. The service previously benefitted from 14 hours a week of administrative support, funded by the Trust.

The project model has ensured that the service has been well equipped to manage this challenge: the flexibility of a holistically trained team has meant that key skills have not been lost as a result of staff absence.

4.2 Implementation

Progress for the project this year has remained strong. Activities have included:

- **Hospital in-reach** – The service has grown in response to positive feedback from patients and hospital staff. The nature of the service is unchanged, but the team is seeing more patients this year. The focus was previously on identifying patients in the Medical Assessment Unit (MAU). This has been extended in the last year to include in-reach in the ambulatory care ward and A&E department.
- The project has continued to work with other medical and surgical wards, however this tends to be on a referral basis. Virtually every patient goes through the MAU, ambulatory care, or A&E. Patients identified on other medical/surgical wards would be those who have developed a cardiac problem whilst in hospital for another reason. The team reported that due to their ‘visibility’ across the hospital, and the embedding of the in-reach, communication has improved with generalist teams, such that verbal referrals have replaced paper-based referrals.
- **Pathway development** – The in-reach service is supported by two pathways which have been developed by the project lead to direct healthcare professionals (HCPs) in A&E and MAU during times when the postholders are not available (i.e. out of hours). The two pathways developed are for:
 - New presentation AF – This includes a description of inclusion and exclusion criteria for patients with this condition along with actions against these; recommended assessment and treatment; and discharge criteria.
 - Management of Acute Chest Pain - This includes a description of symptoms, treatment, and referral actions for patients categorised by three levels of risk: ‘low’, ‘intermediate’, and ‘high’ risk.

Although the development of these pathways was broadly reported as a success for the project, one interviewee commented that the implementation of these by generalist HCPs could be improved. The implication of the pathways not being consistently implemented is that some patients could get missed and ‘fall through the net’.

- **Nurse-led clinics** – The postholders are continuing to independently run the rapid access chest pain and Acute Coronary Syndrome clinics in the hospital. In addition to these, they have started to run the pre-operative clinics in the hospital which were previously run by the project lead. The five community HF clinics are also continuing to be run by the postholders.
- **Home visits** – The number of home visits conducted to monitor patients - and thereby prevent unnecessary hospital admissions - have been reduced over the last year. This decision forms part of a need to act ‘smarter’ in response to the increased demand for the service. Rather than being kept on the caseload, these patients are now referred to GPs with a management plan. Home visits that do take place are also now better coordinated with community clinics, so that some economies of scale can be achieved by visiting those patients in the same areas that clinics are held.
- **Working with primary and community teams** – The continued work with the Home Intravenous Therapy Service (HITS) team which provide home-based IV diuretics was described as a key success. This service enables patients to remain in the community rather than be admitted for IV diuretics treatment. The project identifies suitable patients for HITS, who are able to access treatment at home through three access routes:
 - Early supportive discharge – This is when patients who have been in hospital and subsequently received IV diuretics in hospital want to be at home.

- Admission avoidance – This is when a GP referral or an identification of someone in a community clinic leads to a patient being referred to HITS directly, preventing hospital admission in the first place.
- Symptom management at end of life (EoL) – This is when patients who are at EoL desperately want to be at home. These patients might not have received treatment at all, or would have had to stay in hospital for it.

Support for self-management in the community has continued this year, with the use of the 'traffic light' patient tools developed last year for HF and chest pain.

This year the project has also worked with neighbourhood teams, in their role as part of a 'shared community'. GPs identify patients at high risk of hospital admissions, and invite relevant specialists to review co-morbidities in bi-monthly meetings. This allows GPs to follow management plans for these high risk patients. Project staff have contributed to this work by attending these meetings when cardiac patients are being reviewed.

- **Learning and development** – This year the project has continued to informally and formally train HCPs as part of a whole teams approach; a total of 18 formal sessions have been delivered to over 200 HCPs. Informal training (in signs and symptoms of CVD conditions) of generalist staff in the hospital is on-going.
- Training in nursing homes has also continued, with about 10 further homes having been trained this year. Training is delivered on signs and symptoms such as weight gain and ankle swelling. Nursing home staff are encouraged to call the team when these signs/symptoms are observed. Advice on management is then given over the telephone, thereby preventing unnecessary admissions to hospital. The feedback from nursing homes on this training has been good.
- Eight to nine GPs have been trained in a CVD specific session. A further four sessions have been held – which were also attended by GPs – where training was incorporated into Long Term Condition (LTC) chronic disease management training. This was multi-disciplinary training delivered in conjunction with respiratory nurses, smoking cessation services, diabetes nurses, and pain nurses.
- Interviewees reflected that a more holistic case management (rather than disease specific) approach is beginning to be considered in primary care; this is also supported by the CCG. Interviewees also reported that GPs are increasingly more accepting of the services implemented by the project, and are more frequently calling for advice on patient management. One interviewee described having different IT systems in secondary/primary care as the key challenge to developing links further in primary care. This has sometimes resulted in miscommunication and delays, for example when letters detailing recommended medication changes are delayed.
- **Dissemination activities** – This year efforts have gone into disseminating project success. Presentations have been made at the National LTC conference at the Queen Elizabeth Conference Centre in London, and at the care integration conference. At the time of the visit a presentation to a BHF meeting in Leeds was also being planned for. In addition to this, the project team have been contacted by a number of NHS Trusts who are interested in implementing a similar model of integrated care. Some NHS Trusts have visited the project, others have been sent pathways and protocols developed by the team.

4.3 Outcomes and impacts

The main outcomes reported were at the level of patients in terms of better experience of care, and at the level of the organisation in terms of cost savings for the Trust. These outcomes have been reported quantitatively in the annual return (see Section 14). This section will therefore focus on qualitative descriptions from the interviews. The economic evaluation will also be presented here.

Patients

Patient outcomes were reported specifically for the in-reach service, and for the joint working with the HITS team to ensure that IV diuretics could be received in the community.

Outcomes for in-reach (supported by pathway development) were reported in terms of patients getting more appropriate reviews, and the speed in which they were identified and treated:

“Since having the BHF nurses, they are picking up patients who were previously being continually admitted and had never been picked up before...because they were admitted under different consultants and not referred to the cardiology team...they were being picked up when [the BHF nurses] were doing ward rounds”.

One interviewee reflected that this better care should translate to better physical and psychological outcomes.

For HF patients that have been managed in the community with the support of the HITS team, outcomes were reported in terms of the better experience of care resulting from them being able to remain at home. One interviewee described the improvement in quality of life for a patient who was managed in the community with the HITS input. The patient had achieved significant weight loss as a result of the IV diuretics treatment, without being admitted to hospital: *“that would have been unheard of, he would have been in hospital for months and months”*. The interviewee noted that HF patients are a group which is known for long hospital stays, with the national average stay being 15 days⁵.

Patient benefits for remaining at home were described by another interviewee in terms of them being *“more comfortable, feeling safer, and being more empowered.”* This interviewee commented that the more empowered patients are the more likely they are to self-manage and to actively seek advice by calling the team. The scale of shift to community management was also described as substantial, with consultants having observed that they don’t often see HF patients anymore.

Outcomes for families and carers were described in terms of them wanting their loved one to stay at home where they are comfortable, and that having them at home helped family members feel more involved in their care. One interviewee commented that the service was *“very involving”* of families/carers.

‘Kevin’ has been living with angina for the past 12 years and had managed to keep the condition relatively stable over this period. However, in the last year, he began to put on a considerable amount of weight which affected his mobility and breathing. *“I could only walk 25 yards before I would lose my breath”* making regular visits to the hospital difficult as *“you can never find a parking space near the place”*. In the end, his consultant referred him to a cardiologist who immediately referred him to the Diuretics Service.

Kevin was very happy with how quickly the treatment process was: *“As soon as I saw the cardiologist at Macclesfield things really happened. She got a line put into my arm straightaway; within two hours”*. He particularly valued the home visits (HITS team input), which began shortly after his referral, because it meant that he no longer had to travel to the hospital and could be sure that somebody would be coming to administer the treatment, take necessary tests and check up on him on a daily basis. In addition, he felt it reduced the chances of him picking up any *“hospital bugs”*.

He reported that the treatment had a number of positive impacts. For example, Kevin had put on a considerable amount of weight because his heart does not function properly causing a build-up of excess water. After 60 days of home care, he lost six stone in weight and no longer had a problem with water retention. This had a positive impact on his health, wellbeing

⁵ In 2013, the National Heart Failure Audit put the mean length of stay at 12.2 days. See: <http://www.ucl.ac.uk/nicor/audits/heartfailure/documents/annualreports/hfannual12-13.pdf> [accessed 14th July]

and social life. *“I can walk a lot better now and breathe which means I can get out and about more”.*

Kevin also noted his satisfaction at how smoothly the service ran, stating that despite not knowing which of the four nurses would turn up to deliver his care, *“they treat you like royalty...and the service is always excellent”*. He did, however, suggest that one way to improve the service would be to provide patients with a more specific visiting time. The current visiting period can be any time within a 4 hour timeslot.

Organisation

The main organisational outcome was reported in terms of cost savings yielded by a reduction in length of stay, and admission avoidance. Substantial savings have been reported in the annual return (See Section 14), and HF management was described as the biggest success in this respect. Cost savings have been demonstrated for:

- **Angina, myocardial infarction (MI), and arrhythmia** – Due to earlier assessment and referral for angiograms, length of stay has reduced. Prior to the project assessment and treatment were often delayed; active identification in medical wards has meant that treatment can now be rapidly initiated.
- **HF** – national audits show that HF admissions have increased nationally by 16%. Macclesfield Hospital admission figures for HF have remained constant over the same time period, indicating that admissions have been avoided.

The project has reported savings in excess of £1 million for the last year, based on a saving of 2391 bed days, and a bed day cost of £500. Our independent economic analysis confirms cost savings of the project – see below.

Healthcare professionals

Outcomes reported for HCPs included that the training delivered to generalist staff had been *“well received”*, with medical teams now being much more willing to involve the in-reach service. The acceptance from medical staff for this nurse-led service has been reported as a particular success by all interviewees.

Outcomes for HCPs were also reported in terms of the training and experience gained by postholders through the project. Postholders reported how they had become more confident in their skills over the course of the project, and other interviewees reported how the postholders had learnt a great deal and were now working autonomously.

Economic evaluation

This section presents a limited economic evaluation. East Cheshire was selected for this since the project here had conducted their own analysis on cost savings. Our analysis provides an independent assessment of this, and extends this to include a cost-benefit analysis. The cost benefit analysis looks at the costs and benefits to health service over the life of the project. It does not include estimates of future benefits accruing from the projects, or wider benefits to society (for example productivity gains or better patient experience).

Analyses are based on the project evaluation carried out by the project (which was submitted as part of the annual returns – see Section 14); and information gathered from qualitative interviews carried out with project staff.

4.3.1 Previous research

The project team carried out an assessment of the monetary impact of the project on the health service. The most recent analysis showed that the service had reduced the number of bed days required for patients suffering from the following conditions:

- Myocardial Infarction;
- Atrial Fibrillation;

- Heart Failure; and
- Treatments of IV diuretics.

In order to monetise these savings, the project used BHF suggested costings of £500 per bed day saved, and an £80 saving for administering the IV treatments in the community rather than in secondary care. Using these assumptions, the savings to the health service over the two year project would be £1.8 million (£1.7 million from nearly 3,400 bed days saved and £140,000 for 1,800 IV treatments).

4.3.2 Costs of the project

We have taken the analysis of benefits carried out by the project and extended the analysis to include the costs of the project. The costs of the project can be broken down into two main components: costs paid for by BHF funding, and costs paid for by in-kind contributions.

In East Cheshire, the BHF funding was just under £155,000. This covered two WTE Band 7 nurses for two years. Three part-time nurses held these posts.

There were also significant in-kind contributions to ensure the success of the project. This included support from cardiology consultants and the project lead throughout the project; the purchase of some equipment; the provision of facilities to conduct clinics in; and providing training opportunities for the project staff. The method used to estimate these costs is discussed below.

4.3.2.1 Consultant and project lead time

The project lead and cardiology consultants provided in-kind support for the project throughout its two year lifespan. The evaluation of the project estimated this in-kind contribution as £24,000 per annum, following BHF guidelines. Therefore the total cost of the support provided by the project lead and consultants is estimated to be £48,000.

4.3.2.2 Purchase of capital equipment

Some small items of equipment were purchased for the project, which were paid for outside BHF funding. These included scales and blood pressure machines. The evaluation of the project estimated the cost of these items was £200.

4.3.2.3 Provision of facilities

The project was able to provide clinics in hospital premises without any charge. The value of this is difficult to estimate, as the cost of the space provided is unknown. It is inappropriate to use office rental rates as the space is not needed permanently, and hotel and conference facilities will overstate the cost of providing facilities to hold a clinic. Therefore, the cost of facilities for a clinic have been estimated using the cost of hiring small rooms in community centres in the area, which is approximately £20 per hour. It has been assumed that each clinic session lasts for half a day (four hours) and there were 41 clinic sessions over the course of the project. These values have been multiplied together to estimate the cost of the facilities.

4.3.2.4 Training opportunities

The project provided training opportunities for the project staff, which was not funded through the BHF funding. Masters level courses (individual modules) were provided in:

- Clinical Examination Skills;
- Diagnostics and Health assessment; and
- Non-medical prescribing;

A total of five modules were taken by project staff. Each module cost £445, giving a total cost of providing training opportunities of over £2,200.

4.3.2.5 Total cost

The information described above has been used to estimate the total cost of the project, which is presented in Section 14. The total cost is over £200,000, the majority of which funding for the posts provided by the BHF.

Table 4.1 Total cost of project

Cost element	Total cost (£)	Percentage of total cost (%)
BHF funding	154,800	74%
Consultant and project lead time	48,000	23%
Capital equipment	200	0%
Provision of facilities	3,300	2%
Training opportunities	2,200	1%
Total cost	211,800	100%

4.3.3 Savings

The information provided by the project team on the savings the project has made for the health service indicates that the savings from the project far outweigh the costs associated with providing the project. This includes the in-kind contributions for the projects. The cost benefit ratio is £1:£8.8; for every £1 spent the health service saves £8.80.

The assumption that each bed day saved through the project saves the health service £500 would seem to be an assumption at the higher end of the value of a bed day (the average cost of an excess bed day was £275 in 2013-14⁶ and excess bed days for many heart conditions lower than this), although this cost may include treatment costs as well. Even using lower values (such as the average cost of an excess bed day), the project still represents a saving of £1.1 million, far in excess of the cost of the project. Therefore, it can be seen that the project offers value for money.

4.4 Sustainability

As reported above, the project has been fully sustained, with all posts supported by BHF now being maintained by the trust. The demonstration of cost savings was reported as a key lever for sustainability of the service, meaning that BHF's input has also been important to sustaining the service. One interviewee also commented that the project was implemented in the "*right time window*", where the aims were consistent with the strategic direction (working more efficiently with less resource) of the trust. The trust is also looking to see how the model can be rolled out to other specialities.

4.5 Monitoring and evaluation

All agreed processes for monitoring and evaluation have continued into this final year of the project. The final annual return was submitted at the end of the project. The project has supplied additional cost data to the evaluation team; this has fed into a cost-benefit analysis (reported above).

4.6 Concluding points

This project showed promise from the start of the programme, and has continued to be one of the most successful projects. It has benefitted from the unique situation of being a District General Hospital where cardiologist care can be limited, and the existence of parallel services

⁶ Department of Health (2014) Reference Costs 2013-14. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/380322/01_Final_2013-14_Reference_Costs_publication_v2.pdf

which have supported the project in achieving cost savings. The project was described as coming together as a “*perfect storm*”, where it was supported by cardiologists, was in line with the Trust’s strategic direction, and where a patient need had been identified. Without any one of these elements, the project might not have enjoyed the same level of success.

The project’s success also owes much to the dedicated team and project lead. Big investments have been made in up-skilling nurses for autonomous clinical roles in the community. Going forward, the project would benefit from further extension so that it is able to operate a 7 day a week service, since out of hours care remains a key gap.

5 Project level findings: North Somerset CCG

This project implemented a community heart failure (HF) service in North Somerset. The overall aim of the project was to *“increase and improve the management of chronic HF in the community, thereby reducing emergency admissions to acute care, reducing length of stay for unavoidable admissions, and improving patient ability to self-care”*, (interviewee). The project forms part of a wider service for HF, which was going to be commissioned regardless of BHF support. The rationale for the project was therefore two-fold:

1. **Improving patient care** – a HF service did not exist in the area, unlike other surrounding areas. There were therefore people with HF in North Somerset who weren’t being effectively managed. The service has sought to improve care by optimising medication; increasing patient understanding of their condition; and supporting self-management. In addition the project has supported smoother and more appropriate transitions across secondary and primary care by linking in with HF services in acute trusts in the area. GPs are supported to ensure this seamless service.
2. **Improving resource use** – much like CCGs across the country, North Somerset CCG is faced with financial challenges. A priority for the CCG is therefore to avoid emergency admissions by increasing self-management and providing more care closer to home. Specialist HF inputs are labour intensive – requiring multiple consultations (average of 14 contacts per patient with the service) and blood monitoring. GPs were therefore not able to do this effectively, and there was no clinic space in the local hospitals. This – coupled with the financial imperative – led to the development of the community based service.

The project was originally awarded £175,867 for 2.5 WTE Band 6 nurses for two years. Due to staffing challenges which have been noted in earlier reports, this funding was subsequently reorganised. The following inputs for the project have been utilised to date:

- A full-time Band 6 community HF nurse was funded by the BHF.
- A Band 6 community HF nurse was funded by the BHF for 3 days a week. In October 2014, this postholder became a full-time Band 7 community HF lead nurse.
- A Band 8b nurse consultant post was funded by the North Somerset Community Partnership (NSCP) CIC for 2 days a week, between October 2013 and December 2014, to support the training and development of the BHF funded Band 6 nurses.
- The NSCP also funded 2 days of administrative support (Band 3) from December 2013 to the end of the project in April 2015.
- The NSCP paid the sick pay for a previous Band 6 postholder from June-December 2014.
- The NSCP service manager has provided substantial in-kind contributions due to the staffing challenges; this constituted 40% of her time from August 2012, and went up to 70% during the most challenging months for the project, between August 2013 and May 2014.
- The CCG paid for consultant time (£13,200) and for clinic time (GP room hire charges) at £3.50 per hour.
- The CCG paid £1,400 for 3 ECG machines. Charitable donations from a drug company paid for other equipment.
- The project has also accessed BHF funding (BHF Alliance learning and development grant) for supporting the two current postholders to complete a HF degree module. One of the postholders is also receiving support with the completion of a degree in Long Term Conditions (LTCs).

5.1 Update since the last visit

This project has made substantial progress in the last year. The previous two years were hampered by challenges with staff recruitment and sickness. The project has now overcome these challenges, and a cohesive team works closely together to deliver an embedded service:

“We went from a closed caseload and a service on the brink of closure to meeting all expectations and targets for the year.”

The CCG and the community partnership have a good relationship and are viewed as part of the ‘same’ team: interviewees talked about a relationship characterised by honesty and trust. In addition the nursing team works well together, and a *“culture of learning and knowledge building”* within the team was described.

The service has focussed on the following elements in this last year:

- **Specialist input in the community** – the nurses deliver specialist HF services through community clinics, home visits, and telephone support. In addition they visit patients in the community hospital, and can also refer patients here. The team currently has an active caseload of 80-90 patients. GPs and hospitals can refer into the service, and the nurses also engage in active case-finding activities. Clinics have increased from 2 clinics a week to 5 clinics a week being delivered in the last year. The service is not time-limited; patients are seen until their medications are optimised and they are confident to self-manage. They are then discharged back to the GP with an open door policy for re-access back into the service.
- **Clinical support** – a consultant provides support to the HF nurses. They have a weekly meeting with him to review cases and receive informal training. In addition there is daily support available from the consultant in instances when they need immediate advice.
- **Support for GPs** – The service works to support all 26 GP practices within the CCG area. The virtual clinics have become a lesser feature of the project compared to the original design (see challenges below). Many queries are taken by telephone however, and those who have benefited from this service are well engaged.
- **Training** – This is another feature of the project which has become a lesser focus. There was some training for healthcare professionals (HCPs) in the early part of programme, but due to the staffing challenges a decision was made to keep the primary focus on patient delivery. Thus far training has been delivered to community nurses and clinical leads, and there are further plans to train practice and district nurses in the future.

Another change this year has been in terms of the physical location of the team. Previously housed in CCG office space, they now occupy offices in a clinic building. The key benefit of this move has been the privacy afforded for them to discuss patients – the CCG location had been open plan where they were required to ‘hot desk’.

5.2 Implementation

The following key strengths of the project were described by interviewees:

- Despite some continued staffing challenges the team have still managed to increase their caseload and the number of clinics delivered.
- The way the team works together is one of the main strengths. They are passionate about HF services, and have a shared ethos of partnership working. The postholders have ‘driven’ the service, not only by providing patient delivery, but also by marketing the service and engaging with partners in the community.
- The model of a CCG leading the project with community services delivering it has worked well. This is partly because the individuals involved were all part of the same organisation (the PCT) once. They have an understanding of each other’s organisational priorities and have been able to build a relationship based on honesty and trust. This model also benefits from the extra layer of governance provided by the CCG, where quarterly steering and

performance groups are part of the project deliverables. The CCG has also worked hard to align reporting requirements with those of the project.

- There is good communication between GPs and the service, with the nurses being called regularly with queries and concerns about HF management. A key facilitator of this strength has been the impact of the specialist inputs observed by GPs: *“there’s good dialogue both ways, this has been a growing development, because you’ve fed things back and the GP can see how you’ve changed things (i.e. with patient management), it’s a really good relationship.”*
- The nursing team has been well supported by senior leaders: *“they listened when we said we needed support, we went from being on the verge of closing to a flourishing service.”* The service has also benefitted from BHF resources; they have made use of BHF self-management tools and information leaflets, and have joined the BHF Alliance⁷.

The following challenges to implementation of the project this year were described by interviewees:

- Staffing challenges as per previous reporting has continued to some extent. In the last year a Band 7 nurse left, and another Band 6 went off on long term sick leave, before being ill health retired.
- The virtual clinics have had low engagement from GPs. Only 8 clinics have been conducted since April 2014, compared to plans to deliver 24. The team is trying to understand the issues with engagement further. Part of the problem might have been that continuity of support is limited with only 2 sessions allowed per year per practice. They are in the process of conducting a GP survey to find out what the level of preferred support is. Going forward this might be in the form of e-mail support which can be more regular. They might also consider offering locality based clinics rather than going out to each practice.
- There have been some challenges with referrals from Weston hospital and Southmeads hospital, in comparison to the referrals coming in from more established services in Bristol, such as from the Bristol Heart Institute. This challenge has been overcome to some extent with Weston hospital, through more active case-finding. A process has been put in place, whereby cardiology technicians at the hospital send echocardiograms to the service in addition to sending it to patients’ GPs. When it is sent to the GP, if there is a need for HF specialist input the technicians put a sticker on it to flag a referral. The HF nurses are able to chase this referral since they now get a copy too. Southmead is a new hospital (bringing together two previous hospitals - Frenchay and Southmead - into a single new building), and communication with them is expected to improve once they are more established.
- Finally the context of restructuring was described as very challenging, the instability afforded by this making it a difficult time to launch a new project. As a result of restructuring the project had been led by three different organisations, having started with the PCT, then moved to the CCG, then to the CSU, and now being back with the CCG.

5.3 Outcomes and impacts

Outcomes for the project were reported at the patient, HCP and organisational level. Interviewees discussed how patient satisfaction with the service was shown by patient surveys. Additionally they described patient outcomes in terms of increases in self-management, and for end of life patients, preferred place of death. At the organisational level avoided hospital admissions were described, as well as process learning for implementing similar projects in the future. At the HCP level, interviewees mainly discussed outcomes for the postholders in terms of learning gains and training opportunities.

⁷ The BHF Alliance is the BHF membership scheme to support the professional development of professionals working in the field of cardiovascular disease.

Patients

Interviewees discussed how the service has improved patient care for those living with HF. Through the service patients now have access to a better discussion of their condition and prognosis, which was a service gap as they don't get this from GPs or hospital services. In addition patients now receive medicine up-titration which they weren't getting from GPs as they should have been. They also have continued access to specialist support through telephone access to the service.

HCPs also discussed how the HF service has led to earlier discharge – which benefits both the patient and the organisation:

"We're under constant pressure to get people out very quickly, previously you'd wait until patients were very stable, but now you can discharge people at an earlier stage in the knowledge that someone will be keeping an eye on their blood tests."

- Outcomes for self-management were described in terms of the effects of advice given for diet and exercise. Positive outcomes were described even for those patients who had learning difficulties or cognitive impairments. Support with self-management has enabled some of the younger patients seen by the service to go back to work.
- Support for end of life care patients was described in terms of the effects of advance care planning. This support has helped patients with decision making (e.g. about interventions/resuscitation wishes), and helped them to die in their place of choice.
- Positive experiences of the service are shown by the two patient case studies below.

'Joan' is 86 and had a pacemaker fitted late last year. She lives on her own in rural Somerset where there is no access to public transport. Before her referral to the service, she did not receive any care at home and, due to the lack of transport, travelling to the hospital would have been very difficult.

After the consultant referred Joan to the service, a nurse began visiting her once a fortnight – now once a week: *"to check my blood pressure, pulse, heartbeat, and for any other health issues. [The nurse also] ...asks me how I'm doing and gives me instructions on how to look after myself...I have a little book to record my weight every day which means I don't have to take diuretic tablets which is good"*.

Joan felt that the care was well coordinated and that communication between the nurse and her cardiologist worked well, noting that *"they wanted to alter my medication but I have come down with a virus, so she is going to talk to me today about what to do...I speak with her and then she consults the specialist"*.

Overall, Joan was very satisfied with the service and cited a clear need for the care, highlighting the importance of community care services: *"I'm on my own. I had no one...I didn't have any care before and I wished I'd had it earlier. Now I am so pleased I've got it."* She commented that the care has had a positive impact on her emotionally: *"I feel I've got someone there who I can consult...If I need anything I've got her number. This has given me confidence in myself and I have a log book that tells me all about my condition"*.

'Mark' suffered a sudden heart attack in October 2014, aged 65. At the time of the attack, his heart stopped beating; the medical response was quick and paramedics were able to resuscitate him. He was immediately taken to hospital where he was operated on and had stents put in. As part of his recovery, he was referred to a HF nurse and the rehabilitation clinic for 8 weeks.

Mark travels to a local clinic to see the HF nurse every couple of weeks where the nurse *“...checks my blood and keeps an eye on my medication. She’s trying to add in a few extra and stronger tablets to maximise my blood pressure results”*. He was particularly pleased with the emotional support he received from the nurse, stating that *“It builds confidence in you after an extreme shock”*.

Overall, he felt that the care he received was well coordinated between the nurse, his GP and the consultant: *“I had an ECG last week, she sent the results off to the specialist to analyse them and the specialist phoned her back to say that it was all ok”*. Mark compared his experience of care to the experience of his father after he had a heart attack: *“my father had a heart attack when he was a similar age to me...but once they had dealt with him, there was no further consultation...he just had to get on with it. [in comparison] I couldn’t say enough good things about the service, it’s excellent”*.

Organisation / system

Interviewees commented that although it is difficult to demonstrate cost savings from the data they have access to, the service has been able to avoid admissions, with 7 having been avoided in the month prior to the visit (January 2015). Although reducing the length of stay was not specifically targeted by the project, some interviewees commented that it is plausible that this could have been achieved since earlier discharge was now being supported. This has largely resulted from the additional capacity created in the community, where patients can now be handed over to a supportive team.

The project has also provided invaluable learning in relation to processes for setting up community services which can be implemented in other specialities in the future:

“We have learnt that when we bring nurses out of an acute setting to work in the community they find it more difficult because they don’t have the same support around them, we need to support them more, make sure the clinical support is there for them, because they feel isolated.”

Healthcare professionals

Outcomes for HCPs were largely described in terms of outcomes for the postholders. The two nurses who deliver the clinics have passed the HF degree module and achieved all competencies from the competency framework developed for the service. Development of the postholders has been highly positive, with them becoming HF specialists in a relatively short space of time. As one manager noted:

“In terms of their personal development they have gone from experienced generalist nurses to being highly skilled HF specialist nurses.”

In addition, outcomes for GPs include the access they now have to specialist support for HF.

5.4 Sustainability

At the time of the visit the sustainability of the project had not yet been confirmed, although interviewees were confident that the service would be supported by the CCG. The business case had included administrative support and a Band 3 support worker.⁸

At the time of the visit, interviewees had said that if commissioned they would revisit the service specification to better tailor the service to local needs, and also to better align KPIs to service aims. Ideas shared by interviewees for the future development of the project included:

⁸ The project has been fully commissioned by the CCG since the visit; for more information please contact Suzy Taylor taylorsu@bhf.org.uk.

- Extending the service to South Somerset where there is no HF service.
- Developing a counselling offer (6 week programme) with the support of a psychologist.
- Focussing again on the HCP training elements of the service.
- Working with IV diuretics – to look at how this service can also be delivered in the community.
- Linking in better with social care and voluntary sector services – this is important for providing holistic care to improve resilience.

5.5 Monitoring and evaluation

As the project has progressed, evaluation processes have become robust, supported by the CCG requirement for quarterly reports. The CCG have worked to align BHF outcomes with their requirements. The 'POS' scale has been used in the patient survey, with the addition of some questions from the LT-6 scale, and the Department of Health recommended integrated care question. This means that patients have been asked to complete a single tool in addition to the patient satisfaction tool developed by the project.

Reporting requirements for the programme were described as challenging, with the tool for reporting being described as 'clunky'. Particular challenges included the time limited nature of completing the returns, and the inability to print off their own responses.

5.6 Concluding points

This project has managed to conclude in a strong position, having successfully overcome earlier challenges. It benefitted from a unique commissioning model within the programme, where the contract with BHF was held with the CCG. Although this contributed to a number of challenges in implementation, it ultimately led to a stronger service being developed. This could not have happened without the dedicated efforts of the partners coming together to work as one team focussed on the shared vision of delivering the *"best service they could for patients"*.

BHF inputs were integral to the success of the project; in particular the Area Development Manager (ADM) has been a source of proactive support for the project, being described by one interviewee as *"part of the team, which meant that you have a close link with the BHF"*. Types of support provided by the ADM included information provision, encouragement to join the BHF Alliance and stay in touch with the BHF, and the brokering of funding changes following challenges. The very positive relationship developed here means that project staff are keen to link with the area lead even after the project ends, in order to access wider BHF resources⁹.

⁹ It was also confirmed after the project visit that the team have been shortlisted for an Alliance award at the annual Alliance conference (in June).

6 Project level findings: Oxleas NHS Foundation Trust

This project sought to extend a cardiac rehabilitation (CR) service in two London boroughs – Greenwich and Bexley – which are served by Oxleas Foundation Trust (OFT). The previous service was delivered jointly by a 0.2 WTE Band 7 clinical nurse specialist (CNS) based at the Queen Elizabeth Hospital, and a 0.5 Physical Activity Specialist. This service was limited to patients who were self-referring, limiting access to ‘the already motivated’. In addition there was a low representation of ethnic minority groups accessing CR. Greenwich has high levels of social deprivation, and is ethnically diverse. Some ethnic minority groups, and those living in socially deprived conditions are at a higher risk of developing CHD. This project therefore aims to reach groups who had not traditionally accessed the previous service.

The rationale for the project was based on the need for widening access to CR for two main reasons:

1. **CR is an important part of the pathway** – CR plays an important role in recovery and prevention of reoccurrence in those who have suffered a heart attack, have had heart surgery, or are living with HF. The previous service was reaching a very low number of patients who were able to actively ‘self-refer’. There was a need to increase the number of patients accessing CR across the boroughs, through active recruitment and better integration across secondary and community healthcare.
2. **‘Hard to reach’ groups could benefit from CR** – Greenwich has high levels of social deprivation, and is ethnically diverse. Some ethnic minority groups, and those living in socially deprived conditions are at a higher risk of developing CVD. This project therefore aimed to reach groups who had not traditionally accessed the previous service.

BHF funding of £88,304 was provided to support one WTE Band 7 CR nurse for two years. A further £1000 was provided in the form of an education grant by BHF; this was used to support the postholder in her Masters degree. OFT also holds contracts with Greenwich and Bexley CCGs. These have supported the following additional inputs in the last year:

- A full-time exercise specialist and an exercise practitioner who works 18.75 hours a week;
- A Band 7 cardiac nurse for 30 hours a week, who leads the work in Bexley;
- A Band 6 cardiac nurse for 25 hours a week, who works across both boroughs;
- Staff have been supported to complete the ‘Heart Manual’ training;
- Transport provision for patients who have difficulty getting to community classes;
- Rent for the Greenwich venue for community sessions, which is approximately £500 per month for 3 classes a week.

6.1 Update since the last visit

Prior to the project being implemented, the CR service was running a single class a week (on a Friday) in Greenwich. With BHF support for the new postholder, the service was expanded with more active recruitment (phone calls/home visits upon discharge from hospital). In addition, an educational component was designed and delivered, in the form of a ‘healthy heart’ day. The service was then extended further with support from Greenwich CCG. The recruitment of a second nurse meant that a second class was started on a Tuesday.

The main change in the last year has been the further extension of the service to cover the borough of Bexley. A third nurse has joined the team, and there are 2 classes per week being delivered here on a Tuesday and a Monday. The Tuesday class in Bexley is open to high risk and high support patients. This class is held in a community hospital, and is commissioned by Guys and St Thomas’ NHS Foundation Trust. Since Greenwich does not yet have a similar class, patients from Greenwich who are high risk/high support can also be referred to the Bexley class.

6.2 Implementation

Interviewees felt that in general the project had been delivered as expected; although set-up initially took longer than necessary. This generated learning for extension of the project into Bexley, meaning that the set-up process here was far quicker.

Delivering integrated care

The project's understanding of 'integration' was in terms of integrating CR into the community, and in terms of community services working more closely with secondary (and tertiary) care. The preferred model was to move CR out of hospitals into community venues, and to ensure appropriate knowledge, understanding, and timely referrals from secondary (and tertiary) care. In addition the project has sought to integrate better with primary care, so that patients experience continuity of care across all settings. As one HCP interviewed noted, the project focused on:

"Plugging the gaps, trying to have a smoother pathway from secondary to community and then into primary with the GPs."

Integration in this respect has been approached through 3 main activities:

1) The project has established referral pathways with secondary and tertiary care. The catheter laboratories in the Queen Elizabeth Hospital in Greenwich, and Kings College Hospital (tertiary centre) now directly refer patients to the service. This means that patients who are not in hospital for long durations (e.g. when they have stents fitted) are able to access the service. The service makes first contact with the patient within five days of the referral.

2) The project has worked with cardiologists to ensure their endorsement of CR, which helps to improve uptake of the service. One interviewee noted the power of this endorsement in supporting take-up:

"Sometimes we have someone who says they don't want to do it, and then they see the cardiologist and he says why haven't you done it, and then they ring up and say 'oh the doctor says I have to do it'."

Interviewees described how cardiologists have become more engaged in promoting the service in this way. This has been reinforced by marketing material for the service, which now includes the words 'your consultant' in the health promotion message for CR.

3) Education sessions have been delivered in primary care to GPs, district nurses, and practice nurses. Thus far, referrals have come in from district nurses. Once patients complete the CR programme their GPs are also sent discharge summaries which advise preventative measures such as uptitration of medication for HF patients. More work is needed with GPs going forward, and at this stage interviewees were unable to comment on the extent to which change has been achieved in primary care support for CVD patients.

Working with hard to reach groups

'Hard to reach' groups for this project were described as those faced by practical barriers such as those who are housebound or don't speak English as their first language, as well as young (Black and Minority Ethnic) BME men. Two main activities were described in working to engage these groups:

1) Hospital in-reach and educating ward staff. The active recruitment in hospitals has included cardiac nurses visiting patients whilst they are still on the wards in order to promote CR. This is then followed up by phone calls once the patient is discharged. Interviewees described this as a method for identifying and recruiting those who would not have traditionally accessed the CR service. It was generally thought that this method had been successful, but that more could be done to engage these groups (e.g. working with community groups, delivering women only sessions).

2) In the last year there have been more efforts to engage with those who find it difficult to leave their homes – particularly frail older people. More home visits have been conducted, and

a home exercise programme has been designed for those who do not feel able to attend the community sessions. Project delivery staff are also due to attend 'Heart Manual' training, which helps to support independent CR. Interviewees described how the support at home interventions had been successful, often leading to attendance at community sessions. Other options for independent CR are being considered, including web based/mobile app approaches and telemedicine.

Interviewees described the expansion of the service into the borough of Bexley as an element of the project which has particularly 'worked well', both in terms of coverage in Bexley but also in terms of how it has supported the service in Greenwich:

"Having the additional staff has augmented the Greenwich service as well, because they don't sit in silos."

The inclusion of high risk patients in the contract with Bexley CCG has also helped secure the postholder's post for another year (see below).

Interviewees also described a number of challenges experienced in the last year of the project:

- The geographies served by OFT present some challenges. The service is currently being run in two boroughs (although the trust also covers parts of Bromley and Maidstone), which have separate CCGs. The contracts with the CCGs differ substantially in terms of delivery (e.g. high risk group in Bexley); type of contract (block vs. Payment by Results); and reporting requirements. The populations across both boroughs also differ, with the population in Bexley being older and more engaged. This has resulted in different approaches to delivery – such as more telephone reminders in Greenwich. In Bexley however the challenge has been managing demand.
- The service extension into Bexley was also described as challenging since it had to be started at short notice when the CCG's previous provider contract ended sooner than expected. During the early stage of this transition, bank staff were used whilst the additional nurse was being recruited. Classes were also suspended, although the telephone support and education elements continued. There were also logistical problems in setting up the classes in Bexley.
- Working with the high risk group in Bexley has also presented challenges. This group is generally older and more ill, and the active referral process means that they are seen soon after an event, which means they are less stable. The additional risk of emergencies means that there is a higher patient to staff ratio (3:1 compared to 5:1 for those with low/moderate risk).
- An additional challenge on capacity has been that the service has not had administrative support since the administrator is on long term sick leave. The implications of this have been mainly in terms of project staff having to cover data administration tasks.

6.3 Outcomes and impacts

An overall outcome was described in terms of how the format of CR has been changed in Greenwich. By delivering CR in the community rather than in hospitals, patients have been supported closer to home and in a less medicalised environment, for example the nurses no longer wear uniforms.

Other outcomes were discussed at the patient level in terms of widening access to CR, and increased levels of physical activity. Outcomes at the level of the organisation and system include increased profile for OFT and better links across the local system. HCP outcomes were described for the postholder in terms of the opportunity to work in a satisfying field as well as the learning and training opportunities afforded by the project.

Patients and families/carers

In Greenwich the service is overachieving on targets for the CCG contract they hold. Interviewees discussed how the project has allowed far more patients to access CR services:

“Greenwich had a very threadbare service before, we could only put a tiny number through before.”

Findings from the patient survey and a patient focus group have shown other outcomes which have been achieved. These outcomes included patients who had never exercised before now engaging in physical activity, as well as patients reporting that they were managing their condition better.

Interviewees talked about how patients were also given access to specialist support through the project; while on the programme patients are able to consult with the team for advice they would otherwise have had to go to the GP for – for example advice on medication. One interviewee described a patient with dementia who had improved not only in terms of fitness, but also in terms of memory and cognitive ability.

Interviewees also talked about the social benefits of the CR programme, where patients were *“able to share”* experiences with others in similar situations. This had resulted in many patients wanting to meet more with the rest of the group, and to have more follow-up meetings. Staff had therefore begun to make more referrals to support groups.

Outcomes for families and carers were also described; mainly in terms of reassurance they felt from being able to attend the programme with the patient. This allowed them to either observe or take part in the exercise classes, or to talk to the nurse about any issues which were concerning them. This was also reported to have an impact on patients in terms of ‘adherence’ with the programme.

The case study below shows how one patient benefitted from a number of outcomes as a result of attending the CR programme.

‘Jacob’ suffered a second heart attack in December 2014, aged 69 years old. He was subsequently fitted with stents in January 2015, when he had an overnight stay at the hospital. During this stay he was introduced to CR by a CR nurse. He attended CR for 12 weeks, starting his first session in February 2015.

Jacob had not heard about the CR service until the CR nurse came to visit him in the hospital. The hospital doctors or nurses had not mentioned it to him before this. When the CR nurse came and saw him she brought some leaflets which he said he would read at home. About a fortnight after being discharged from the hospital, the CR nurse called him. She invited him to the CR classes, and he accepted the invitation, although it was not something he would ordinarily have been interested in:

“I thought I’ll give it a go, if I don’t like it I’ll just come home.”

Jacob was first invited to an assessment at a GP practice, although at the time he was unable to do the exercise test, since he was on antibiotics for bronchitis. He was invited to go to the gym for classes and given the option of attending on a Tuesday or a Friday. He chose to attend the Friday class, and was asked to come in half an hour earlier so that he could complete the exercise test.

Jacob was anxious at first about taking part in exercise, but he soon felt reassured by the staff:

“The staff were absolutely fantastic...nothing was too much effort, they listened, and then you also noticed that when you was over the back, you had your back to them, they’d stop someone doing something, so it gave you confidence they were watching you, you know that if something was wrong they were there, I thought ‘yeah, this is brilliant’.”

Jacob found that the advice the staff gave was useful – for example the recommendation to walk around the gym without getting out of breath. He soon noticed a difference in terms of his physical fitness:

"The first two weeks I found it quite hard, got home, I was knackered, but after that it was all uphill, every time I went home my wife said you're looking better, and it was working...best thing I've ever done!"

"The biggest change was staircases. All of a sudden, before I went in, the wife went up for me, I went upstairs for bed and that's it, staircase was murder, and then after 2 weeks of doing the gym and using the staircase there, I said I'll go up the stairs, I said to the wife, I'll get something for you now, I'll do it for you. Massive difference. I think it was the third week I went home that the wife said 'you've got your colour back.'"

Improvements in Jacob's physical fitness also helped him to build his confidence back up:

"I wouldn't go out on my own, because I was frightened something would happen and I wouldn't be able to get back, but after the gym I'll take the dog for a walk on my own."

Jacob also talked about how he benefitted socially from the CR sessions. He discussed how after the gym classes he would go up to the canteen for a coffee with the staff – *"it was a laugh, and you find out bits:"* He also liked to socialise with other patients in the class:

"Every week was an improvement, I was quite sad in the end when it ended, 'cause you get friendly with people you know, and the staff, and I still keep in with the other chap now, and they're all in the same position as you, they've all got heart trouble like you"

Jacob noted other benefits in terms of support from the CR nurses that he was able to access:

"I think if you wanted to ask something you could pick a 'phone up, whereas you haven't got that with the doctor."

Ultimately Jacob was very pleased with the benefits he observed from attending the CR programme, and commented that he thought it was as important for his recovery as the medical treatment he had had. He noted that it is also important to exercise at home in between sessions, but also after the CR programme had ended. He now tries to do some exercise in his home (staircase/press ups/walking), although he did not feel like he wanted to continue going to the gym as part of Phase 4.

Jacob did not think that the service needed to be improved in anyway, but suggested that more could be done to promote it:

"I do think a lot of people miss it because it should be advertised more. [The consultant should] say 'if you want help, ring this number', because you walk out of there, and nobody says a word, because if [the CR nurse] hadn't have spoken to me I'd never have known. My mate went into St Thomas', if someone had have rung him he would have gone, he didn't know a thing about it."

Organisation / system

Outcomes at the level of the organisation were reported in terms of the service being now well established, and well regarded within the local health and social care system. This has meant that the profile of both the trust and CR has been raised through the project. The trust was historically a mental health trust, and one interviewee commented that the project had enabled the promotion of it as a physical health trust. The fit of CR within the community trust has been strengthened by its links with services for other long term conditions, such as diabetes and Chronic Obstructive Pulmonary Disease (COPD). Taking account of the increasing prevalence of co-morbidities, this also supports continuity of care.

Interviewees described how in Greenwich there were already existing relationships across the system. However in Bexley this was not the case, so stronger links being established here are an outcome of the project.

Some system level outcomes have been more difficult to demonstrate for the project however. For example positive impact on hospital admissions is entirely possible since patients are fitter and better able to self-manage as a result of the project, are more likely to use preventative medication appropriately, and have access to specialist support for the duration of the programme. This has been difficult to evidence since the inputs of the programme are preventative.

Healthcare professionals

Impacts at the HCP level were described in terms of how the postholder benefitted from the BHF support. The main benefits were described in terms of the opportunity to be involved in a re-framing of a CR service being delivered in the community, and in terms of being able to witness the impact on patient experience.

In addition the postholder has benefitted from learning and training opportunities, in the form of BACPR courses, the programme events hosted by the BHF, and working closely with the BHF Area Development leads.

6.4 Sustainability

The project has been fully sustained by local commissioners in the following ways:

- The postholder has been funded for another year in the first instance by Greenwich CCG. The business case for this post was supported by the Bexley CCG contract, which by providing a service for high risk patients meant that there were inequalities of access across the two boroughs. Such a service will therefore be delivered in Greenwich now with the extension of the postholder's position. The contract in Greenwich is a Payment by Results contract, where payment (£600) is given for the completion of patient goals.
- The rest of the team have been funded for a further five years under the contract held with Bexley CCG. The contract with the CCG is held as a block contract by Guys and St Thomas' Foundation Trust, which is the prime provider which contracts OFT for the CR service.

Going forward the project hopes to develop in the following ways:

- By providing a service for high risk patients in Greenwich there will be better integration between heart failure and CR services. Providing this service will mean an additional class will be delivered in Greenwich.
- There will be more capacity to extend on efforts to access hard to reach groups, for example by providing specific education days for African men and Asian women.
- In reach and home visits will be expanded.
- The public profile of CR will continue to be improved.

6.5 Monitoring and evaluation

Monitoring and evaluation has presented a particular challenge for this project. This is partly a function of confidence and skills within the project team to collect and report on quantitative data. It has also been a function of the number of different agencies that data are being reported to by the service. The service has been delivering data for this programme, as well as for the contracts held with the two CCGs. In addition there is a dataset which they deliver to the National Association of Cardiac Rehabilitation.

Other challenges for the project have been in terms of application of some of the required indicators for the programme – most notably those related to hospital admissions and cost

savings. The project team therefore advised a more tailored approach to monitoring requirements in future BHF programmes.

6.6 Concluding points

The project has been successful in expanding a CR service and ensuring that it is embedded in the local system. The added value brought to the service by BHF was noted in terms of the resources made available, and the supportive relationship. As one HCP noted: *“[It’s] useful to have outside eyes looking in, even if it’s just to say you’re doing a good job”*.

The project would have benefitted from a more concerted effort to meet its aim of recruiting hard to reach groups however. This includes defining these groups more tightly from the start; targeting these groups more directly through delivery; and measuring impact by monitoring and recording how access for these groups then changed over the course of the project.

PART 2: INTEGRATED CARE PILOTS IN WALES

7 Context to integrated care in Wales

This section contextualises the programme. It updates the policy context described in the Interim (August 2014) and Baseline (September 2013) reports.

7.1 Integration is becoming a more prominent theme in Welsh policy

As highlighted in previous reports, integration has appeared as a theme throughout many different Welsh policy documents in recent years. These include:

- The chronic conditions management (CCM) model framework which set out a new approach to managing chronic conditions, based on care within the community (Welsh Assembly Government, 2007). This has resulted in the formation of integrated teams working across the health and social care sectors.
- *Our Healthy Future* (Welsh Assembly Government 2009a) which builds on a range of existing strategies and policies in Wales. The document emphasises the importance of prevention, early intervention and healthy sustainable communities as well as the necessity to address current service provision within a financially constrained context.
- *Setting the Direction* (Welsh Assembly Government 2010) has integration at its core. The document is designed to support local health boards in developing and delivering improved primary care and community-based services, focused around 'locality based models'.
- *Together for Health* (Welsh Assembly Government 2011) outlines the need for integrated care and identifies seven major areas in which change must happen in the NHS. This includes moving care closer to home, which will be supported by new technologies allowing patients to be treated closer to or in the place where they live.

More recent developments in Welsh policy for integrated care include:

- *Delivering Local Health Care – Accelerating the Pace of Change* (Welsh Government 2013a) aims to achieve “accessible, effective and sustainable local care services, which will have a real impact on people’s lives.” (NHS Wales, 2013, pg 5). The document forms part of a range of policy literature which supports integration of health and social care.
- *A Framework for Delivering Integrated Health and Social Care for Older People with Complex Needs* (2014) aims to support the development of integrated services to better managed service demand and ensure sustainability. The framework states: “Integrated services will ensure easy and rapid access to service and support that are effectively co-ordinated and simple to use. This requires integrated working between local authorities, health and housing, with the third sector and independent sector.” (Welsh Government, 2014, pg 4).¹⁰
- *Social Services and Well-being (Wales) Act 2014* was introduced in 2014. It aims to improve well-being outcomes for care users and joint working between public authorities. The Act states local authorities “must exercise its social services functions with a view to ensuring the integration of care and support provision with health provision and health-related provision.” (Welsh Government, 2014, pg 116).

7.1.1 Standards have been produced to improve CVD outcomes in Wales

CVD is a major issue in Wales, with cardiac disease being one of the biggest killers. Latest figures from the Wales Health Survey (2013) reveal that 23% of people aged 16 and over reported being treated for a heart condition, including high blood pressure. Several initiatives have therefore been taken to improve outcomes in CVD. These include:

¹⁰ <http://gov.wales/docs/dhss/publications/140319integrationen.pdf>

- *The Cardiac National Service Framework for Wales* (Welsh Government 2009b) which was introduced in 2009 outlining seven standards to improve prevention and treatment of cardiac disease with the overall aim of improving health outcomes.
- *The Halcox Report* (2010) made several recommendations including reviewing the existing systems of prevention in CVD; developing a national plan for identifying patients at risk of CVD and coordinating care between community, primary and secondary settings; and, targeting at risk individuals to reduce inequalities in health.
- *Together for Health – a Heart Disease Delivery Plan* (Welsh Government 2013b) outlines further commitments from NHS Wales to reduce the CVD rates to meet the standards set in 2009 framework and the Halcox Report. The plan outlines six delivery themes that have been identified to deliver better health outcomes, through the integration of a set of services.

8 Project level findings: Abertawe Bro Morgannwg University Health Board

The Abertawe Bro Morgannwg University (ABMU) Health Board's project sought to improve HF services in Swansea and its surrounding villages. Across the Health Board areas, emergency admissions of HF patients have been an increasing problem. Once admitted to hospital, patients' average length of stay is higher than the Welsh average¹¹. To overcome these problems, the project implemented a new HF pathway to provide improved care and to prevent unnecessary admissions. Key features of the pathway are:

- Supported discharge from hospital: A discharge nurse is responsible for developing discharge plans and supporting patients to move smoothly into community care from the hospital.
- A new clinic for complex cases that is a 'one stop specialist assessment' based in secondary care. The clinic receives referrals from a GP with Special Interest (GPwSI) who triages results of brain natriuretic peptide (BNP) tests and echocardiograms. Those cases judged to be urgent by the GPwSI are fast-tracked to the new clinic, and patients are expected to be seen within two weeks.
- Four community clinics run by HF clinical lead nurses. These clinics provide support to patients in relation to: up-titration of medication; education on self-management (including telehealth); and coordination of care, including referrals back to the secondary care clinic and on to other community care services as necessary (such as rehabilitation and palliative services).

In addition to direct delivery of secondary and community HF services, the project also includes an important education and training strand of activity. 15 HCPs completed a degree-level distance learning module on HF provided by Education for Health, a voluntary and community sector training provider based in Warwick. The knowledge gained from the training has been cascaded to other colleagues.

Funding of £162,578 was awarded by the BHF over a two year period. This was to be used alongside funding from the Health Board to fund the following HCPs:

- BHF funding for 1 x WTE community HF coordinator (funded at Band 8a) who coordinates all of the strands of project activity and provides clinical guidance to the nurses running the community clinics;
- BHF funding for 0.4 WTE in-hospital HF care and discharge nurse (Band 6). The Health Board funded an additional 0.4 WTE, making this a 0.8 WTE role;
- BHF funding for 0.5 HF clinical lead nurse (Band 6). The Health Board also contributed funding for an additional 0.7 WTE HF clinical lead. The combined funding was used to appoint five community HF clinical leads, based in the Chronic Conditions Management (CCM) team, who work on the project for 0.75 days per week.

8.1 Update since the last visit

The main objectives of the project have been achieved. However, there have been some new developments to the delivery of the pathway since the last visit. The following activities have taken place:

- **The CCM nurses have re-allocated some of their time to triaging patients discharged from hospital.** At the time of the last visit, the pathway had only just become fully operational. Since then, the demand for the service has increased and the four community clinics reached full capacity. As a result, the CCM nurses have begun triaging patients

¹¹ Figures as cited in the Project Application Form.

discharged from hospital in order to ensure that the pathway is able to deal with the demand, whilst ensuring the patients receive the care they need.

- **Expansion of referrals/geographical extension.** Whilst the initial focus of the pilot was on Swansea and its surrounding villages, the project has also treated patients from other localities, such as Neath, Carmarthen and Bridgend, as well as patients from nearby Singleton hospital. The reason for this is because project staff believed it inequitable not to treat patients with HF because they were not based in Swansea. Therefore, the discharge nurse has also supported these patients and worked to link patients into local HF services in their area.
- **Delivered training to GPs.** During the last visit, the project team noted that they intended to deliver HF training to GPs and practice nurses. Since then, the team have successfully delivered training to local GP surgeries.

8.2 Implementation

The project team and stakeholders agreed that the following components of the project have worked well:

- The role of the project coordinator has been important in driving the project forward and overseeing all components of the project. Interviewees noted that the coordinator's clinical experience, management skills and strong leadership were particularly influential in bringing the project together, building relationships between the different disciplines, and ensuring that the multi-disciplinary team worked well together.
- The steering group meet once every eight weeks and is comprised of the project coordinator, cardiologist, business manager, GP representative, BHF representative and other partners. The meetings have provided the opportunity for input from a wide range of key stakeholders and have helped ensure that the project is on track. As one interviewee described:

"[The steering group cover] every base looking at the finances, looking at the budget...they have been able to hammer out issues and reflect on progress on a regular basis".
- The discharging of patients from hospital has worked particularly well. Having an experienced HF discharge nurse responsible for providing patient information to the health professionals in the community has been crucial to improving coordination between the services, with patient information sent to the CCM nurses detailed in the discharge summary. In addition, the discharge nurse and CCM nurses are able to feedback information to the cardiologist should they need to.

Interviewees noted that they faced similar logistical challenges throughout the duration of the project. For example, since the project has been fully functional, meeting the level of demand in terms of number of patients has been a challenge for the team's capacity, particularly with increasing referrals coming from GPs. To meet the growing demand, one of the CCM nurses has altered their role to concentrate more on triaging patients to overcome capacity issues, maintain a high quality of service delivery and ensure that care is appropriately matched to the needs of the patients. However, staff commented that they would benefit from having more staff and clinic capacity in order to meet the growing demand for the service.

Interviewees also noted that the limited administrative support, meant that they were spending more time than they wanted conducting administrative tasks. Whilst staff agreed that the administration was important, it placed added pressure on staff time and capacity; time that they would prefer to be able to spend seeing patients.

The main lessons learned from the project have been that a lead in time of around six months is required to establish a new community HF service. This enables time for the Health Board to approve new roles, for new processes to be established and staff to be trained. In addition, the importance of ensuring primary and secondary care can access a shared IT system. The

project has had to establish its own database to overcome incompatibilities between existing systems.

Additionally, the project team felt that the banding for the discharge nurse and the HF CCM nurses (Band 6) were targeted slightly lower than required. The project team noted that if they were to repeat the bid, they would consider banding the role at a Band 7.

8.3 Outcomes and impacts

Interviews undertaken over the three visits indicate that this project had generated beneficial outcomes across a number of levels.

Patients

Improved ability to self-manage. Interviewees agreed that the project has led to an improved ability among patients to self-manage their condition. Under the old pathway, patients were discharged from hospital with little knowledge about HF and limited opportunity for HCPs to discuss the condition with patients. However, under the new pathway the support provided in the hospital by the discharge nurse as well as the community clinics and home visits provided by the CCM nurses fills this gap. There is now the opportunity for the HCPs to engage with patients about HF. Staff noted that this had led to improvements in patient self-management of their condition, monitoring symptoms and keeping a close check on their weight.

Improved quality of life. Project staff, partners and patients agreed that the project has improved patients quality of life. There was a view from staff that previously, under the old pathway, many HF patients would have been vulnerable to re-admissions due to a lack of support and appropriate monitoring of their condition after discharge. The community support provided by the CCM nurses fills this gap. Staff felt that they were able to “*manage patients more effectively*” and are therefore “*able to see them much sooner after they leave hospital [rather than wait months to see the cardiologist]*”. This has resulted in patients continuing to receive high quality care and monitoring after discharge, improving the patient experience and enhancing patient recovery. Under the old pathway this support would not have been available.

Feedback from patients agreed with the staff and partners, suggesting that the service contributed to improvements in the quality of life. One patient’s experience is highlighted below.

‘Rhodri’ suffered a heart attack in 2014 and a stroke shortly after, resulting in him having a quadruple bypass. He also suffers from diabetes and since the heart attack, has had several toes removed as a consequence. This has resulted in him spending a considerable amount of time in and out of hospital, and relying on his wife ‘Bet’ for care and support.

Whilst Rhodri was in hospital recovering from his quadruple bypass, Bet received a call asking her to meet with the discharge nurse to discuss Rhodri’s care options. Bet was informed that Rhodri would be able to receive specialist treatment for his HF and the discharge nurse began visiting him on the ward and at home once he was discharged.

Rhodri now attends weekly HF clinics “*to monitor his blood pressure and medication. The nurse has also given him an ECG, taken blood tests and gone through all his medication*”. Bet believed the care from the nurse had been beneficial to Rhodri, particularly in relation to his medication. “*After going through all his medication, the nurse arranged for him to be taken off diuretics because he was getting dehydrated and has put him on another medication to help strengthen his heart*”.

Reflecting on the impact the service has had on them both, Bet noted that she felt more confident in helping Rhodri manage his condition. “[I am more] aware if his blood pressure drops [and how to use] the traffic lights system...the HF booklet is helpful and I have picked up some knowledge through working with the nurses”.

Beti also reported good coordination between the HF nurse and the GP: “[Rhodri] *has also been able to stop other medication because it’s not for his heart but for his amputations which have healed up...* [the nurse] *said to the doctor, ‘does he really need these now’* [and the medication was stopped]”. In addition, Beti believed that the care he received from the HF clinic saved Rhodri’s life: *“Looking at him this time last year, I didn’t think I’d be looking at him sitting there now. He’s almost back to normal”*.

Service/pathways

Fieldwork with the project team and relevant stakeholders undertaken across the three visits has provided multiple examples of ways in which the service has generated improvements at the organisational level.

Improved coordination of care. The project team and relevant stakeholders agreed that the pathway has led to improvements in the coordination of care. There are several examples of this at different stages of the pathway. One of the most recent outcomes has been that, over the course of the project, awareness of the service and the role of the project coordinator and discharge nurse has improved across other wards in the hospital. The project team are more aware of patients with HF located elsewhere in the hospital. This has enabled the identification and treatment of patients with HF admitted into other wards.

As one of the project partners described: *“I think the patients are being picked up and treated better...they are getting a better quality drug treatment because the nursing staff are advising the teams [in other wards] to titrate the drugs accordingly and get them towards the target dosages”*. Under the old pathway, interviewees suggested that patients located in other wards may have not received appropriate treatment for their HF condition which could result in re-admission to hospital after discharge.

In addition, the CCM nurses noted that the project had improved the coordination between secondary and primary care that did not exist before: *“[The project has] given us the links into secondary care...this is unique”*.

Improved access to specialist care. All interviewees agreed that the pathway resulted in patients receiving care more quickly. This was viewed as an improvement on the quality of care being provided. In particular, interviewees agreed that the service was receiving an increase in referrals from GPs and all patients with a HF diagnosis were now able to see either the GPwSI or the cardiologist.

Prevention of admissions. There was agreement among project staff and partners that the new pathway and community clinics have prevented admissions to hospital. Project nurses perceived there to have been a reduction in the number of patients being admitted to hospital because of complications with their condition and medication. These were problems they frequently encountered before the new service was established. Whereas now, staff were able to provide examples of where patients did not turn up at hospital, such as contacting the service hotline to speak to someone about their condition or using the traffic light system to self-manage their health.

Project staff also noted that the awareness and influence of the project coordinator and discharge nurse among other wards in the hospital has led to improvements in patient health outcomes. The discharge nurse is able to pick up HF patients on other wards and/or who may have been admitted to hospital by a different department, and treat them for their HF. In one instance, a patient was on a general medical ward and their care was being overseen by a gastroenterologist:

“They kept wanting to discharge him because he was [fit to go home in terms of his gastroenterological condition]... we had known about him from a previous admission and [the HF nurse] went there and delayed the discharge for good reason...I think he was that sick [from a HF perspective] that he could have easily gone home and died because he was not well...he stayed and [his excess fluid] was successfully offloaded”.

Healthcare professionals

Like previous visits, the HCPs working on the project noted that the new pathway had resulted in improvements in job satisfaction as well as a greater awareness of HF among health professionals in primary care. Interviewees noted that they felt more confident and competent about performing their job roles and dealing with HF patients as well as greater support structure. As one CCM nurse described: *“Aside from the satisfaction I get from seeing the patients [get better]...I think the job satisfaction comes from working in a new project. It’s supported by a consultant which you don’t get [in many other services]. It’s led by somebody who is motivated and keen...and [you get] support from the GPwSI”*.

There is also evidence that the pathway has led to the up-skilling and the cascading of knowledge among non-specialist CCM nurses and other healthcare professionals working in the community. As staff described: *“that knowledge isn’t just being used in the HF role, it’s now being extended into other people’s roles...it’s really rippled beyond the five to seven posts that we envisaged”*. In particular, interviewees agreed that the project had made a positive impact on GPs and practice nurses in local surgeries. The project team felt that other health professionals recognised the HF expert knowledge the team possessed and valued the information the CCM nurses could share with the practice staff. This has led to increased referrals from GPs.

Strategic value

There was a consensus among interviewees that the project has influenced other areas of service provision. These include:

- The project staff acknowledged that there were existing gaps in service provision in other hospitals in the Health Board area. Some HF patients in other hospitals were not being supported as effectively as they might be. The discharge nurse and the project coordinator have reported that they have been working with health professionals in surrounding hospitals to support patients where possible and share knowledge and practice with other staff. Health professionals from other hospitals appeared eager to mirror the service.
- The CCM team has continued to see patients with bi-ventricular pacemakers in the community. They work alongside the pacing team to up-titrate medication and deliver education to patients about HF. Staff believe this to be relatively innovative practice that would not have been established in the absence of the project.
- Interviewees also believed that the service model could be adopted by services for other conditions. The project coordinator stated that they intended to forge stronger links with the renal team to share learning and practice between the services. In addition, staff felt that a similar pathway model could be implemented within oxygen services. This was in the early stages of development.

Economic evaluation

This section presents a limited economic evaluation. ABMU was selected for this since the project here had conducted their own analysis on cost savings. Our analysis provides an independent assessment of this, and extends this to include a cost-benefit analysis. The cost benefit analysis looks at the costs and benefits to health service over the life of the project. It does not include estimates of future benefits accruing from the projects, or wider benefits to society (for example productivity gains or better patient experience).

Analyses are based on the project evaluation carried out by the project (which was submitted as part of the annual returns – see Section 14; information from the project’s business case for project sustainability; and information from qualitative interviews carried out with project staff.

8.3.1 Previous research

The ABMU project prepared a business case for the extension of the project where the savings the project generated were estimated. The business case estimated that over a one year period the project prevented 67 patients being admitted to hospital. If this is extrapolated over the full two years it implies that 134 patients were prevented from being admitted to hospital.

In order to estimate the monetary value of preventing these patients being admitted to hospital, ABMU used the following assumptions:

- The cost of the first bed day per patient is £274;
- The cost of all subsequent bed days per patient is £120; and
- Each patient is in hospital for 19 days.

Using these assumptions, the saving per patient prevented from admission is £2,554. This gives a total estimated saving to the health service of over £340,000.

8.3.2 Cost of the project

The costs of the project can be broken down into two main components: costs paid for by BHF funding, and costs paid for by in-kind contributions.

For this project, the BHF awarded funding was £160,000. This covered:

- One full time project coordinator;
- Half time of discharge nurse (Band 6); and
- One whole term equivalent of chronic conditions nurse (Band 6).

There were also significant in-kind contributions to ensure the success of the project. This included support from GPs, administrators, pharmacists, cardiology consultants and discharge nurse; the provision of facilities to conduct clinics in; and providing training opportunities for the project staff. The method used to estimate these costs is discussed below.

8.3.2.1 In-kind provision

The total value of in-kind contributions to the project were estimated to be £88,000 over two years. The assumptions for this estimate are set out below.

8.3.2.2 Discharge support

There is substantial time offered as in-kind support for the BHF project in ABMU. This comes from administration and nurse support for discharge of patients. This involves:

- Time for the cardiac rehabilitation administrator. Estimated to be around 3 hours/just under half a day a week.
- Audit clerk (from the Health Board), who contributes to administrative support. Estimated at a few hours a week.

The value of the administration time is estimated to be one day per week (cumulatively) of Band 3 administrative support.¹²

8.3.2.3 Cardiologist support

The cardiologist consultant provides support to the project through the following inputs:

- Weekly emails, telephone calls, communication;
- Virtual review of clinic – referred patients sent to project coordinator;

¹² Agenda for Change pay scale, Band 3 point 9 £17,972 per annum. Available at: <http://www.nhscareers.nhs.uk/working-in-the-nhs/pay-and-benefits/agenda-for-change-pay-rates/>

- Triage work; and
- Multi-disciplinary team.

Overall, the project receives around 4 hours of in-kind contribution per week from the cardiologist consultants. Each cardiologist hour is estimated to cost £101.¹³

8.3.2.4 Pharmacist support

A pharmacist (Band 8a) provides 5-6 hours a week support to the pacing clinic. Their time is not funded by the project. The cost of pharmacist time is estimated to be £27 per hour.¹⁴

8.3.2.5 GP support

The 'GP with Special Interest' (GPwSI) provides support to the project through triaging referrals from the GPs directly to the cardiologists. The GPwSI spends 2 hours a week providing support to the project which is not funded by the project. The GPwSI time is estimated to be £109 per hour.¹⁵

8.3.2.6 Management support

The Project coordinator's line manager has provided support to the project, which is estimated to be one hour per week. The value of the nurse time was taken as the mean Band 8a value for nurses.¹⁶

8.3.2.7 Provision of facilities

The project runs seven clinics out of five clinic venues. New patients are allocated a 40 minute clinic slot, and follow up patients are allocated a 20-30 minute slot. All clinics run for approximately four hours.

Actual costs of the venue space provided by the Health Board were unknown at the time of interview, the estimated cost for running the hospital based clinic amounted to £12,000 per annum.

8.3.2.8 Training opportunities

There were two courses funded by the project in addition to BHF funding. 14 nurses attended the training courses at an average cost of £650 per place.

8.3.2.9 Total cost

The information described above has been used to estimate the total cost of the project. The total cost is nearly £270,000, of which the majority is the posts funded by the BHF. Sources of information used for this analysis are the business case and the interviewees with project staff. The information reported in the final quarterly return differs.

¹³ PSSRU, (2014) Unit Costs of Health & Social Care 2014

¹⁴ PSSRU, (2014) Unit Costs of Health & Social Care 2014. Annual earnings for pharmacist at band 8a is £45,325. This hourly cost assumes the pharmacist works for seven hours per day for 240 days per year.

¹⁵ PSSRU, (2014) Unit Costs of Health & Social Care 2014

¹⁶ PSSRU, (2014) Unit Costs of Health & Social Care 2014. Annual earnings for a nurse at band 8a is £45,113. This estimation of cost assumes the nurse works for thirty five hours per week.

Table 8.1 Total cost of project

Cost element	Total cost (£)	Percentage of total cost (%)
BHF funding	160,000	59%
In-kind time contributions	88,500	33%
Provision of facilities	12,000	5%
Training opportunities	9,100	3%
Total cost	269,600	100%

8.3.3 Savings

The information provided by the project team on the savings the project has made for the health service and the analysis of costs carried out here indicates that the savings from the project outweigh the costs associated with providing the project. The analysis here includes the in-kind contributions for the projects.¹⁷ The cost benefit ratio is £1:£1.27; for every £1 spent the health service saves £1.27.

The assumptions around the savings related to bed days saved show a much lower monetary value per bed day than those used in the East Cheshire calculations (see Section 4). It is assumed that the estimates here exclude treatment costs whereas in East Cheshire some treatment costs are included. Therefore, the estimates on the savings the project makes to the health service are likely to be a conservative estimate. Even so, the project still demonstrates a positive return on investment. The return to inputs (including in-kind inputs) is also positive, with an estimated saving of £340,000. Therefore, it can be seen that the project offers value for money.

8.4 Sustainability

The project leads have built a business case to put to the Executive Board to ensure the service can be sustained after the project ends. This is on a year-by-year basis. They have also put in an extended business case to expand the delivery of the pathway to cover Neath-Port-Talbot and Bridgend. This is to help better manage some of the capacity and demand issues the service is currently experiencing and to reduce the inequality in HF services provision within the region. As one of the project leads described: *“We can’t carry on as we are. We do need to extend. Senior management have recognised that”*.

The project leads have also requested to increase the number of HF acute hospital discharge nurses. They hope to place one in Singleton hospital and increase the number of discharge nurses in Moriston hospital to 2.8 whole term equivalent. In addition, they are hoping to:

- Increase the number of HF specialist community nurses;
- Increase community administrative support to 30 hours a week and acute hospital administrative support to three days a week; and,
- Work with the ambulatory diuretics service improving the projects links with palliative care so that they can provide support to advanced HF patients who wish to die at home.

8.5 Concluding points

The project has successfully established a new HF pathway, despite some operational and logistical challenges in relation to available capacity and resources. There was a consensus among all interviewees that the project had led to increased levels of integration between primary and secondary care. As a result of this, patients are receiving improved HF care provision which has led to improvements in health outcomes. The project team have built a business case to continue and extend the service and were optimistic about the continuation of the pathway.

¹⁷ Using the figures reported in the quarterly return would indicate no cost savings have been made.

9 Project level findings: Betsi Cadwaladr University Health Board

There is increasing demand for HF services in Betsi Cadwaladr University Health Board (BCUHB). Yet there are gaps in primary care services. The number of patients on GP HF registers does not match expected prevalence, suggesting identification could be more effective. Where suspected cases of HF are identified, bottlenecks in hospital-based cardiology units prevent patients from having an echocardiogram to obtain a diagnosis as quickly as they should. Furthermore, patients with diagnosed HF are not always on optimal medication and do not have access to cardiac rehabilitation services. As a consequence, there are relatively high rates of emergency admissions to hospital among HF patients in the area (approximately 1,600 per year); associated costs are high and unsustainable.

In east and west North Wales the problem has been tackled by a community based HF team consisting of a GP with Special Interest (GPwSI) in cardiology and two HF nurses. By improving diagnosis of HF patients and ensuring they are on optimal medication, the team has contributed to halving projected unplanned admissions of HF patients and increased the proportion of patients admitted to cardiology wards (improving quality and productivity).

There was no equivalent provision in central North Wales. This project was therefore established to extend a similar model to the central region and deliver a community heart failure service. The project was awarded £89,470 funding over two years to appoint a:

- Cardiac physiologist (Band 7) – 1 day per week – £9,206;
- HF specialist nurse (Band 7) – 2 days per week – £18,412; and,
- GPwSI – 2 sessions per week – £17,118.

The BHF-funding was the main input; there was no funding from the Health Board. There were some in-kind contributions in the form of venues for community clinics.

At the start of the project the multidisciplinary team was intended to work with GP practices in Communities First¹⁸ areas in Conwy and Denbighshire. The project design was that:

- The HF specialist nurse would contact the GP practice and negotiate access to their patient database. She would work with the practice to analyse patient records to identify: 1) those with known HF; and 2) those who are at risk of HF (e.g. because of a previous heart attack) but with no record of an echocardiogram. Dates would be arranged for the multidisciplinary team to locate themselves at the GP practice.
- Patients identified as falling into the two categories would be invited to meet with the multidisciplinary team. Those with known HF would have an appointment with the HF nurse to discuss symptoms, check they are on optimal medication and receive guidance on self-management. One or two practice nurses would sit in with the HF specialist nurse during appointments so they could increase their own knowledge and skills in relation to HF. Those at risk of HF would be seen by the echocardiographer; if diagnosed as having HF, they would be referred on to the specialist nurse, GP or cardiologist. The GPwSI would supervise the nurse and echocardiographer and support clinical decisions in more complex cases.
- At the end of the community clinic, there would be a debrief between the peripatetic specialist community team and one or two GPs and practice nurses to ensure they were informed and could resume on-going care. After the initial appointment, the specialist HF nurse would follow up with high risk patients but most would not be seen by the multidisciplinary team again.

¹⁸ Communities First is the Welsh Government's flagship programme designed to improve the prospects of people in the most disadvantaged communities across Wales. It operates in areas which are in the top 10% of deprivation according to the Welsh Index of Multiple Deprivation.

At the time of the second visit, which took place in March 2014, there had been some substantive changes since the first visit, including:

- **Modification to the process of identifying and targeting patients.** Initially, it was intended that the project team would validate the GP HF registers. This was found to be a time consuming and difficult process. It was decided that it would be more efficient for GP practices to identify patients themselves.
- **Setting up a rapid referral echo clinic and HF nurse follow-up clinic in Llandudno hospital.** The need for this clinic was established during work with GP practices in East Conwy.
- **A shift of resources in the project.** The GPwSI was contributing fewer hours to the project; freed resources had been used to employ a pharmacist as part of the multidisciplinary team. The pharmacist was working with patients and staff on in-patient wards to ensure HF patients or those with suspected HF received specialist care and were on the right drugs. This was previously a gap in the project as the engagement of in-patient nurses had been more limited than expected. It was intended that there would be systematic follow up of these patients. To facilitate this, the pharmacist was working closely with community pharmacists and had provided training on HF.
- **A new model in South Denbighshire.** Local GPs in South Denbighshire were consulted and suggested that they would prefer an open access clinic in a community hospital rather than a peripatetic clinic in individual practices. A venue had been secured and a new clinic had been established.
- **Changes to post-holders.** The BHF-funded specialist nurse was moving on to a new job. A replacement had been identified and a smooth transition was expected.

9.1 Update since the last visit

Since the last visit in March 2014, the project has continued to progress. There have been no major changes. The focus has been on ensuring the newly established community HF service can be sustained after BHF funding comes to an end (see 9.4 below).

As in March 2014, the project remains well aligned to the strategic objectives of the BCUHB. The BCUHB's five year strategic plan, *Bringing people and services together for North Wales*, identifies the development of enhanced community services that prevent unnecessary admissions to hospital as a priority. In relation to LTCs, improving patients' ability to self-care is also promoted. The project has also been designed to contribute to objectives set out in the North Wales Cardiac Network Heart Disease Delivery Plan, which cites detection and treatment of HF is a priority and mentions the project as a means of achieving this.

The main type of integration being tested by the project is between general practice and specialist community support. Integration between secondary and primary care is not a focus although at the time of the last visit the new pharmacist had expanded her role to try and improve partnership working between hospital wards and community services.

9.2 Implementation

Since the last visit:

- The open access diagnostic echo clinic in a community venue in South Denbighshire has been held weekly and received a steady rate of referrals. HCPs considered that *"now GPs are aware of the service, they are keen to refer"*.
- There has been pharmacy follow up of patients with Left Ventricular Systolic Dysfunction (LVSD) at the same community venue.
- The possibility of establishing a similar clinic in Rhyl, a coastal town in Denbighshire, has been scoped. It was decided that the existing administrative processes were not sufficiently robust to ensure the clinic could be run efficiently and safely. Instead, the team

ran a clinic in a Rhyl surgery and has three further practice based clinics planned between November 2014 and the end of the project.

- There has been further training on HF for community based pharmacists and technicians.
- The team's pharmacist has led a pilot project in three GP practices to test new software that allows patients' medicines to be reviewed.

Interviewees did not identify any particular challenges experienced between March 2014 and November 2014 (the second and third evaluation visits). They reiterated the key challenges experienced throughout the project:

- The loss of a HF specialist nurse mid-way through the project. Although a replacement was found quickly and the transition was relatively smooth, the loss of the HF specialist nurse who helped to set up the project was considered to be a setback that resulted in *"loss of momentum"*.
- Different levels of interest and commitment to the project among GP practices. In some cases, this was because practices could not provide an appropriate room for the clinic; in others it was because HF was not seen as a priority. Around a third of practices did not engage in Conwy. In those that did, around three quarters did not make practice staff available for the clinics. As a consequence, there has been limited up-skilling of primary care staff (*"this just wasn't really happening in our practice-based model"*).
- Difficulties in engaging in-patient specialist nurses. It was anticipated that in-patient specialist nurses would be on the steering group but attendance has been limited.
- Managing the administration required for the project. The initial project plan did not include administrative support (e.g. to book clinics, send appointment letters, send follow-up letters to GPs); this has been time consuming for the project HCPs.

Aspects of the project that are considered to have worked well are:

- The composition of the multidisciplinary team. The mix of HCPs is considered to work well and to provide a *"one stop shop"* for patients.
- The follow-up clinic in Llandudno. Project HCPs and partners agreed that the rapid referral echo clinic and specialist nurse-led follow up clinic in Llandudno has worked well and filled gaps in service provision. A GP whose practice took part in the project commented that the clinic has *"worked very, very well"*. He described previous local cardiovascular disease services as *"very bad"*, but feels they have improved significantly since the introduction of the Llandudno specialist clinic, noting that patients now receive a specialist assessment much more quickly.
- The format of the community clinic, which allows relatively long appointment slots. One HCP commented *"the long appointment slot really makes a difference. It means you have time to sit down with them and explain things. No one has ever done that with them before"*. Wider health problems, such as depression and fatigue, have also been picked up in the appointments and onward referrals made. HCPs commented that *"it allows a holistic assessment that we don't normally have time for"*.
- The approach taken in the pharmacy improvement project of using stickers on case notes to prompt staff on in-patient wards to check that HF patients are on the right medication and that HF is identified early and diagnosed is considered to be effective. *"It acts a useful prompt"*.
- Communication with GPs after the diagnostic clinic. Rather than sending a complex, technical echocardiogram report, the team have sent a letter from the HF nurse and a one page action plan. This is considered to work well because *"sometimes GPs can be put off by long technical reports. This project is different because rather than the standard technical report, it gives a diagnosis and also recommendations"*.

The key lessons that have emerged from the pilot are:

- Having fewer locations for the community clinic is more effective as it reduces the administration time required to find clinic space and makes the clinic accessible:
“A one stop shop model is much better than going in to individual surgeries. It means it's accessible to everyone. It's a small hospital and patients still feel like it's a community setting that's easy for them to reach and is still local”.
- The need for flexibility in the service delivery model. In some geographic areas a community clinic may be more appropriate but in some cases, it may be helpful to visit a large GP practice or to conduct a targeted visit to a practice where particular problems have been identified in relation to identification and diagnosis of HF.
- Good quality administrative support is a key part of the project team.
- Including a pharmacist can reduce the time input required from a GPwSI and it also *“gives us flexibility as a team because the pharmacist and echocardiographer can work together”* so the specialist nurse or GPwSI is not always required.
- The need to build in time and resources for patient follow-up. Patients, particularly more complex cases, may need to be contacted or seen by the specialist nurse a few times before they can be discharged from the community clinic back into the care of their GP.
- Up-skilling community staff and improving their knowledge and skills in relation to HF is likely to require several different approaches. For example, this might include some practice based training, some larger regional training days and also written guidance.
- Even though GPs are sent recommendations by the specialist HF team, they may be reluctant to implement the changes. This indicates the need for follow up from specialist nurses and pharmacists until there has been more up-skilling of GPs and practice nurses.

9.3 Outcomes and impacts

Interviewees confirmed that the outcomes mentioned in the previous evaluation for patients, the organisation and staff had continued to be achieved.

Patients

HCPs and partners consider that the project has improved patients' quality of life, as their symptoms are better managed. A GP commented: *“they're on optimum treatment now, it's given some people a new lease of life”*. Similarly the specialist nurse commented: *“I have many patients that GPs were just up-titrating and I have halved the dose”*.

Patients also value having a community-based specialist service, which makes it easier for them to attend appointments. One HCP explained, *“I had a patient last week who was over the moon, she couldn't believe she could have a cardio scan in Denbigh and didn't have to travel for it”*.

HCPs have also noticed an improved ability to self-manage. *“I see quite a few patients who come in with their weight recorded. It feels like they've taken on board the information and advice you've given them”*. They attributed this to the time they have been able to spend with patients during the community clinic providing patient education.

An interview with a newly diagnosed patient who was referred to the community clinic (see blue box below) confirmed HCPs' views and also echoed comments from patients interviewed during the previous case study visit.

'Rose' heard about the service through her GP and had her first appointment in Denbigh two weeks after she was initially referred. She was first seen by the echocardiographer and the specialist nurse, who diagnosed her condition. Subsequent appointments were with the pharmacist, and were usually fortnightly, lasting about 45 minutes each. Rose was sometimes required to attend a blood test three days before her next appointment. After her initial visit and diagnosis, subsequent visits usually included discussions about changes to her medication, and advice on self-management, for example encouraging her to undertake regular but gentle exercise. She makes an appointment for the next visit while she is at the clinic and has the telephone number of the pharmacist so is able to contact her at short notice if needed.

She reported that the service is *"excellent...I can't fault it"*, and if she hadn't been referred to this service she does not think her condition would ever have been properly diagnosed. Before the service was available, Rose was on a seven week hospital waiting list and had been in and out of hospital a couple of times when she got short of breath and needed to be put on oxygen. She is now better able to self-manage and has not had to go back into hospital - *"as soon as I went there and they gave me a diagnosis, I never looked back. They gave me some tablets that day, they told me that some of my heart had died, sort of thing, putting it in an easy way, and they gave me the medication and about three days later I felt a lot better"*.

She is very happy that the new service is so much more accessible than the hospital she was initially being referred to, and that the referral process was so much faster. She also felt that the care was *"very well coordinated"*, with the pharmacist writing weekly letters to her GP to explain any medication changes. Not only has the service benefitted her physical health, she has also found the care extremely beneficial for her mental wellbeing, *"I was so poorly...and I was getting nowhere. I was on steroids, and I'd put on two stone and I still wasn't getting any better"..."I'd got myself really down – it was having the diagnosis I think that helped me a lot. You know, I know what's wrong with me now"*.

Service and system-wide

A March 2014 review of the outcomes of the new service in Conwy by Public Health Wales¹⁹, drawing on GP practice data in relation to key areas of care, indicated that there was emerging evidence of improved identification and diagnosis of HF patients and drug therapy. It showed that:

- **Identification and diagnosis:** There have been modest improvements in the number of practices showing an increase in the number of patients who had an echocardiogram recorded at the time of having a myocardial infarction (MI). This had been identified as a gap in primary care services that led to poor identification and diagnosis. It will be some time before a significant increase in the total proportion of MI patients who have an echocardiogram is evidenced because of the size of this group. The data also suggests that there are differences in levels of improvement between practices, which could either be as a result of inaccurate recording of data or because good practice is not being consistently replicated. A GP partner considered that the project has helped in *"putting people who previously thought they didn't have HF onto a care pathway"* as well as optimising the treatment of those with a diagnosis.
- **Effective drug therapy:** There is emerging evidence that the variability of drug therapy between practices is improving, with a small number of practices showing significant increases in the number of patients now being prescribed appropriate drugs.

¹⁹ Review of CHF quality improvement activity – Conwy 2013-2014, March 2014, Primary Care Quality Public Health Wales

As a result of IT problems, updated data (i.e data for the Conwy GP practices between March 2014 and the end of the project and data on GP practices in Denbighshire) is not currently available. The Health Board is seeking to resolve these technical issues and when it becomes available, the data will be shared.

Analysis of data **on admissions of HF patients and re-admissions** within 30 days indicates a slight downward trend suggesting potential cost savings are being made. There was a drop in HF admissions from 336 in 2012 to 283 in 2013. Although, project staff recognise that other initiatives, such as an enhanced care project in Glan Clwyd Hospital, may have contributed to this reduction, they are confident that the project has also contributed. One of the HCPs commented: *"I have carried out several home visits and all have avoided hospital admission. One patient would definitely have died – they were reliant on care from a medical professional who did not have the relevant specialist knowledge"*

HCPs also considered that there was a reduction in referrals to secondary care as a result of the project. They consider that *"GPs are better able to manage"* patients with the input of the specialist community team. Data is not available on this indicator.

Healthcare professionals

Project staff considered that in general up-skilling of primary care staff has not been achieved because in most cases practice staff were not present to learn from the specialist team. Nonetheless, it appears that in practices where practice staff worked alongside the project team, there have been benefits. For example, a GP partner perceived that there was *"an awareness of the benefits of optimum treatment"* and *"less reluctance by doctors to prescribe inhibitors, beta blockers, and large amounts of diuretics to patients"*, as a result of the project.

Project HCPs reported improved knowledge and confidence as a result of the project. The project GPwSI reported that staff are *"now able to work more independently"* and require *"less supervision than at the start of the project"*. BHF-funded HCPs reported *"some really positive learning about other people's part in the team and an understanding of their role"*. The pharmacist also reported learning a lot working as part of the multidisciplinary team:

"I've learned a lot about diagnosis and also about making links across primary and secondary care".

Strategic value

As a result of the pharmacist's successful integration into the project, the pharmacy team hope to trial a similar approach for community-based follow up for patients with other chronic conditions. This is unlikely to have happened in the absence of the project, which provided an important opportunity to trial a new way of working.

9.4 Sustainability

The BCUHB and Cardiac Network delivery plan for HF patient care in North Wales was updated during the course of the project. Learning from the project about how a relatively inexpensive specialist community team can contribute to service improvement informed the review process. Data on outcomes was used to present a business case for sustaining the specialist community team to the Board. This was approved and accepted by the Board as a sustainable exit plan for the project. Approximately £400,000 per annum has been committed by the Board to establish a single community heart failure team for North Wales.

Learning about the important role of pharmacists in the multidisciplinary team is being used and there will be a new 0.5 FTE pharmacist post in the team. There is also a commitment to continue to try and up-skill community based pharmacists across North Wales in HF.

A key focus of the new HF team will be considering how targeted support can be provided to GP practices where it is known that identification, diagnosis and medicine management could be improved. It is considered that there is *"still a hardcore of surgeries that won't refer"* to the open access echo diagnostic clinics and that tackling this must be a priority.

Some interviewees considered that the project has catalysed progress: *“this would have been achieved at a slower pace without the project. The project evidenced the need and helped to secure the on-going funding”*.

There are wider developments within the Health Board in relation to improving management information systems. If these plans progress and are delivered, it should support the work of the new community HF team by allowing community staff such as GPs and practice nurses to share records with the specialist team.

9.5 Monitoring and evaluation

The project's processes for collecting data on admissions as a result of HF, emergency re-admissions within 30 days, and drug therapy has clearly contributed to its success in securing on-going funding.

The Minnesota Living with Heart Failure Questionnaire and European Heart Failure Self Care Behaviour Scale were used to capture patient-reported outcomes for a small number of patients who attended the follow up clinic. The first questionnaire was administered before the clinic and the follow-up questionnaire posted back by patients. The return rate of follow-up questionnaires using this method was very low, suggesting the need for a different approach.

9.6 Concluding points

Learning from the BHF project has informed service development in North Wales. It has demonstrated that a specialist community HF clinic can help to improve outcomes for patients and also to contribute to core organisational outcomes such as reductions in admissions and re-admissions.

As a consequence, key components of the project are highly likely to be maintained as part of the new North Wales community HF service that has been approved by the Health Board. The project has provided a crucial opportunity to test different models of service delivery and to gather evidence of outcomes and impact to build a business case.

The main challenge experienced by the project has been variable commitment among GP practices to the project. The project overcame this by successfully establishing open access clinics in a community hospital. The challenge remains for the new service and learning from the project suggests that a flexible model that allows for a combination of practice-based and open access community clinics is likely to be most effective.

PART 3: INTEGRATED CARE PILOTS IN SCOTLAND

10 Context to integrated care in Scotland

This section contextualises the programme. It updates the policy context described in the Interim (August 2014) and Baseline (September 2013) reports. A description of the main policy initiatives is augmented by national stakeholder views on progress with integration in practice.

10.1 Integration is a core theme in Scottish policy

Scottish policy is supportive of integration, and highlights CVD as a major priority.

The Scottish Government has published a number of policy documents that promote integration. This includes:

- *The Healthcare Quality Strategy* for NHS Scotland (NHS Scotland 2010) encourages a whole system improvement through partnerships between patients, medical teams and other bodies. The ultimate aim is to provide world leading, high quality care for patients in Scotland through ensuring that all services are aligned and integrated.
- *A Route Map to the 2020 Vision for Health and Social Care* (NHS Scotland 2011) was published in 2011 providing strategic narrative and context for implementing the Quality Strategy. Within the roadmap, integrated health and social care was detailed as being a key component in delivering better health for Scotland.
- In 2014, the Scottish Government introduced *The Public Bodies (Joint Working) (Scotland) Act 2014* (Scottish Government 2014a), which requires health boards and local authorities to integrate planning and delivery of certain adult health and social care services. This includes the requirement for local authorities and health boards to jointly prepare an integration scheme for the local area.

Moreover, the Act puts in place the following:

- A set of nationally agreed outcomes across health and social care, for which health boards and local authorities are jointly accountable
- The integration of health budgets between health boards and local authorities
- Promotes partnerships to improve the role of clinicians and care professionals, as well as the third and independent sectors, in service planning and delivery.
- *Integrated Care Fund* (Scottish Government 2014b) provides additional resources of £100m to health and social care partnerships in 2015-2016 (as a result of *The Public Bodies Bill*) to support delivery of improved outcomes from integration, prevention and tackling health inequalities.²⁰

10.2 CVD recommendations and standards support integrated care in Scotland

CVD is a major cause of both morbidity and mortality in Scotland (NHS Quality Improvement Scotland 2010). Death rates from CHD are higher in Scotland than in England or Wales and in 2010, premature deaths were 37% higher for men and 60% higher for women compared with England (British Heart Foundation 2012). Thus, heart disease has been a priority for NHS Scotland for over fifteen years. NHS Scotland has therefore introduced policy specifically focusing on addressing CVD which also supports integrated care. This includes:

- The *Better Heart Disease and Stroke Care Action Plan* (NHS Scotland 2009) which made recommendations in five main areas focusing on prevention; specific services for heart disease and stroke; improving the quality of care and support; and improving the IT infrastructure.

²⁰ <http://www.gov.scot/Resource/0046/00460952.pdf>

- Clinical Standards for heart disease (NHS Quality Improvement Scotland 2010) introduced eighteen standards to improve care and experience of patients with heart disease including standards which have implications for the integration of care, such as patients receiving treatment in the community setting.
- The Scottish Government Heart Disease Improvement Plan (August 2014), which defines priority areas and actions to improve prevention and treatment in six areas: 1. Prevention of Cardiovascular Disease; 2. Mental Health for Heart Disease; 3. Secondary and Tertiary Care Cardiology; 4. Heart Disease Management and Rehabilitation; 5. Heart Failure; and 6. Arrhythmias.

10.2.1 Scottish stakeholders suggest integration in Scotland is showing promise

Interviews with national stakeholders suggest that integrated care in Scotland is more developed compared to England. In part, this is due to the structure of health care in Scotland, where health boards have joint responsibility over primary and secondary care. Integration across primary and secondary care was described as having been relatively successful, with attention now being focussed on how to develop integration between health and social care, as well as integration of the public and voluntary sectors.

Interviewees commented that *The Public Bodies Act* had been a key driver in promoting integration between health and social care. As recently as 1 April 2015, Scotland reached a milestone when all thirty-two local NHS and council partnerships finalised their plans to bring together the health and social care services (Scottish Government 2015).

However, challenges still remain. One stakeholder noted that there needs to be a shift in (financial) balance towards community care if integration between health and social care is going to be realised.

11 Project level findings: NHS Fife

The project, based in NHS Fife, aims to improve the standards of care for patients with heart failure (HF). Based on the demographic characteristics of the local area, the project manager and clinical lead considered at the start of the project that HF in Fife is under-diagnosed. Data show that there are around 0.7% prevalence of the condition across the health board area; however it is suspected that there may be the same number of people again (or more) with HF who remain undiagnosed.

At the outset, the project planned to undertake two main activities. These were: an audit of practices' registers to try to identify patients with HF who are currently undiagnosed (or patients listed as having HF who have been misdiagnosed); and supporting the implementation of a care bundle for HF patients. A care bundle is a specified, consistent and evidence-based package of care; it usually comprises a small number of practices – typically three to five – with an evidence base to suggest that implementing these practices would improve patient outcomes. Bundles are typically based on an electronic tool which is embedded into GPs' patient management systems and then is used to guide clinicians' engagements with patients. This was to be supported through training of staff in engaged practices.

The project was awarded £81,590 which is being used to employ one Band 6 nurse for two years. The project is being supported by both cash contributions (£3,520) and in-kind contributions (valued at £4,000) in addition to the BHF funding.

11.1 Update since the last visit

The project ended in October 2014. The overall aims of the project remained in place and the main activities did not change substantially throughout the programme. The project's overall scope changed with the team deciding to target a smaller number of GP practices focussing on embedding the bundle where possible. However this did not affect the achievement of the overall aims and objectives of the project.

11.2 Implementation

There are 58 GP practices in Fife. The HCP reviewed the HF registers of 35 of these practices. The practices visited included those in rural and deprived areas and across the three community health partnership areas in the Health Board. The bundle has been implemented in 12 of these practices.

The project team recognised at a relatively early stage that they would not be able to visit all practices in Fife, as originally hoped. Refining of the HF registers was a more time consuming process than originally envisaged. This reduced the total number of practices it was possible to visit in the time available. The project team also found that not all the GP practices were able to, or interested in, taking part.

Along with the register refinement, the HCP offered practices an education session on provision of care for HF. Ten sessions were delivered to 38 staff in total. For those practice nurses and GPs who were particularly interested, the HCP was able to support them to become heart failure champions. The intention is that these staff will continue to play a key role in maintaining the momentum generated by the project. There are 16 GPs and three practice nurse champions in the area now. They have committed to continue the work and review the register. They will also lead on the heart failure clinics.

The HCP also undertook a range of data collection and evaluative steps as part of the project. This includes:

- Analysis of the data collected through the register review visits. This forms the core of the evaluation and includes measures such as prevalence rates, and the number of patients added to, and removed from, the heart failure registers.

- A baseline and follow-up audit of practices to assess the impact of implementing the bundle. This looked at the number of patients who had received a primary care heart failure review, whether patients had anything recorded against the New York Heart Association (NYHA) Functional Classification, and whether patients had received a medication review.
- A survey of GPs and practice nurses who had been involved in the project to ascertain whether they were doing anything different as a result.
- Three focus groups and a survey questionnaire with patients who had attended follow-up appointments with their doctor or practice nurse following implementation of the bundle.

11.3 Outcomes

Outcomes of the register review

Across the 35 practices visited in NHS Fife, 464 patients were removed from heart failure registers, and 913 were added. The recorded prevalence increased from 0.68% to 0.85%. The project team also learned about why patients' conditions had not been recorded accurately initially. Several factors were identified:

- The main source of information on which coding decisions are based is letters received from the hospital after patients are diagnosed in clinics. The GP often highlights the part of the letter that is relevant for coding and due to time pressures it is thought that this is often done inaccurately. Sometimes, letters can be unclear (as one of the HCPs noted: *"They show the test results, but not necessarily the diagnosis"*). In other cases, the coding is carried out by non-clinical staff who may not have the required expertise to interpret the letters. Partially as a result of the project, the secondary care clinicians are now providing the accurate read codes in the letters to GPs (*"GPs are really pleased with this"*) – a good example of a more integrated service.
- If patients move GP practice, their records may not be automatically or accurately transferred. Data quality can degrade at this stage.
- Patients who were diagnosed a few years ago did not routinely receive an ECG to diagnose heart failure. Common practice at this time was for diagnosis to be based on an assessment of the symptoms. In some cases, this was done inaccurately.
- Patients are sometimes simply miscoded following an ECG (*"The patient may have heart failure due to a systolic impairment and the record may show they have this instead of heart failure"*).

The main reason that GPs are not able to rectify the inaccurate coding themselves is largely because they do not have the time and resources to do so. One of the project staff further considered that, in general:

"There is also a definite need to improve the knowledge in primary care – both GPs and practice nurses – and they will say that to you".

Following the progress made with primary care registers, a Fife-wide heart failure register has been developed. This will support the development of an alert system for secondary care. This will alert the heart failure team when a patient with this condition is admitted to hospital and allow them to carry out the necessary follow-ups.

Outcomes of the primary care heart failure bundle

The team compared data collected at the baseline review with data collected on the follow-up review. It was found that due to the implementation of the bundle, there had been an increase in the number of patients who had had a heart failure review appointment (from 12% of patients at baseline to 54% at follow-up), had a NYHA classification recorded (from 1.9% of patients at baseline to 31% at follow-up), and an increase in patients receiving a medication review (although the project's internal evaluation report noted that this may be influenced by a recent government initiative with similar goals).

Outcomes for the HCP

The HCP has also undertaken specialist training throughout the project. This included a diploma and a heart failure module. She wishes to continue her career in cardiology, and progress into more senior posts. Her skills in understanding and using evidence and in engaging with and influencing GPs were noted to have developed as well.

Summary of interviews with GPs

In October 2014, telephone interviews with three GPs who had engaged with the BHF Heart Failure project were undertaken. The main findings were that:

- Interviewees were aware that some of their heart failure patients were potentially miscoded; it was noted that this works both ways, with patients incorrectly coded as having heart failure, and others diagnosed with heart failure where this is not the case. This is the result of several factors going back over several years.
- Interviewees reported that, at the time the project began, new medications and patient management approaches in this area were becoming available, or being trialled. It was also noted that other complementary work was taking place in the area – for example, the introduction of new heart failure nurses in the community. As a result, interviewees perceived there to have been a growing focus on this area of care in recent years that this project contributed to.
- Interviewees highlighted two main areas of impact:
 - Skills and knowledge of staff. Interviewees noted that this is quite a complex area of care, and as such, the skills required are quite specialist. It is also an area of care where practice nurses have a key role to play in managing patients with heart failure. As a result, specialist additional support is valued. GPs noted that their practice nurses are now more confident in this area, are asking the right questions, and are more confident in medication management (for example, they have more knowledge of titration practice). Staff are also more aware of other services available in the area, that could potentially support heart failure patients.
 - Implementation of the bundle. Where this has taken place, interviewees noted that it leads to more consistent check-ups. It was also noted that the bundle is particularly popular among the nursing staff.
- In general, interviewees noted that the project had integrated primary and secondary care providers. This was achieved by the increasing knowledge of secondary care services in primary care providers, and a greater degree of coordination between the care each delivers to more complex patients.

11.4 Sustainability

Interviewees agreed that the *“legacy of the project is powerful”*. There are several components to this. The patients who have been re-coded on the practice register should receive more appropriate care in future, whether through a proactive invitation for a heart failure check-up, or in their on-going links with primary care.

The learning from the project will also be shared. The project team has produced a report detailing the project’s achievements. This will be shared with the ‘heart failure hub’ for Scotland which is the key forum for sharing some of the findings from this project. The project team also has a draft version of a Local Enhanced Service (LES) bid set up, which they do intend to take forward.

The champions will continue their involvement in the clinical area; there will be continued training and the MCN is likely to continue to stay in touch with this group.

12 Project level findings: NHS Lanarkshire

The primary aim of this project is to improve the capability of staff in primary care settings to manage patients with Atrial Fibrillation (AF), a heart condition within the broader condition of arrhythmia which increases stroke risk fivefold.

In order to achieve this, the HCPs carried out an audit of activity currently taking place in primary care settings using the GRASP-AF tool²¹. On completion of the audit, practices were provided with a summary of the findings, and the HCPs made recommendations and provided tailored training for staff based on what the tool found.

The project's secondary aim was to support the development of services in secondary care. There is a rapid access nurse-led AF clinic already in place in the hospital which is hosting the two project HCPs. The HCPs are training four specialist nurses so that they can establish rapid access nurse-led AF clinics in the two other hospitals in NHS Lanarkshire (described below). This ought to improve equity of access to the nurse-led clinics across the area by developing the skills of specialist nurses in other acute settings. Prior to the project, this clinic (and the perceived benefits they provide patients, such as reduced waiting times) was only available to around one-third of the area.

The project was awarded £97,660 for two Band 7 nurses who each worked 0.5 FTE over the two year duration of the project (while continuing to carry out their current role with the remainder of their working week). The project is being supported by both cash (£1,550) and in-kind contributions (valued at £13,200) in addition to the BHF funding. The project was completed in March 2015 and a final evaluation report is being produced by the project for NHS Lanarkshire and the NHS Lanarkshire CHD Managed Clinical Network.

12.1 Update since the last visit

The HCPs have completed their contracts and returned to their original posts or moved on to new roles. The project team has completed an evaluation of what was achieved over the two years. The project has surpassed its original goals in terms of the number of practices engaged with. The qualitative evidence collected from the final fieldwork visit also suggests that the impact of the project on the knowledge and behaviours of staff providing primary care has changed as a result of the project. Although education of specialist nurses was provided, to assist the service with roll-out of the rapid access clinics in other secondary settings in the health board area, the education was not delivered to the desired level. So, while secondary to the main aim of this primary care-focussed project, the team has not made the desired level of progress in providing the education to support the roll-out of the rapid access clinics in other secondary settings in the Health Board area.

12.2 Implementation

The project's design involved the use of an “*audit and education*” approach focussed on increasing the skills, knowledge and confidence of primary care staff to identify patients with AF, and to optimise their on-going management. There are 96 GP practices in Lanarkshire and the project team worked with 55, which exceeded the original target.

By agreeing to be involved in the project, GP practices underwent a GRASP-AF audit of their patients diagnosed with AF. This tool analyses the practice's patient list identifying all patients with a diagnosis of AF, calculates a CHADS₂ and CHA₂DS₂-VASc score²² for these patients, and focuses on the medications these patients are on. The end product is a practice-level dashboard which summarises AF patient management in the practice. Alongside the baseline

²¹ GRASP-AF is an electronic tool which runs a set of queries on the practice database building a list of every patient with a diagnosis of AF, the drugs associated with AF and any contraindications for anticoagulation.

²² CHADS₂ is a tool used by clinicians to predict the likelihood of an AF patient having a stroke; this informs clinical decision making.

audit, the HCPs delivered a formal education session to staff in the practice outlining the latest approaches to managing AF.

Following the baseline audit, the HCPs visited the practices twice more: after six and twelve months. The aim of the follow-up visits was to assess progress with implementing any changes recommended after the audit process and the impact of the project on the practice (with the data generated from these visits, forming a central part of the project's evaluation).

The project team also offered GP practices a coaching session based around a clinic for patients with AF who, following the audit, were identified as requiring a change to their care plan. The HCPs sat in on a clinic and provided guidance and support to HCPs in Primary Care on communication, support and education techniques to enable patients to make informed decisions on their management of AF.

In general, interviewees reported that the project has been designed effectively and as a result has worked well. Several factors were evident over the three fieldwork visits:

- The relatively straightforward recruitment process and high take-up of the project from practices in the area, indicates that there was an unmet need for extra support on AF in the area. It also illustrates that the fairly minimal inputs required of the practices themselves, make this use of “audit and education” an attractive offer to them. A number of clear and immediate benefits to participation have been identified, which may also have contributed to their involvement:
 - The impact on patients can be significant with the project team able to describe that involvement can reduce patients' stroke risk.
 - The output from the audit gives a CHADS₂ and CHA₂DS₂-VASc score for all patients in the practice. The practice manager can use this as evidence in order to gain full QOF points against this measure. This reduces the time and effort of doing the count manually.
 - AF is also seen as becoming more high profile within primary care.
- Feedback from the project team on the use of the GRASP-AF tool has been mixed. The Managed Clinical Network (MCN) project manager bought the license for the use of this tool and this has meant the audit takes a number of hours, compared to several days of manually searching registers. Data analysis is also reasonably efficient as the GRASP-AF tool generates databases for the entire Health Board as well as the practices themselves. However, the project team has identified weaknesses with the tool. The main output of the audit – the practice-specific dashboard – was thought to be too generic. It required the practices to actively interrogate their own patient lists in order to generate a list of those who needed to be called in for a review of their treatment. This was found to be a barrier to many practices acting on the initial audit thus reducing the potential impact. Having identified this barrier, the project team carried out extra work to generate individual lists for practices. In this context, the fact that the project included a mid-point catch-up with practices was crucial to its success as this issue was confirmed when HCPs re-visited practices six months after the initial audit.

A secondary activity to the development work with primary care providers was to develop the skills of staff working in other parts of the Health Board, to deliver new nurse-led one stop rapid access AF clinics in the two other hospitals in the Health Board area (Monklands and Wishaw). A model of these clinics has been running in Hairmyres Hospital over the last few years. The process of setting up the clinics is outside the scope of the project; the BHF funding was provided just for the education. The clinics have not yet been set up due to a mixture of logistical and strategic reasons. However, the project team are hopeful that the momentum generated in the project may lead to more progress towards establishing an effective diagnostic pathway for patients with suspected AF at a later date.

12.3 Outcomes and impacts

Interviews undertaken over the three visits and an assessment of the early findings of the project evaluation indicate that this project has generated beneficial additional outcomes at two levels: for the staff who engaged with the project and patients in the area.

Staff who engaged in the project

The HCPs have identified that the practice nurses and GPs they engaged with had several knowledge gaps in relation to AF. Common knowledge gaps were an underestimation of the stroke risk of AF, an over-estimation of the bleeding risk attached to particular medications, and a low level of understanding about new drugs available for treating AF. In general, it was noted by one of the project team that:

“It’s relatively new for them [primary care staff] to be managing AF. Previously patients with AF were referred for investigation and treatment to their local hospital... now they’re actually starting to investigate and treat AF patients.”

The HCPs and wider project team identified that the initial training – which was structured against a set of learning objectives (including recognition of AF, incidence and prevalence, causes, classification, treatment options, stroke risk and anticoagulation) – addressed many of these knowledge gaps. The coaching sessions, which in most cases took place later in the practice’s involvement in the project, provided more focused support on the clinical staff’s engagement with patients with AF. These were reported to have been particularly beneficial and addressed many of the previous approaches followed.

Patients in the area

As a result of the knowledge gaps identified by the project, many patients were remaining untreated as it was thought to be unsafe for them to go on anti-coagulants. Some of the newer drugs which are now available were not being prescribed. The project attempted to address these issues through targeted education and this is likely to lead to: an increased level of diagnosis of AF; a higher level of anti-coagulation prescriptions for patients with AF; and, ultimately, a decreased risk of strokes than there otherwise would have been (with the associated economic benefits to the healthcare system due to the cost of these expensive episodes of care).

The preliminary findings from the project’s own evaluation are based on the GRASP audit and were made available for this write up. They provide supportive evidence to the stakeholder views on impact set out above and suggest that 12 months after the initial audit and education intervention:

- The prevalence of AF has increased: up to 1.68% of patients in the Health Board area from a 1.4% baseline;
- More high risk patients are on anticoagulation medication: 62.2% of high risk patients which is an increase of 4.2% from baseline; and,
- The stroke risk has reduced: this is down to 78 strokes predicted annually in the high risk untreated group, a reduction of 14% from baseline (91strokes at baseline).

Feedback from the primary care staff themselves has been collected across the visits. A GP who took part reported that his clinical staff are now:

“Looking for signs [of AF] rather than waiting for people to present with symptoms... for example, when a new patient comes in, the clinician will think ‘I might as well check this [AF symptoms] and their pulse while I’m here... it’s about being more proactive rather than reacting”.

Another primary healthcare practitioner reported that the project had impacted on the way she was prescribing (“I was made aware that the way I was prescribing aspirin was wrong”) and that she is more confident in prescribing warfarin.

In general, primary care also reported that the project is well-timed. They were aware of the growing prevalence of this condition, their increasing responsibilities for managing the condition and the other drivers affecting their behaviour in this area (such as QOF).

12.4 Sustainability

Across the three fieldwork visits undertaken, there is evidence that the project has made an impact at the strategic level. A key medical stakeholder working in the clinical area identified that the project has been delivered at a time when attitudes towards managing AF in primary care are changing. These attitudes are expected to change further in the future, with a growing role for GPs and (particularly) practice nurses in screening for the condition. The outcomes generated by the project in relation to the skills of staff are likely to have greater value in this future policy context.

The project team is planning other activities to build on the work carried out to date. This includes, sharing the evaluation findings with all practices in the Health Board. It is hoped that this will act as a reminder for those who took part and highlight more clearly the potential benefit of taking part for the practices which chose not to last time. Secondly, the project team hopes to use the NHS Lanarkshire IT team to develop a more basic version of the GRASP-AF tool which will allow practices to do some on-going audit of their systems. Third, senior medical stakeholders will share the evaluation findings with key groups such as the Arrhythmia working group. Finally, the audit will act as a baseline against which future progress can be measured.

13 Project level findings: NHS Tayside

This project implemented three distinct but related activities to improve arrhythmia management:

- Reviewing current care provision for atrial fibrillation (AF) patients and setting up a rapid access nurse-led AF clinic for these patients;
- Setting up a new nurse-led support service for patients who are getting a Cardiac Implantable Electronic Device (CIED) implanted (i.e. Implantable Cardioverter Defibrillators ICDs and Cardiac Resynchronisation Therapy with Defibrillators (CRTD)), and offering enhanced support for historic patients with a device implanted; and,
- Developing services for people with inherited familial arrhythmias or cardiac conditions. This included the establishment of a new multi-disciplinary clinic

An additional element, which spanned all three arms of the project, was to provide education and develop knowledge and skills in arrhythmia management for members of the wider health care teams within primary and secondary care.

Each new service piloted a new approach to service delivery examining how nursing posts can be used to enhance or redesign current services. Fundamentally, the project aimed to fill gaps in current services:

- The arrhythmia service aimed to speed up the referral process for these patients, as well as testing the benefits of a nurse-led service with timely review (which can typically offer more time per patient) as opposed to a consultant-led service;
- The enhanced support service for patients with a CIED implanted aimed to fill a perceived gap in the provision of holistic support (particularly psychological and information needs); and,
- The inherited cardiac conditions clinic is a new service which aims to support the substantial emotional and psychological needs for these patients and their families. This clinic targets families with a variety of inherited conditions which requires input from several different clinicians including the geneticist, cardiologist and the arrhythmia nurses.

Funding of £117,240 was awarded by the British Heart Foundation, paying for two 0.5 FTE Band 7 Arrhythmia Specialist nurses for two years. The project is also being supported by both cash contributions and substantial in-kind contributions (primarily through oversight and research support from a Nurse Consultant) in addition to the BHF funding.

13.1 Update since the last visit

The HCPs are approaching the end of their contracts, which have been extended by a few months using Health Board funding before integration into the specialist nursing service. Each of the three components of the project has been running for over a year. The main objectives of the project have been achieved and a final project evaluation report has been completed.

13.2 Implementation

Progress across the three components of the project was initially slower than planned. This was mainly a result of the ambitious nature of the project which required three separate new clinics to be established. The logistical challenges with carrying out this sort of activity (such as finding clinic space, establishing referral routes) were highlighted on previous visits.

The **rapid access arrhythmia clinic** began early in the project. The project team began by mapping out existing service provision, developing new guidance and protocols (using other examples around Scotland to support this process). The team also consulted widely with stakeholders and their teams, partly to raise awareness of the new service.

The first of these clinics started in November 2013 in Perth Royal Infirmary with clinics at Angus and Dundee following in 2014. Both of the HCPs have been delivering these clinics. The number of new patients was quite low to begin with as the cardiologists wanted to build up the referrals gradually, however it is now in full delivery across all sites. The HCPs are seeing a substantial number of patients attending for return appointments and the challenge now is to manage the demand for the services as opposed to generating demand.

The clinical sessions themselves are being delivered along the lines initially envisaged. HCPs are seeing newly-diagnosed patients within two weeks of diagnosis. The appointments take around 45 minutes and focus on provision of advice about how to manage the condition. They are also taking on the review of patients on long term antiarrhythmic therapies.

While this was on-going, the team focused on support for patients about to get a CIED implanted, as well as the offer of support for historical patients. For the former group, the HCPs have provided support for patients and their families immediately prior to and following their procedures and liaised with the physiology team about implantation and review. HCPs also contact the patients by telephone or see them face-to-face one month, four months and ten months afterwards. These discussions have included assessing a patient's understanding of what an ICD or CRT-D is, outlining the reasons the device is needed, and a discussing how to live with such a device (including managing physical activity, occupations, insurance and medication).

For the historical patients, the HCPs made contact by letter to introduce the service, assess patients' current level of concern about their device and provide them with the opportunity to attend a review appointment. Both sets of patients are also provided with a contact number for the HCPs.

The final area of work was to develop a new clinic for patients with an inherited cardiac condition. There was no specific clinic in place for these patients prior to the project commencing. There is now a monthly multi-disciplinary clinic for these patients, led by a Consultant and a geneticist, and supported by the HCPs; the HCPs also support the fortnightly cardio-genetics MDT meeting which is very useful to discuss patient management plans. While the number of patients seen is small in comparison to the other two components of the project (less than 20 were reported to have been supported so far), their needs are high (especially for psychological support) and the numbers are likely to grow as genetic testing technologies improve.

Across these three strands of work, the BHF-funded HCPs were identified to have made several key contributions:

- Carrying out scoping research along with colleagues which informed the design of the new services developed, drawing on best practice from other parts of Scotland and England through site visits and on-going communication as well as engaging with key clinical stakeholders and mapping existing care pathways and services.
- The HCPs have acted as a focused resource able to undertake much of the complex logistical work required to develop and operationalise a new service (for example, finding clinic space and developing referral routes and clinic proforma).
- Adding a nursing-specific skill set and approach to service delivery challenges. For example, their contribution to the inherited cardiac conditions clinic was considered by staff to be *"knowledgeable support for a group of patients with very high needs"* while for the patients undergoing a CIED procedure, the benefits of a nursing input, and the supportive advice able to be offered from this perspective pre-procedure (particularly in comparison to / in connection with the medical input), were noted.
- Using standardised tools to guide interventions and generate data for the evaluation (for example, the ICD Concerns questionnaire and the Hospital Anxiety and Depression Scale), and the AFEQT.

After initial challenges – which included difficulties finding clinic space, operationalising the service, liaising with other healthcare professionals within a complex organisation – were

overcome the project has made good progress across all three components. As a result, all project stakeholders agreed that objectives were met. Crucially, it was reported that the number of patients that use each new service was sufficient to illustrate the demand for these introductions, and to generate a sufficiently large evidence base for the evaluation.

Throughout the project there has been on-going provision of educational events on arrhythmia, organised by the project lead. In addition the team have contributed to educational events organised by partner agencies (e.g. Community Health Partnerships, BHF, pharmaceutical companies, professional organisations). All of these events have been open to staff from all professional backgrounds caring for arrhythmia patients and been positively evaluated (with most participants stating that they would recommend the course and that their post-course knowledge was substantially higher than pre-course).

13.3 Outcomes and impact

This project has generated a robust qualitative and quantitative evidence base of the impact it has had. It will be presented here by whether the outcomes are for patients (clinical, experience of service and quality of life), staff and the wider service.

Patient outcomes

Fieldwork with project stakeholders undertaken across the three visits has provided numerous examples of how the HCPs' work has generated positive outcomes for patients. These primarily relate to their experience and ease of access of services, the degree to which they can manage their own condition and the impact that this, and how the care directly delivered by the HCPs has on their quality of life.

The project evaluation report submitted to the BHF provides support for these qualitative findings. Some selected findings are:

- For the AF rapid access clinic²³ it was found that:
 - Patients reported that the different people providing care had worked well together to deliver an integrated service (93% of respondents reported this);
 - There were high levels of support for the nurse-led nature of the clinic (98% reported being satisfied with a nurse providing the care as opposed to another medical professional); and,
 - The nurse had helped them understand their condition (94% of respondents reported this).
- For the ICD support²⁴, it was found that:
 - Patients reported that the different people providing care had worked well together to deliver an integrated service (94% of respondents reported this);
 - The nurse had helped them to understand their condition (90% of respondents);
 - The information received from the nurse helped them to understand their condition (90% of respondents); and,
 - The mean number of concerns and their severity was higher among the cohort of historic ICD patients surveyed than for those patients surveyed following the introduction of the pre-implantation and pre-discharge nurse-led consultation.

²³ The clinic was evaluated using: AF knowledge questionnaire (to look at knowledge of condition), AFEQT (to look at quality of life), PAMS (to look at self-management) and a service evaluation questionnaire (to look at patients' experience of the service). 102 responses were collected.

²⁴ Activity in this area was evaluated using the ICD concerns (to look at knowledge of condition), RAND's SF 36 (to look at quality of life), PAMS (to look at self-management), and the Hospital Anxiety and Depression Scale (HADS) to look at mood. A total of 69 patients with an implanted device returned their service evaluation questionnaire for analysis.

- For the inherited cardiac conditions service, the number of patients who had used the service was small (less than 20) and so the number of responses to questionnaires was limited. However analysis suggested that the new service is perceived to be integrated, generally delivered in a way understandable to patients and that their questions were answered to their satisfaction.

As set out above, most of the indicators were assessed at one time point. As a result, the project has developed a thorough understanding of the challenges facing the patients in question, and a baseline against which future activity can be measured.

In addition to the survey responses, the project team carried out patient interviews, the findings for which were submitted to the BHF in the final evaluation report. These interviews illustrate the benefits of the service as well as providing powerful case studies illustrating the continued need for the services.

Service outcomes

One of the main aims of the project has been to pilot a new approach to specialist nursing in which senior nurses are able to work across several areas or services. One member of the project team noted that:

"We don't want these [new] services to be person-dependent. We want them to be integrated into the senior nursing team... we want to spread that skill throughout the team."

Interviews undertaken across the three visits indicate that the BHF funding has enabled this goal to be achieved. This has enabled a move away from a 'siloed' approach in which patients are assigned to a particular service area to one in which:

"There is an opportunity to blur the boundaries within the senior nursing team... this will benefit the nurses and the patients in the longer-term." And,

"Patients should be able to access anything they require at any point as they transition through their illness [as there can be]. lots of different things at lots of different time points."

Colleagues of the HCPs have identified that their skills are broader as a result of working across more clinical areas. It was also noted that since they know about several parts of the wider cardiac service, they are able to provide better advice to patients about the rest of their care pathway, as well as support their nursing colleague to do the same. In some cases, they will have provided care for them earlier in the individual's care pathway (for example at the rapid access AF clinic) and so will know the patient history more thoroughly. As one senior nursing colleague reported, this increased flexibility will benefit the patients:

"[The project has been about] integrating all parts of the service... it's one patient but many people looking after them."

For the outcomes generated there is a good amount of qualitative evidence that they would not have been achieved to the same degree, or as soon as has been achieved, had the BHF grant not been available. In addition to delivering the new services, the HCPs have been crucial in setting them up both in terms of the skillsets they have and the time resource available. The time and skills required to do this would have been very difficult to find within the Health Board had staff with a specific resource not been available. In some cases, such as with the familial arrhythmia clinic the work being carried out had *"In a sense, not been done before"*.

13.4 Sustainability

The services established using the BHF funding are expected to continue now that this funding has finished. Interviewees reported that the new services have now become part of the system and that losing them would impact on patients. As one member of the project team stated:

"I think we would significantly struggle to now pick that service up and bring it back into what we [as doctors] do... we'd miss it significantly."

The arrhythmia service will be maintained through on-going funding within the specialist nursing budget from the Health Board so the HCPs will be able to continue to deliver the services they have developed.

Several factors have facilitated this move towards mainstreaming of the services:

- The project had a plan for sustainability – through the re-structuring and redesign of specialist cardiac nursing – from its commencement;
- Key stakeholders (including senior nursing managers, and consultants in the area) were supportive of the projects' goals from the bidding stage, which has helped its progress;
- The project team included individuals with the skills and desire to generate a robust evaluative evidence base on the implementation and impact of the project from its outset. The evidence was generated to meet the BHF's requirements, as well as those of their own Health Board and service.

Project interviewees noted that an important future issue for the new services would likely be related to managing demand. It was reported that the inherited cardiac conditions clinic could see a steep increase in demand in future due to improvements in diagnostic technologies. A similar increase in demand could occur for the nurse-led rapid access clinic due to an increase in follow-up appointments for those on long term therapies as opposed to initial appointments.

Other areas for future development, which are already happening to an extent, will be to share findings to a wider audience (for example through the Familial Arrhythmia Network for Scotland) and shaping national policy on these areas of care.

14 Analysis of project monitoring returns

This section presents an analysis of the data gathered from the second annual monitoring return. The data have been aggregated and compared as far as possible. The main limitation here is the coverage of the final returns: six of the nine sites completed the final return, upon which the analysis is based; the remaining sites had already completed their projects and therefore did not provide this return. It is important to note therefore that this was not a failure to return on their part, but because their pilot had finished²⁵. Further, more specific issues, with the returns data will be highlighted throughout this section.

The analysis begins by considering inputs and outputs. Inputs are reported in terms of the non-BHF and in-kind contributions made to the projects. Outputs include the total number of patients seen by the project; the number of consultations held; and the number of formal teaching sessions carried out. Some project specific outputs were also reported, and these are presented in three categories: patient-related; HCP related and system related outputs.

The section then moves on to consider outcomes. These are again organised into patient level, HCP levels and service level outcomes. Finally we describe key themes for lessons learned and risks to the projects.

14.1 Inputs and outputs

Five out of the nine sites provided information about their in-kind and non-BHF cash contributions (Table 14.1). A total of nearly half a million pounds (£455,014) of non-BHF inputs were reported across the two years of the project. Total additional inputs were nearly double last year's figures (£259,406).

Most additional non-BHF input was in the form of cash (£335,331) which rose from £172,155 at the end April 2014. Additional cash funding varied greatly across sites, from £0 to nearly £180,000, with North Somerset providing the greatest additional cash input (£177,210) and North Bristol providing the smallest (£0).

However, there were also significant in-kind contributions (£119,683) which increased from £87,251 in April 2014 (although measurements of in-kind contributions are necessarily less exact than measurements of cash inputs (see guidance issued by ICF at the beginning of the evaluation). In-kind contributions varied less across sites than cash funding, from £0 to just over £50,000. ABMU provided the greatest in-kind contribution (£50,625) while North Somerset (£0) provided the smallest.

Bristol and Lanarkshire both provided more contributions in-kind than in cash, Tayside provided similar amounts of both, while ABMU and North Somerset provided significantly more cash contributions than in-kind contributions.

Two sites provided total non-BHF contributions (in-kind and additional cash contributions) greater than or similar to the original funding provided by BHF: North Somerset provided £177,210, compared to the £175,867 provided by BHF; and ABMU's total additional cash and in-kind contribution totalled £156,441, similar to their BHF funding of £162,578.

²⁵ BHF is considering how this type of 'post project' information might be collected for future programmes.

Table 14.1 Cumulative non-BHF cash inputs and in-kind resources

Project site	Original BHF Funding	Non-BHF Cash Funding	In-kind resources	Total additional input
Lanarkshire	£97,660	£2,217	£26,400	£28,617
Tayside	£117,240	£50,088	£40,331	£90,419
Fife*	£81,590	-	-	-
Betsi Cadwaladr*	£89,470	-	-	-
North Somerset	£175,867	£177,210	£0	£177,210
North Bristol	£194,671	£0	£2,327	£2,327
East Cheshire*	£154,847	-	-	-
ABMU	£162,578	£105,816	£50,625	£156,441
Oxleas ²⁶	£88,304	-	-	-
Total	£1,162,227	£335,331	£119,683	£455,014

*No quarterly return was received from this site

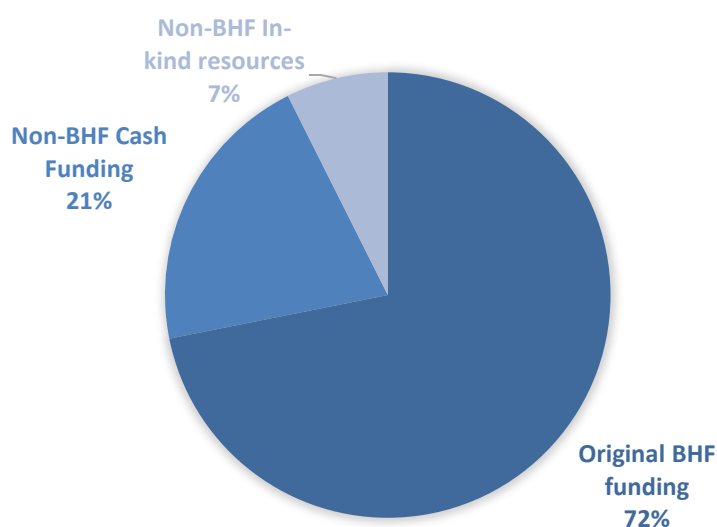
Figure 14.1 Proportion of BHF funding compared to non-BHF funding provided

Table 14.2 shows data reported against standard outputs set by the programme. While only five of the nine sites provided standard output data, results show that:

- Over 4,000 patients have been seen across the programme, an increase of 881 patients since April 2014. North Bristol and ABMU saw the highest number of patients, at 1,669 and 1,483 respectively. Lanarkshire saw the lowest number patients (59 in total).
- There have been over 8,000 telephone consultations with patients or their GPs/consultants, double last year's figures. However, only three sites reported having consultations, and there was great variation across sites: North Somerset had over 6,000 consultations, followed by around 1,500 consultations at ABMU, while Tayside had just under 500; and

²⁶ No response was provided for this question.

- There have been over 200 formal teaching sessions, a small increase of 68 compared to last year. Only four sites reported data on this variable, but the number of sessions varied from 18 in North Somerset, to almost five times that number in Lanarkshire (96 sessions).

Table 14.2 Project outputs

Project site	Number of patients seen in total	Number of telephone consultations with patients or their GPs/consultants	Number of formal teaching sessions
Lanarkshire	59	0	96
Tayside	552	466	41
Fife*	-	-	-
Betsi Cadwaladr*	-	-	-
North Somerset	375	6,415	18
North Bristol	1,669	-	-
East Cheshire*	-	-	-
ABMU	1,483	1,461	74
Oxleas ²⁷	500	-	-
Total	4,638	8,342	229

*No quarterly return was provided for this site

Additional project specific outputs were reported by the sites. These are presented in Table 14.3, and are categorised by those that relate to patients, HCPs, or the local system. Not all projects have quantified these outputs, with some providing qualitative descriptions of activities.

In general patient related outputs refer to those patients receiving specific elements of the service – such as care plans, care bundles, or being seen in particular clinics. HCP related outputs are focussed on those receiving particular types of education, training, and staff development. System related outcomes include referrals made between different sectors / organisations / teams, and also those elements of the service which are about improving the way the system operates – such as outputs related to improved identification of patients in primary care.

²⁷ No annual data was provided.

Table 14.3 Project specific outputs

Project site	Patient related	HCP related	System related
Lanarkshire ²⁸	-	■ Attendance at CHD MCN Arrhythmia Steering Group. ■ GP Practice Education Sessions = 54 . ■ GP Practice Coaching Sessions = 26 . ■ Face to face contacts (via coaching or education sessions) = 157 GPs, 38 practice nurses, 141 practice managers, 2 Pharmacists. ■ A Heart-E (e-learning) module on Atrial Fibrillation was developed ■ Presentations were made by the post-holders to HCPs at the following conferences: FANS, Scottish BHF Alliance HCP conference, Cross Party Group on AF, 4th annual Bayer Scotland Anticoagulation Symposium, Arrhythmia Alliance Cardiac Update and the Cardiac Rehab Interest Group Scotland annual conference.	■ Number of Audits = 56 GP practices x 3 audits per practice = 168. ■ The Primary Care Guideline for Management of Atrial Fibrillation was developed and circulated to all GP Practices in Lanarkshire ■ Nurse-led Rapid Access AF Clinic Protocols were updated as part of the project
Tayside	-	■ Development of heart e-modules, a national online learning resource and developed a package of educational resources. ■ No. of online educational modules developed and tested related to ICDs = 1 ■ No. delegates attending full day events for rhythm and ECG training = 120 ■ Team delivered workshops to 80 delegates at the annual national FANS symposium as well as presentations at various events/forums to around 193 delegates in total.	■ Protocols and proformas developed for nurse-led clinics/service consultations. ■ Electronic referral pathways in place. ■ Links developed with cardiac rehabilitation. ■ Audit data now available on Direct Current cardioversions, along with service evaluation data for each of the project arms.
Fife	-	■ No of HCP survey respondents who received some kind of training or education as part of the project = 22 (50%).	-

²⁸ Figures in this table reported by Lanarkshire updated using additional information from ADM.

		- No. of HCPs attending evening Heart Failure presentation = 82. - No. of HCPs attending e learning module on heart failure = 38. - No. of practice nurses receiving support from Specialist Nurses when carrying out initial reviews = 2. - No. of nurses completing the Caledonian Heart Failure course = 1.	
Betsi Cadwaladr	-	-	-
North Somerset	-	No. of HCPs achieving heart failure degree level 3 module = 2.	-
North Bristol	- No. of attendances at community diagnostic clinics = 977. % of patients with a personalised care plan = 100% (equivalent to 1669 patients).	No. of specialist nurses completing the Caledonian Heart Failure course = 2.	- No. of community diagnostic referrals = 1,266 - No. of referrals to in-reach service from NBT = 483 - No. of patients referred to Tele-health = 37.
East Cheshire	-	18 training sessions delivered by the cardiology nurse team to over 200 healthcare professionals across primary and secondary care. - All three BHF nurses undertook Masters' modules in diagnostics; two completed clinical skills modules; two attended courses in advanced communications; and two have undergone advanced life support training.	-
ABMU	- The majority of the 1,483 patients have attended a community Heart Failure clinic or have received a home based review by a HF / Chronic Condition Nurse. - No. of medical adjustments (including commencement, change in dose or discontinuation of treatment) = 510.	- No. of Heath Board Staff completing Education for Health HF Module = 32. - All 21 chronic conditions nurses and five healthcare support workers have been up-skilled through a series of tutorials, including managing HF in the presence of co-morbid conditions. - No. of formal teaching events ≥ 66	- No. of service referrals (in the 18 month period to December 2014) = 393 - No. of "hidden" HF patients identified, who had been incorrectly coded as not having the condition = 250.

	No. of “patient issues” discussed with either a consultant, GP or other HCP, which resulted in a patient benefit due to change or reinforcement of a management plan = 1,400.	- Three cohorts of the ‘HF interest group’, made up of qualified nurses, received seven 2 hour tutorials covering various HF topics. - No. individuals attending Swansea Primary Care Heart Failure Meeting and/or Study Day = 174.
Oxleas ²⁹	-	Whole team completed the Heart Manual Training. -

²⁹ No response was provided for this question.

14.2 Patient level outcomes

There were a number of problems with the reporting of project level outcomes meaning the results below should be interpreted with caution. Some sites noted problems with capacity meaning that they were unable to collect the required data, while others had problems with their data collection tools resulting in poor response rates. For example, while North Somerset had around 200 survey returns, North Bristol had only 24, a very small sample size from which to interpret patient level outcomes. Other sites were still in the process of collecting their outcome data so were not able to report by the submission deadline, and some only reported percentages which could not be converted into the number of patients.

Another key limitation was that not all projects reported over the same time period, meaning that the total figures reported below are underestimates. The requirement to return both an annual and a quarterly return appeared to be the main cause of this confusion, with some sites reporting only figures for this quarter (rather than cumulative figures for the life of the project), while others reported only up to December 2014, excluding January- March 2015 data (where this was the case, it has been clearly footnoted in the tables below).

Eight sites reported outcomes for the number of patients reporting improvements after the project interventions. Lanarkshire did not report because patient outcomes were not relevant for this project as it did not involve any direct patient care.

Table 14.4 summarises the data reported. In total, the projects report that 412 patients have perceived their care to be integrated as a result of the project, double the figure reported for last year; 682 patients have reported improvements in healthcare outcomes, nearly three times last year's figure; and 505 patients have reported being more empowered to manage their condition, an increase by a quarter of last year's figure.

With the exception of Lanarkshire, all projects described outcomes for patient/carer satisfaction, patient health, and/or patient self-management. Lanarkshire were not able to measure these outcomes because their project did not involve any direct patient care. Results are summarised in Table 14.5. Common outcomes identified included:

- Improved patient understanding of their condition, and self-management of symptoms;
- Patients feeling less anxious, safer and more in control;
- Improvements in health-related quality of life particularly as a result of optimised medication; and
- Overall confidence in their HCPs, with many patients happy to recommend the service to their friends or relatives.

Table 14.4 Number of patients reporting improvements

Project site	Number of patients reporting integrated care	Number of patients with improved healthcare outcomes	Number of patients empowered to manage their condition
Lanarkshire ³⁰	n/a	n/a	n/a
Tayside ³¹	169 (91%) ³²	– ³³	–
Fife	22 (92%)	–	–
Betsi Cadwaladr	– ³⁴	400	285
North Somerset	102 (52%)	44 (56%) ³⁵	– ³⁶
North Bristol	24 (100%) ³⁷	–	82 (95%) ³⁸
East Cheshire	48	26 (52%)	– ³⁹
ABMU ⁴⁰	– ⁴¹	166 (84%)	88 (90%)
Oxleas	47 (94%)	46 (92%)	50 (100%)
Total	412	682	505

³⁰ Lanarkshire's project did not involve any direct patient care. Nonetheless, information from the ADM shows that: a focus group of 40 patients with AF and carers was held at the beginning of the project – their feedback helped inform the current pathway for AF patients. As a further result of the focus group, a patient self-management card, using a traffic light system that highlights to patients when they should seek help, was produced and circulated to all practices for patients.

³¹ Feedback was sought from 185 service users across the three arms of the project (AF, ICD support and inherited cardiac conditions).

³² This can be further broken down into 120 respondents (65%) who answered with “yes, always”, and 49 (26%) who answered with “most of the time”. For each of the three clinics separately, 93% of respondents from the AF clinic, 94% from the ICD clinic and 86% from the ICC clinic, reported that care was integrated.

³³ No overall figure was provided or could be calculated from the available data due to different collection methods across each clinic. See Table 14.5 for data on patient health outcomes.

³⁴ Unable to quantify numbers but reported that all patient feedback forms were positive.

³⁵ This is only one year's data (April 14 – Feb 15) and doesn't include patients currently on the caseload who have yet to complete a discharge outcome score (currently 86 open on the caseload).

³⁶ No figures were provided, only that 94% of respondents reported positively on the Patient Outcome Scale.

³⁷ Of the 24 individuals who completed the telephone questionnaire, all reported that care was integrated.

³⁸ 82 out of 86 respondents to the Meridien survey stated they felt increased confidence to manage their condition.

³⁹ Only percentages were provided.

⁴⁰ Data reported here for ABMU are for the time period June 2013 to December 2014.

⁴¹ ABMU distributed two patient satisfaction surveys at 6 and 12 months into the project. However they did not provide the number of total survey respondents so we were unable to calculate the number of patients reporting integrated care.

Table 14.5 Outcomes relating to patient satisfaction, health, and self-management

Project site	Patient/carer satisfaction	Patient health	Patient self-management
Lanarkshire ⁴²	n/a	n/a	n/a
Tayside ⁴³	- No. of individuals with confidence in the nurse/team providing their care = 178 (96%) - No. of individuals reporting that their treatment/health advice was delivered in a way that they could understand = 174 - No. of individuals reporting their questions were answered to their satisfaction = 174 - No. of individuals reporting that having a direct contact number for a HCP was very helpful = 155 - No. of patients reporting that overall, they were very satisfied with their care = 125 (68%)	- A concerns questionnaire completed by 135 patients in the ICD clinic showed pre-BHF service, the mean number of concerns was 7.6 (0-20), with a mean severity of 12.5 (0-69) and mean total score of 20.34 (0-87). After the introduction of the arrhythmia service, the mean number of concerns, severity and total score decreased to 3.1, 4.5 and 8.1 and data already collected at follow-up review was even lower, at 3, 3 and 6 respectively and continued to decrease between 4 and 10 months post-device. - The Atrial Fibrillation Knowledge Questionnaire (AFEQT) questionnaire measuring disease-specific health related quality of life for AF (0 corresponds to complete disability and 100 corresponds to no disability) showed an improvement in mean overall score from 81 at initial visit, to 84 at 1 month review, and 88 at 6 month review.	- No. of individuals reporting that the information received from the nurse/clinic helped them understand their condition = 168 (91%). 94 patients returned the AFEQT and results suggested there is still room for improvement in patients' knowledge: 39% (37 respondents) did not know or did not respond when asked about the trigger factors for AF; 44% (41 respondents) did not know why it was important to take their medication correctly. - Results from the Patient Activation Measure (PAM) found that 76 (81%) of AF patient respondents and 47 (71%) of ICD patient respondents are either taking action or maintaining positive behavioural change.
Fife ⁴⁴	- No. of respondents satisfied with the review they received = 21 (88%) - No. of respondents satisfied that their staff worked well together to provide care either all of the time or most of the time = 18 (77%)	-	No. of questionnaire respondents who were able to provide a list of medications they took = 20 (83%)

⁴² Lanarkshire's project did not involve any direct patient care.

⁴³ Feedback was sought from 185 service users across the three arms of the project (AF, ICD support and inherited cardiac conditions).

⁴⁴ Data in this section comes from Fife's patient satisfaction questionnaire which was distributed to 62 patients, and returned by 24 (39%). The questionnaire was distributed to patients who had attended their GP surgery for a heart failure review using the care bundle.

Project site	Patient/carer satisfaction	Patient health	Patient self-management
			- No. respondents who felt confident they would be able to identify a change in their symptoms = 16 (67%) - No. of patients who knew what their goal weight was = 10 (42%) - No. of individuals who checked their ankles for swelling or recognised when more short of breath than normal = 20 (83%) - No. of patients who received information on what to do if their symptoms worsened = 15 (63%)
Betsi Cadwaladr	-	Results from the joint BHF and BCUHB questionnaires showed that approximately 400 patients have seen health benefits as a result of prompt diagnosis and treatment plans (although this number is an underestimation as patients with normal echocardiogram results will also benefit psychologically from re-assurance and discussion with healthcare professionals).	Patient self-management outcomes were monitored at follow up appointments: all patients diagnosed with heart failure (approximately 285) were empowered to manage their condition.
North Somerset	- No. of respondents rating their experience as excellent or good = 18 (100%)⁴⁵ - No. of respondents stating they would be extremely likely or likely to recommend the service to friends or family = 18 (100%) - Number of respondents strongly agreeing or agreeing that they were treated with dignity and respect = 18 (100%)	Using the Patient Outcomes Scale, 44 patients (56%) reported an improvement in their health outcomes⁴⁶. Improvements were seen in: breathlessness; sleeplessness; fatigue; swollen legs; reduction in anxiety levels; reduction in pain levels; improvement in mood levels; and patients recorded family and friends felt less anxious.	Results from the Patient Outcome Scale showed an increased ability of patients to manage their own health (94% of patients reported positively on the patient outcome scale for this indicator)⁴⁷.

⁴⁵ Data for these indicators were collected in January 2015.

⁴⁶ This is only data for one year (April 2014 to Feb 2015) and does not include patients currently on the caseload who have yet to complete a discharge outcome score (there are currently 86 open on the caseload).

⁴⁷ Actual numbers cannot be calculated because the total number of respondents for this question was not provided.

Project site	Patient/carer satisfaction	Patient health	Patient self-management
	No. of respondents stating they were extremely satisfied or satisfied with the care they received = 18 (100%)		
North Bristol	Findings from the Meridien Patient Satisfaction Survey concluded that 95.6% of respondents were satisfied with the service, 97% recommended the service, 98% recommended care as excellent or good and 100% felt they were treated with respect⁴⁸.	- Patients completed a Patient Reported Outcome Measure to consider changes in Quality of Life⁴⁹. There was a mean improvement in score of -5 points (range 2 to -15) showing an improvement in overall quality of life and function⁵⁰. - Heart failure medications have been optimised to tolerated doses.	100% of patients were offered a personalised care plan (1,669 patients), of which 77% of patients accepted. 94% of patients achieved the personal goals from their treatment plan. - Prior to review by the BHF nurse, 4% (1 telephone questionnaire respondent) felt confident to self manage their condition. This increased to 96% (23 respondents) by the end of treatment. - Some patients noted that the service has enabled them to remain at home: <i>"I was in hospital for six months out of ten. But now I have been home for three months"</i>.
East Cheshire ⁵¹	No. of respondents reporting that the different people treating and caring for them worked well together to give them the best possible care = 50 (100%)	26 respondents (52%) reported improved health outcomes, 20 (40%) reported unchanged health outcomes, and 4 (8%) reported worsening of their health outcomes.	- No. of respondents who felt they had been properly consulted about treatment options and decisions = 50 (100%) - No. of respondents who felt they were fully informed about their condition = 49 (98%) responded with "yes always" or "yes mostly".

⁴⁸ Total number of survey respondents was not provided, only percentages.

⁴⁹ The Dartmouth Coop measures a number of areas including ability to complete daily tasks, social activity & physical activity as well as emotional aspects. The worst score is 45, the best is 9.

⁵⁰ Information about the total number of survey returns was not provided.

⁵¹ No quarterly return was received from this site.

Project site	Patient/carer satisfaction	Patient health	Patient self-management
ABMU ⁵²	- Improved integration and patient experience: <i>“the ambulance and nurses were excellent and very good with my wife, and in hospital I had very prompt attention – excellent treatment”</i>. - Well-coordinated care with direct links to the cardiologist.	166 survey respondents (84%) reported an improvement in their quality of life post-intervention compared to pre-intervention⁵³. The 32 respondents (16%) who had the same or worsened quality of life were noted to have advanced heart failure symptoms with co-morbid complexity. - Improvements to condition as a result of taking the correct medication: <i>“my condition has much improved because I can now take the right medication”</i>. - Helped individuals come to terms with their condition <i>“the emotional support helped me come to terms with the condition”</i>.	88 survey respondents (90%) adopted an element of self-care behaviour post-intervention compared to pre-intervention. The remaining 10% of respondents had a similar score with no further decline in their usual self-care behaviour⁵⁴. - Patients reported feeling safer, more in control and understood more about their medication. - Felt better supported to care for themselves: <i>“the support provided helped me to better self care”</i>
Oxleas	- No. of respondents who felt they had been provided with enough information about their care and treatment = 50 (100%) - No. of respondents who felt HCPs worked well together to give the best possible care = 47 (94%) - No. of respondents who would recommend the cardiac rehabilitation team and service to friends = 48 (96%) - No. of patients who felt their family benefitted from the programme/found it useful = 26 (52%)	- No. of respondents reporting improvements in quality of life = 49 (99%) - No. of respondents reporting improved anxiety and worry in relation to their heart condition = 45 (90%) - No. of respondents reporting improved mobility and fitness = 46 (92%) - No. respondents reporting improved mood and motivation = 48 (96%)	No. of respondents saying they were involved in decisions about their care = 49 (98%)

⁵² Information reported for ABMU is for the time period June 2013 to December 2014. ABMU distributed two patient satisfaction surveys at 6 and 12 months into the project. However they did not provide the number of total survey respondents and while percentages were provided, they were unclear and often incorrect (for example, adding up to more than 100%) meaning we were unable to calculate numbers of patients. Despite not being able to provide any figures, there were numerous qualitative comments from the surveys, which are reported here.

⁵³ See footnote 21.

⁵⁴ See footnote 22.

14.3 Service and system level outcomes

The data returned suggests that, for many of the projects, service level outcomes have not yet been realised (and/or quantified). For those that have been quantified, methodology varied greatly, particularly in terms of the factors considered in estimating cost savings resulting from the project, so results should be viewed only as broad estimates.

Table 14.6 shows results for reduced numbers of unplanned admissions. This is not an aim of all projects, and for some this outcome was deemed not applicable (e.g. Lanarkshire and Oxleas). Only three projects account for the results reported here. Moreover, where data have been reported, the timescales for data collection often vary, with some sites only reporting data for the last 12 months (the timescales for data collection have been clearly footnoted in the table below). Nonetheless, results suggest that 198 unplanned admissions have been prevented. This figure is likely to be much larger, considering East Cheshire have not reported the number of admissions prevented despite having estimated the greatest savings.

Only one site (ABMU) estimated the reduction in average length of stay as a result of the project, reporting an average reduction of three days.

Depending upon the typical level of intervention required following an unplanned admission (and the local costs associated with this) it is possible to estimate resulting savings. Four projects reported on savings, with a total estimated value of £1.7 million saved across all four sites. However, further work is needed to establish the method used to estimate these figures before this result can be used with confidence as there were significant variations in estimations, from £68,000 in North Somerset, to £1.2 million in East Cheshire, (see also Sections 4 and 8 for our economic analysis).

Eight projects described outcomes in relation to improvements to how the local system provides CVD care (shown in Table 14.7). Only North Somerset did not report on this indicator. As with patient outcomes, the majority of the information provided was project-specific. However, high-level themes included:

- Improved knowledge transfer and integrated working between teams/HCPs, particularly between primary, secondary and community care;
- Improved medical management including reductions in waiting times, faster and more efficient referral pathways, timely follow-up and fewer cancellations;
- Development of new, integrated services, taking a more holistic approach to care. For example, ABMU have developed three dedicated Heart Failure Cardiac Rehabilitation programmes to overcome capacity problems with the current service, and a joint Heart Failure and Cardiac Resynchronizing Pacing Clinic. Plans are also in place, working closely with palliative care, to develop a “home parental diuretic service”;
- Greater awareness-raising of the programme across wider regions; and
- Expansion of current services to accommodate more patients or tackle unmet need in other geographical regions.

Table 14.6 **Unplanned admissions, length of stay and estimated savings**

Project site	Estimated reduction in number of unplanned admissions	Estimated reduction in average length of stay (days)	Estimated savings in £
Lanarkshire ⁵⁵	n/a	n/a	n/a
Tayside ⁵⁶	-	-	-
Fife	– ⁵⁷	-	-
Betsi Cadwaladr	21	n/a (patients are seen in primary care)	-
North Somerset	84	n/a ⁵⁸	£68,000 - £110,000 ⁵⁹
Bristol	– ⁶⁰	– ⁶¹	£151,561 ⁶²
East Cheshire	-	-	£1,195,500 ⁶³
ABMU	93 ⁶⁴	3 ⁶⁵	£308,390 ⁶⁶
Oxleas	0	0	0
Total	198	3	£1,744,451

⁵⁵ Lanarkshire's project did not involve any direct patient care.

⁵⁶ Quantitative data for these indicators has not been collected by the site.

⁵⁷ Numbers unknown. Fife report that they feel it is too early in the project to see a different.

⁵⁸ Not applicable as North Somerset is not a supported discharge service.

⁵⁹ Calculated for 30 avoidable admissions depending on two different tariffs. The midpoint of this range has been used in the calculation of the overall total.

⁶⁰ No numbers were provided, however a 31% reduction in non-elective admissions in the six months after referral to the service compared to the preceding six months.

⁶¹ Data on this indicator was not collated as NBT not part of data collating exercise.

⁶² For the period 2013/14. Bristol reported this figure as a minimum saving from activity reduction in non elective admissions and out-patient costs.

⁶³ Results for the last 12 months only.

⁶⁴ Overall readmission rate reduced: 2011/12 = 10.89%; 2012/13 = 8.38%; 2013/14 = 5.29%. In addition, looking at the 30-day readmission rate, national HF Audit (NICOR) data demonstrated a difference between patients who received the BHF intervention (contact with the BHF in-patient liaison nurse and referral to HF follow-up) compared to those who did not. April 2013-December 2013: 26% of all HF patient admissions (310 admissions) to Morriston Hospital were BHF intervention patients and 0.3% were readmitted in 30 days. This compares with 3% who did not receive intervention. April 2014-December 2014: 52% of all HF patient admissions (269 admissions) to Morriston Hospital were BHF intervention patients and 2% were readmitted in 30 days. This compares with 10% who did not receive intervention.

⁶⁵ Data used to calculate reductions in length of stay have only been reported up to December 2014.

⁶⁶ Data reported for April 2013 – December 2014. Total savings are made up of savings per day of medical ward beds over 18 months (estimated at a conservative £287,380); and savings due to reduced GP and community nurse consultations (approximately £21,010).

Table 14.7 System/pathway level outcomes

Project site	System/pathway level outcomes
Lanarkshire	■ Improved communication and information transfer between teams. ■ Improved medical management of AF in primary care, stroke risk assessment and treatment. ■ Increase in recorded prevalence of AF as a result of increased awareness of the importance of screening high risk groups.
Tayside	■ Better working and sharing of information/skills across teams e.g. between nursing medical staff and the physiologists for device patients; and integration between primary and secondary care teams. ■ Nurses are more involved in the strategic work around the arrhythmia services, through participating in key steering groups e.g. CHD MCN steering groups, cardiology improvement board, Community Health Partnership (CHP) cardiovascular steering groups. ■ The revised model of nurse-led clinics and cardioversion has improved the patients experience by offering pre assessment clinics, shorter waiting times, fewer cancellations and timely follow up allowing further intervention if required ■ Expansion of the AF clinic service. It is now being provided across all of NHS Tayside's geographical sites where they offer 10 clinics each month. ■ There is now awareness of the project at national level.
Fife	■ 25 GP or Practice Nurse respondents (57%) thought there had been an improvement in the integration of services since the beginning of the project. ■ Central HF register has been develop which allows for collection of epidemiological data and has facilitated the development of an alert system when HF patients are admitted to hospital.
Betsi Cadwaladr	■ Closer working relationships developed between different teams/ HCPs ■ Clinics providing open access Echocardiograms and a holistic approach to patient care are to be implemented across North Wales.
North Somerset	N/A
Bristol	■ Improved integration of care between secondary, primary and community care. This has improved communication for complex patients allowing the nurse to become the centre of a patient's care. ■ Smoother and safer discharge into the community with improved quality of care to follow up their medical management. The new pathway integration has led to the diagnosis phase moving more into community settings (using the existing GPSwi Diagnostic Clinic model) with the majority of follow-up occurring within community care. ■ There is now signposting from wards to Heart failure specialists for ongoing management which did not happen prior to the service.
East Cheshire	■ BHF project has enabled standardised treatment pathways for common cardiac conditions to be developed and implemented. ■ Waiting times for a consultation with a cardiologist have been reduced and all patients admitted to hospital are now seen and assessed by the integrated cardiology team by the next working day.

Project site	System/pathway level outcomes
ABMU	■ Closer working across teams/HCPs, for example via the HF multidisciplinary team meeting, and better sharing of clinical information. ■ Three dedicated Heart Failure Cardiac Rehabilitation programmes and a joint HF and Cardiac Resynchronizing Pacing Clinic have been developed. There are also ongoing links with palliative care to support a “home parental diuretic service” to enhance symptom control of end stage HF and prevent unscheduled hospital admissions. ■ The project hopes to inspire service development in other regions of the country e.g. the Project was presented at the King's Fund “Integrated Care” conference and there are plans for a presentation at a Cardiology Study Day in West Wales where there is currently no formal HF service. ■ Streamlined, faster access to specialist review, including diagnostics.
Oxleas	■ Referral process is now more straightforward. ■ They are now seeing greater numbers of patients due to having more staff, the ability to do home visits and more telephone consultants which has increased the number of individuals attending classes. ■ As a result of the project in Greenwich, the Trust were commissioned to set up another programme in neighbouring Bexley.

14.4 HCP level outcomes

Six of the projects reported project-specific HCP level outcomes (North Somerset, East Cheshire and Oxleas did not report). Overall themes included:

- Improved knowledge and confidence, particularly around prescribing medications;
- Improved clinical practice; and
- Sharing and cascading knowledge to the wider team, sometimes through the development of Nurse Champions.

■
Table 14.8 HCP level outcomes

Project site	Outcomes for healthcare professionals
Lanarkshire	■ Improved knowledge and confidence among primary care professionals in the management of AF. ■ Better understanding of gaps in patient care and how to address patient needs.
Tayside	■ Nurses have developed further skills in advanced clinical practice, decision making, education, audit and evaluation, as well as gaining an increased understanding of the organisational and strategic challenges of developing and implementing new services. ■ All cohorts attending the 'Current Perspectives in Cardiac Disease' course reported improvements in knowledge, and survey respondents also reported that it has improved their clinical practice.
Fife	■ 26 (59%) of staff who responded to the questionnaire felt that their knowledge around heart failure had increased, especially around heart failure medication. ■ Increase in the number of HCPs who felt confident in managing heart failure, including prescribing and optimising medication. ■ 16 HF Champions have been identified who will continue to support ongoing work.
Betsi Cadwaladr ⁶⁷	■ Upskilling of all team members including pharmacist, clinical psychologist and nurse.
North Somerset	-
Bristol	■ Improved confidence in medical staff to discharge patients with HF into the community due to their improved awareness of the follow-up provided. ■ Clinical supervision is now embedded within the team. ■ Two cardiac nurses have developed into Heart Failure specialists and an assistant practitioner has developed into a new role able to support the specialists.
East Cheshire	-
ABMU	■ Overall, at least 590 local multi-disciplinary HCPs have improved their knowledge about the management and care of heart failure e.g. all staff who took part in the HF Degree Module said they had increased HF knowledge from "average" to "above average", or from "above average" to "very good"; and the training improved their confidence in day-to-day practice and helped them to consider the patient holistically, including their mental wellbeing. ■ Trained HCPs shared knowledge and cascaded expertise to the wider team, including the development of HF Nurse Champions across several ward areas.
Oxleas	-

14.5 Risks identified and lessons learnt

In the final returns received, the most frequently identified risks included:

- **Potential issues around the capacity of the service.** Three out of four sites (North Somerset, ABMU and North Bristol) identified capacity, or changes in demand and/or supply of services as a highly probable risk, with high potential impact. For example, one site was worried about the future capacity of the service in terms of the availability of clinic venues and unforeseen changes to referral patterns. Mitigating steps for this risk were reported in terms of reviewing caseloads regularly to ensure all are being actively managed and those patients who are stable are being discharged; and liaising with consultants to make sure they are referring patients onto the service.

⁶⁷ No quarterly return was received from this site.

- **The availability of administrative support.** This was identified as a high or medium risk, with high or medium impact, by two sites (North Somerset and ABMU). Concerns included not having enough administrative hours or not being able to adequately capture the sources of patient referrals and patient contact details. Mitigating steps were described in terms of securing funding for a new administrative post or requesting additional administrative hours; and reviewing/improving the current systems being used to capture patient data and referral information.
- **Funding cuts or other service cuts.** One site saw the discontinuation of Health Board funding after the end of the project as a high risk, with potentially high impact, while another site was worried about the discontinuation of the arrhythmia nursing service. Mitigating steps were reported as submission of a business case to funders and highlighting service achievements at senior meetings.
- **'Other'.** One site was concerned about effective communication between care partners, while another felt that their new Band 6 role not receiving the right training was a highly probable risk, with a high impact. Mitigation was described as putting in place or improving the current communication systems, in order to facilitate information-sharing between care sectors and ensuring training for new nurses is in progress.

Reflections provided on the lessons learnt from the projects included:

- A number of issues should be considered right from the start and factored into the original bid e.g. correct costings to include all the necessary infrastructure (and access to a dedicated budget); details of the outcome measures; adequate administrative support, including IT support for online surveys etc.; as well as factoring in of appropriate set-up time for recruitment, training and the time taken for staff to feel confident and competent to manage new roles.
- Regular feedback from patients/carers and HCPs has helped to guide the needs of the service - patient involvement during the early planning stage would have been useful to help shape the service.
- The importance of taking an interdisciplinary approach e.g. one project had been driven by the Health Board 'Steering Group' which brings together managers, and various clinicians from both community and hospital settings, while another mentioned that ongoing support from the clinical, managerial and BHF teams has been vital to project success.

Finally, a few sites made some additional comments about issues they faced with regards to the reporting process. They felt it would have been useful to have been given a BHF final return document at the start of the project to ensure they were collecting correct data; and they would have preferred a free text reporting template because the 'Survey Monkey' format did not allow them to save and review each submission to ensure continuity of responses. One project suggested that BHF arrange funding and licencing agreements for all projects to use a recommended instrument for evaluation e.g. the PAM.

15 Conclusions and recommendations

The BHF Integrated Care Pilots programme has now ended. This report has built upon previous reports from the evaluation and presented qualitative and quantitative findings on the impact of the programme and individual projects within it. Findings are generally highly positive: there is much to celebrate in terms of outcomes achieved at the patient level, and in terms of sustainability of the new approaches piloted. Going forward, it will be valuable for BHF to capitalise on these achievements through its ongoing development work.

With this in mind, our main **conclusions** are that:

BHF's work on integrated care will continue to benefit from a supportive policy context

The programme was delivered within a favourable policy context. All three nations regard integrated care as a 'solution' for improving the patient journey for those with long term conditions, as well as a possible efficiency solution for increasingly restricted public sector funding. The push towards better integrated care has continued to grow in the three years that the programme has been implemented. The scene is therefore set for a continued focus on integrated care in policy and practice.

The programme has prioritised service development and CVD management systems

Projects within this programme have focussed on two main areas: 1) the extension of existing services or the implementation of new services for CVD patients and 2) the improvement of CVD patient management systems in primary care. Projects have therefore been designed to address inequalities of access and gaps in patient care. Whilst this has been the primary focus, projects have also built in activities for improving HCP knowledge and awareness. Integration has been largely approached by improving coordination across secondary, primary and community healthcare.

Integration takes time – it depends on relationship building

Successful integration in the programme was dependent on positive relationships being built. These relationships took time to develop, and project challenges reflected this: engagement with primary care was reported as a common challenge. A substantial amount of time was also required in setting up the project – delays or changes in staffing often presented challenges in this respect. This has meant that projects were only starting to mature in the later stages of the programme.

The programme has evidenced strongest impact at the patient level

Data reporting has varied across projects, with some sites submitting far higher quality returns than others. Site visits identified challenges with reporting for some projects. Nonetheless, the programme has been able to show impact at the patient level in terms of an increased number of patients being offered a new/improved service over the course of the programme; patients perceiving that their care was integrated; patients reporting improvements in health outcomes; and patients reporting that they were more empowered as a result of the programme interventions.

Patient interviews have also shown outcomes in relation to better coordination of care; their satisfaction with services received; improved knowledge, understanding of condition, and confidence; and in some cases physical, psychological/emotional, and social outcomes being reported.

Impact at the HCP level has been in terms of improved knowledge, confidence and clinical practice

There were over 200 teaching sessions delivered across the programme. Impact at the level of HCPs has been reported in terms of improved CVD related knowledge, confidence and clinical practice. Postholders have also identified a number of benefits resulting from the opportunity to be funded by the BHF for this programme. These benefits include the

opportunity to work in an area of patient care which they are passionate about, as well as the learning gains from being in the job, formal and informal training, and access to programme and other BHF events.

Conclusive evidence on service and system level outcomes has not been generated

In part because of the heightened analytical difficulties of doing so, evidence of impact at the system level has been weaker, with many projects not reporting on key indicators (e.g. reduced hospital utilisation and cost savings). Whilst three projects have been able to report a reduction in unplanned admissions (total of 198), and one project an impact on average length of hospital stay (reduction of 3 days), it is perhaps too early to make significant programme-level conclusions based on this limited evidence. Impact at the system level was also reported in terms of knowledge transfer, improved medical management and improved integration resulting in more holistic patient care. The economic evaluation of two projects has also shown promise with potential savings outweighing project costs

The programme has successfully led to sustainable change

Project visits have indicated that the ‘pump priming’ model adopted by BHF has been successful. Of the nine projects piloted through the programme, five have been sustained locally, and two had substantial plans for sustainability in place at the time of visits. The two remaining projects planned for sustainability in terms of utilising the learning generated – these projects were never intended to be sustained in their current form since they were audits of existing practice.

Elements of the programme could usefully be replicated

Nine pilots were established under the broad theme of ‘integration’. Pilots interpreted this to address local needs and priorities, setting up services to improve perceived local deficiencies in services, patient experience and outcomes. The programme was not focused on the implementation of a single ‘integrated care’ model, but was deliberately permissive in allowing local areas to address local needs. It was therefore characterised by heterogeneity, making more general conclusions difficult. Nonetheless, and accepting all the limitations implied by the diversity within the programme, common elements of good practice can be seen. These include: the use of in-reach to actively identify patients following admission; supported discharge to ensure that care is integrated in the transfer from secondary to primary / community care; nurse-led follow-up clinics in community settings, providing specialist care closer to home for patients; and support to improve systems for record keeping / identification in primary care, alongside the provision of evidence-based advice and nurse-led clinics to improve patient management.

Building on these conclusions, our main **recommendations** are:

BHF has an important role to play in supporting integrated care

Integration is a strong theme in current policy. The question facing health and social care systems is not ‘whether’ integration, but ‘how’ to do it. Systems therefore need examples, models, evidence and guidance. This programme has demonstrated that BHF is a key player in this regard – providing an example of stimulating innovative practice in integrated care for patients with CVD. BHF should continue to drive forward this agenda since it has much to contribute in terms of advancing knowledge and practice, and building on the learning generated here. In particular the new BHF House of Care programme stands to benefit from learning in relation to ‘what works’ in implementing change in this area.

Longer investment in programmes may yield greater impacts

Providing integrated care requires substantial system-level change. This is no easy task, and the programme has shown that more time was often required than initially anticipated – both to set up the project, but also to engage with different sectors and organisations. BHF should therefore consider whether future programmes should be designed with this in mind. A programme with a longer lead-in time and overall duration would provide the opportunity to

observe more fully the outcomes and impacts achieved by mature projects. This would also benefit sustainability plans: projects which have been sustained more easily were those which planned for this at an early stage by engaging with commissioners and gathering evidence which showed impact. A longer programme would allow for greater impact to be observed as project staff become better skilled in both their delivery and data collection.

Future efforts in this area should consider how changes implemented can be ‘scaled up’

Going forward, the learning should be used to ‘scale up’ or extend on the sorts of changes supported by this programme. ‘Scaling up’ in this sense is not necessarily about increasing scale in terms of extending services, number of patients, or widening geographies, but is about working more fully across the local system. For example, by implementing relevant interventions for patients and HCPs, as well as working to improve infrastructure to support change, and by working across healthcare, social care, and the voluntary sector in order to embed change. The House of Care programme offers an opportunity to address this, and learning garnered from this new programme should include reflections on ‘what works’ in this type of scaling up.

Monitoring and evaluation arrangements for future programmes should be refined

The programme has also generated important learning in relation to the management of the programme, particularly in terms of monitoring and evaluation. Capacity and skills for self-evaluation and reporting varied greatly across the projects. Particular ways in which refinements to processes could be made include: balancing a standardised approach to indicator setting against a more tailored approach (i.e. ‘top-down’ versus ‘bottom-up’); setting realistic expectations of what can be achieved with data collection within the project resources (measuring a few things well); and improving the reporting systems used – for example by allowing inputters to re-access/print off their completed template.

Learning from the programme should be disseminated widely

As highlighted above there is much to celebrate in terms of the achievements of the programme. A three-year programme is relatively short for change to be properly embedded. Yet impact – certainly at the level of patients – has been observed, and sustainability has been achieved for the majority of projects. BHF should therefore seek to disseminate findings as widely as possible. This should include showcasing exemplar projects both internal and external to the BHF. Whilst other BHF programmes could benefit from this, so too could BHF benefit in its capacity of seeking influence amongst policymakers, service developers, and commissioners. There is also valuable learning to be shared across health charities who are involved in similar work, (e.g. Macmillan, Age UK, Kings Fund, The Health Foundation).

Good practice from the programme should be replicated at the level of the service or – perhaps more powerfully - the system

Any of the common elements of good practice noted above would merit replication in themselves. Even where there are differences in national context / system, there are reasons to think that practice is transferable (e.g. the core of the primary care development work in Scotland does not seem particular to that context). Local areas considering improving the integration of care between secondary and primary settings therefore have models and lessons to choose from within this programme. Yet it should also be noted that these models can be combined to improve systems of care; BHF should also therefore consider how they might advocate approaches at a system (rather than single model or service) level to improve integration. Again, the House of Care programme provides a means of taking this forward.

ANNEXES

Annex 1 References

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Annex 2 Interview topic guides

A2.1 Project lead interview topic guide

Update since the last visit

1. Have there been any significant changes made relative to the original bid/ to the project since we last spoke to you?

Probes: Has there been a change in project lead / HCPs since our last visit? Have remits within the team changed – e.g. role for evaluation; project oversight; project delivery? Have there been any changes in local context which are relevant to this project?

2. Please provide an update on progress since we last visited.

Probes: What have been the main activities? Has progress been as you expected?

A) Implementation

Use these questions to discuss progress in more detail. What have been the key obstacles, and how have these been overcome? Are things on target, and if not, why?

3. What services does / will your project offer to patients?

Probes: How is it redesigning services for patients? How is it delivering a new service? How is it delivering services differently? How is integrated care being provided? What are your next steps for project delivery?

4. Are any resources other than BHF funding being used to run the project?

Probe for other cash sources and in-kind support, and reason for additional resource required (i.e. inaccurate funding assessment at design stage or early expansion?)

5. What have been the main outputs of the project so far?

Probes: is the focus be on 'simple' outputs, such as the number of patients or a new screening tool; or are we looking at more complex outputs, such as a new care pathway?

6. Is this new project part of any broader local system or organisational re-design that you are aware of and if so, how does it provide added value or complement these?

Probes: examine any added value of the BHF programme – e.g. did it stimulate thinking on integration? Did it lead to a reframing of the way that CVD is considered?

7. Describe the key challenges you have faced in the implementation of your project? How have these been overcome?

Probes: what were the barriers to delivering your project effectively?

8. What has worked well so far?

Probes: what were the key facilitators for these successes?

9. What have been the lessons arising from implementing your project so far? How have these impacted on your project?

B) Outcomes and expected impacts

Use these questions to focus the discussion on effects of the project in terms of outcomes so far, and longer term impacts. Explore the barriers and facilitators in terms of contextual factors, and how these might impact on the success of the project (and thereby programme). Tease out as many detailed examples as possible. (Note, not all projects will seek an effect in each of these areas, explore / leave topics as appropriate).

10. What have been the main effects of your project so far, at the level of:

i) Patients?

Probes: what enabling factors can lead to better care experiences, quality of life, self-management for patients, and greater patient participation in decision making? What barriers may prevent the same outcomes?

ii) Families and carers of patients?

Probes: What are the main barriers to increasing levels of satisfaction for carers and patients?

iii) Health care professionals funded by the programme?

Probes: What knowledge gains have been acquired since the project began? How has this helped improve identification, diagnosis and patient care? What are the requirements for ongoing professional development of these HCPs?

iv) Health care professionals who received training from the BHF funded health care professionals?

What were the training requirements required to enable the success of the programme? What barriers for Healthcare Professionals affected project delivery? What are the requirements for ongoing professional development of HCPs generally?

v) The organisation involved?

Probes: What have been the enablers/barriers to seeing reduced admissions/readmissions, reduced length of stay?

vi) Wider system level changes?

Probes: What are the key barriers/enablers to service improvement and workforce learning? What are these for: better competency frameworks; referral pathways; cost-savings (please see cost savings note below); greater access to services and care co-ordination? Also barriers or enabling factors relating to the promotion of best practice and ability to offer consistent messages both internally and externally, within the profession and to patients and carers.

vii) Community groups?

Probes: What are the barriers/enablers to delivering tailored heart health messages to this/your particular population groups?

11. Has your project changed patient pathways, if so how?

Probes: What have been the key changes? Have these contributed to improvements in patient experience?

12. Are you seeing evidence of the potential for cost savings, where productivity gains can be made whilst maintaining quality services?

Probes: Are you seeing gains in outcomes for the same (or less) cost? Are you seeing more effective use of resources?

When talking about 'cost savings' be mindful of breaking down/prompting the definition of cost savings into 'level' of saving, 'type' of saving and 'costs involved'.

13. Are there any examples where the pilot is adding strategic value? Have any strategic partnerships been developed as a result of this project?

Probes: would this work have gone ahead in the absence of the programme? Has the pilot led to activities happening sooner / at a greater scale / at a higher level of quality / in a more coordinated fashion?

14. Can you describe any examples of local innovation achieved by the project so far?

C) Lessons on integration

15. What is the current understanding of 'integration' within the context of this project?

Probe for reflections on policy context of health and social care integration, and the positioning of CVD as a long term condition. On integration – probe around 'type' (vertical, horizontal, within team, across organisations / systems?) – and purpose, why 'integration' and not some other response? Check if knowledge and understanding of what integration means has developed over the course of the project.

Also for English sites, be mindful of the distinct categories of QIPP which relate to the programme; specifically remind them of the QIPP domains and prompt them into thinking about how the project is aiming to increase the following

- **Quality** of care;
- how it is being **Innovative**;
- how it is enhancing **Productivity** (which is a key issue around the integration agenda); and
- **Prevention** – supporting self-management and wellbeing?

16. Is the project making a contribution to integration at a local level? Have there been any changes to CVD care observed as a result of the project?

Probes: To what extent is this pilot showing leadership on better integration – e.g. are they testing something that others might learn from / replicate; is the project 'making the case' locally for better integration / treating CVD as a LTC?

17. How might your project and the programme contribute to the overall system change required for transforming CVD services within an integrated care model? What else might be required?

Probes: What else will be needed to further push the integrated care agenda along? What are the policy developments that are needed to support on-going progress beyond the life of the programme?

D) Sustainability and recommendations

Use these final questions to gain an understanding of the future of integrated care for CVD. What else is needed to improve integration, and how might the BHF programme team ensure that the programme is a success?

18. What plans have you made for sustaining the project post-BHF funding?

Probes: What measures have taken place already? What further measures are planned? How established are project links to key stakeholders who can be instrumental in supporting continued progress after the programme?

19. What do you think will be required to move your project forward into sustained improvements in the quality of CVD services, both in and outside your organisation?

Probes: What else is required to mainstream service improvement in this area? What steps are being taken to maximise the chances of success, for example by on-going sharing of project success in the wider policy context. How likely is it that good practice will spread beyond project sites, and how can this spread be facilitated?

20. What are your reflections on BHF support you have received thus far?

Probes: Is the support from the Area Development Manager/central team adequate? What have you found most helpful?

21. Did you find the event in June helpful?

Probe: Would it be useful to have another event? What are your recommendations for the next one? Any thoughts on the format of evaluation support?

22. What further support or training would you require to help with the implementation of your project?

Probe for support from trust and BHF.

23. What (if any) recommendations do you have for the BHF programme team?

Probes: How can the team ensure that the programme is a success? What are the external factors which might present challenges or barriers that they should be mindful of?

24. Finally, do you have any further points you would like to make in relation to the topics discussed, or are there any other issues you would like to raise?

A2.2 Interview topic guide for healthcare professionals

A) Background & role

Establish the background of the interviewee (e.g. job title, organisation, role.)

1. Please describe your job title and role in the project.

Probes: Where did you work before? How long have you worked in CVD?

2. What attracted you to this position?

3. Please describe your understanding of the purpose behind the project – why was this project needed?

Probes: Why was this project needed? How will it improve care?

B) Implementation

Use these questions to discuss the progress of the project, focussing on delivery. What have been the key obstacles so far, and how have these been overcome? Are things on target, and if not, why?

4. What services does/will your project offer to patients?

Probes: How is it redesigning services for patients? How is it delivering a new service? How is it delivering services differently? How will integrated care be provided?

5. What has been your role so far?

Probes: What activities have you been involved in? How will this change over the next year of the project?

6. How are you being supported in your role?

Probes: Please describe the training you have been given so far, and any further plans for your development? Is this meeting your needs, what else would be useful? Would you have received similar training without this project? How are you seeking out further development for yourself?

7. What are your views on the data monitoring requirements for the project?

Probe: Is there anything missing that you feel should be collected?

8. Describe the key challenges you have faced in the implementation of your project? How have these been overcome?

Probes: What were the barriers to delivering your project effectively?

9. What has worked well so far?

Probes: what were the key facilitators for these successes?

10. What have been the lessons arising from implementing your project so far? How have these impacted on your role within the project?

C) Outcomes and expected impact

Use these questions to focus the discussion on effects of the project in terms of outcomes and expected longer term impacts. Explore the barriers and facilitators in terms of contextual factors, and how these might impact on the success of the project.

11. What have been the main effects of your project so far, at the level of:

- i) Patients?

Probes: what enabling factors have led to better care experiences, quality of life, self-management for patients, and greater patient participation in decision making? Can you give any examples of patients with improved experiences? What barriers may prevent achieving these same outcomes across a broader range of patients?

- ii) Families and carers of patients?

Probes: What are the main barriers to increasing levels of satisfaction for carers and patients?

- iii) Your own professional development?

Probes: What knowledge gains have you acquired since being involved in the project? How has this helped improve identification, diagnosis and patient care? What are your requirements for ongoing professional development?

- iv) Health care professionals who are receiving training from the BHF funded health care professionals?

What are the training requirements required to enable the success of the programme? What barriers for Healthcare Professionals are likely to affect project delivery? What are the requirements for ongoing professional development of HCPs generally?

- v) Community groups?

Probes: What are the barriers/enablers to delivering tailored heart health messages to particular population groups?

- vi) Organisations?

Probes: What are the enablers/barriers to seeing reduced admissions/readmissions, reduced length of stay, and cost-savings?

- vii) Wider system level changes?

Probes: What are the key barriers/enablers to service improvement and workforce learning. What are these for: better competency frameworks; referral pathways; cost-savings; greater access to services and care co-ordination? What value for money does the intervention bring?

12. Has your project changed patient pathways, if so how?

Probes: What have been the key changes? Have these contributed to improvements in patient experience?

D) Lessons on integration

Use these questions to pull out lessons learnt in relation to trialling an integrated care project. Explore what these lessons mean for local services, and for CVD services in general.

13. What is the current understanding of 'integration' within the context of this project?

Probe for reflections on policy context of health and social care integration, and the positioning of CVD as a long term condition. On integration – probe around 'type' (vertical, horizontal, within team, across organisations / systems?) – and purpose, why 'integration' and not some other response? Check if knowledge and understanding of what integration means has developed over the course of the project.

Also for English sites, be mindful of the distinct categories of QIPP which relate to the programme; specifically remind them of the QIPP domains and prompt them into thinking about how the project is aiming to increase the following

- **Quality** of care;
- how it is being **Innovative**;
- how it is enhancing **Productivity** (which is a key issue around the integration agenda); and
- **Prevention** – supporting self-management and wellbeing?

14. How might your project contribute to the overall system change required for transforming CVD services within an integrated care model? What else might be required?

Probes: What else will be needed to further push the integrated care agenda along? What are the policy developments that are needed to support on-going progress beyond the life of the programme?

E) Sustainability and recommendations

Use these final questions to gain an understanding of the future of integrated care for CVD. What else is needed to improve integration, and how might the BHF programme team ensure that the programme is a success?

15. What do you think will be required to move this project forward into sustained improvements in the quality of CVD services, both in and outside your organisation?

Probes: What actions have been taken to ensure the sustainability of the service? What else is required to mainstream service improvement in this area? What steps are being taken to maximise the chances of success, for example by on-going sharing of project success in the wider policy context. How likely is it that good practice will spread beyond project sites, and how can this spread be facilitated? How established are project links to key stakeholders who can be instrumental in supporting continued progress after the programme?

16. What are your reflections on BHF support you have received thus far?

Probes: Is the support from the Area Development Manager/central team adequate? What have you found most helpful?

17. What further support or training would you require to help with the implementation of your project?

Probe for support from project lead, trust, and BHF.

18. What (if any) recommendations do you have for the BHF programme team?

Probes: How can the team ensure that the programme is a success? What are the external factors which might present challenges or barriers that they should be mindful of?

19. Finally, do you have any further points you would like to make in relation to the topics discussed, or are there any other issues you would like to raise?

A2.3 Interview topic guide for partners and other local stakeholders

A) Background & general reflections on the project

Use these questions to establish the background of the interviewee (e.g. job title, organisation, role), and how this relates to the project; the health and social care integration agenda; and the policy context for long term conditions and CVD.

1. Please describe your role, how your work relates to the project, and how you came to be involved in it.
2. What are your views on local service provision for patients (and carers) with CVD? Are they meeting local aims and objectives?
3. Please describe your understanding of the aims and objectives of the project. How do these fit within the local context?

B) Outcomes so far, and likely impact of the project

Use these questions to focus the discussion on effects of the project in terms of outcomes and expected longer term impacts. Explore the barriers and facilitators in terms of contextual factors, and how these might impact on the success of the project.

4. What have been the main effects of this project so far, at the level of:

i) Patients?

Probes: what enabling factors can lead to better care experiences, quality of life, self-management for patients, and greater patient participation in decision making? What barriers may prevent the same outcomes? Any examples where change is already being observed?

ii) Families and carers of patients?

Probes: What are the main barriers to increasing levels of satisfaction for carers and patients? Any examples where change is already being observed?

iii) Health care professionals involved?

Probes: What are the training requirements required to enable success? What are the barriers likely to affect the delivery for Healthcare Professionals?

- iv) The organisations participating?

Probes: What are the enablers/barriers to seeing reduced admissions/readmissions and reduced length of stay locally? What implications does this have for other local providers?

- v) Wider system level changes?

Probes: do you expect this project to lead to broader change? What steps are in place to support this change?

- vi) Community groups?

Probes: What are the barriers/enablers to delivering tailored heart health messages to particular population groups?

5. Has the project changed patient pathways, if so how?

Probes: What have been the key changes? Have these contributed to improvements in patient experience?

6. Are there any examples where the pilot is adding strategic value? Have any strategic partnerships been developed as a result of this project?

Probes: Would this work have gone ahead in the absence of the programme? Has the pilot led to activities happening sooner / at a greater scale / at a higher level of quality / in a more coordinated fashion?

C) Lessons on integration

Use these questions to pull out lessons learnt in relation to trialling an integrated care project. Explore what these lessons mean for local services, and for CVD services in general.

7. What is your understanding of 'integration', and how do you see the project within this?

Probe for reflections on policy context of health and social care integration, and the positioning of CVD as a long term condition. On integration – probe around 'type' (vertical, horizontal, within team, across organisations / systems?) – and purpose, why 'integration' and not some other response? Check if knowledge and understanding of what integration means has developed over the course of the project.

Also for English sites, be mindful of the distinct categories of QIPP which relate to the programme; specifically remind them of the QIPP domains and prompt them into thinking about how the project is aiming to increase the following

- **Quality** of care;
- how it is being **Innovative**;
- how it is enhancing **Productivity** (which is a key issue around the integration agenda); and
- **Prevention** – supporting self-management and wellbeing?

8. Do you expect the project to make a contribution to integration at a local level? Have there been any changes to CVD care observed as a result of the project?

Probes: To what extent is this pilot showing leadership on better integration – e.g. are they testing something that others might learn from / replicate; is the project 'making the case' locally for better integration / treating CVD as a LTC?

9. How might this project contribute to the overall system change required for transforming CVD services within an integrated care model? What else might be required?

Probes: What else will be needed to further push the integrated care agenda along? What are the policy developments that are needed to support on-going progress beyond the life of the programme?

D) Sustainability and recommendations

Use these final questions to gain an understanding of the future of integrated care for CVD. What else is needed to improve integration, and how might the BHF programme team ensure that the programme is a success?

10. What do you think will be required to move this project forward into sustained improvements in the quality of CVD services locally?

Probes: What actions have been taken to ensure the sustainability of the service? What else is required to mainstream service improvement in this area? What steps are being taken to maximise the chances of success, for example by on-going sharing of project success in the wider policy context. How likely is it that good practice will spread beyond project sites, and how can this spread be facilitated? How established are project links to key stakeholders who can be instrumental in supporting continued progress after the programme?

11. Finally, do you have any further points you would like to make in relation to the topics discussed, or are there any other issues you would like to raise?

A2.4 Interview topic guide for patients, family members, and carers

1. Please describe the care that you/the patient received/is receiving.

Probes: How did you come into contact with the service? How did you access different services? What were the types of service you received, who were the main people involved in this care (i.e. ascertain which part of the project they have been involved in)?

2. What is/was your experience of this care?

Probes: Was it as you'd expect it to be? Why/why not?

3. Are/were you satisfied with this care? Why/why not?

4. Did/do you find that your care was/is well coordinated, and has this changed over time?

Probes: Did you feel that you had to repeat your 'story' at each organisation? Were services seamless? Did your main care providers communicate well between themselves and with you?

Also probe for change over last year to gather information on impact of project.

5. How has the care you received helped you? In what ways?

Probe for outcomes re. physical health, well-being, emotional help, knowledge of condition, confidence to self-manage etc.

6. Do you have any recommendations for improving the care you've received?

7. And finally, would you like to discuss anything else about the topics we have talked about?

Annex 3 Detailed evaluation questions

Element of policy cycle	Key questions
Rationale & Design	■ What types of interventions are being used and are these the best methods? ■ How has the project overcome local CVD issues with innovative solutions?
Implementation	■ How has the intervention been specific to the locality? ■ How has the project successfully worked with CVD groups? ■ Has the project adapted the intervention based on carer and patient groups' feedback? ■ How did the project target priority population groups and how were the interventions/messages developed to meet their specific needs? ■ What messages/techniques worked well and which were not as effective and what were the reasons behind this?
Outcomes & Impact	■ What value for money does the intervention bring, what are its economic benefits? ■ What would have happened anyway, without the intervention being in existence? (the counterfactual) ■ Are there any indirect outcomes emerging from the intervention? ■ What is the nature and scope of the intervention's strategic added value? (for example, to explore the partnerships, stakeholder engagement and relationships that have had positive effects and have supported the intervention). ■ How has the project's approach to integrated care provision led to improved care outcomes? ■ How has this approach improved the experiences for patients and carers? ■ Have these interventions led to reduction in: unscheduled hospital admissions; readmissions within 30 days; and length of stay in hospital? ■ Does the community/primary care setting reduce specific costs compared to providing the service in the acute setting, if so in which areas? ■ Have members of the CVD groups changed their behaviour and adapted best practice? ■ Has the project increased the knowledge base of patients and carers, if so, in what way? ■ Has the project delivered tailored health messages and triggers to the community? ■ How has the training improved identification, diagnosis and patient care? ■ Has the learning been disseminated to other clinical/professional groups and if so, in what ways? ■ Would the HCPs have acquired this knowledge over time anyway without the intervention? ■ Did the (project) solution result in increased access to services? ■ Did the innovation improve patient and carer satisfaction compared to existing service?
Lessons Learnt & Sustainability	■ How sustainable is the intervention after funding has ceased and what exit strategies are in place? ■ What are the key lessons that have been learnt and what are the recommendations for the future? ■ Could the intervention, or elements of the project, be rolled out in other areas across the UK, and if not what would be required to ensure the success of the intervention in other regions? ■ What legacies and added value will continue after the funding has ceased?

