ALL WALES COMMUNITY CARDIOLOGY EVALUATION

Formative Evaluation Report

for British Heart Foundation and All Wales Cardiac Network

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CONTENTS

Glossary of terms

AF – Atrial fibrillation
Echo – Echocardiogram
ECG – Electrocardiogram
DGH – District general hospital
GPwSI – General Practitioner with special interest
IMTP – Integrated Medium-Term Plan
PwSI – Practitioner with special interest
RTT – Referral to treatment time
UHB – University Health Board

EXECUTIVE SUMMARY

SOME KEY ANSWERS TO KEY QUESTIONS…

In order to provide a summary of this report, we have produced a series of simple answers to some of the key questions that were asked of the study. Detail is to be found in the subsequent chapters below, but we trust that the answers are useful in focusing on the overarching issues that the study was designed to address.

- ***Did the invitation to bid process support the development of evidence based and sustainable service development plans? Has the allocated money been spent according to the service proposals submitted?***

  It is clear that the process of applying for funding required health boards to think through the ways in which they would spend the money in an effective way and to put in place project management arrangements to ensure that the services were implemented well. Interestingly, nearly all of the six community cardiology services are delivering close approximations to the bids that they submitted. It is also important to note that there was no clear vision for what 'community' in community cardiology meant, nor a requirement to collect evidence about these new services when the proposals were developed – in effect, the bid process didn't initially support evidence-based service development. The plans have been sustained to date, but also there have been problems (as in all such project working) in making the transition from a project mind-set (getting things in place, organising new premises etc.) to a service mind-set (where this is now efficient and effective 'normal business' for the six health boards involved in community cardiology).

- ***How is the recurrent funding supporting sustainability and ongoing service development?***

  Having recurrent monies is a real positive for those managers and clinicians leading this service. That said, there are expectations of 'core' services that aren't the same for projects, and managing these expectations can be a challenge in itself. Further, there are some concerns that the dedicated funding for these services may be absorbed into other areas. There is clearly a degree of certainty in being able to plan for continuity given this financial situation, but there remains an unanswered question about the further development of services. It is certainly the case that all six services have some distance to travel before they could claim to be operating at an optimum level, although the gap between current performance and optimal performance is larger for some than others.

- ***What are the key lessons that have been learnt?***

  There are a number of key themes, issues and lessons that have emerged from the work to date. These centre on:

  - needing to improve the largely negative situation that projects have found in respect of the **infrastructure** they are dealing with within NHS Wales;

- experiencing positive but also some challenging aspects around **leadership**, especially as projects move into the next phase of their development;
- coping with the **workload implications** and **evolving job roles and profiles** that comes with working in an innovative way to embed new pathways, processes and practices;
- **striking the right balance between primary and secondary care**, and recognising the value that is placed on relationships of trust between colleagues in order to achieve a good balance;
- dealing effectively with questions of **governance and accountability** especially when project teams and staff groups are undertaking services that are breaking new ground in their approach to community services;
- aligning the work of the projects with the principles of **Prudent Healthcare** so that there is a high-level strategic and operational fit between the new service model and the policy context;
- recognising the significant and positive **impact on patients** that has been achieved, primarily at this stage through some powerful patient reported experience measures; and
- moving from **more transactional to more transformational** forms of practice which meet the aspirations of the Welsh Government funding stream.

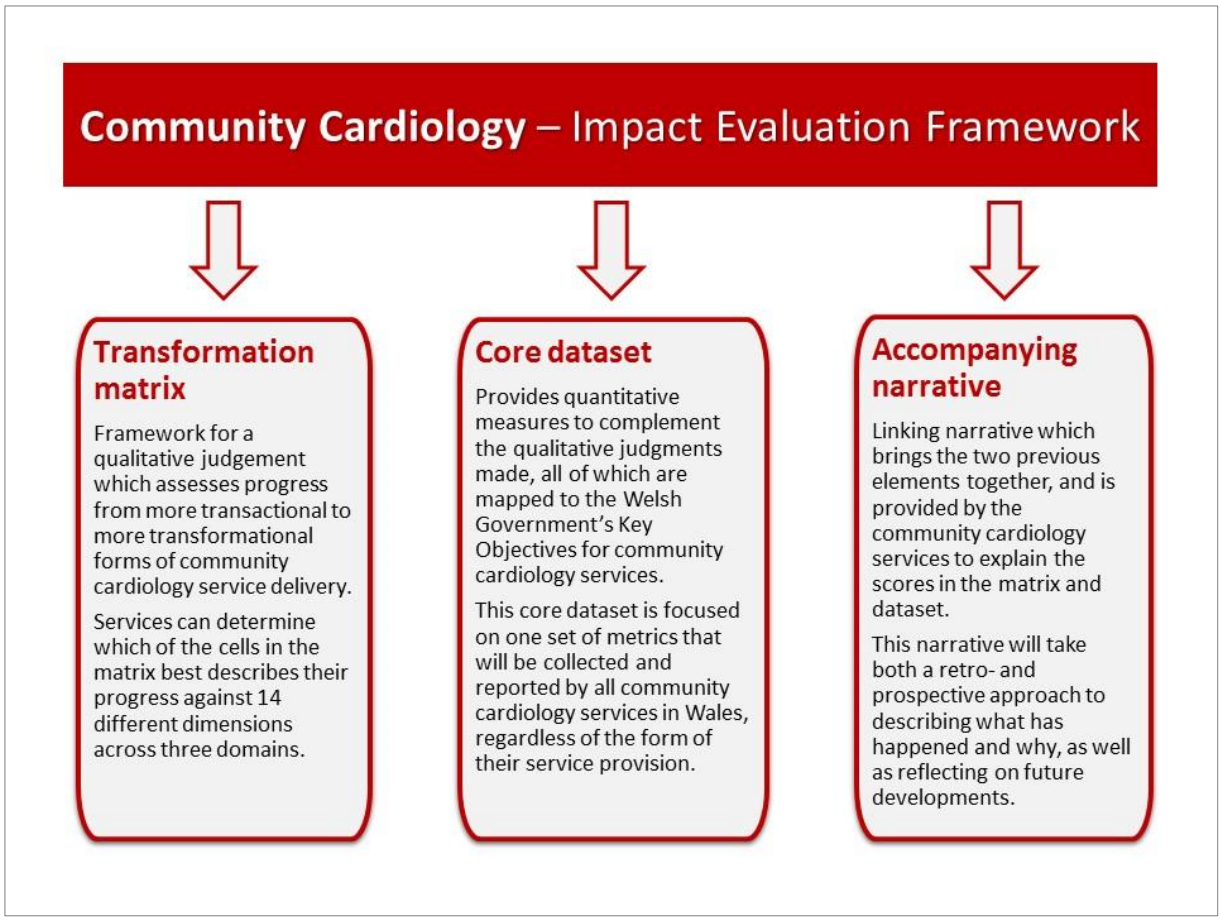
– ***What barriers and challenges were encountered and how can these can be overcome?***

We have encountered and explored how barriers and enablers acted in the development of these community cardiology services. Overall, our analysis revealed that the barriers implicated in this study conformed (to varying degrees) on the following sorts of issues: organisations perceiving innovation, particularly from external sources, as a threat; silo mentalities including between professions as well as organisations/departments; separate worlds between front-line staff, managers and research; risk aversion and resistance of employees to change; short-termism including a focus on the day-to-day operations and short-term planning; and poor evidence and metrics of effectiveness of the innovation or access to them. It is the case of course, that there is a spectrum upon which each of these issues operates. Indeed in some of the sites these operated less as barriers, and more as enablers because the staff teams and managers had worked effectively to address them.

– ***What is the impact of these community cardiology services?***

It was never the purpose of this study to come to definitive conclusions about the impact of these community cardiology services – this is a formative evaluation, and the evidence as implicated by the answers does provide some positive indication impact. There were two key outputs from this study – this formative evaluation report, and an impact evaluation framework (IEF) – and the IEF will form the basis of the impact assessment of the community cardiology services into the future. The IEF is constituted of three principal elements as outlined in the diagram overleaf: a transformation matrix (allowing for a qualitative assessment of progress); a core dataset (collected by all of the services across Wales which will allow for a comparison to

be drawn between them); and an accompanying narrative (which links the other two elements together.



- ***Which is the best model for delivering community cardiology?***

  Given that a standard set of data has not been collected to date, it is almost impossible to come to any robust answer to this questions. However, once the IEF has been completed, this analysis should be possible to undertake. That said, it should be recognised that the services are very different in approach and method – this is certainly not a 'one size fits all' area of service development. Indeed, we suggest that the aspiration for a single best model for Wales is not asking the right question given the variation across the country in terms of need, geography, and demography.

- ***What are the key recommendations on the governance and process to support roll out of any future service developments?***

  We make ten such recommendations, and have linked these to the key themes that emerged though the analysis undertaken:

  1. As part of subsequent funding rounds, consider investment in IT infrastructure to support access to patient data from primary to secondary care and vice versa.

2. Provide technical support for the implementation of the IEF to minimise the burden on project teams.
3. Support leaders of the community cardiology services to share lessons and good practice through a network.
4. HCIG to consider a review of the 'visibility' of community cardiology in IMTPs and to provide critical friendship to health boards where this is absent.
5. Services should reflect (using the transformation matrix in the IEF) on whether they are fully optimising any efficiencies that may be possible.
6. Current pathways and models of service should be reviewed in order to ensure that they best reflect the skills, competencies and capabilities of the PwSIs, and all those in the community cardiology service models.
7. Review the ways in which the community cardiology services are 'advertised' and promoted, especially at GP cluster meetings and across the whole primary care team.
8. Governance arrangements for the service to be reviewed frequently, especially if the pathway and service model evolves from the original submission to health boards.
9. Greater alignment between the Prudent Healthcare/value-based healthcare principles and the outcomes of the community cardiology service should be developed.
10. Fully comply with the requirements of the IEF in order to create a robust evidence-base on patient reported experience and outcome measures.

1. INTRODUCTION

The Welsh Institute for Health and Social Care (WIHSC), University of South Wales was commissioned by the British Heart Foundation to research and evaluate how the community cardiology funding from the Welsh Government has been utilised and explore whether the proposed new services and pathways have been realised.

This report provides information about one of the two key outputs from the study – a formative evaluation of the process of implementation of the six community cardiology services across Wales.[1] WIHSC was specifically asked to provide an: *identification of success factors in setting up and implementing community cardiac interventions to improve outcomes and a set of key recommendations to facilitate the spread, adoption and implementation of these best practice principles across Wales supported through the Heart Conditions Delivery Implementation Group (HCIG)*.[2]

Accordingly, this report contains an account of the qualitative interviews conducted by WIHSC with a variety of stakeholders involved in the project delivery as well as members of the relevant health boards and key informants within Welsh Government and other stakeholder organisations.

CONTEXT

The investment of £850k in Wales' Community Cardiology projects is a significant development for several reasons.

First, it tests at scale the possibilities for developing a more community-orientated provision of specialist services. This has been an ambition of health services across the UK (and elsewhere) for many years, and cardiology provides a fascinating case study of the opportunities and challenges in developing a new set of professional and service organisation relationships across primary and secondary care. The many other examples of such innovation have revealed several impediments, including the difficulties of shifting resources to match shifts in activity (sometimes in the context of 'double-running' costs, increased service demand, and the cost pressures of quality improvement), various professional anxieties and uncertainty about changed roles and relationships, and patient uncertainty about appropriate levels of specialism and changed patient roles in service co-production.

Second, it explores the potential for a relatively common model of service innovation to generate new approaches, and then facilitate their wider adoption. Innovation models are typically located on a spectrum from central dictation (of foci, objectives, approach etc.) to complete local determination. The approach in this case – one which is widely used in the UK NHS – was to invite local services to suggest new approaches to tackling several different areas of *local* priority, albeit within the context of a national focus on community cardiology. Thus, the six approaches which are being supported

[1] The other key output is the impact evaluation framework (IEF).

[2] Statement taken from the BHF specification for the community cardiology evaluation study.

not only aim to meet unique local circumstances (*inter alia* geography, historical levels of resources, population profile), but also have somewhat different objectives and foci.

Third, the diversity of approaches and circumstances across the six projects provides a valuable 'natural experiment' through which the evaluation can explore the impact and importance of those features which are known to influence the rate, scale and sustainability of complex service innovation. Such variables commonly include the quality and availability of activity and output/ outcome data; the nature of the relationships between the various stakeholders, and their level of commitment; the quality of leadership; prior history of innovation; and the adequacy and flexibility of resources (human, technological, as well as financial). Surrounding these factors are the various governance processes and structures (national and local) which are there to facilitate the required changes, and which present opportunities and challenges of their own. Interestingly, the funding also supports an element of formal education (the Bradford cardiology diploma course).

Finally – and fundamental to each of the above – is the need simply to chart and describe what has happened across all aspects of the programme, from its initial design and invitation to take part, through the national and local set-up and implementation processes, the allocation and commitment of resources, the governance processes, and tangible and intangible delivery, to the emerging quantitative and qualitative outputs and outcomes. The intangible elements include clinical, managerial and patient perceptions of the service, and their reactions to it. The basic chronology of the projects is clear from the available documentation, there are a multiplicity of different perspectives about many other aspects of their implementation, which are now captured, understood and evaluated.

When the Welsh Government made available the annual £850,000 to provide community cardiology services, six health boards were successful in making applications for this money which was distributed on a per capita basis across Wales. The Welsh Government set down six key objectives against which the funded community cardiology services were expected to deliver:

1. Ensure patients receive cardiology diagnostics and effective treatment in a timely manner
2. Improve access to primary care, and support a shift into community care
3. Support activity to sustainably improve patient flow and waiting lists
4. Deliver substantial planned pathway improvements, and reducing avoidable pressure on unscheduled care
5. Reduce admissions and re-admissions to hospital
6. Add to the evidence base on innovation in community cardiology

It should be noted, however, that when beginning to put in place the new services, health boards were working in the absence of defined national pathways, and that underneath the six headline objectives, there were no targets, key performance indicators or measures issued. There was a degree of flexibility in how different areas interpreted different aspects of their new services, and the six sites all took different approaches to the nature of what constitutes community cardiology – one service model size did not fit all. Further, there was an asymmetry in the starting points and history

of such community services across Wales. Accordingly, those delivering services started to collect data on the impact of their services without clear guidelines, and as such there was no consistency of approach between the six services.[3]

IMPLEMENTING PUBLIC SERVICE INNOVATION – FROM TRANSACTION TO TRANSFORMATION

In May 2013, *The State of Innovation: Welsh public services and the challenge of change* was published by NESTA.[4] The study concluded that Wales has a long tradition of public service innovation but that many innovations are incremental, seldom attaining impact beyond the organisation or initiative in question, and many fewer could be described as transforming the whole system. It is the exception for innovations in one place to be scaled or transferred nationally. There have been a series of initiatives aimed at promoting innovation in public services and encouraging a ground-up approach. Whilst some initiatives have been successful, the overall picture has been mixed. Factors for this – relevant to both Wales and elsewhere – include:

- The development of skills necessary to implement innovation within or across organisations has been patchy – and the need for such skills always recognised;
- There is some evidence that innovation tends to be seen as distracting people from the basic job of delivery – innovators report that they often feel isolated and unsupported. Leadership is clearly a factor but there may also be a defensiveness about change among many;
- Standardised systems for identifying and disseminating have tended to be thin and there is often a lack of interaction within or between sectors. Experience suggests that transfer is a process that has to be carefully and actively managed. Good practice websites – although important – are not enough;
- All parts of the organisations – from the front line to the board (or equivalent structure) – need to be involved in the innovative practice, and this is not always the case;
- The metrics and other evidence of success are often not sufficiently developed to engender confidence in the innovation; and
- There is no overall agreement about the value and practice of citizen engagement and co-produced solutions – making shared learning and cross-sector collaboration more difficult.

The successful transfer of innovations in Wales identified within the *State of Innovation* was often based on an alliance between a highly committed innovator, the development of rigorous supporting metrics and evidence, and clarity about which aspects of the innovation require absolute fidelity and which can be flexed according to the circumstances of the 'receiving' organisation. This context is important for the study and germane to the approach.

ADOPTION, SPREAD AND SCALE

Two recent reports have provided further evidence on the nature of innovation within the NHS and the processes inherent in adoption, spread and scaling.

[3] A short summary of the six different service models is provided in chapter 2 of this report.

[4] Gatehouse M and Price A (2013) *State of Innovation: Welsh Public Services and the Challenge of Change* Nesta: London https://www.nesta.org.uk/sites/default/files/state_of_innovation.pdf

Collins[5] reflects on the key determinants of enabling innovative working to spread including that fact that a very small amount of funding is provided in order to ensure the process is embedded, the need for clarity around adoption or adaptation, capacity to deliver the new ways of working, and having supportive leaders, managers and effective delegation processes.

In a more systematic manner, Aldbury et al[6] provide insights concerning the key enablers for spread from both the perspective of those 'in pursuit of spread' (innovators and leaders of the those involved in the new service model) and those responsible for 'creating the conditions for spread' (policymakers, system leaders and organisations in the wider health economy):

In pursuit of spread

1. Building demand through existing networks and narratives - experiential evidence and personal relationships are critical for finding early adopters, but reaching a bigger audience for scale requires aligning an innovation with existing priorities and engaging relevant professional and patient networks.
2. Using evidence to build demand - producing evidence is not a scaling strategy in and of itself, but using evidence effectively can be an important factor in building demand. Qualitative as well as quantitative evidence is often necessary to build demand and capture the hearts and minds of stakeholders in addition to demonstrating efficacy.
3. Balancing fidelity, quality and adaptability - as an innovation scales, it must be flexible enough to be adapted to new contexts while continuing to achieve the same impact. Here, adopters and evaluators are critical partners in identifying the core components of the innovation that must stay the same and those aspects that can be adapted to new settings.
4. Scaling vehicles rather than lone champions - scaling an innovation is often a full-time job, and it is difficult for a single individual to do. Success is often reliant on an organisation or group that consciously and strategically drives the spread.

Creating the conditions for spread

5. Capitalising on national and local system priorities - alignment with national policy priorities is often critical for spread: innovations that relate to high-profile challenges for the health service can tap into an existing case for change, so this must be an important consideration for those defining and articulating these priorities.
6. Using policy and financial levers to kick start momentum - policy and financial levers can focus attention on an innovation at a moment in time, thereby encouraging adoption, but by

[5] Collins B (2018) *Adoption and spread of innovation in the NHS* King's Fund: London https://www.kingsfund.org.uk/sites/default/files/2018-01/Adoption_and_spread_of_innovation_NHS_0.pdf

[6] Aldbury D, Beresford T, Dew S, Horton T, Illingworth J and Langford K (2018) *Against the odds: successfully scaling innovation in the NHS* Innovation Unit and the Health Foundation: London https://www.innovationunit.org/wp-content/uploads/Against-the-Odds-Innovation-Unit-Health-Foundation.pdf

themselves have limited scope for creating an intrinsic commitment to an innovation over a sustained period.

7. The importance of commissioning for sustainable spread - the routes taken to commissioning an innovation can be influential in shaping the quality of the innovation and its impact as it scales.
8. The role of external funding to support spread - external funding can be valuable for scaling and development - notably for independent evaluation, and especially if it helps develop intrinsic motivation for adoption. Whether and how such funding is used to create sustainability over the long-term is often key to the success of the scaling strategy.

This context is important for the study, and will be reflected on in the discussion and conclusion chapter at the end of the report.

METHOD

The formative evaluation was constituted of three key phases.

PREPARATORY RESEARCH

Ahead of the Case Study visits, our preparatory research laid much of the groundwork for the substantive research phase that followed, and comprised three principal elements: a brief literature review (to inform both this part of the study and for the Impact Evaluation Framework); a series of scoping interviews, and a documentation review. The documentation review (and linked pro forma) included the following:

- Formal objectives, and any subsequent modifications;
- Rationale and intellectual origins of the project;
- Stakeholders, including the nature and extent of their engagement;
- Project plans (including modifications) and proposed and actual chronology;
- Inputs, including budget, human resources, contributions in kind – proposed and realised;
- Proposed metrics which illuminate 'successes' (including processes, outputs and outcomes),and any subsequent modifications;
- Data relating to the above, quantitative and qualitative; and
- Current forward plans.

The information received was analysed and contextualised before the first Case Study visit was undertaken.

CASE STUDY RESEARCH

Each of the Case Studies consisted of four elements:

1. Documentation review, which included national and local specifications and plans (as per the work in the previous phase), performance appraisals and audit or similar reports [pre-visit];

2. In-depth interviews with the key individuals involved including those responsible for developing the project design; current leading clinicians in cardiology and primary care, including medical, nursing and other professions as appropriate; and those with lead managerial and finance responsibility for the project [during visit];
3. Analysis and write-up of the salient issues discovered [post visit]; and
4. Follow-up interviews to complement the site visit and to reflect back on the responses heard [post visit].

The in-depth interviews[7] were the principal primary research tools employed during the visits and they had three broad components:

1. Issues arising from the initial survey and review of documentation;
2. A semi-structured exploration of the potential impact of:
   - individual, organisational and system incentives and disincentives – to be interpreted widely, to include financial, budgetary, prestige, professional competition and HR issues
   - external knowledge and its nature/availability
   - professional networking, formal and informal
   - Individual, team, organisation and system leadership – a description, and an assessment of the extent of its impact
   - patients, carers and the public – direct and indirect
   - local and national policy, local service and other history and context
3. Issues which the Case Study participants wished to raise.

MEMBER CHECKING WORKSHOPS

The final stage of the method involved inviting the Case Study participants to a 'member-checking' workshop to offer them an opportunity at the end of the substantive research phase to validate the evidence submitted to the researchers, as well as to hear a number of different perspectives on the data collected. We ran two workshops to gather feedback from clinicians who are engaged in directly providing community cardiology services (whether GPs or other practitioners), consultant cardiologists, general managers within cardiac services, and a range of others.[8] These workshops gauged reaction to the findings and ascertained key features to be incorporated into the Impact Evaluation Framework.

REPORT STRUCTURE

The next chapter of the report provides a snapshot of the six funded community cardiology services within Wales. Following that, we provide an analysis of the findings from the case study research, and the report concludes with a discussion chapter which provides recommendations emerging from the evidence-base.

[7] 27 interviews were undertaken in the study.

[8] Twenty-one people contributed to these two events – one of which was a teleconference held between North Wales and Merthyr Tydfil, and the other a face-to-face meeting held in Bridgend.

2. DESCRIPTION OF COMMUNITY CARDIOLOGY SERVICES

This chapter provides a summary of the six funded community cardiology services. These service model summaries have been shared with the leaders of those services and they have amended them in places.

ANEURIN BEVAN UNIVERSITY HEALTH BOARD (ABUHB)

The community cardiology clinics in ABUHB aimed to provide a one-stop shop for patients to undergo same day investigations – primarily ambulatory ECG monitoring and echocardiography.

The initial proposal stated that weekly locality clinics would be held on three sites across the Health Board; North (Blaenau Gwent and North Monmouthshire), West/Mid (Caerphilly) and Central/East (Newport/South Monmouthshire). The clinics were to be run by a GP with a special Interest (GPwSI) supported by a Consultant Cardiologist and Cardiac Physiologist. With the aim that the clinics will provide assessment and prompt diagnosis for patients with non-complex conditions.

> ***Extract from the ABUHB bid*:**
>
> *Initially, a Consultant Cardiologist will direct referrals to the community following triage whilst the successful* GPwSI *undergoes speciality training leading towards a Diploma (e.g. Bradford GPwSI Diploma). Following training, it is anticipated that colleagues in primary care will be able to directly access community cardiology services, referrals having been screened by the GPwSI.*
>
> ***Community Diagnostics***
>
> *Proposal: Ambulatory heart rhythm monitoring for patients with undefined palpitations and no "red-flag" features and community echocardiography for patients with atrial fibrillation, suspected heart* failure *and murmurs.*
>
> *It is anticipated that services will evolve in a phased manner initially involving assessment of palpitations and* atrial *fibrillation, followed by assessment of heart failure and murmurs to allow for GPwSI training and physiologist recruitment.*

Three GPs commenced the Bradford Diploma and have had the opportunity to attend clinics with consultant cardiologists, observing interventions, attending physiologist reporting sessions and clinics with specialist nurse practitioners.

One weekly community clinic in Ysbyty Aneurin Bevan, with the GPwSI seeing general cardiology referrals – which have been triaged to the clinic by consultant cardiologists – started in November 2016. The clinic is run alongside a consultant's existing valve clinic, which has been moved from Neville Hall Hospital to Ysbyty Aneurin Bevan. A cardiac physiologist is also present to conduct echocardiograms, ECG and cardiac event monitors. This clinic may become a focused clinic (e.g. palpitations, chest pain, heart failure).

The other planned clinics will be located at Avicenna Medical Centre and Chepstow Hospital. The team have experienced delays in finding suitable venues and problems with arranging and ensuring the necessary IT infrastructure requirements.

The Chepstow Hospital clinic is due to start in February 2018. It is planned to have a consultant in clinic every other week. There will be a physiologist to facilitate the use of Holter investigations and a longer-term plan to have echocardiography facilities as well. The main purpose is to serve as a one stop clinic. The intent is to see only palpitation referrals with possible expansion to other presenting complaints and problems.

All three of GPwSI have taken part in providing educational teaching sessions to their GPs and GP trainees. All have been completing applied methodology assignments, as required for completion of the Bradford Diploma that are relevant to the GPwSI role and the cardiology department.

ABERTAWE BRO MORGANNWG UNIVERSITY HEALTH BOARD (ABMUHB)

In ABMUHB East the community service has been running since 2006, where the GPwSI triages referrals with general cardiology to attend the community clinic.

The community cardiology funding was intended to expand the current service across the health board. There are currently four GPwSI based in GP practices across ABMUHB.

***Extract from the ABMUHB bid*:**

ABMUHB have successfully piloted and implemented a GPwSI model of secondary cardiology care in one locality within the Health Board.

All primary care referrals for secondary cardiology in the Swansea Locality are triaged by a GPwSI who has timely access to diagnostic tests and also the ability to refer on to a cardiologist if required.

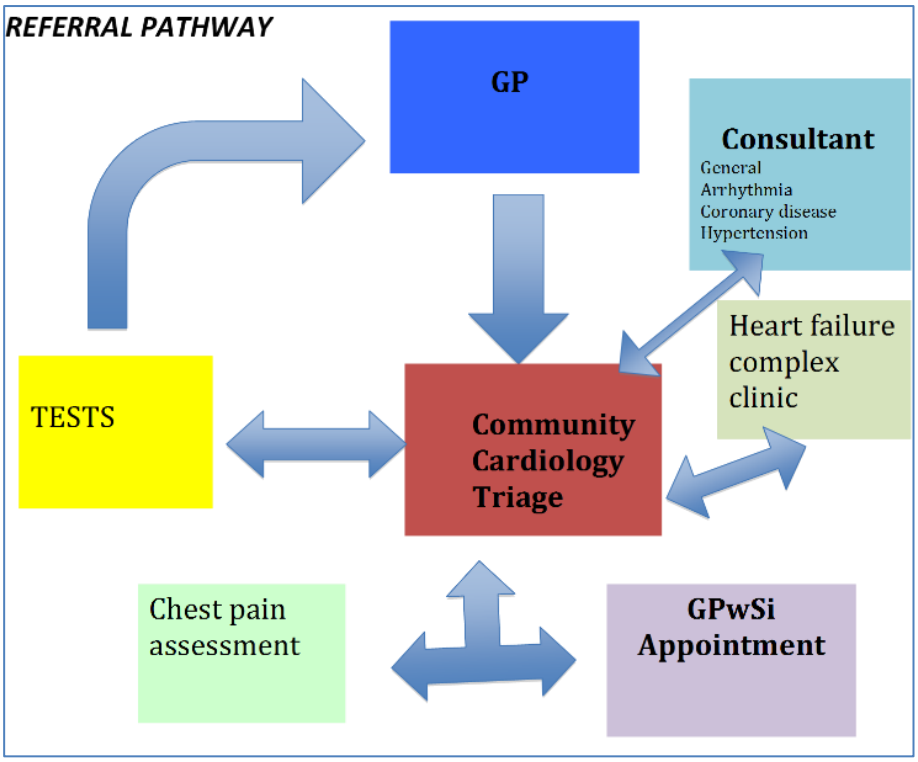
The Health Board has targeted investment as part of IMTP for both 14/15 and 15/16 to improve access to cardiac diagnostics.

GPwSI led clinics are held in the community thus avoiding the need for a patient to attend a hospital setting.

The proposal is to strengthen and build upon this successful proven service model and provide community cardiology clinics across all 3 HB Localities.

In addition it is proposed for cardiologists to provide direct support into the established community clinics working closely with GPwSIs to manage more complex cardiology patients in a community setting.

A referral pathway into the community cardiology clinics has been developed, and is reproduced below.



BETSI CADWALADR UNIVERSITY HEALTH BOARD (BCUHB)

The project planned to establish a community Arrhythmia service tasked with identification of high risk patients, supporting community management of these conditions, as well as improved Cardiac Rehabilitation services to enhance participation and to reduce hospital admissions. BCUHB have been unable to appoint practitioners to begin the Bradford University postgraduate Cardiology Diploma Course until March 2018 when a PwSI will start. The health board has been able to fill the atrial fibrillation nurse post at band 6 level from April 2018.

The chest pain nurse has been appointed and launched a series of angina assessment clinics across BCU West along with a community stress echo service. This is a two-stop service with the potential to become a one-stop clinic.

Funding to increase to full time the post of Exercise Physiologist has enabled the Cardiac Rehabilitation Team in Central BCU to fulfil their commitment to offering Community Cardiac Rehabilitation Exercise programmes to all appropriate Heart Failure patients who are referred to the service. The Exercise Sessions within Conwy and Denbighshire are running to capacity, all run with a mix of cardiology patients as they do not have the capacity to have Heart Failure only sessions, however this does not appear to be disadvantaging patients. Response from patients is positive with no concerns or complaints raised.

Open access NTproBNP testing and echocardiography has been established across North Wales. GPs across BCUHB have been trained in assessing suspected heart failure. Patients with elevated NTproBNP levels are offered echocardiography at their nearest community clinic and the results are discussed with them that day with a letter and medical management plan sent to the patient and GP within 1 week.

The roll out of heart rhythm monitors to primary care is underway.

The familial hypercholesterolemia service - 90% of GP practices within BCUHB have had at least one patient genotyped for FH – an increase of 5% since the introduction of community cardiology funds / 0.2WTE administrative support.

***Extract from the BCUHB bid*:**

Location: North West Wales in Year 1 (Gwynedd, Conwy West and Ynys Môn) with roll out across North Wales from Year 2 (FY 2019-20), subject to evaluation and support/funding from BCUHB to roll out.

Purpose: To ensure a comprehensive community cardiology service:

1. *A comprehensive Community Stable Chest Pain assessment service based on NICE validated investigations for new primary care referrals.*
2. *A Community Arrhythmia Service*
3. *A Clinical Academic Nurse Post*
4. *Direct training and support of community Advanced Nurse Practitioners (ANPs) and Primary Care GPs and staff*
5. *Cardiac Rehabilitation (CR)*
6. *Heart Failure case finding and hospital cardiology "in reach"*

The Clinical Academic Nurse Post is a new post based on developing the role of their senior Heart Failure Nurse Consultant and member of the British Heart Failure Society Board. There are five key aspects to the role:

1. Overseeing the implementation of NTproBNP testing by acute Heart Failure Nurses for the exclusion of heart failure and early discharge of hospital in patients to the community
2. Evaluating the role of HFNEF (Heart Failure with Normal Ejection Fraction), thought to account for up to half of heart failure including hospital admissions
3. Develop Advanced Care Planning for cardiology patients
4. Attracting further finance for project development through bids to national UK funding bodies
5. Ensure full participation in National Cardiac Audits and to lead on the necessary service change resulting from audit findings

CARDIFF AND VALE UNIVERSITY HEALTH BOARD (C&VUHB)

The service proposed to recruit three GP Champions each leading on one of the following areas of Cardiology:

- Breathlessness/Heart Failure
- Palpitations/Atrial fibrillation
- Chest pain

The aim of the project was to appoint the GP Champions for 2 sessions per week. One session would be spent within secondary care gaining a deeper understanding about the clinical condition, the services available, models for delivery and constraints within the system. The second session would be used to work across primary care developing and implementing templates and pathways. It was envisaged that their time would also be spent enhancing communication links, educating colleagues in primary care and promoting the pathways to ensure that appropriate patients are referred to the appropriate services at the appropriate time.

***Extract from the C&VUHB bid*:**

An evaluation of the impact and effectiveness of the pathway changes is proposed as part of the project, subject to identification of a suitable MSc (or other) student. The Cardiff and Vale Local Public Health Team will liaise with colleagues in Cardiff University Institute of Primary Care and Public Health, to identify a suitable student to carry out the work (e.g. as part of their dissertation), in conjunction with a named clinician at CAV.

It is also proposed that in year one, Breathlessness/Heart Failure will receive a particular focus in order to develop and deliver a service to identify patients earlier and to improve end of life care of patients with terminal heart failure.

To achieve this, a monthly one stop clinic will be established aligned to one or two specific GP Clusters that are identified as having the greatest need. It is hoped to locate these clinics in areas servicing the most deprived fifth of the population. This local service will have multidisciplinary input including a Heart Failure Specialist, the GP Champion, Specialist Nurse and a Physiologist to provide Echocardiography for rapid diagnosis. It is intended that the clinic(s) will be audited and should the outcomes demonstrate the benefits that are anticipated, this can then be rolled out to further areas as funding allows in future years.

In year two it is proposed that there will be a focus on implementing Primary Care based services for Atrial Fibrillation, Palpitations and Angina Management, with a similar approach taken as with the Heart Failure service e.g. monthly clinics focussed on identified GP Clusters.

These pilot clinics will be assessed by the student with potential measures including patient reported outcomes (PROMs), GP and clinical evaluation, impact on inappropriate referral rates and unscheduled care admission rates.

In October 2016 the clinic commenced in North Cardiff with the Cardiff East clinic starting in March 2017. The initial focus of the clinic is on breathlessness and heart failure with a plan to expand to chest pain and palpitations/ AF as ongoing work in progress. A referral guideline for suspected heart failure has been developed (see below) – with an average wait of 39 days. The community clinic intends to be a one-stop clinic to conduct Echocardiogram, ECG, clinical assessment, input from specialist nurse. This aims to reduce non-essential follow up/investigations and improve patient experience.

Currently a GP and consultant both attend the community cardiology clinic.

Two GPs and one specialist nurse have enrolled on the Bradford Diploma. The GP champions also work to bridge the gap between primary and secondary care, with regular attendance at GP cluster meetings.

CWM TAF UNIVERSITY HEALTH BOARD (CTUHB)

The aim of the community cardiology service was to develop a one stop clinic within the Cynon Valley cluster to deliver HCIG priorities and link in with the Cwm Taf Chronic Conditions Management Model currently being developed within each of the Locality Cluster Hubs.

***Extract from the CTUHB bid*:**

The One Stop Cardiology Community Clinics will be provided by a multi-disciplinary team consisting of a broad range of specialist staff including GPwSI, Secondary Care Consultant, specialist nurses, general nurses, physiologists, administrative staff and importantly access to a wide range of diagnostics that can be undertaken at the time of the consultation to reduce repeat consultations and allow a more rapid diagnosis for patients. In addition there will be direct access for investigations for GPs.

Currently there is no specialist Arrhythmia Specialist Nurse and so no nurse led service. This development would facilitate the development of a nurse led service alongside GPWSI/Consultant support. There is a very small Heart failure Specialist Nurse resource, which can only support a secondary care service. By enhancing Heart Failure Specialist Nurse resource, this would allow a nurse led service in the community supported by a GPWSI/Consultant and also allow the heart failure service to further flow into home delivered care for severely ill patients. The plan would be to receive support from the IV team to provide IV diuretics in the community/home to prevent patients having multiple admissions and allow them to choose to end their days on an end of care pathway in their own home rather than in a hospital setting.

The integrated service will provide an efficient, fully accredited and regulated service closer to home for local patients, avoiding unnecessary cost, travel, improved access to services, including diagnostics and a reduction in secondary care referrals/ admissions. The multi-disciplinary team will provide primary and secondary care prevention activity, assessment, diagnostic and treatment plan for cardiac patients.

The concept of the clinic is that the majority of patients will have all necessary diagnostics and then following an appointment with a GPWSI/Consultant as necessary, patients will be given a formal diagnosis and information about their condition as well as advice and signposting in relation to wellbeing and lifestyle change and support services. If required, a follow up appointment will be available in the Community Clinic, however patients will then be discharged back to the care of their general practitioner or referred onwards to a secondary care provider for ongoing management if necessary. The underlying principle of the clinic is rapid assessment, diagnosis, treatment plan and discharge. The clinics are not primarily to see follow ups.

The Community Cardiology Clinic model also incorporates a protocol driven Open Access Investigations Service for G.Ps. not currently available within CTUHB. At present, patients who required investigations are referred into secondary care and can wait up to and in excess of 26 weeks for an investigation and subsequent outpatient appointment if required. The open access diagnostics service in the one stop cardiology clinic will reduce waiting times for both diagnostics and outpatients and reduce the referral to treatment time for patients suitable for the service.

This service will be further supported by a consultant advice line for GPs, utilising existing resources and due to be implemented from 1st July 2015.

HYWEL DDA UNIVERSITY HEALTH BOARD (HDUHB)

The aims of community cardiology service in HDUHB were to the deliver consistent and timely access to cardiac diagnostic investigations into the community and thereby reducing waiting times for consultant cardiology clinics.

***Extract from the HDUHB bid*:**

One stop community cardiology service operating as part of the Mid Wales Collaborative. Co-locating community cardiologist, supported by GPwSI and GPs, diagnostics, arrhythmia and heart failure nurses and community pharmacy.

The scheme will deliver

- *Early diagnosis*
- *Care out of the hospital, in settings close to home in a rural community*
- *Improve waiting times*
- *Avoid admissions*
- *Integration of primary and secondary care working as part of the same team*
- *Skills development*
- *New workforce models, in particular the novel use of community pharmacists as part of this team*

Since July 2017, the community cardiology clinics take place at Cardigan Hospital, Aberaeron Hospital, Amman Valley Hospital, with between 2-5 clinics per month at each site. Clinics also take place at Glangwili General Hospital clinic twice per week and Prince Philip Hospital clinic twice per week. The team have set up remote ambulatory ECG monitoring at Tywyn Minor Injury Unit, Cardigan Health Centre, Llandiloes and Glantwymyn Health Centre in Machynlleth. Patients are connected to monitors nearer to home and the recording is sent via memory card to Glangwili Hospital/Bronglais to be analysed by a qualified cardiac physiologist. Clinics are yet to be set up in Pembrokeshire.

One physiologist undertook the Bradford Diploma. The current team consists of two Band 8 Advanced Practitioners in Cardiology (physiologist and specialist nurse) and one Administrator (all 0.8WTE)

Consultant cardiologists are not directly involved in the clinic but triage referrals to the community clinic and are available for mentoring and support (1 hour clinical supervision per advanced practitioner per week).

Pathways have been developed for palpitations, syncope and atrial fibrillation.

Investment in equipment/technology to support the project includes:

- 4 x ECG machines (paper/electrodes) 2 loaned to community services
- 2 x Laptops (plus tongle x 2)
- Transcriber machine
- Echo machine

- 8 x monitors for remote community use
- 4 x remote access sites
- 4 x BP monitors
- 2 x sphygmanometer

The advanced practitioners also provide education and support in the community to GPs, practice nurses, care home staff, and health care support workers. Education provided on performing and interpretation of ECGs, promoting the 'Know your pulse' campaign, and teaching sessions at GP surgeries.

3. THEMATIC FINDINGS

During the interviews conducted as part of the community cardiology evaluation, participants spoke at length about the barriers and enablers encountered during the implementation of the community cardiology services.[9] The health boards were all at different stages of the process and had used the funding as per their original bids to varying extents.

INFRASTRUCTURE

In practical terms, problems with infrastructure had been encountered by many of the projects. Including challenges with IT, securing appropriate venues, storage and access to data, which was often compounded by the issue in some health boards of primary care staff (e.g. PwSI) undertaking clinical work that is traditionally done in secondary care. For example, one health board had trouble finding suitable venues for the clinic in a community setting, which delayed the start of some clinics:

> *"Initially the view was for all community cardiology clinics to be in practices but this wasn't possible – couldn't accommodate number of rooms required" (Directorate manager)*

Another example demonstrates the challenges of IT and undertaking diagnostic tests in a community setting: *"What we haven't cracked yet is to download the data from the patient and take the monitor off when the clinic isn't running" (PwSI)*

Some health boards however had invested in equipment and technology to ensure that the diagnostics could be performed outside of the usual secondary care site. For example, in Hywel Dda UHB, the service had invested in remote ambulatory ECG monitoring, where patients can be connected to monitors closer to where they live and the recording sent via web access to be analysed in secondary care by qualified cardiac physiologists. However, in this health board the staff running the community cardiology clinic are from secondary care and could easily access patient notes and test results. Some of the PwSIs reported difficulties in accessing the results of patient diagnostic tests because of their being primary care clinicians:

> *"If I was a consultant I'd have a secretary and my results would go to my secretary or if I was a registrar the administration would come under my consultant. I'm an anomaly as a GP with special interest. I'm on my own. I'm not directly under a consultant. So [consultant's secretary] emails me if my investigation comes through so I can log on and have a look at it when they come in…it's taken a while to figure all that out" (PwSI)*

> *"IT is extremely frustrating because you are working in the community with primary care run computers but you are actually doing a secondary care service so you need access to secondary care databases…so there may be cardiologic letters out there which we can't access" (PwSI)*

Other concerns focused on the issues concerning more general administration, data capture and analysis issues. There was a perception that capturing data in a way that's high quality and objective is

[9] References to four categories of respondent are made throughout this chapter: PwSI, Consultant, Other clinician, and Directorate Manager. It should be noted that GPwSI are contained within the PwSI category.

not easy, and that because existing data systems do not allow for new fields (like community cardiology) to be captured easily. Analysing data often required those involved in the services to do manual audits to assess, for example, the proportion of direct referrals from primary care as opposed to those which have come to the service after being triaged by a secondary care consultant: *"That's the response we've had back from the admin staff who are processing the referrals, that the ones that predominantly come are triaged up from the secondary care waiting list and they book them in this clinic. They've had ones come through that the GPs have directly put on the list that they want to be seen in clinic, but these have been quite low, but the actual numbers of that…unfortunately at the moment we don't have the actual figures" (Consultant).*

Whilst there was an explicit recognition that an evidence-base needed to be gathered on community cardiology, people acknowledged the infrastructural difficulties inherent in this. They knew that, alongside other innovative work programmes, being able to demonstrate what is being done and the links back to the key objectives is very important. However, they identified that because of the way things are currently organised this is can be a very burdensome activity. It requires lining up all of the relevant people in order to provide accurate data which can mean a significant change from the current situation. It is also a time-intensive process:

> *"It sounds very simple doesn't it – let's have a community cardiology clinic – but actually the barriers for that are huge. The administrative barriers. For example, something as simple as the fact that there's no referral process in place to send patients to the community cardiology clinic, means they are all sent to secondary care. And actually changing that, it's like trying to turn around a super-tanker. You have to get a lot of people involved in that process – the medics, the clinicians, the medical records people. To be fair we have had a lot of engagement and people have been very positive, especially the consultants and the physiologists and there's been a lot of positivity about running these clinics, but getting over those barriers has been difficult. Getting to the point where we are now, it was actually a good six months before we could run the first clinic and that has eaten up more than double the time that we had allocated as part of the project staff budget" (PwSI)*

LEADERSHIP

The challenge of where the community service sits – whether in primary or secondary care – was also evident when interviewees spoke about the decision-making and leadership of the projects. Often the projects were developed by secondary care consultants and managers but run by primary care clinicians. Some individuals highlighted the difficulties of having so many people involved in the service – from triaging patients into the clinic, performing the diagnostics tests, interpreting the results, and consulting with the patient – there was sometimes a lack of ownership over the clinics and a lack of opportunities to share ideas and move the service forward:

> *"I can't remember ever us all sitting down with everyone there to discuss what the issues were" (PwSI)*

> *"It's all a bit ad-hoc and it's not being done in a formal way…it's about getting everybody in the same room at the same time which isn't easy" (PwSI)*

Some of the primary care clinicians also reported that they didn't have the experience in secondary care to set up a new clinic without the support of other colleagues:

> *"We've found that the way its set up and the administrative time that's been given to push these roles forward has just been a real challenge…nobody has had any dedicated administration time to set up these clinics. It's been left to people who already have other jobs and have been given this to do as well. It's been very slow to get things moving" (PwSI)*

> *"It's very difficult for us coming from outside of the trust and we don't understand the nuances of the system and the funding and how you set up a new clinic" (PwSI)*

Staff from different health boards identified the need for support from senior colleagues and managers in the health board, and to help those who were working in a new way and in a new environment to cope with those changes:

> *"I was employed to come into this role but I've never been told what's been expected of me actually. I missed all the initial meetings as I wasn't even invited to attend and I had been in post for months before I was invited. I'm not really sure in my mind what's expected of me here, I'm not very clear on my role or the expectations of it. I've always worked in secondary care and I feel very comfortable in that environment. There's a lot about primary care and the way GPs work which I really don't understand" (PwSI)*

> *"Change is really, really difficult. You've got to get somebody on side who is senior enough to be a decision maker and to make things happen and who's got time as well" (Other clinician)*

> *"You do need the support of operational managers and the people who hold budgets and make decisions. People you are line-managed by to make these things happen" (PwSI)*

Integration and development of the service seemed to be more straightforward when the clinicians running the service were already known to the secondary care team, as in HDUHB and BCUHB, where the staff had worked in secondary care previously and were trusted colleagues. There also seemed to be some issues with using a 'rota' of consultants, whether that be for triaging patients into the community service or attending the community cardiology clinics: *"If a case is being discussed with a consultant on day 1 and any subsequent discussions should be with that same consultant rather than who happens to be here on the next week" (PwSI).* However, this was not the case across all the services.

Having reached a point in time where services had been established, there was an identified need in the interviews for leadership and ownership post-pilot phase. Indeed it was suggested that there may be a project management vacuum across community cardiology: "*I think that you do need to make sure that the programme is properly led and managed and owned by the health board. My job is also to feed this into our strategic priorities, so it's going straight through the chief operating officer which makes the connection with the health board by making sure that things that are really aligned with the local cardiology plan. That's my job, to make sure it has a high visibility and I think it's been managed well because we owned it and managed it and led it, but where it goes from here into the strategic objectives of the health board is a big question" (Directorate manager).*

There was a question about who leads these innovative programmes, built on a perception that such innovative services tend to be clinician led rather than being planned and led by operational managers: *"it's been clinicians wanting to keep up best practice and seeing the need that they can address" (Directorate manager).* The importance of the character and approach of the 'pioneers/early adopters' was also recognised – people felt that the outcomes of this study were important in providing evidence. However that still leaves some tough, reflexive questions which need to asked:

> *Have we got the right people in the right place at the right time? Given the significant opportunity costs involved in setting things up, how do we best optimise and capitalise on these potentially good service models? Would an injection of serious project management moves us off our plateau and onto the next level? And offset the potential risk of service coming to a halt? (Other clinician)*

WORKLOAD IMPLICATIONS

Working as part of the community cardiology services – whilst technically offset by the funding available – was often perceived as an extra duty on top of clinicians' existing workload, and the implications of the new service model was discussed with many of the interviewees. For example, in one health board, it was recognised that tasks and procedures need to be done frequently for clinicians to become proficient at them. Using the example of the 'e-advice' service for primary care clinicians, this task of responding to these requests was limited to four consultants. The premise behind the service was that if the requests for advice don't become new referrals (although some of them will) the time taken to respond to queries will be saved in numbers of new patients having to be seen in secondary care: *"the gains from this would more than offset the losses" (Consultant)*. Similarly in another health board it was suggested that the cardiology advice system for GPs could be managed by the PwSI:

> *"I think a good role for us would be a GP advice system. If we're a point of contact between primary and secondary care it would be quite helpful for advice to be directed towards us and then if we needed advice from a consultant we could get that" (PwSI)*

There were mixed views on who should be triaging the patients from the secondary care waiting list into the community cardiology clinics. Some saw the natural progression of the service (if it wasn't being done so already) as for the PwSI to triage appropriate referrals into the community clinic (as is already the case in one of the community cardiology services). Others however saw things differently: "*I think there are already too many barriers between a patient going to see a cardiologist and I worry that some of these systems that are being put in place in Wales that effectively means the GP sends to another gatekeeper to decide whether it gets to a cardiologist or not. All the primary care referrals come in and a cardiologist reads them and decides whether it goes to a pooled hospital clinic or whether it goes to a community cardiology clinic or whether it goes straight into the heart rhythm clinic or the heart failure clinic in the hospital. That prioritisation is currently done by consultant cardiologists – we don't have any GPs doing that role and that's partly because it's a big ask of the GP no matter how specialised they are to do all of that filtering" (Consultant).*

All of these comments were contextualised by interviewees who felt that there was limited capacity around cardiology services in general, whether in the community or in secondary care. As such there was a focus in the interviews about how best to 'future-proof' the service and deal with the implications of this new workload model. There were no simple solutions to this, but it was strongly felt by some that more needed to be made of building on the success of having sent a cohort through the Bradford course: *"we should have a rolling programme of people going through the Bradford diploma so that we build a critical mass of PwSIs in community cardiology" (Consultant).* More broadly, there were reflections on the constantly evolving nature of cardiology to consider:

> *"I think the way we practice cardiology changing all the time. I think there is always resistance to additional work being put on top but if it were work that substituted for our time? I don't think there's really much resistance to that as long as we can all sit around as a group and say that's the way things are going and that's the way we are going to organise ourselves. We've been very as a group across primary and secondary care having those types of discussions. I think if we find a way of making it substitution work and saying this is a better way of sorting and organising patients, and ensuring that the clinic is an effective use of resources, I think people would buy into it" (Consultant)*

EVOLVING JOB PROFILES

The evolution of the PwSI role was discussed in terms of seeing patients with the consultant, or the consultant being on site but seeing their own caseload of patients, or the consultant being available remotely for advice and to discuss cases. This has obvious and considerable implications in terms of cost and the number of patients that can be seen per clinic session. In some services, the consultant sees their own patients in a clinic that runs alongside the PwSI clinic, whereas in others the consultant and PwSI see the same patients, with the long-term plan of the PwSI running the clinics independently: *"The idea is now as [the PwSI] finish their training the consultants pull back a bit" (Consultant).* The challenge of high 'double-running' costs of the PwSI and consultant was justified both in terms of short-term loss for long-term gains, and that it provided robust assurance about safety and clinical governance issues.

However, some viewed the 'double-running' of clinics as unnecessary for those practitioners with more experience. Those that worked without a consultant in the clinic or within the same setting reported being comfortable running the clinics as they were able to call or email the consultants if they had a query.

The importance of having that communication was seen as vital to the support of the PwSIs: *"I don't feel isolated doing a clinic here on my own because I know I can pick up the phone or I can email and we'll get help…that's maybe because I've done it longer" (PwSI).*

There were also differences in the remit of the clinic in terms of which patients they see (either specialised clinic such as palpitations, AF, heart failure, or general 'low-risk' cardiology clinics). Some practitioners also had different preferences, with some wanting to be highly specialised in a certain area and some wanting to keep experience across a range of cardiac conditions:

"It would be overambitious for GPwSI to see a whole breadth of cardiac cases. Filter out patients who are non-complex who might best be seen in a one-stop e.g. palpitations / chest pain" (Consultant)

"It's preferable to keep it more focused than general once the training has finished. We don't want lots of patients that then have to come back for further assessment – complex patients" (Consultant)

"I would prefer to be more highly skilled in a certain area of cardiology and see patients that we can turn around in one-stop clinics" (PwSI)

Many of the primary care clinicians also expressed the intent to perform more of an education role for other primary care staff and to improve the link between primary and secondary care:

"I think that's one of the more exciting aspects of what we could do with these posts because we've got a unique perspective being GPs and working within the cardiology department, to be able to improve those links, with the idea of reducing unnecessary referrals into secondary care and speeding up treatment for those who don't have to sit on a waiting list for months" (PwSI)

In some health boards, the advanced practitioners were already providing education sessions to primary care and care homes, amongst others, and were looking to further develop ECG training, other health boards were in the process of establishing the information giving and educational role of the PwSIs: *"The next step is looking at local education and increasing the bridging role between primary and secondary care" (Directorate manager).*

The evolution of service was discussed by all interviewees. There were real benefits for consultants working alongside primary care colleagues. Put simply, they felt that the more GPs that have that interest in cardiology, the better as their practice is informed by new approaches, new roles and new medications. The 'ripple effect' as it was described was welcomed positively, in the context of effective clinical governance: *"working with the GPwSIs has been good" (Consultant).* On the flipside of this relationship, there were identified a series of benefits for the enhanced role that the PwSIs are playing in these new service models, alongside ways in which the roles could be extended further:

"I think obviously having the GPs involved and having them trained up has been really beneficial to improve their skills. We'll be having an internal meeting in the next few weeks to discuss how we take the clinics forward and whether or not there's options for them to see different types of patients. At the moment they are seeing the non-complex patients, but obviously now they have finished their training, what other types of patients could they see? There are opportunities to develop it" (Consultant)

Linked to this was the identified need to build on the momentum of the Bradford course in bringing capacity and skills to more and more PwSIs in primary care.

Key to this though, it was recognised, was the ability to recruit the right calibre of PwSI. Not only do you need the right individual supported with an appropriate training programme (like the Bradford course) but interviewees recognised that you also need to have the right teams of clinicians, managers

and administrators around them. In essence enhancing the primary care job profile of PwSIs means a thorough reconsideration of the whole pathway to ensure that it is working to its optimum level.

BALANCE BETWEEN PRIMARY AND SECONDARY CARE

Building on some of the issues raised under the theme of infrastructure above, addressing the balance between the primary and the secondary care elements, accountabilities and operational responsibilities of the community cardiology services has been a real challenge. Ostensibly, these new innovative models of service are community based, and led by PwSIs in a variety of non-DGH settings. Some respondents felt that the labelling of the services as 'community cardiology' was in itself problematic: *"It's not community cardiology, it's integrated cardiology. What I mean by that is that it's primary, community and secondary care so it's a whole service. The pyramid of care means that only those patients who are really complex go to the highly skilled team when they come into hospital and patients who can be managed and diagnosed in the community are. That's the model of care so we can keep those patients outside hospital, diagnose them early, treat them early and keep people well, keep them from getting really sick and coming into emergency departments…that's the kind of thing we were looking at" (Directorate manager).*

On the positive side, some interviewees were explicit in recognising the 'added-value' that this new way of working has brought:

> *"I think there is a huge primary/secondary care interface added value here because I can now go give a lecture to GPs, and GPs can come and do a workshop and we can learn from each other. That's fine, but is a little ad hoc, whereas this way of working is consistent – having GPs constantly engaging with consultants colleagues and taking that back when they engage with their primary care colleagues. They have got a much better understanding of how specialists work and we gain a much better understanding of how GPs work because of the constant exposure to one another. You can't get that from just sitting in a room or in a meeting, you have to actually roll your sleeves up and do it together, and that's been a really valuable part of this new model" (Consultant)*

> *"I think we are closing the gap between primary care and secondary care first and I don't think we would have done it without some form of community clinic. Then obviously the follow on from that is the reduction of patients actually having to access the main hospital site" (Consultant)*

Feedback was not universally positive however. From the primary care side, there was a perception that due to infrastructure and other issues, that services were still very much 'owned' by secondary care:

> *"Because we are not involved in the implementation of this clinic, we have little say as to how this clinic is run. So therefore there's lots of problems with this clinic, and there can be months that go by where a GP who is a cardiologist specialist is not seeing patients. That has a knock on effect for own professional practice as it means that we don't do cardiology all the time. There is a knock on effect for us when we have to report on results in letters. This isn't really how the service is supposed to be running, and I understand that in part it's because we don't have enough*

referrals in, but I think there is a case to say maybe we should see a wider variety of patients" (PwSI)

"It's all a bit ad-hoc and it's not being done in a formal way. We do have meetings where we can bring these things up, but not everyone has been invited and it's difficult for us to get time to go to the meetings as they are invariably held in the hospital not in the community which is a frustration. The people that need to be able to make the decisions to say 'this is where we are going' aren't necessarily there at the same time" (PwSI)

One potential solution to these matters emerged through interviews with some of the services that have existed for a longer time – essentially that this comes down to the need to let time pass and trust be built between primary and secondary care colleagues. Central to this was the need for almost constant communication: *"I think to do this type of role you have to be willing to put in the extra time to communicate with everybody and you have to build relationships and you have to build trust and all of those things take time. When I look back I had the consultant's trust because I had worked alongside him for years but nobody in the [other DGH] knew who I was. It was only by seeing patients that I saw that they built up their clinical trust in me, and by me going and meeting them and spending that time with them. It meant going up introducing myself. I think that process is always ongoing isn't it because you get a changeover of consultants who don't know you. You have to keep building those relationships and when you are very busy that time is difficult to find. That interface is so crucial though because it secures that support clinically. Having the support of the consultants that you can actually email or ring up and say 'hang on I've got a patient with me, I'm really worried and not sure what to do with them' is so important because you are isolated out in the community they are not next to you. If you don't have that relationship and the phone numbers, then you're isolated and it doesn't work. You have to be working together and you need them to answer their phone when you ring them. It's a two way process, to have a two-way link to be able to make it work from a clinical perspective" (PwSI).*

A final issue concerning the primary and secondary care interface centred on the nature of referrals into the community cardiology services. To date, the majority of referrals are coming from the triaging of patients by secondary care consultants, and smaller number from direct referrals from primary care. It was felt that increasing the direct referrals from primary care would enhance the service profile of the community cardiology services. It was recognised that more effort in engaging GP cluster leads was crucial to this process, and that secondary care consultants have as much of a role in this regard as those in primary care.

GOVERNANCE AND ACCOUNTABILITY

Each of the community cardiology services is ostensibly doing something new and innovative, even where the provision builds on and extends existing models of care. Some services are breaking completely new ground in what they are doing, which brings with it even greater levels of oversight than extending tested services: *"When you are starting a service as we are doing which is probably the first in the UK in the community, we need to go above and beyond safety considerations because it's going to be scrutinised isn't it? It's the first. It's about proving its worthwhile as well – it's about quality control and making sure what we are doing is correct" (PwSI).*

As such, they have all had to undertake a series of clinical governance considerations, and will have had to provide evidence to those in charge of such matters locally that they have fully considered the relevant questions about accountabilities and responsibilities. These issues are made more complex by the fact that the services straddle both primary and secondary care (as described above) and that they are being led in novel ways by a range of different clinicians. It was interesting to hear, for example, about the ways in which non-medical clinicians are supervised and monitored and the systems in place for clinical governance in these sorts of circumstances.

One of the keys to this is to ensure that the different clinicians in the team have the requisite skills, competencies and capabilities: *"'Doing no harm' is about being able to provide safe services isn't it so that the right person is treating that patient. We are demonstrating that we are not just bringing in somebody to treat a patient who is less expensive to employ, but that person is able and within their own capability. Essentially to provide assurances that the capability and competence of their post can deliver that level of care and that level of care is right for that point in time" (PwSI).* Governance and clinical oversight take a variety of different forms, in part depending on the service model and whether the cardiologist is on site or is remote from the community service:

> *"We've got quality control in two ways. I'll talk with the consultant about the patients we've seen, perhaps say 'I'm going to discharge this chap, do you agree or disagree based on what we've said?' But we've also got quality assurance with another consultant cardiologist who has been doing these diagnostic tests for a long time, and he's agreed to take a sample of say 10 and let me know if he agrees with what I am saying" (PwSI)*

> *"I have a supervising cardiologist and obviously we discuss with the cardiologist on the day here. It's not quite a one stop shop really because we are giving them the events monitors and they take them away and we have to wait a little while for the results to come back and I do run those results with the cardiologist and they always have a discharge letter done" (PwSI)*

Underpinning all of this is the need to develop relationships of trust so that issues of clinical governance are everybody's business: *"The consultants have built up trust in my clinical knowledge and abilities I think, I hope, and also the GPs have supported the service by referring into it" (PwSI).* Further to this study's examination of all of the projects, there are no outstanding concerns surrounding the clinical governance of the community cardiology services.

PRUDENT HEALTHCARE

The interviews also touched upon the value of the community cardiology clinics in terms of the prudent healthcare principles such as 'only do what you can do'. Interviewees discussed the current and potential value of community clinics – moving "low risk" patients away from the hospital setting so that patients receive more appropriate care, and reducing waiting times to improve timely access to care for those with greater need:

> *"If we see a heart failure patient we can give them straight to the heart failure nurse without consulting the cardiologist – they don't have to wait to be seen in cardiology clinic. The same if we pick up echos from the GP – the heart failure nurse picks them up" (PwSI)*

"I definitely think it aligns to that principle of shifting more services from secondary to primary and community and obviously that's one of our key priorities for our new IMTP process going forward. In terms of delivering care closer to home, I think the community clinics definitely have a positive impact on that" (Directorate manager)

The focus of some of the community cardiology clinics on specific conditions was also seen as providing a valuable service in terms of providing a one-stop clinic for patients who are often the 'worried well'. The diagnostic tests and reassurance to patients can be provided at the same clinic and they can then be discharged back to primary care: *"We run independent clinics and focus on arrhythmia. It's a diagnostic clinic and we don't see follow-up patients. We've seen patients, diagnosed them, and discharged them. We've picked up a few heart failures, and some have been referred back to cardiology. They don't stay in our clinic for long" (PwSI).*

One health board highlighted the fact that waiting times for secondary care had reduced, although this couldn't solely be attributed to the community cardiology clinics: *"Our waiting times have come down. Community cardiology has had some impact – we've taken patients off the back of the waiting list but there are a number of other factors that have contributed to why our waiting times have come down. We are RTT compliant. It relates to a number of service developments that have taken place" (Directorate manager).*

This highlights the difficulty of evidencing any change that can be directly attributable to the community cardiology clinic, as other initiatives and changes to services take place at the same time. There was also discussion about the right person treating the right patient, and even though the cost of the PwSIs is lower than that of consultant cardiologist, this is not driven by costs:

"We have some patients that have to travel up to two hours to get to their DGH. A lot of patients cancel or don't attend because they can't make the journey and they are usually the ones that desperately do need to attend, so they'll have the knock on effect that they end up becoming inpatients" (Other clinician)

"Overall we are cheaper than consultants. I know we talked about moving them into the community but when they are based in the hospital they can deal with a lot more emergency ward work and outpatients all combined so being entirely honest it's much more productive for them to be based in the hospital than an outreach clinic. I know that not everyone agrees with me, but I'm happy to work remotely and know they are there if I need them. So prudently we obviously are cheaper, and we are getting patients seen hopefully close to home, reducing anxiety from reducing the waits" (PwSI)

IMPACT ON PATIENTS

In terms of patient reported outcomes, anecdotal evidence from our interviewees suggest that patients like the community setting because of the less clinical environment, reduced travelling distance and easy parking. Some services have implemented patient satisfaction questionnaires which have found that, if given a choice, a majority of patients preferred to have their appointment in the GP surgery. None of the patients would have preferred to have their appointment in the hospital. Other feedback from the perspective of patients centred on the following areas:

"I know for example that patients who have gone into the community heart failure clinic come back and say that they had fantastic treatment and they have been able to give us a story about this is what happened to me and I didn't know this and I now know this. I've been managed well. I think that's important" (Other clinician)

"The timeframe is condensed isn't it and much better for the patient. And the feedback that we've had from the patients has been really positive. They'd much rather come to somewhere like this and be seen in a more relaxed area. Everyone thinks about the DGH and they think about how busy it is and what a nightmare the parking is so they all feedback really positive and they think it's great that they can come in on the day and they can get the tests they need done and it's quite a short time from when the patient is referred to us to the time when they are actually seen" (Other clinician)

"So it's much nicer to get to see the patient all in one go from test to diagnosis to having the chat that we have which is quite informal. Sometimes in outpatients it can feel a bit rushed because you've got queues of people outside. There is a smaller amount of people to see here so we get to spend that bit more time with the patients and it's a nicer experience" (Other clinician)

"Out of all those patients we've surveyed, none of them elected to wish to be seen in a hospital clinic in preference to the clinic they've been seen here. Their feedback was positive and it was extraordinarily positive feedback. They felt they had been listened to, they felt they had their questions answered, they felt they were treated with dignity and on the rating scales they rated us incredibly highly. So patient feedback tells us that this is a quality service. I think patients are appreciating that – the time they get, the fact they are told everything. Everyone is worried about what the results of their tests are and it's great to be told that whatever else is wrong with you, your heart is fine. You don't have to wait three months to go back to a clinic, and then go and have your echo three months after that, and three months later again you go and see the cardiologist. That might take nine months, whereas the wait for our service is a couple of weeks" (PwSI)

Although the general consensus was that patients preferred the community clinics due to them being closer-to-home, some interviewees reported that there were patients who were triaged to the community clinic had to travel a long distance and an issue of the ambulance transport not being available for the community clinic: *"They can't get the ambulance services to bring the patient here for this clinic which is a huge deficit when you are trying to move things into the community"* (Directorate manager). As above, much of the effective work was done when clinicians are working together to ensure the patients are going down an effective pathway. Whilst that may not work all of the time, it was recognised that this is all focused on *"doing your best for the patient because ultimately the patient is at the heart of all this and that's what you are trying to achieve: better, quicker care for the patient" (PwSI).*

TRANSACTION TO TRANSFORMATION

Implicitly and explicitly, interviewees commented on the nature of their services, and the degree to which it exhibits more transactional or more transformational qualities. The interviewees reflected on

the initial concept for the clinics and the extent to which they had achieved their objectives. Part of this was to consider answers to the question as to how you define a 'community' service – is it the location, the service provider, or something else that makes a clinic truly a community service?:

> *"What we didn't want was more of the same – a relocation of a typical cardiac clinic run by a GP…we saw this as an opportunity to build bridges between primary and secondary care" (Directorate manager)*

> *"We're not cardiologists, we're GPs and we should be trying to do something that's different to improve the service rather than just being another cardiology doctor seeing patients. I don't really see the value in that" (PwSI)*

One dimension of this centred on the way in which these more or less innovative services are financially sustainable, efficient and productive. One the negative side, some people felt that the resources in the service were not being used in an efficient way, and were actually not being invested effectively: *"I think the only issue actually is the number of patients we see. At some point clearly we have to review whether or not a GP and a consultant seeing four patients is an appropriate use of the resource" (Consultant).* However, balancing this with the need to be truly transformative and perhaps engage in 'double-running' for a short period in order to build capacity – a short term loss for a long term gain:

> *"I think whenever you have a doctor doing triage it's probably not the most effective way of doing it, but what do you find as an alternative isn't it? That is really hard" (Consultant)*

> *"If you think about it, looking in terms of efficiency, it's always going to be more efficient to force the patients into having to travel to us in the DGH and then sit around and wait for us to do the appointment when it suits us than it is for us to travel out to them and provide them with a service. If you have a physiologist who comes in to work and at 9 o'clock starts scanning, they'll get five scans done by lunch time. If you have a physiologist who is having to drive to a GPs practice and then drive back they'll get four scans done in the same time so you will always have a more efficient service if you inconvenience the patient. But I think there's a number of ways where those inefficiencies can be off-set. I think one of them is when you are providing that service at the same level but the consultant can step back a bit and I think the other way is the ripple effect from that clinic to what the other GPs in that practice are doing and how they are behaving and what they are referring and what they are prepared to take on because this is just a normal part of what they do and they are more comfortable with it" (Consultant)*

> *"We need to make it perhaps more cost effective but then I can't bring in the cost effectiveness of what the GPs are now doing because I can't measure how many GPs are now initiating titrating heart failure drugs compared to what they were doing previously, for example" (Directorate manager)*

Trying to move to greater transformational services than transactional services is challenging. The financial envelope is one issue: *"This budget doesn't buy you some amazing change to cardiology services" (PwSI)*. However, there were people who provided a very clear vision of how community cardiology could deliver true transformation:

"My vision is that we would have a large number of cluster GPwSIs in one of those clinics, and there would also be a physiologist on site so that scanning can take place and you are bringing those tests out of the hospital as well. Anything else that needed to be done there and then could be done because it's really annoying having to send someone back to the hospital having taken them out of the hospital. We've got the couches, we've got the equipment, and we've got the competencies and skills, but we need an appropriate level of funding" (PwSI)

"I think you've got to ask yourself what type of cardiology are we going to be practising in 2025 and 2030, and I think the type of cardiology we'll be practising is not more of the same. I think we'll be practising quite differently and that's why I'm trying to look at these locality hubs that we are still a few years away from and looking at everything else. I think you could end up with services reorganised in a more efficient way and in a way that's more interesting for the GPwSIs and also works better for cardiologists because I think a lot of the simpler stuff is sorted out by primary care as referrals are coming through of a higher quality. I think the cardiologist will like that and if they build up a rapport with GPs they won't mind providing them with the back up support they need. I think overall you can have a system that's far more integrated, and transforms care for patients" (Consultant)

4. DISCUSSION AND RECOMMENDATIONS

Implementing new service models means different things to different people. These differences are exacerbated when different places start from different points. Within our case study sample, we identified different types of innovative working: transactional or incremental innovation (improvements within an existing organisation but probably not of wider significance), radical innovation (new services or major changes to relationships between users and providers) and transformational innovation (resulting in whole sector change, and new systems).

BARRIERS AND ENABLERS

Through the interviews our study explored how barriers and enablers acted in the development of these community cardiology services. Overall, our analysis revealed that the barriers implicated in this study conformed (to varying degrees) on the sorts of issues inflicting innovative practices as identified by Borins[10] which centre on:

- organisations perceiving innovation, particularly from external sources, as a threat;
- silo mentalities including between professions as well as organisations/departments;
- separate worlds, between front-line staff, managers and research;
- risk aversion and resistance of employees to change;
- short-termism including a focus on the day-to-day operations and short-term planning; and
- poor evidence and metrics of effectiveness of the innovation or access to them.

It is the case of course, that there is a spectrum upon which each of these issues operates. Indeed in some of the sites these operated less as barriers, and more as enablers because the staff teams and managers had worked effectively to address them. On the positive side, for example, one of the projects had explicitly focused on embedding a service model which is long-term in ethos, moving away from a focus on the day-to-day, and towards building capacity and skills over many years.

DOMAINS OF ACTIVITY

In order to describe this, Table 1 provides an assessment (against a RAG scale) as to how these barriers and enablers play out in localities. The Table provides information against the following three 'domains' in order to provide a picture of what has been happening to date in the development of the community cardiology services:

1. 'The site' – whether the innovation has been delivered in a specific location or locations (eg community clinics or hospitals), in a dispersed way across geographical area, or in some other way, and by whom – whether this is an individual working alone or within a team;
2. 'The organisation' – how far the innovative approach that has been taken has impacted on spreading good practice and learning within the organisation's different sites, to what extent

[10] Borins, S (2001) 'Encouraging innovation in the public sector' *Journal of Intellectual Capital* Vol 2 Issue 3 pp.310-331

key individuals have stimulated and catalysed change, and how far any project partners have been impacted upon;

3. 'The system' – understanding the ripple effects and impacts that the approach has had across the sector and the system more broadly, how it has operated within the local, regional and national strategic context and where the innovation has come up against resistance.

In order to explore fully these domains, we have considered the ways in which three further issues are features of the projects. The first of these concerns the behavioural changes evidenced, or not, as a result of the innovation. We have assessed the ways in which professionals have responded to the situation, and the impacts that have manifested as a result. Secondly, even though these projects are in a relatively early stage, we have considered the ways in which there has been any sustainability and spread of the innovation – either through the actions of individuals, teams, or organisations. Thirdly, we have looked at the early impacts on the return on 'investment' made where these have resulted in intended or unintended consequences, and may have yielded a range of different outcomes. The term 'investment' is not used here in a narrow financial sense (although this is a relevant consideration) but taken to mean the broadest sense in which 'cause and effect' can be identified in the Case Studies.

Table 1 – Assessment of domains

Domain	Heading	Descriptor	RAG assessment
THE SITE	Behavioural change	Impact on patients/service users/staff	GREEN
		Lessons shared and change of practice evidenced	AMBER
	Sustainability and spread	Implications from innovation practice for others	AMBER
		Cascade learning delivered to other individuals/teams	AMBER
	Return on 'investment'	Better use of resources within site plus added value gains	GREEN
		Improved outcomes delivered	AMBER
THE ORGANISATION	Behavioural change	Use of innovation example as catalyst for change	AMBER
		Individuals acting as champions for change across organisation	RED
	Sustainability and spread	Implications of practice for others	AMBER
		Sharing learning between sites across localities within organisation	AMBER
	Return on 'investment'	Cumulative impact of changes in practice	AMBER
		Evidence of cost/capacity releasing activity identified	AMBER
THE SYSTEM	Behavioural change	Individuals as champions for change across sector/system	AMBER
		Feedback to conferences and learning shared	GREEN
	Sustainability and spread	Ripple effects across partner organisations	AMBER
		Evidence from innovation is driving change elsewhere	RED
	Return on 'investment'	Cost/capacity releasing activity identified by others	RED
		Unintended consequences and added value of changes	RED

CONCLUSIONS AND RECOMMENDATIONS

In order to cover off the key outputs from the study, this section provides an account of the conclusions that the study team have come to. As specified, this section offers an account of the process of implementation (understanding what has happened, and why it has happened like this) and formulates a series of linked recommendations for future national roll-out.[11]

Table 2 brings together the conclusions and recommendations against each of the key themes identified in the previous chapter.

Table 2 – Conclusions and Recommendations

Theme	Concluding comments	Recommendation/s
INFRASTRUCTURE	This has been one of the areas with the greatest challenge. Sorting out working space, IT arrangements, administrative processes and other such matters has proved very difficult for people whose working lives are already very full. Where this has worked best, colleagues have built on extant arrangements.	1. As part of subsequent funding rounds, consider investment in IT infrastructure to support access to patient data from primary to secondary care and vice versa. 2. Provide technical support for the implementation of the IEF to minimise the burden on project teams.
LEADERSHIP	In places, a degree of disconnect has emerged between those project teams leading services and those senior managers to whom they are responsible. In other places, this is functioning very well. Linked to this are the perennial challenges of developing new services models which straddle both primary and secondary care systems. Continuing high quality clinical leadership is also crucial to the success of the community cardiology services.	3. Support leaders of the community cardiology services to share lessons and good practice through a network. 4. HCIG to consider a review of the 'visibility' of community cardiology in IMTPs and to provide critical friendship to health boards where this is absent.
WORKLOAD IMPLICATIONS	To date there has been a period of considerable work required by all members of the community cardiology teams to implement the services in practice. Efficiencies are beginning to emerge, although significant pressure on cardiology services persists.	5. Services should reflect (using the transformation matrix in the IEF) on whether they are fully optimising any efficiencies that may be possible.

[11] The other key component (Key Component 4: Developing a legacy of datasets, key metrics and analysis tools for future use) is complete and contained within the Impact Evaluation Framework.

Theme	Concluding comments	Recommendation/s
EVOLVING JOB PROFILES	Embedding new clinical pathways that have new job roles within them is never a straightforward task. Positively, all of the PwSIs are able to perform their tasks, but more needs to be done in order to ensure that these developing job roles and profiles are fully integrated in the clinical pathways for patients. This may require the PwSIs taking greater levels of control over the community cardiology services.	6. Current pathways and models of service should be reviewed in order to ensure that they best reflect the skills, competencies and capabilities of the PwSIs, and all those in the community cardiology service models.
BALANCE BETWEEN PRIMARY AND SECONDARY CARE	This service naturally encompasses both primary and secondary care, and in many ways demonstrates great success in bringing clinicians with a common interest and specialism in cardiology together. There remains some work to do to ensure direct referrals from primary care are an increasing proportion of the service case mix. In part this is a function of 'advertising' the community service as part of the pathway 'upstream' of a traditional secondary care referral to all those in primary care, which has been undertaken by some services to greater effect than others. We noted in our evidence collection that GP cluster leads, network managers and others had not always been included in these initiatives. Given that cluster network development is expected to be a major driver of change in the Welsh NHS, it is important that the development of community cardiology is appropriately integrated into cluster work, not just IMTPs.	7. Review the ways in which the community cardiology services are 'advertised' and promoted, especially at GP cluster meetings and networks, and across the whole primary care team.
GOVERNANCE AND ACCOUNTABILITY	Implementing new and innovative service models is replete with challenge. Considerations around governance and accountability are paramount in this regard, and these new community cardiology services have ensured that the requisite processes have been completed. As the services develop and evolve, governance arrangements need to be kept under constant review.	8. Governance arrangements for the service to be reviewed frequently, especially if the pathway and service model evolves from the original submission to health boards.

Theme	Concluding comments	Recommendation/s
PRUDENT HEALTHCARE	Service teams are able to describe the various ways in which services are delivering a number of the Prudent principles. Community cardiology has the prospect of being able to provide a robust evidence-base against the concept of value-based care.	9. Greater alignment between the Prudent Healthcare/value-based healthcare principles and the outcomes of the community cardiology service should be developed.
IMPACT ON PATIENTS	The community cardiology services have made a demonstrable impact on patients. It is reported that they prefer attending less stressful and more accessible clinics, and enjoy the fact that there is often more time available to them to discuss their conditions. The patient reported experience measures (as evidenced by local surveys and feedback) is compelling. This feedback needs to be formalised and systematised.	10. Fully comply with the requirements of the IEF in order to create a robust evidence-base on patient reported experience and outcome measures.
TRANSACTION TO TRANSFORMATION	The six community cardiology services are all located in different places on the spectrum of providing more transactional to more transformational form of service delivery. In many ways this is a reflection and a function of their different starting points. There are transformative aspects to each of the services, although some services have understandably responded to very real and immediate pressures on outpatient services. There is a real prospect that each of the services, now that they are firmly embedded will be able to move into more transformational ways of working.	-

CONSIDERATIONS

In closing, and building on the conclusions and recommendations made, the following provides more insight from the work of Aldbury et al[12] referenced earlier. The insights from their work suggest that we need to think differently about how we approach new practices, and how to scale them.

They provide in their paper a series of statements (reproduced below) to help think about the implications and considerations needed for innovation and new working practices.

[12] Aldbury D et al (2018), op. cit.

Considerations for system leaders and funders

- Create the space, time, resources and expert support needed for teams and organisations to adopt and adapt innovations, including funding time for the innovators to have meaningful interactions with these teams and organisations;
- Whereas the current system primarily rewards innovation, there should be greater rewards and recognition for the spread and adoption of innovation;
- Encourage leaders of transformation and patient networks to articulate their needs for innovation and consider whether there is expressed demand for innovations before they are selected for scaling and diffusion;
- Give weight to qualitative evidence as well as quantitative evidence; stories about why and how an innovation has been implemented and the outcomes and benefits that have resulted can be powerful in making the case for change;
- Ensure that robust and proven approaches to scale and spread (including the engagement of relevant professional and patient networks) are built into the development of innovations from the outset;
- Make it easier for individuals and teams to spin-off and set up organisations to drive the scaling of an innovation; and
- Be mindful that policies and initiatives not directly concerned with the diffusion of innovation can have beneficial or deleterious effects on diffusion, and build consideration of these effects into policymaking wherever possible.

Considerations for innovators

- Ensure that robust and proven approaches to scale and spread are built into the development of the innovation from the outset, rather than after the innovation's core features have already been defined;
- Rather than focusing on traditional sales, marketing and dissemination techniques, it may be more fruitful to spend time engaging with and really understanding the needs, pressures and constraints of potential adopters;
- Identify and communicate the core aspects or principles of the innovation and then ensure that it has the flexibility beyond this to be adapted to differing local circumstances and contexts;
- See adopters as potential partners that are critical to helping enrich and develop your innovation, and ideally involve them in the codification of the innovation;
- Tap into relevant movements and networks, and encourage coalitions of patients and professionals to support the development and spread of the innovation; and
- Collect qualitative evidence and stories of need, implementation and impact and turn them into a compelling set of materials for winning hearts as well as minds.

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