Improving quality, outcomes and uptake of Cardiac Rehabilitation in London; the challenge

Introduction:

This document has been developed as part of the London Cardiac Rehabilitation (CR) Services' mapping project. The aim is to raise awareness of the project and highlight the challenges of improving uptake and completion rates (as set out in the Long Term Plan) in London, while also modernising the model and moving away from a "one size fits all" approach to personalised CR.

Defining the problem:

Cardiac rehabilitation is a programme of exercise, education and psychological support that is proven to reduce hospital readmissions, deliver better outcomes and is cost effective[1]. It is traditionally delivered in a class format in the hospital or community setting. Despite this evidence and the programme's proven benefits, only just over half of those eligible take up the offer of attending cardiac rehabilitation[1].

The British Association of Cardiovascular Prevention & Rehabilitation (BACPR) set agreed national standards for the delivery of CR in the United Kingdom (UK)[2]. Services submit data to The National Audit of Cardiac Rehabilitation (NACR) to be measured/against these standards and a yearly report is published.

The National Certification Programme for Cardiac Rehabilitation is a joint project between BACPR and NACR that has been running for nearly four years. Since 2018, certification standards for all programmes in England, Northern Ireland and Wales have been reported as part of the NACR Quality and Outcomes Report. While NACR analyses and publishes research based on the collected data, only around a quarter of services in the UK meet quality standards with others at less optimal levels of service delivery.

The certification programme benchmarks services against key performance indicators (KPIs) based on the BACPR standards and core components, one of which is entering data on NACR. Certification is achieved through meeting all 7 KPIs; 3 Minimum Standards (1-3) and 4 Standards based on national averages (Appendix 1).

Green: Meeting all 7 minimum standards ('certified')

Amber: Meeting 4-6 minimum standards

Red: Meeting 1-3 minimum standards

Fail: Meeting 0 standards or not entering data on NACR

Cardiac rehabilitation and the Long Term Plan:

In January 2019, the NHS set out its long-term plan to transform patient care. Within the plan, it set targets to improve Cardiovascular Disease (CVD), with an overall aim to prevent up to 150,000 heart attacks, strokes and dementia cases in England over the next 10 years. The targets pertaining to CR are:

- By 2028 the proportion of patients accessing cardiac rehabilitation will be amongst the best in Europe, with up to 85% of those eligible accessing care
- Cardiac rehabilitation is an intervention recommended by NICE which can save lives, improve quality of life and reduce hospital readmissions. Access to and uptake of cardiac rehabilitation services varies across England, and only 60,877 patients (50%) of the 122,277 eligible patients per year, take up offers of cardiac rehabilitation.
- Scaling up and improving marketing of cardiac rehabilitation to be amongst the best in Europe.
- Enabling more people with heart/lung conditions to complete a programme of rehabilitation will result in improved exercise capacity and quality of life in up to 90% of patients.
- Breathlessness is a very common symptom that is shared by a number of cardiac and lung conditions as well as psychological and mental health conditions and is compounded by physical de-conditioning.
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Turning back the Tide:

'Turning Back the Tide' is the British Heart Foundation's strategic document outlining its framework for 'beating the heartbreak' of heart and circulatory diseases[3]. This document supports the priorities for diseases (? conditions) highlighted in the NHS Long Term Plan and emphasises the need for public engagement. The framework requires action from medical research funders such as the BHF, Government, industry and all levels of the NHS.

If uptake of CR were increased to 85% this would lead to nearly 20,000 fewer deaths in England and nearly 50,000 fewer admissions, potentially saving millions of pounds in future care costs. Women, those from black and minority ethnic communities and those living in areas of deprivation are currently less likely to attend. People living with heart failure are also less likely to take up the offer of cardiac rehabilitation. In order to achieve the target in the Long Term Plan, we need a new personalised menu-based approach which focuses on the individual and not the institution. Exploring joint working with pulmonary rehabilitation services and digital options could identify potential ways of increasing uptake.

The problem:

In London, only 8 out of 23 services have received a green 'certified' status and 9 are meeting 1 – 3 minimum standards or have failed to meet the standard at all.

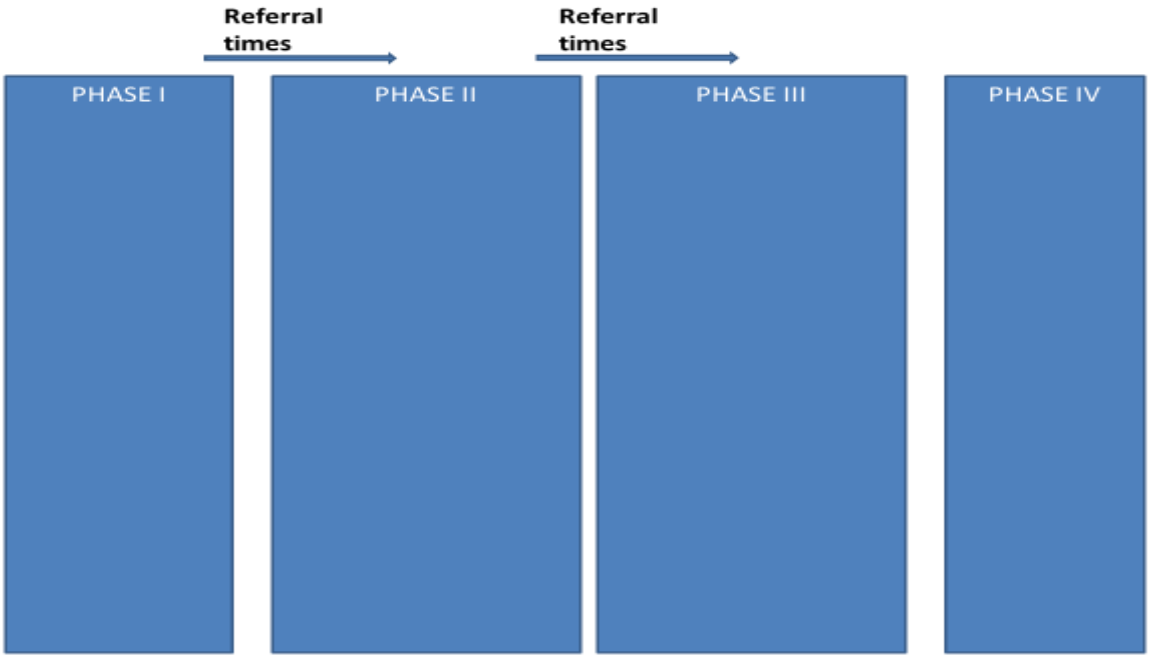
STP	Number of services	Green	Amber	Red	Fail
North East	4	1	1	3	0
North West	7	2	2	1	2
North Central	5	2	1	2	0
South East	5	2	2	1	
South West	2	1	1	0	0

Discussion in the Pan London Cardiac Rehabilitation Working Group revealed that many services were experiencing challenges and issues that prevented them from meeting the minimum standards. It was evident from the data that there were inequalities in the provision and delivery of services across London.

Analysing the challenges and identifying best practice:
A Cardiac Rehabilitation Service pathway mapping project was undertaken by the London Cardiac Clinical Network in partnership with the British Heart Foundation (BHF) and the co-chairs of the pan London Cardiac Rehabilitation Working Group. The aim was to help us understand and reduce unwarranted variation in access to and quality of CR. To help streamline services to meet core national standards as set out by the British Association of Cardiovascular Prevention and Rehabilitation (BACPR) and to help services improve and widen the menu of choices available to patients. Since commencing the mapping, it became clear that we also needed to improve uptake and completion rates in London.

The process:
In July 2018, all CR services in London were sent a letter, asking them to take part in the pathway mapping project, with follow up letters going out to services who had not responded, once the long-term plan was published. Since then we have visited (16) 70% of all London NHS CR services, with further visits booked in.

Meetings were conducted with the team lead, as many team members as possible and commissioners or service managers. Information was obtained on the patient pathway from referral through to discharge, using a process mapping template (see below). The meetings lasted approximately 2 hours. Each section of the pathway was explored in detail.



Further information was collated on:

1. How the service is commissioned
2. Team staffing
3. Infrastructure – gym & clinic space
4. The type of patients seen
5. How they are performing on NACR
6. Any innovations the service is using.

Simple solutions to improve quality and outcomes were offered to services at the time of the mapping. They were also sent a report with the details of the mapping and the streamlining solutions. Examples of good practice were shared with other teams.

Work so far:

The mapping is analysed on a regular basis and common themes have emerged. These themes are shared regularly with the pan London CR working group and work has developed and been commenced as an outcome of the mapping.

Emerging Themes:

Commissioning:

- There is a large variation in how services are commissioned. Services based in acute Trusts tend to be commissioned as part of a Cardiology bundle, with services often not being clear who manages their budget. Community services tend to use payment by results. However,

we came across a couple of services which cover 2 CCGS and are commissioned differently by each one.

- Inequality in staffing levels: Huge variation occurs in the number of staff in teams, from 2 – 10 (for nursing and exercise specialist/physiotherapist), this impacts on the frequency and type of rehabilitation offered. Some services have no administrative support whilst others have support full time. There is also a difference in access to staff to support education and emotional support.
- Inequality in infrastructure e.g. access to gym and clinic spaces

Monitoring Quality:

- NACR: 2 services in London do not input into NACR at all and there are problems with commissioning not being in line with standards. Although NACR is part of the National Quality Standards, it is not a mandated audit, and this sometimes causes a conflict of interest between services and their commissioners.

Patient Choice:

- Standards state that patients should be offered a menu of different choice for their rehabilitation. The reality in most services, is that they only have an option of one or maybe two classes a week; these will be in a group setting and are often in the middle of the day. There is little or no flexibility to meet the needs of people who have returned to work or are not comfortable attending a group.

Uptake rates:

- The long-term plan has tasked the CR community with increasing national uptake rates to 85% by 2028; uptake in London is currently 51%. There is a range of potential causes for this variation, therefore in London there are plans to look at reasons for non-attendance as well as completion rates.

Embracing change:

- Although services are aware of the Long-Term Plan, some find the idea of change challenging and are wary of trying new ideas.

Addressing the challenges:

To address some of the issues, small working groups have been set up. These include:

Technology

- Technology and innovation is an emerging area for CR and there are many companies coming forward with new apps and innovations for services to use. There has been an increase in appetite for the use of digital technologies but services are struggling with their interoperability with primary and secondary care IT systems. There are also issues around the governance of using an app. For instance, one hospital has held licenses for over 18 months but has not been able to pilot the app due to IG issues. The apps are also unregulated, and some services have found that the exercises on the apps do not meet BACPR standards.

- A sub-group has not yet been formalised, however a pan London event was run in collaboration between the Cardiac Clinical Network, BHF and the Health Innovation Network(south London AHSN) to look at optimising digital opportunities in CR. This was very successful in bringing together innovators and clinicians to discuss future ways of working (see Appendix 2 for further details). A pilot of remote CR is planned for the next couple of months.

Service user feedback group:

- This group has been set up to help improve uptake and completion rates. We are working on a number of small projects.
    1. Each service has been asked to call 5 patients who did not attend the classes and ask them a few questions to increase understanding about reasons for non-attendance and help tailor services to the needs of the population.
    2. Services have been asked to put a patient testimonial on their Trust website to help people understand what CR is.
    3. One service is going to pilot a videoed patient testimonial being played in Cardiology out-patient waiting rooms.
    4. 5 services are going to pilot having ex-patients coming into their classes once a month to talk to patients currently in the system, to help explain the benefits with a view to increasing completion rates.

De-medicalisation of rehabilitation:

- This group was originally formed in response to discussion around performing unnecessary clinical monitoring but is now refocused on how to meet new guidelines, staff competencies and variation in treating patients who are deemed “high risk”.. Current work includes –
    1. Feeding back to the working group on new guidelines such as the soon to be published diabetes and exercise guideline.
    2. Reviewing competencies across the region to ensure cardiac rehabilitation professionals have the appropriate skills and knowledge to perform accurate and evidence-based patient assessments.
    3. There is potential inequality of access to rehab across London for some patients deemed too high risk to exercise. We are in the process of devising a patient scenario based survey to capture any differences in assessment between services.

Future work

- Complete the mapping of cardiac rehabilitation services in London. Our ambition is to reach 100% of services.
- Personalised care – we invited the personalised care team to our most recent Pan London Cardiac Rehabilitation Working Group to talk about their work. As a result, we have a number of CR services interested in piloting the Patient Activation Measure (PAM) as a way to ensure that individuals have the skills and motivation to change their behaviour and can be directed to the most appropriate programme option for their needs.

- Continuing to support services to embrace and implement innovation. This will be through sharing of innovative practice found during the mapping process and potential future workshop sessions on implementation and building business cases.
- Building and encouraging relationships between services and their commissioners.
- Collaboration between stakeholder organisations has been vital to the success of the work in London. We aim to build on this, particularly in the technology theme by encouraging more joint working between BACPR and NHSX. More work needs to be done to get CR apps on to the NHS apps library.
- Encourage teams to explore joint working between cardiac and pulmonary rehabilitation
- An ambition is for this work to influence the mandating of NACR certification in London in order to drive quality improvement.
- In the long term, do we need to reimagine cardiac rehabilitation? Do we need to change the model completely?

Summary:

The Long Term Plan has tasked the cardiac rehabilitation community with the challenge of increasing uptake of cardiac rehab from 50% - 85% in the next 10 years. To achieve this, it is important to understand what is happening in the system currently. Mapping the patient pathway in London has not only given us a clear understanding of the services in London, including where the services are, how they are commissioned, the inequalities in the system and the challenges of meeting the Long Term Plan targets. It has also helped formulate a plan to help address these challenges and move the service forward.

Acknowledgements:

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Authors:

Clare Thomson, Senior Project Manager, NHSE Clinical Networks

Kelly Read, Clinical Development Coordinator, British Heart Foundation

References

[1] British Heart Foundation (2018) The National Audit of Cardiac Rehabilitation Quality and Outcomes Report 2018, British Heart Foundation

[2]BACPR (2017) The BACPR standards & Core Components for cardiovascular disease preventioin and rehabilitation, BACPR, 3rd Edition.

[3] British Heart Foundation (2018) Turning Back the Tide, British Heart Foundaiton.

Appendix 1[2]

BACPR/NACR Key performance indicators
Minimum Standard 1: Multidisciplinary Team
At least three health professions in the CR team who formally and regularly support the CR programme
Minimum Standard 2: Patient Group
Cardiovascular rehabilitation is offered to all these priority groups: MI, MI+PCI, PCI, CABG, Heart Failure
Minimum Standard 3: Duration
Duration of Core CR programme: ≥ national median of 56 days
Standard 4: National Average for Assessment 1
Percent of patients with recorded assessment 1: ≥ England 80%; Northern Ireland 88%; Wales 68%
Standard 5: National Average for CABG Wait Time
Time from post-discharge referral to start of Core CR programme for CABG: ≤ national median of England 46 days, Northern Ireland 52 days, Wales 42 days.
Standard 6: National Average for MI/PCI Wait Time
Time from post-discharge referral to start of Core CR programme for MI/PCI: ≤ national median of England 33 days, Northern Ireland 40 days, Wales 26 days
Standard 7: National Average for Assessment 2
Percent of patients with recorded assessment 2 (end of CR): ≥ England 57%, Northern Ireland 61%, Wales 43%

Appendix 2

Maximising Digital Opportunities in Cardiac Rehabilitation in London

Cardiac Rehabilitation (CR) aims to address the underlying causes of cardiovascular disease and improve physical and mental health after a heart attack or other cardiac condition. It is a structured programme and includes a range of interventions from physical exercise to health education and lifestyle advice.

The British Association for Cardiovascular Prevention and Rehabilitation (BACPR) sets out evidence-based standards and core components for Cardiac Rehabilitation. They have an emphasis on measurable clinical outcomes, audit and certification. The British Heart foundation fund the National Audit of Cardiac Rehabilitation (NACR) which audits all CR services across the UK against the BACPR standards. The data they collect is used to help inform clinical practice standards, NICE clinical guidance and commissioning. Each service is given a certification of either, green, amber, red or fail. The table below sets out how London is doing:

STP	Number of services	Green	Amber	Red	Fail
North East	4	0	2	3	0
North West	7	2	2	1	2
North Central	5	2	1	2	0
South East	5	2	2	1	
South West	2	1	1	0	0

In London, the Cardiac Clinical Networks and the British Heart Foundation have been working together to process map the patient pathway against clinical standards. The aim is to reduce variation in access to and quality of CR services in London. Streamline CR pathways to meet minimum national standards and to work with CCGs and providers to improve and widen the menu of choices available for patients. We also know from NACR that only 51% of people who are offered CR in London take up the offer, the National average is 52%. We also know that it is even lower in areas of high deprivation.

After mapping only a few services, it became apparent that most services only offer face to face group rehabilitation, often in the middle of the day. With an increased use of technology in healthcare, many services were being approached by technology companies about using apps they had developed for CR. In some instances, technology companies had approached CCGs or consultants and services had been told that they were to trial an app, without their input into choosing the one they felt would best suit their service. Some services reported feeling overwhelmed by the choice, how they work, the benefit of using apps and the cost. Some services had not considered the use of apps as an adjunct to rehabilitation at all. It was felt that there was an opportunity for a London wide event to examine how to maximise digital opportunities in CR.

We approached the Health Innovation Network (HIN) AHSN and met with their executive team to discuss how we could work together on this project. Through the digital accelerator programme, they had access to innovators and the Network had access to the clinicians. The HIN put out a call to innovators, inviting them to apply to present their technology at the event. A panel was put together to analyse the application forms. The panel consisted of representatives from the Cardiac Network, the BHF, the HIN, BACPR, the London clinical chairs from the pan-London CR working group and a patient representative. 16 companies applied to present at the event and using a scoring sheet and discussion (based on relevance and innovation), 6 companies were asked to present at the event and 4 others to exhibit only.

All CR services in London were invited to the event. However, word spread about the event and we had interest from some services outside of London. We also invited all London CCGs however we had very little representation from commissioners. In total we had over 100 people attend the morning event.

The British Heart Foundation and the Cardiac Clinical Networks chaired the event presenting the targets and aspirations for cardiac rehabilitation in the BHF 'Turning the Tide' document and The NHS Long Term Plan. The format of the event compromised of keynote speakers Patrick Doherty from NACR and Sally Hinton from BACPR highlighting the need to find new modes of delivery to increase uptake, followed by presentations from the 6 companies showcasing their innovations. Attendees then had the opportunity to talk in more detail with each company during a World Café style session and ask questions. The event concluded with a panel discussion.

Feedback from the event demonstrated that attendees found it very useful and increased their knowledge of digital options. Since the event, some attendees have engaged with digital companies but others reported there were still barriers involving a number of themes. There are issues around how digital apps are commissioned in terms of funding and poor engagement/discussion between the commissioners and services when selecting the right digital option for the local population. The compatibility of apps with existing hospital IT systems and the governance surrounding the data is a problem along with compatibility with NACR. Any data that digital apps collect will need to be entered again onto the NACR database if it does not upload automatically. There were concerns around the efficacy of digital options and the need for there to be a more coordinated approach in collecting evidence. Feedback suggested that the quality of the presentations at the event was variable and this could suggest that digital companies may not be approaching clinicians in the most effective way or with the information they need. Clinicians felt that while they did have a better understanding of digital innovations, they lacked the knowledge of how to implement them in their services.

Next steps centre on supporting clinicians to implement digital innovations and facilitating the relationship between services and commissioners. This may take the form of a follow event or sessions for clinicians focusing on business case development, how to engage with commissioners and sharing existing examples of where services in London have successfully implemented digital cardia rehabilitation options. More discussion is needed with the key stakeholders to ensure that there is a more coordinated approach to collecting evidence to demonstrate the efficacy of digital options.