Survey of cardiac rehabilitation across the English Cardiac Networks 2007–2009

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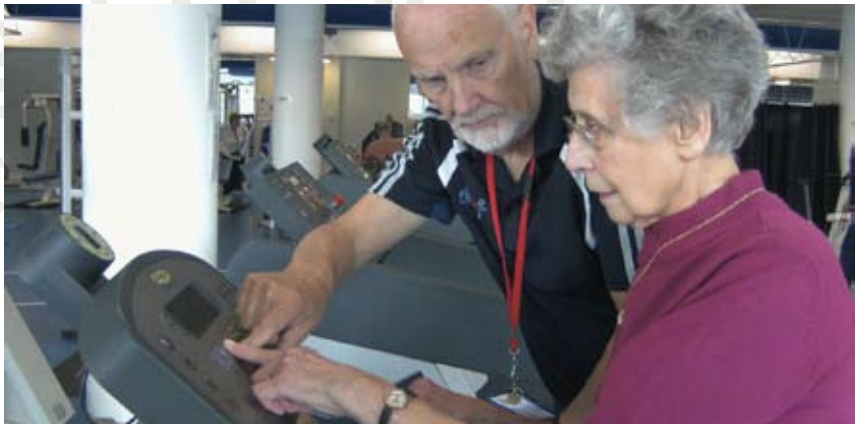


Cardiac Networks always promised to be effective health communities across which sharing good practice and ultimately redesigning ideal care pathways for patients including Cardiac Rehabilitation (CR) could be made.[1] The Black Country Cardiovascular Network in collaboration with the NHS Improvement programme conducted this observational study aiming at assessing and encouraging CR development across the English Cardiac Networks.

Twenty-eight English Cardiac Networks were surveyed annually from 2007 to 2009 using an email questionnaire to the network coordinators. There was a 100% response rate with the majority showing agreed work plan progress. Only 50% have a lead cardiologist for each programme. Although networks are committed to National Audit of Cardiac Rehabilitation (NACR), data submission remains non-uniform across 61% of networks. National Service Framework (NSF) standards were achieved by 41% in 2007, 47% in 2008 and 50% in 2009. National Institute for Health and Clinical Excellence (NICE) post myocardial infarction (MI) guidelines including CR were met by 34% in 2007 increasing to 50% in 2009. An improved commissioning relationship was observed from 34% rated good in 2007 to 78% improving in 2009. The number of networks revisiting their CR pathways post earlier revascularisation/percutaneous coronary intervention (PCI) has increased from 10% in 2007 and 32% in 2008 to 93% in 2009. A genuine choice of centre or home-based CR is now offered in 72% of the networks in 2009. Overall, a positive impact of network coordination has been seen in 78% of the organisation.

In conclusion, this survey supported Cardiac Networks in developing their cardiac work plans and identifying priority projects on post revascularisation CR pathways and commissioning.

Introduction

Cardiac rehabilitation (CR) is the process by which patients with cardiac disease, in partnership with a multi-disciplinary team of health professionals, are encouraged and supported to achieve and maintain optimal physical and psychosocial health.[2]

CR is an evidence-based intervention, which reduces the mortality and morbidity that accompanies the global epidemic of heart disease.[3,4]

In 2000, the National Service Framework (NSF) for Coronary Heart Disease (CHD) set out standards, targets and milestones for CR, aiming to see CR being offered to at least 85% of all myocardial infarction (MI) and revascularisation patients[5] and subsequently to patients with heart failure and angina. Standards for the provision of CR were strengthened by the guidelines published by the Scottish Intercollegiate Guideline Network (SIGN) in 2002 and adopted by the British Association for Cardiac Rehabilitation (BACR).[2]

The West Midlands NSF regional implementation group for CR and secondary prevention moved forward immediately drawing up local standards in early 2002, updated annually, and providing a model for the West Midlands to spread nationally, and encouraged in various commissioning guides and core projects.[6]

However, within the UK, provision of this important aspect of cardiac care has been shown to be patchy and has grown up haphazardly.[7] In response to the first disappointing findings of National Audit of Cardiac Rehabilitation (NACR) in 2007 (reflecting 2005/06 data) with around 40% uptake of CR, and with the emerging National Institute for Health and Clinical Excellence (NICE) post MI guidelines including CR 2007[8] and BACR core standards,[9] the National Campaign for CR was launched in 2007.

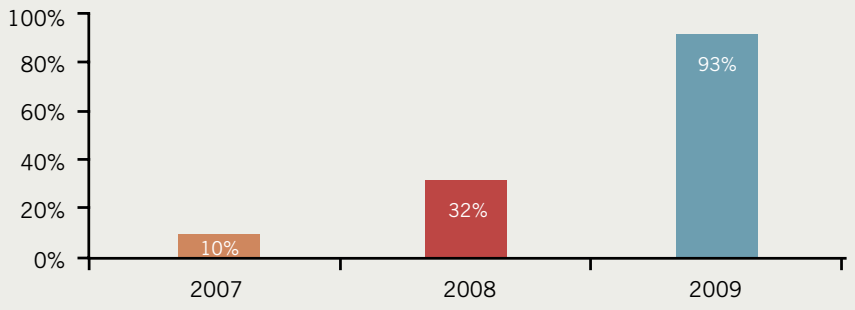
Our experience stimulated an initiative to encourage CR development nationally by surveying networks for their efforts and achievements, complementing the renewed National Health Service (NHS) Improvement National Priority work stream by re-audit of the networks in 2008/09, and 2009/10.

Table 1. Summary of the key responses from the questionnaires 2007–10

	Year 2007	Year 2008	Year 2009
Total number of networks	29	28	28
Updated work plan for CR	27 (93%) – subgroup formed only	25 (89%)	23 (82%)
Meeting NSF standards	12 (41%)	13 (47%)	14 (50%)
Following NICE CR guidelines	10 (34%)	11 (39%)	12 (43%)
Lead cardiologist for each CR programme	20 (69%) – network champion only	13 (46%)	14 (50%)
CR pathway revisited following earlier revascularisation (including primary PCI)	3 (10%)	9 (32%)	26 (93%)
Improved commissioning relationship	10 (34%)	10 (36%)	22 (78%)
Improved provision for home rehabilitation	6 (21%)	8 (29%)	18 (64%)
Uniform NACR data submission across network	6 (21%)	11 (39%)	11 (39%)
Positive network impact on CR	Not assessed	21 (75%)	22 (78%)

Key: CR = cardiac rehabilitation; NACR = National Audit of Cardiac Rehabilitation; NICE = National Institute for Health and Clinical Excellence; NSF = National Service Framework; PCI = percutaneous coronary intervention

Figure 1. Post primary percutaneous coronary interventions (PCIs) revisited



Aims

The aims of a questionnaire to the 28 Cardiac Networks were:

- to assess and encourage progress and development of CR through work streams and leadership
- to detect commitment to NACR across networks and ability to achieve NSF/NICE goals
- to explore their influence on commissioning of CR
- to start monitoring the consideration of CR in the dynamic roll-out of primary and earlier percutaneous coronary intervention (PCI) for ST elevation MI (STEMI)/non-ST-elevation MI (NSTEMI)
- to appreciate the value of patient and public involvement (PPI) in CR support
- to encourage new initiatives in patient choice, patient-reported outcomes measures development (PROMS), and evidence towards the quality, innovation, productivity and prevention (QIPP) agenda.

Methodology

A questionnaire **(see appendix)** was developed by the authors and distributed to the Cardiac Networks across England by the NHS Heart Improvement Programme in 2007, 2008 and 2009/10. Each year the findings were reviewed, aims updated and the questionnaire was modified to encourage improved practice. The responses were received through electronic mail. The data were presented in an Excel format, analysed and disseminated.

Results

The networks have responded with increasing enthusiasm, showing 100% return and response in 2008–2009, only one Network had no administration to respond in 2007 (**table 1**).

In 2008, 89% of networks showed an agreed work plan in progress and 82% had reviewed their CR work plan by 2009. Although only 21% of Networks have so far worked with the national team on priority projects, almost 61% expressed their willingness and readiness to contribute to a national priority commissioning project.

There has been only a modest increase from 41% in 2007 to 50% of the networks in 2009 meeting NSF standards. Similarly, NICE post MI guidelines including CR were followed by 34% in 2007, 39% in 2008 and still only 43% in 2009. There is sustained majority commitment to NACR data entry but this remains uniform in all programmes across 39% of networks only.

The majority (79%) reported a champion cardiologist within the network in 2008, but still only 46% in 2008 and 50% in 2009 have a lead cardiologist for each programme.

Compared with the year 2007, commissioning links remained challenging in 2008 with still only 36% reporting a robust commissioning link. Improved commissioning relationships are now present in 78% in 2009 but 18% look forward to further support.

The 2009/2010 results show a marked increase of 93% of networks revisiting the CR pathways following earlier revascularisation including primary PCI compared with only 32% in 2008, and 10% in 2007 (**figure 1**).

An increasing number of patients have been offered home-based rehabilitation by 64% of the networks in 2009 in comparison to 29% in 2008 and 21% in 2007. Furthermore, 72% of the networks in 2009 have reported offering a genuine choice of group-based or home-based rehabilitation programmes to all their patients, marked improvement from 25% in 2008.

Despite 69% of networks in 2007 declaring receipt of British Heart Foundation (BHF)/ National Outcome Framework CR/Heart failure grant monies, more than half (61%) had very limited provision of CR for heart failure patients in 2008. The latest survey of 2009, however, showed a trend towards increased uptake by 60% of networks across all diagnostic groups, including heart failure patients.

Only 21% in 2008 and 39% in 2009 reported staffing increase for their CR programmes, consistent with NACR data.

PPI was present in 89% in 2008. In 2009, 64% showed enthusiasm for developing PROMs.

The initial success of the national campaign considered by 54% of networks in 2008 appears to have fallen to 36% since, compatible with BHF data. However, the majority (75%) of networks have been successful in improving CR across their region and 42% have been able to facilitate funding for their local programmes.

Discussion

There is much to celebrate in the management of CHD as there has been great progress in the last 10 years since the NSF for CHD.[10] However, there are tough challenges ahead and one of them is availability, effective provision and uptake of CR. Recent NACR figures show that uptake remains low at 38% and that average trend in uptake had not changed from 2007/2008.[11] It is reasonably concluded that limited staffing and resources have restricted offers of CR to cardiac patients, but it is also appreciated that a certain percentage of patients tend to decline.[12]

A 100% response has been encouraged from the networks to assess serial change over three years since the national campaign began and the two years of the national priority projects (NPP) for CR. A sustained majority commitment to NACR within networks gives some confidence for the future monitoring of data and progress uniformly across the networks, provided there is increased commissioning. Ideally, NACR should be interfaced with the Myocardial Ischaemia National Audit Project (MINAP) and National Revascularisation, Heart Failure and CHD registers.

The CR team should include a cardiologist, as physicians are an important factor in CR recruitment: their endorsement and involvement enhance patient referral and enrolment in CR.[8] British Cardiovascular Society (BCS) recommendations over the years[13-16] have repeatedly emphasised that cardiologists must lead the rehabilitation and prevention programmes. Although the majority of the networks have champion cardiologists within the network, direct involvement with the local cardiologist is less than comprehensive, yet would be ideal for local clinical follow-up integrated with rehabilitation. The challenge of this vital part of CHD pathways has been acknowledged in developing and promoting leadership experience at the "Developing Cardiologist Leadership of Referral to CR" meeting of the NHS Heart Improvement Programme in November 2009.[17] Most of the networks report that their champions have been influenced by that meeting.

Commissioning against commitment to key defined outcomes is important for the future. Our initial surveys highlighted the minority view of robust commissioning links, which supported the need for national priority projects on commissioning. These have strengthened the commissioning relationship reflected in the network survey of 2009/10. The Department of Health (DoH) commissioning tool/pack for Primary Care Trusts (PCTs) will support redesigning the CR services and provide an opportunity to adjust the services to local needs.[17]

PCI without comprehensive risk factor modification is a suboptimal therapeutic strategy. All patients following primary PCI must have access to CR services.[18] CR should be integrated into all cardiac care pathways. Despite DoH recommendation that a proportion of patient choice revascularisation monies 2002 should be used for rehabilitation,[19] more than half of the networks never received any of this funding for rehabilitation. The roll-out of primary PCI for STEMI provided an opportunity to include CR within the business case, stimulating an increasing number of networks to revisit the CR pathways.

Every cardiac patient should have an assessment of their rehabilitation needs

and be offered a genuine choice of group programme or home-based option. Home-based programmes have already been shown in a number of randomised trials to be better than care without specific CR included,[20] and to be equally effective as many centre-based CR programmes in improving clinical and health-related quality-of-life outcomes.[21,22] An indication of positive change was seen in our latest survey with increasing uptake of a home-based option and genuine choice offer.

There is increasing evidence of benefit for heart failure patients with CR[23-26] and considerable progress has been made in their care. Nearly half of the networks surveyed reported increasing uptake of patients with heart failure. To help drive further improvement, heart failure has been identified along with CR as an NHS Heart Improvement Priority in "From Good to Great 2010–2015".

Public, patient and carer involvement has specifically and increasingly championed CR services across many of the country's Cardiac Networks and contributed to their success. The latest 2009/10 survey focused on PROMs showing that the majority are prepared to help develop and record PROMs.

Overall, 75% of networks reported improvement of CR for their efforts. The effect of the national campaign was more often positive than neutral only in 2008 on network CR development.

The positive response to the survey supported commitment to CR at national level. However, much work remains to be done as CR is clearly an unfinished business

Conflict of interest

None declared.

Key messages

- Networks are well placed to coordinate cardiac rehabilitation (CR) development
- Significant challenges remain to record National Audit of Cardiac Rehabilitation (NACR) data uniformly across networks and achieve adequate commissioned investment in CR services
- Commissioning links are maturing as a result of initiatives including priority projects and the Department of Health commissioning tool/pack
- Majority review of CR pathways following earlier revascularisation is encouraging

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