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Evaluation of Big Lottery Fund/British Heart Foundation Cardiac Rehabilitation Programme

First Annual Report

(20 July 2006)

Janet Heaton,[§] Corinna Petre,^{*} Bob Lewin^{*}

BHF Care and Education Research Group, Health Sciences,^{*} and
Social Policy Research Unit (SPRU),[§] University of York.



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Tel: 0207 211 1800
Fax: 0207 211 1750
Email: e&r@biglotteryfund.org.uk

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For further information about the evaluation, please contact one of the authors:

Janet Heaton: Social Policy Research Unit (SPRU), University of York, York. YO10 5DD.
Tel: 01904 321950.

Bob Lewin/Corinna Petre: British Heart Foundation (BHF) Care and Education Research Group, 2nd Floor Research, Department of Health Sciences, Seebohm Rowntree Building, University of York, York. YO10 5DD. Tel: 01904 321336.

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Contents

Executive summary

1. Introduction

2. Overview of the Big Lottery Fund Cardiac Rehabilitation Programme

 Background

 Aims

 Commissioning of the cardiac rehabilitation programmes

 Commissioning of the evaluation

3. Outline of the evaluation

 Timetable

 Aims

 Methods

4. Progress

 Rolling survey

 Descriptive matrix

 Links with quantitative evaluation

 Applications for ethical and research governance approval

 Local and national steering group meetings

 Problems encountered

5. Initial findings

 Textual analysis of the successful applications

 Aims chosen for the evaluation by the programmes

 Progress of the cardiac rehabilitation programmes to date

6. Conclusion and interim recommendations

Acknowledgements

References

Appendices

Executive summary

Background

This is the 1st annual report of a three year evaluation of the Big Lottery Fund's Cardiac Rehabilitation (CR) Programme, supported by the British Heart Foundation (BHF). The programme has two main aims: to increase the uptake of cardiac rehabilitation services, particularly among groups of people who currently make low use of existing services and to drive sustainable improvements in the quality of services on offer to patients.¹ Thirty six CR programmes in primary care trusts in England were funded for up to three years, from 2005/6.

The evaluation

An evaluation was tendered by the Big Lottery Fund to assess how far:

- the Big Lottery Fund CR Programme has succeeded in meeting its overall aims;
- selected programmes have succeeded in delivering their own aims in the context of the Programme's overall aims;
- the overall Big Lottery Fund CR Programme has contributed to the provision of evidence-based health promotions services and addressed inequalities;
- programmes have linked with and met the targets of local and national strategies; and to
- identify evidence of good / effective practice in running successful CR programmes.

The winning bid was from the University of York, with a three-part evaluation:

- a rolling quarterly survey measuring progress towards the individualised aims of each programme and recording the barriers to and facilitators of success;
- case studies involving interviews with staff, patients and carers in eight centres, half of which have met their criteria for success and half that have not met their objectives;
- the synthesis of qualitative data with quantitative data from the National Audit of Cardiac Rehabilitation (NACR) an online national audit of CR.

Progress

The main activities during this year have been

- A textual analysis of the applications to characterise the different projects in a descriptive framework. This revealed a wide range of aspirations and intentions, many of which had little to do with the support applied for. Many were difficult to follow. The most common intentions were to improve access by bringing the programme closer to the patient, through home based programmes, phone calls, home visits, satellite programmes and

training fitness instructors in local sports centres: and to develop a menu of choices for patients to improve their health behaviour.

- Helping the individual centres to define one to three aims in operational terms for use in the survey. Many changed their aims and/or revised the estimates of benefit downwards having been over-optimistic in their application.
- Conducting the email survey of the 35 CR programmes currently in operation (one has still to start). Two rounds of the survey have been completed with around 90% return rate.
- Helping centres adopt the NACR, install the software and train in its use. The great majority of centres now have the software and records have been entered for approximately 2,000 patients.
- Preparing the application for ethical approval for the forthcoming case studies.

Interim results

- A total of 79 aims were specified by 35 CR programmes, 68 relating to increasing uptake.
- Only a few aims were to increase uptake in ethnic minorities or of heart failure patients (two groups known to suffer from poor uptake), the most common group to be targeted were the elderly (10% of aims) and women (4%) and MI and surgery patients.
- Initially programmes made slower progress than they had expected.
- By the second survey progress had improved.
- Facilitators of progress included: joint working with other trusts and leisure centres; staff commitment and confidence, clear referral systems.
- There was a great variety of individual barriers, the most common was staffing problems and poor or unclear referral systems.

Conclusion and interim recommendations

The evaluation is progressing as planned. Improving uptake has proved more popular as an aim than improving quality. In future, applications would be improved if candidates were asked to state one or more measurable aims attached to a time frame to be used to measure their success. Although applicants were asked to demonstrate that a job description had been submitted for local approval, subsequent changes in NHS funding arrangements, job freezes in PCTs, and the introduction of Agenda for Change meant that there were delays appointing staff. Barriers to success might be reduced if, where referral pathways involve other organisations, applicants were to demonstrate that those organisations are aware of and fully collaborating with the proposed service.

1. Introduction

This report describes the work undertaken during the first year of a three year evaluation of the Big Lottery Fund's Cardiac Rehabilitation Programme (hereafter referred to as the Big Lottery Fund CR Programme)^① It is intended as a progress report, for administrative purposes. All analyses are provisional. It was compiled by the research team and discussed with the evaluation's local and national steering groups (Appendix A). It is in 6 sections:

Section 2 - an overview of the programme, its aims and the commissioning process.

Section 3 - the aims and methods of the evaluation.

Section 4 - progress made in the first year of the evaluation.

Section 5 - provisional findings.

Section 6 - brief conclusions and recommendations.

2. Overview of the Big Lottery Fund Cardiac Rehabilitation Programme

Background

Cardiac rehabilitation is a life saving intervention that the Department of Health (DH) has said should be available to the majority of cardiac patients.² It teaches patients to be better 'self-managers' of their illness and 'through their own efforts' helps them live as full and healthy a life as possible. The most recent Cochrane review demonstrates the dramatic effect it can have on survival: patients who were randomised to attend CR had a 26% lower death rate over the next 2-5 years.³ Unfortunately cardiac rehabilitation is under-provided and under-resourced and it has been estimated that less than 40% of the patients who should be benefiting from a longer and more enjoyable life are offered a chance to attend CR.⁴

Although there is no definitive information there is a widely held perception that certain groups of people are less likely to attend - people from ethnic minorities, the elderly, women, smokers, the depressed, people in rural locations have all been identified as under-represented at some time. Some groups are unlikely to be asked to attend, especially those with heart failure or arrhythmias. Similarly it is clear that many programmes are not compliant with national guidelines for staffing and content.

^① Throughout this report we use the terms 'Big Lottery Fund Programme', 'initiative' or 'scheme' to refer to the overall Big Lottery Fund CR Programme; the terms 'CR programme', 'project', 'site' or 'centre' are used to refer to the individual CR programmes that have been funded by this Programme.

Aims

The Big Lottery Fund CR Programme is one of several health initiatives funded by the Big Lottery Fund via the New Opportunities Fund (NOF). This £4.7 million Programme, supported by the BHF, was launched in England in March 2004. It has two main priorities¹

1. To increase the uptake of CR services, particularly among groups of people who currently make low use of existing services.
2. To drive sustainable improvements in the quality of services on offer to patients.

Commissioning of the cardiac rehabilitation programmes

Funding for a number of individual CR programmes was made available to primary care trusts (PCTs) in England, via the BHF. Applicants were informed that, if successful, they would be required to collect audit data and take part in an evaluation of the CR Programme. Thirty six PCTs were awarded funding. Two subsequently withdrew and the funds were reallocated. Funds requested ranged from £97,401 to £179,994. Twenty five of the 36 applications were from single PCTs and 11 were joint applications (from between two and four PCTs). The CR programmes commenced operation from February 2005, one has yet to commence. A list of the successful programmes is provided in Appendix F.

Commissioning of the evaluation

In order to assess the outcomes of the Big Lottery Fund CR Programme, a quantitative and qualitative evaluation was tendered and the work awarded to the University of York. The qualitative evaluation is being jointly carried out by staff from the BHF Care and Education Research Group and the Social Policy Research Unit (SPRU) at the University of York. The qualitative evaluation will draw on data collected through the BHF funded National Audit of Cardiac Rehabilitation (NACR). This involves the use of an online database to collect audit data. The NACR is being carried out by the BHF Care and Education Research Group at the University of York. Both projects are led by Professor Bob Lewin.

3. Outline of the evaluation

Timetable

The three year evaluation began in July 2005 and is due to be completed in June 2008 (see Appendix E).

Aims

The evaluation was required to assess five key issues: how far

- the Big Lottery Fund CR Programme has succeeded in meeting its overall aims;
- selected programmes have succeeded in delivering their own aims in the context of the Programme's overall aims;
- the overall Big Lottery Fund CR Programme has contributed to the provision of evidence-based health promotions services and addressed inequalities;
- programmes have linked with and met the targets of local and national strategies;
- and to identify evidence of good / effective practice in running successful CR programmes.

Methods

A three-part evaluation was designed to investigate the above questions.

1. *A rolling quarterly survey* determining the progress towards the individualised aims of each programme, and the barriers and facilitators of success. Up to three main aims to be agreed with programmes. Programmes will be surveyed every three months to examine progress towards their targets. A total of nine rounds of the survey will be carried out. The results will be used to select eight case study sites.
2. *Case studies* involving interviews with staff, patients and carers in eight centres, half that have met their criteria for success and half that have not. The purpose is to identify and explore the factors that have helped and/or hindered progress, from both staff and users' perspectives. Data from this work will be examined in conjunction with data from other aspects of the evaluation. This part of the evaluation is scheduled to be carried out from July 2007.
3. *Quantitative data from the NACR will be used* to validate the qualitative findings and examine specific questions about equity and uptake. The dataset includes process and outcome data, including health gain and health related quality of life as well as social data such as employment status. This information is collected upon starting the programme, 12 weeks later and 12 months later (by post). It was anticipated that it would take a year for all programmes to have installed the NACR software and begun to send data.

4. Progress

The main research tasks and associated work undertaken in the first year of the evaluation are described below, (n.b. only 35 of the 36 CR programmes awarded funding were in operation).

Rolling survey

All successful applications for funding were reviewed and the apparent aims of each programme were extracted. The aims stated in the applications were not usually measurable for purposes of evaluation. Programme leaders were asked to define up to three aims that were relevant, realistic and quantifiable. Examples of how aims could be re-stated in a measurable format were provided as a guide for this purpose. The four BHF CR Co-ordinators (CRCs) and their manager provided local help for programme leaders on how to do this. The process of extracting and negotiating the aims was accomplished by January 2006. In some cases, the agreed evaluation aims and/or activities differed from those originally specified in the applications for funding because, for example, of being unable to appoint staff as planned, staff changes etc., which necessitated changes to the proposals. Some programmes also amended their aims for the purposes of the evaluation (usually reducing the original targets to more realistic levels).

Examples of two programme's aims are shown in Box 1 and Box 2.

Box 1: CR programme description and the corresponding statement of aims (example 1)

Programme summary

[The aim of the programme is] to provide an outreach programme for the patients of [area] who have received coronary artery bypass surgery or percutaneous intervention. The programme will provide a solution for patients and carers not normally included in cardiac rehabilitation to access support, education and exercise facilities which is near to their home. This initiative at this crucial time post operatively, could be the patient's only opportunity to have access to a cardiac rehabilitation programme.

Programme aims

1. We hope to increase uptake of CR from 65 pa in 2003/04 to 900 pa for patients after revascularisation by the end of the project. Target to include 555 patients who have undergone coronary artery bypass graphs and 345 patients who have had angioplasty.
2. We hope to improve access by providing a wider choice of venues/ programmes from 4 venues pa in 2004 to 10 pa by the end of the project.

Box 2: CR programme description and the corresponding statement of aims (example 2)

Programme summary

We will develop a community cardiac rehabilitation service in the PCT area, delivering personalised menu-based care for patients throughout their journey, by developing a community Cardiac Rehabilitation Nurse providing a community and home-based service using the Heart Manual. Phases 1 to 4 of rehabilitation will be closely integrated, the uptake of services will be increased, and sustainable improvements will be made in the quality and choice of services on offer to patients.

Programme aims

1. We hope that 600 patients will have used a home-based CR program by the end of the project.
2. We will develop and implement a referral protocol for referring patients to phase IV programmes by the end of the project.

Survey questionnaire

An individualised, one-page questionnaire was devised for each CR programme. The questionnaire re-stated the programme's agreed evaluation aim(s) and asked respondents to report their progress toward each aim, indicate whether or not they were on target, and to comment on what had helped and hindered their progress to date (see Appendix D for an example). The survey was sent to project leads (or their nominated staff) initially by email and by post, and by whatever method respondents' preferred thereafter (usually email).

The first survey was sent out early in late January/early February 2006 to 34 of the 36 CR programmes that were in operation and for which we had agreed aims at that time. The second round was carried out in April 2006 involving 35 CR programmes (one had yet to commence). Up to two reminders were sent by email. Project leads had previously been sent an information sheet about the qualitative evaluation (Appendix B), and this was sent again with the first survey.

Descriptive matrix

Textual analysis of the aims chosen for the evaluation and of the successful applications was used to identify and examine the characteristics of all the programmes. A proforma was devised for this purpose (Appendix C) and a 'descriptive matrix' designed. This is presently comprised of a number of tables summarising the data (e.g. number of aims, type of aim, subjects targeted, etc.) and information on the background to the programmes (e.g. which

population(s) the programmes intended to target, the setting(s) where CR was to be provided, and the types of staff to be supported by the awards). It should be noted that information about the aims of the funding taken from the applications often differs from the aims agreed for the evaluation. The latter provides the most accurate information about the centres goals and activities.

Links with the quantitative evaluation

All of the CR programmes were initially sent the NACR software in June 2005 (with the exception of North East Lincolnshire which had not started then). Some of the CR programmes have been slow to install the database. Problems recruiting staff to the projects explain part of this delay but an email survey was carried out in December 2005 to ascertain the other reasons. The most common was either outright resistance of IT staff in Primary care to install the Lotus software, or to this task being regarded by IT staff as of low priority leaving the rehabilitation staff waiting for help.

The BHF CRCs have been providing support and advice to centres and are currently contacting those sites that are not sending data. This has been very successful and currently 29 of the 36 programmes are sending data. Two centres have only just recruited staff and have therefore not installed the software yet and three have installed the software and are collecting the data but have not yet linked to the CCAD servers for technical reasons. Therefore the great majority of centres are collecting the data and those that are not will be shortly. To date we have received data on 2208 patients who have taken part in a programme that has received Big Lottery funding.

Applications for ethical and research governance approval

Work has begun to prepare the documents required for application to multi-centre research ethics committee (MREC) for ethical approval for the case studies to be carried out as part of the qualitative evaluation. The application to MREC is scheduled to be submitted by February 2007.

Local and national steering group meetings

The local steering group meeting has met on two occasions on 10 January 2006 and 28 March 2006 at the University of York. A joint local and annual national steering group meeting is planned for 20 July 2006. Members of the groups are listed in Appendix A.

Problems encountered

There have been no major problems. Some minor problems have been experienced.

- It took longer than anticipated to agree with the aims with each programme.
- The lead contact on one programme was concerned about the confidentiality of the survey results but was reassured that all individual responses remain confidential to the research team, and that findings will not be presented in a way that identifies individual programmes.
- Three sites have failed to respond to both rounds of the survey. Efforts have been made to check that the correct people are being contacted and this has been confirmed. The BHF have been asked to remind these sites that they agreed to take part in the evaluation as a condition of their funding.
- Some of the CR programmes started later than others, one was not in operation by the end of the first year of the evaluation (July 2006). As a result, some of the programmes have had longer to progress than others making comparisons across centres more problematic.

5. Initial findings

Textual analysis of the successful applications

In their applications, CR programmes had to state how funding would be used to meet the main priorities of the overall Big Lottery Fund CR Programme. Applications typically referred to existing problems with equity of provision, accessibility and/or delivery of existing services.

Problems with equity

Thirty three of the 36 applications highlighted problems with equity – in terms of provision for, or uptake by, certain social groups. The social groups most often mentioned as a target population in the applications were elderly people and people resident in rural or remote locations; the main medical conditions targeted were MI and cardiac surgery.

Problems with access

Eighteen applications referred to problems with access because of rural isolation, transport and parking problems.

Problems with delivery

Four proposals mentioned problems with the delivery system for CR, such as a lack of integration and poor links between phases.

Proposed use of funds

The applications universally included proposals to employ new staff and/or purchase additional hours of existing staff. Nurses were most often sought, followed by exercise instructors/physiologists, physiotherapists, and administrative staff. Other staff included programme/pathway coordinators, psychologists, dieticians, occupational therapists, and lifestyle advisers. Applications included plans to use the funds to reduce inequities in provision and improve services in the following ways:

- To provide new CR or extend existing provision (for example, increasing sessions).
- To improve access to and uptake of CR by improving the choice of CR on offer and/or by making it more convenient to use (for example, at times and in places that better suit patients); to tailor CR to patients' individual needs and preferences.
- To develop or implement new ways of delivering CR and supporting patients (for example, via DVD, telephone follow-up).
- To improve the quality of services (for example, patient records, referral mechanisms, staff coordination etc).

Aims chosen for the evaluation by the programmes

All 35 programmes have agreed aims for purposes of the evaluation. Fourteen of the 35 programmes (40%) specified two aims, 12 (34%) selected three aims, and seven (20%) defined one aim; two programmes (6%) each submitted three complex aims that were subsequently converted into four for ease of analysis (see Table 1).

Table 1: Number of aims specified by the programmes for the evaluation

Number of aims	Number of programmes
One aim	7
Two aims	14
Three aims	12
Four aims*	2
<i>Total programmes</i>	35

* Programmes were asked to define up to three aims, but some aims included multiple targets and, where appropriate, these have been re-classed as a separate fourth aim for purposes of analysis.

Relationship of the programmes aims to the aims of the Big Lottery Fund CR Programme

A total of 79 aims were specified by 35 CR programmes, 68 related to increasing uptake (across 33 programmes), and 11 to sustainability, quality and other outcomes (across eight programmes).

It is important to note that for the purpose of ascertaining if the two aims of the Programme have been met we have categorised the aims into two distinct types (uptake and quality), although they are not mutually exclusive or always easily separated. For example, improving *access* was often to be achieved by providing more or better facilities to reach groups of patients, most often the elderly or women and these modifications would benefit all patients thus improving the quality of the programme as well as increasing the numbers taking part. The aims were categorised by two researchers (JH, CP) but where they were unsure or unable to agree a third researcher (BL) made the final judgement.

1. Uptake aims

Thirty three of the 35 CR programmes specified at least one aim related to increasing uptake, especially by groups that are low users of existing provision. Nine CR programmes chose one aim relating to uptake, 14 chose two, nine chose three, and one chose four such aims.

The range and types of CR that programmes were aiming to increase uptake of included: home-based CR (such as 'Road to Recovery' and the Angioplasty Plan); CR provided in more convenient locations (such as leisure centres and other community venues); a wider 'menu' of CR services (such as healthy cookery classes; walking for health; education classes); and other new provision (such as an ethnic language DVD).

2. Quality aims

Eight programmes specified at least one aim that was related to improvements in the quality of services on offer to patients. Six programmes chose one such aim, one chose two aims, and another chose three. Two programmes chose to adopt this type of aim only.

The associated kinds of outcomes included: increasing telephone contact with patients; increasing the number of patients offered information on and a choice of CR; increasing the number of patients transferred from phase 3 to phase 4 of CR; increasing the number of home visits performed; developing staff training; developing improved referral protocols; reducing waiting lists; and improving record-keeping.

Patient groups targeted in evaluation aims

Fifteen CR programmes specified one or more aims relating to particular groups of patients. The medical groups included MI, CABG, PCI, PTCA, revascularisation, angioplasty, AMI, by-pass, post-surgery, pre-surgery, and pre-habilitation. The various social groups explicitly targeted in their aims are listed in Table 2.

Table 2: Social groups targeted by programmes in their evaluation aims

Targeted groups	Number of programmes
Older people/age	8
Women/gender	4
Work status	3
Rural residents	3
Ethnic groups	3
Defined geographical area	2
Housebound; 'Hard to reach'; people with transport issues; people who do not want to go to hospital; people who do not like groups.	1

Progress of the cardiac rehabilitation programmes

Initial analysis of survey data

In the first round, responses were received from 28 of the 34 CR programmes in operation at that time (an 82% response rate). In the second round, responses were received from 31 of the 35 eligible CR programmes surveyed (an 89% response rate).

Programmes were asked to complete a statement for each aim, providing a numerical indication of their progress towards the final goal, for example that 100 of the hoped for 600 patients had completed a home-based programme. They were also asked to choose if they were ‘on target’, ‘ahead of target’ or ‘behind target’ for each aim, and to comment on what had helped and hindered their progress to date (see Appendix D for an example of the questionnaire).

At the first survey, valid data on progress towards their targets was received from 27 programmes rating progress on 57 aims. They were ‘behind target’ on 37 of the 57 aims they had specified (Table 3). They were ‘on target’ in relation to 13, and ‘ahead of target’ in relation to 7. Eleven of the 27 programmes that responded (41%) were ‘behind target’ on all of their aims, and seven programmes (26% respondents) were ‘on’ or ‘ahead of’ target on all of their aims.

By the time of the second survey, the CR programmes showed improvement in their performance. Valid responses were received from 27 programmes (77% of those surveyed) rating their progress on 55 aims. As Table 3 shows, this time programmes were behind target in relation to 23 of the 55 aims assessed. They were on target in relation to another 23 aims, and ahead of target in relation to nine more aims. Overall, nine of the 27 CR programmes that submitted a valid response at the second survey point (33% respondents) were behind target on all of their aims, and 12 programmes (44%) were on or ahead of target on all of their aims.

Table 3: Self-assessed progress with aims (January/February 2006 and April 2006)

	Behind target	On target	Ahead target
First survey (total aims = 57)	37	13	7
Second survey (total aims = 55)	23	23	9

What helped and hindered progress?

Joint working and good relationships with either trusts or leisure services was seen as an important factor in helping programmes achieve their aims. This was mentioned in relation to 11 (19%) aims in round one, and six of these aims were rated as being either on target or ahead of target. In the second round, five (9%) aims were thought to have been helped by links with leisure facilities and trusts, and four of these were adjudged to be on or ahead of

target. Staff commitment and confidence was also seen as important with the achievement of 10 (18%) aims being helped by this in the first round and five (9%) in the second round.

The first round of the survey revealed more variation in the reasons why programmes had been hindered in achieving their aims. These ranged from the inappropriate time of classes, particularly the evening classes which were less likely to be attended during the winter months, to heavy workloads restricting staff from concentrating on the project. By far the greatest problem in both surveys was the lack of, or delay in, appointing staff to posts or the lack of qualified fitness instructors available. In the first round, 19 (33%) of the aims were hindered by these staffing issues and three (5%) by the lack of qualified instructors. Of those aims, 13 were behind target at this point. In the second round, 14 (25%) aims were hindered by staff appointments and eight of these were behind target.

Referral systems were reported to have both hindered and helped some programmes in achieving their aims. In the first round, nine (16%) aims were hindered due to slow or low referral rates. Six of these aims were behind target. In the second round, problems with referrals were mentioned on eight (15%) occasions as being a help (five of those being either on or ahead of target) and on seven (13%) occasions as being a hindrance (three being behind target).

Initial analysis of quantitative data from NACR

Using the outcome data at this stage would be potentially misleading. What follows is analysis of demographic baseline data from a limited sample.

Who came to cardiac rehabilitation?

Ages ranged from 24 to 106 with the mean age of 66 years (sd. 12yrs). Two thirds of the 2208 patients were male of whom 96% classified themselves as white British or white Irish, of the other ethnicities recorded the only significant numbers were 77 Indians (3.5%) and six (0.3%) Pakistanis. Most, nearly 75%, were married 7% were single and 12% widowed. The majority (54%) were retired, with 33% were in employment the great majority fulltime, 5% worked part time and 6% were self employed either part or fulltime, 4% were looking after the family home and only one patient was unemployed and seeking work.

Why did they come?

The majority, just over 50%, had suffered a heart attack, with around 20% having had coronary artery bypass surgery, 20% angioplasty and 3% other cardiac surgeries.

Why did they not come?

The number of eligible patients who did not come because they were unknown to the programme and therefore not invited must remain unknown. However some of the programmes did gather data on those who either declined an invitation or whom it was felt could not be invited. The reason was given for 356 patients, the most common reason was 'patient not interested' (60%). The next most common reason was mental incapacity (24%) in most cases due to cognitive problems such as dementia. Physical incapacity was the next most common reason (10%), followed by too far to travel (3%) and already returned to work (2%). Some early modelling on the potential predictors of not attending showed advanced age to be the best predictor.

What was their lifestyle like?

The body mass index of patients ranged from 17 to 49 (sd 5) with a mean of 27, the recommended ideal is 18 – 25: 25 or more is classified as being overweight with 30 and greater obese. Only 15% had smoked in the previous four weeks, but less than a quarter took the recommended amount of exercise which is 30 minutes three or more times per week.

6. Conclusion and interim recommendations

Despite a few minor problems the evaluation has been conducted as planned. All of the programmes, with some help, have managed to produce between one and three quantifiable goals and to report their progress with these; response rates have been good rising to 90%. Twenty nine of the 36 programmes are sending audit data and the others are about to start. We have already collected data on more than 2,000 patients.

The main findings so far are

- Textual analysis of the applications revealed a huge range of aspirations, aims and methods and many appeared to have little relation to the support being applied for.

- A significant number of programmes wished to change their aims when they were required to quantify exactly what they would achieve, usually because they were aware that their initial claims were overly optimistic. When asked to provide concrete aims many of the aspirations mentioned in the applications, for example to recruit more people from disadvantaged groups, were not selected.
- The great majority of aims revolved around increasing access and uptake, very few were about directly improving the quality of an existing rehabilitation programme without increasing access and uptake.
- In many cases the strategy was to move the programme closer to the patient through home visits, satellite clinics and programmes, phone calls, provision in local fitness centres or home based programmes.
- Another common strategy was to link to other facilities in the community (e.g., walking for health) to be able to offer patients an improved ‘menu’ of opportunities.
- Only three aims were to improve access for ethnic minorities, this was surprising given the well know disparity of uptake. The quantitative data is currently reflecting this disparity with 96% of attendees being white British and 3% Indian. Of approximately 2000 patient records entered so far, only one has been of Pakistani origin. Similarly only one unemployed person has been rerecorded as taking place. We will pay particular attention to the improvement of ethnic uptake in the qualitative and quantitative studies.
- Programmes got off to a slow start mainly due to delays or problems with recruitment (reported by 38% of programmes). We will investigate this further in the case studies.
- The main facilitators of progress reported in the survey were good relationships with existing local NHS bodies and dedicated and hard working staff. This will be investigated further in the case studies.
- Problems were staff recruitment and a wide variety of local difficulties, the only one reported several times was a problem getting referrals to the programme. This may be the result of competition between healthcare sectors or due to poor planning or to poor integration of CR services, possibilities that will be explored further in the qualitative analysis.

Interim recommendations

It might be helpful if, when making an application, candidates were asked to state one or more measurable (quantitative) aims attached to a time frame that could be used to assess

their progress and success. Such aims, with a statement as to how each was to be achieved, would have made the quality of the applications more obvious and might have helped the applicants make more realistic claims for the benefits of funding.

Staff recruitment was a major barrier to establishing the programmes in a timely fashion. Although applicants had to demonstrate that a job description had been submitted and given local approval, changes in NHS funding arrangements, job freezes in PCTs, and the introduction of Agenda for Change led to some delays in appointing staff.

Good integration with local networks appears to be the major facilitator of early success with aims and conversely poor levels of referral and a lack of integration with existing services appears to be a barrier. It would be helpful if in applications the existing patient pathway was described and how the new project will fit with this system. There should be written acknowledgment, from the main referring agents for the new programme, that they are aware of and are fully collaborating with the development of this new service.

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Julie Ferguson (Research Assistant, Health Sciences, University of York) assisted JH and CP with extracting data from the application forms using the proforma. The authors would like to thank members of the evaluation's local steering group for all their help and advice over the first year of the research.

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Appendices

Contents

- A. Members of the evaluation's local and national steering groups
- B. Study information sheet (sent to project leads)
- C. Proforma for data extraction from application form
- D. Sample survey questionnaire (first survey)
- E. Evaluation timetable
- F. List of programmes funded under the Big Lottery Fund Cardiac Rehabilitation Programme

A. Members of the evaluation's local and national steering groups

Diane Card	Cardiac Rehabilitation Coordinator, BHF
Stephanie Dilnot	Cardiac Rehabilitation Coordinator, BHF
Shirley Hall	Cardiac Rehabilitation Manager, BHF
Janet Heaton	Research Fellow, SPRU, University of York
Bob Lewin	PI, BHF Care & Education Research Group, Health Sciences, University of York
Stefanie Lillie	Cardiac Rehabilitation Coordinator, BHF
Corinna Petre	Project administrator, BHF Care & Education Research Group, Health Sciences, University of York
Stacy Sharman	Evaluation and Research Analyst, Big Lottery Fund
Elaine Tanner	Cardiac Rehabilitation Coordinator, BHF
Clare Valentine	Programme representative
Robin Hurst	Patient representative
Martin Winterbourne	Patient representative

Other contributors to one or more meetings

Karen Greenwood	Programme representative
Steve Murray	Programme representative
Jackie Sutcliffe	Former Cardiac Rehabilitation Co-ordinator, BHF

B. Study information sheet (sent to project leads)

THE UNIVERSITY *of York*

Department of Health Sciences

Second Floor,
Area 4,
Seebohm Rowntree Building
Heslington
York YO10 5DD

Telephone (01904) 321336
Fax (01904) 321388
E-mail dr17@york.ac.uk

Professor Bob Lewin

www.york.ac.uk/healthsciences

Evaluation of the Big Lottery Fund Cardiac Rehabilitation Programme

Information sheet for projects

Overview

The Big Lottery Fund (BIG Lottery) has funded the Department of Health Sciences and Social Policy Research Unit (SPRU) at the University of York to undertake an evaluation of cardiac rehabilitation schemes based in primary health care in England. The schemes were set up through the British Heart Foundation (BHF) with funding from the Big Lottery Fund. This project is linked to but separate from the National Audit of Cardiac Rehabilitation also being carried out by the University of York.

The Cardiac Rehabilitation Programme has two main aims:

- to increase the uptake of cardiac rehabilitation services, particularly among groups of people who currently make low use of existing services and
- to drive sustainable improvements in the quality of services on offer to patients.

As part of its commitment to evaluate this and other programmes it funds, the Big Lottery Fund has funded the research to examine to what extent the programme has met its overall aims and how far individual schemes have achieved their goals. This includes examination of how effective services have been at improving access, involving patients, impacting on outcomes, improving quality of life and addressing inequalities.

Elements of the evaluation and timescale

The evaluation will commence in July 2005 and end in June 2008. There are three main elements to the evaluation:

- **Survey:** a brief, ongoing, survey of all the projects will be carried out. The purpose of this is to assess progress in achieving the aims, agreed with projects at the outset of the programme. The survey will commence in 2006 and will be carried out periodically by email through to 2008.

- **Case studies:** the results of the survey will be used to select eight case study sites for more detailed research. This work will involve interviews with staff and service users and their relatives, to be carried out in person and over the telephone. The purpose of this aspect of the evaluation is to identify and explore the factors that have helped and/or hindered progress, from both staff and users' perspectives.
- **Audit:** quantitative analysis of audit data kept by the projects will be examined in conjunction with the data from the other elements of the evaluation, to help examine the effectiveness of projects in improving access to and uptake of cardiac rehabilitation programmes for different groups of people.

Contacts

The evaluation is led by Professor Bob Lewin in the Department of Health Sciences. Other members of the research team are Corinna Petre (British Heart Foundation Care and Education Research Group, Department of Health Sciences) and Janet Heaton (Social Policy Research Unit).

For further information about the evaluation, please contact one of the researchers involved:

Name	Email/ telephone	Address/website
Bob Lewin or Jessica Hemingway	rjpl1@york.ac.uk 01904-321393 jah14@york.ac.uk 01904-321327	British Heart Foundation (BHF) Care and Education Research Group, 2nd Floor Research, Department of Health Sciences, Seebohm Rowntree Building, University of York, York. YO10 5DG. Tel: 01904 321336. Fax: 01904 321383. http://www.york.ac.uk/healthsciences/gsp/themes/cardiarehab/BHFcontact.htm
Corinna Petre	cbp1@york.ac.uk 01904-321336	
Janet Heaton	jh35@york.ac.uk 01904-321950	Social Policy Research Unit (SPRU), University of York, York. YO10 5DD. Tel: 01904 321950. Fax: 01904 321956. http://www.york.ac.uk/inst/spru/

C. Proforma for data extraction from application form

Evaluation of Cardiac Rehabilitation programme ~ Data extraction sheet

**To be copied to a spreadsheet for comparative analysis to help construct descriptive matrix.*

*Project ID	
--------------------	--

CONTACT DETAILS (CF BL FORM)

Lead organization	
*N organizations involved in project (state names of additional orgs)	
Lead contact name	
Lead contact job title	
Lead contact address and postcode	
Lead contact telephone	
Lead contact email	
BHF CRC contact/rep	
BL/BHF own award reference	

AWARD DETAILS (CF BL FORM)

Title of project	
Amount awarded	
Start date	
End date	

EXISTING CR PROVISION (CF PROTOCOL)

Features of existing CR provision	
*Measures of existing usage/performance (with any dates)	
*Main limitations/problems with existing CR provision	

PROPOSED CR PROVISION (CF FORM; PROTOCOL)

*Aims in application (as stated in application)	
*Evaluation aims agreed with CRCs (max 3)	
*Target group(s) – socio-demographics cf 5.4 – 5.7 + rural + carers/family	
*Target group(s) – medical	
*Number of new staff to be appointed/funded through award	
*Type/grade/time of staff to be appointed/funded through award	
*How/where CR to be provided (through Lottery award)	
*Award to be used to (NB say if brand new provision or extension of existing provision)	
*Measures of expected usage/performance cf 2.4 & 5.3	
*Inclu Road to Recovery/Papworth model?	
*Inclu The Heart Manual?	

STAFF INVOLVED WITH PROPOSED CR PROVISION

--

DOCUMENTS SUBMITTED WITH APPLICATION (exclu BL form, protocol, refs, EO policies)

--

D. Sample survey questionnaire (first round)

EVALUATION OF BIG LOTTERY FUND CARDIAC REHABILITATION PROGRAMME

Dear

Progress with aims, barriers and facilitators

As you know every 3 months we are going to ask you to fill in a very brief questionnaire. All you need to do is fill in the blanks in your statement of aims and under each note down anything that is hindering you and anything that is helping you.

Your reply will only be seen by the researchers at the University of York. The results of the survey will only ever be presented in such a way that it is impossible to identify any centre. No other information will be divulged to the Lottery or the BHF or any of their employees. If in preparing the final report we want to highlight the work of a particular centre as an example of good or innovative practice we would write to that centre for their approval. This level of anonymity is to enable you to be absolutely honest with no fear of reprisals or embarrassment: essential if the results are to be accurate and therefore capable of helping improve future award schemes.

On this occasion you will receive the questionnaire by both email and by post, the final question asks how you would like to be contacted in the future.

Please return the survey, within two weeks of receipt, to Janet Heaton via email (jh35@york.ac.uk) or post (Janet Heaton, Research Fellow, Social Policy Research Unit (SPRU), University of York, York. YO10 5DD).

If you have any queries about the survey or the evaluation please contact Janet Heaton (see above, or tel: 01904 321950), or Corinna Petre (cbp1@york.ac.uk or tel 01904 321336).

WE KNOW YOU ARE ALL VERY BUSY - THANKS FOR YOUR HELP

Best wishes,

Janet Heaton

SURVEY POINT: JANUARY 2006

CONFIDENTIAL

Name of project:

Name of contact:

AIM 1: So far we have ___ patients using a [INDIVIDUALISED DETAIL ADDED] CR Programme

Our progress on Aim 1 is (please mark one box):

On target

Ahead of target

Behind target

A) Things that have helped are:

B) Things that have hindered are:

AIM 2: To date we have enrolled ___ patients on a [INDIVIDUALISED DETAIL ADDED] programme

Our progress on Aim 2 is (please mark one box):

On target

Ahead of target

Behind target

A) Things that have helped are:

B) Things that have hindered are:

AIM 3: To date we have ___ patients using the [INDIVIDUALISED DETAIL ADDED] CR Service

Our progress on Aim 3 is (please mark one box):

On target

Ahead of target

Behind target

A) Things that have helped are:

B) Things that have hindered are:

Please send future questionnaires by email or by post

Thank you

Project ID:

E. Evaluation timetable

Tasks 2005 - 2006	Jy	Au	Se	Oc	No	De	Ja	Fe	Ma	Ap	Ma	Ju
Programme Description Matrix												
Identify goals & define criteria for success												
Design email questionnaire												
Email survey							1st			2nd		
Email survey analysis of success, facilitators/barriers & rela to Matrix												
Design links with quantitative data												
Start on MREC application												
Local research team mtg												
National Steering Group mtg 1												
Annual report 1												

Tasks 2006 - 2007	Jy	Au	Se	Oc	No	De	Ja	Fe	Ma	Ap	Ma	Ju
Email survey	3rd			4th			5th			6th		
Email survey analysis of success, facilitators/barriers & rela to Matrix												
Define index score of success – 3 groups = highly, moderately and least successful												
Develop interview schedules, information & consent docs												
Identify 2 pilot sites												
LREC application for pilot work												
Pilot work 2 sites												
Select 8 case studies from most & least successful groups												
MREC application for 8 case studies												
R&D application for 8 case studies												
HC application if needed for 8 case studies												
Links w quantitative data												
Local research team mtg												
National Steering Group mtg 2												
Annual report 2												

Tasks 2007 - 2008	Jy	Au	Se	Oc	No	De	Ja	Fe	Ma	Ap	Ma	Ju
Email survey	7th			8th			9th					
Email survey analysis of success, facilitators/barriers & rela to Matrix												
Case study interviews with patients & carers												
Case study interviews with staff												
Case study qualitative data analysis												
Links w quantitative data												
Local research team mtg												
National Steering Group mtg 3												
Final report												
Dissemination												

F. List of programmes funded under the BIG Lottery Fund CR

Programme

PCT	Programme title
Adur, Arun and Worthing Teaching PCT	Adur, Arun and Worthing Community Cardiac Rehabilitation Project
Barnet PCT	Mobile Outreach Service for Provision of Cardiac Rehabilitation to Barnet's local communities
Blackburn with Darwen PCT	Be Heart Smart
Blackwater Valley and Hart PCT	Expansion of BVHPCT and FPH Cardiac Rehabilitation Services
Bristol South and West PCT	BHF Cardiac Rehabilitation Project
Camden PCT	Empowering Patients to Optimise Attendance, Recovery and Secondary Prevention after Coronary Events
Central Cornwall PCT	Capture Cornwall
Central Suffolk PCT	Suffolk Cardiac Rehabilitation Programme
Dartford, Gravesham and Swanley PCT	Heart of the Community – Dartford, Gravesham & Swanley Community Cardiac Rehabilitation Programme
Leicestershire and South Northants PCT	Community Cardiac Rehabilitation: Improving services, access and patient choice in South Northants
East Cambridgeshire and Fenland PCT	Healing Hearts in Fenland
Eastern Birmingham PCT	Can I take your order? The facilitation of menu-driven cardiac rehabilitation service in primary care
Eastern Cheshire PCT	Comprehensive Multidisciplinary Cardiac Rehabilitation Services in Eastern Cheshire
Eastern Wakefield PCT	Cardiac Rehabilitation Programme
Ellesmere Port and Neston PCT	Restart with a Heart: Ellesmere Port's joint phase 3 and phase 4 Cardiac Rehabilitation Service
Exeter PCT	TLC: Training, Learning and Co-ordination. An integrated programme to support patients in Exeter
Gateshead PCT	Gateshead expansion of cardiac rehabilitation services for the ageing and less able population
Gedling PCT (Queen's Medical Centre)	Positive moves – cardiac rehabilitation in the community
Harrow PCT	Tackling the Challenges of Cardiac Rehabilitation using the Menu based Flexi Heart Plan
Herefordshire PCT	Cardiac Rehabilitation Herefordshire
High Peak and Dales PCT	'Filling the gaps' The further development of cardiac rehabilitation services in North Derbyshire
Hillingdon PCT	The Hillingdon community HEART cardiac rehabilitation programme
Lincolnshire PCT	North Lincolnshire PCT Community Based Cardiac Rehabilitation Initiative
North & East Cornwall PCT	North and East Cornwall extending options in Cardiac Rehabilitation

PCT	Programme title
North East Lincolnshire PCT*	North East Lincolnshire PCT Cardiac Rehabilitation Programme
North Norfolk PCT	Healthy Living in Central Norfolk following Angioplasty
Northumberland PCT	Reaching into Rural Rehab – Building Northumberland's Cardiac Rehabilitation Programme
Salford PCT	Cardiac Rehabilitation Menu and Community Exercise Group Project
Scarborough, Whitby and Ryedale PCT	Community Cardiac Rehabilitation Programme
Somerset Coast PCT	West Somerset Cardiac Rehabilitation Patient Pathway Programme
Southampton City PCT	'Active Hearts' – Community Cardiac Event Recovery programme
South Sefton PCT	Coronary Revascularisation Home-based Intervention Service
Southwark PCT	The Camberwell and Peckham Rehabilitation Initiative - CAPRI
Western Sussex PCT	Creating Choice in Cardiac Rehabilitation
Wolverhampton City PCT	Locality based cardiac rehabilitation: responding to patients needs
Yorkshire Wolds and Coast PCT	Regional Exercise and Health Assisting Benefits Programme

* Programme not in operation at the time of this report