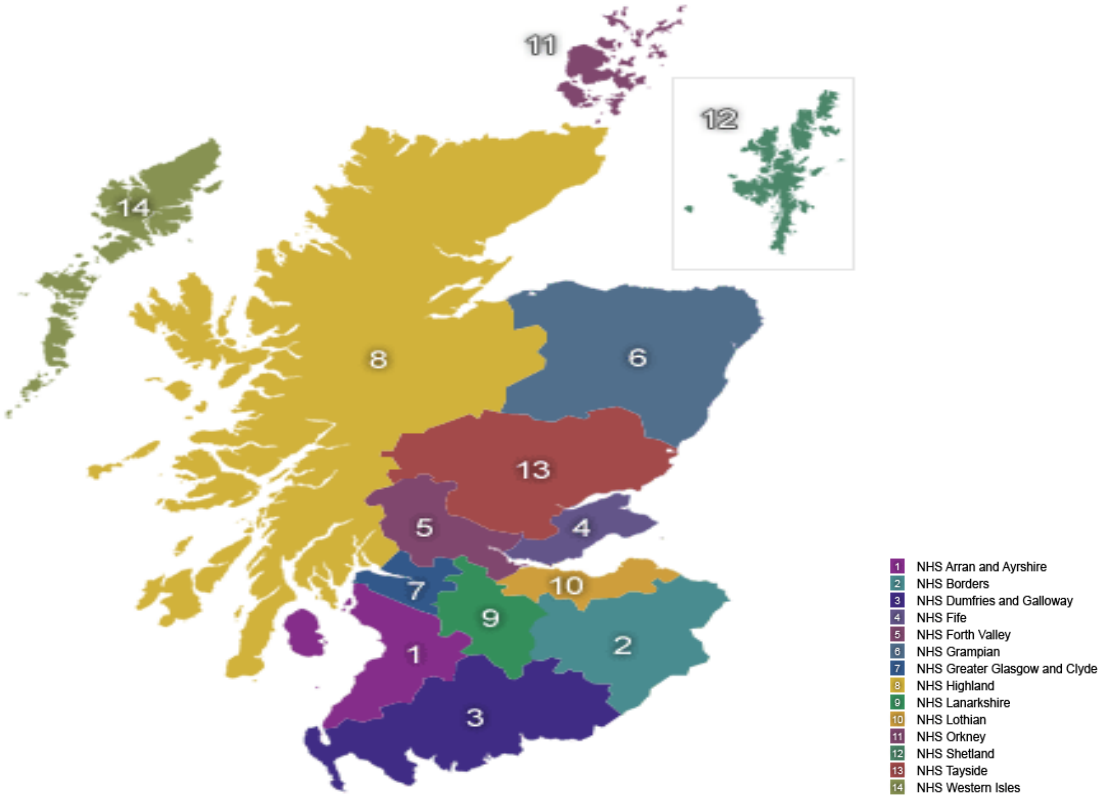
Scoping of

Cardiac Rehabilitation Services

in Scotland 2015



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1. Executive Summary

Background:
Cardiac Rehabilitation (CR) services are well established across Scotland, providing education, exercise and support with a menu of options for patients who have had a cardiac event. Traditionally programmes have been resourced to accommodate patients who have sustained an Acute Coronary Syndrome (ACS) or cardiac surgery. Since the release of the British Association of Cardiovascular Prevention and Rehabilitation (BACPR) Standards and Core Components for Cardiovascular Disease Prevention and Rehabilitation 2012 (which indicate recommendations that CR programmes should be offered to a much wider cohort of patients), CR services are now reporting capacity and resource issues with very few NHS Boards being able to demonstrate the inclusion of all patient groups.

The Heart Disease Improvement Plan (HDIP), published in August 2014, highlights within priority 4 that patients with heart disease should be supported to live longer, healthier and independent lives and that CR services should modernise their approach around patient centeredness including long-term management, anticipatory care planning and good self management strategies. In parallel with the emerging HDIP recommendations, a Vision for CR for 2020 (henceforth referred to as 2020 CR Vision) was developed and endorsed by the National Advisory Committee on Heart Disease in February 2014 as the new model of delivery for CR services across Scotland. Patient assessment is at the forefront of the 2020 CR Vision with an individualised programme of care, meeting the needs of the patient, including referring and signposting to appropriate services depending on individual need.

To support the modernisation agenda, the Scottish Government (SG) appointed a CR Clinical Champion in December 2014, with the aim of identifying whether NHS Boards were meeting the BACPR Standards and Core Components for Cardiovascular Disease Prevention and Rehabilitation 2012 (henceforth referred to as the BACPR Standards), and encouraging individual improvement plans aligned to the 2020 CR Vision.

Scoping of CR Services in Scotland:
A self assessment tool mapped against the BACPR Standards was developed, which individual NHS Boards were asked to complete prior to a scheduled visit. The Benchmarking Criteria, currently being used in respect of the HDIP, was adopted to allow NHS Boards to self-report achievement levels in respect of the individual standards. The tool was tested in four NHS Boards prior to being rolled out to all, with visits scheduled between May and September 2015 by the Clinical Champion.

Key Findings:

1. While programmes are reporting delivery of the seven core components, the menu of options available is determined by the skill-mix and knowledge of the team
2. There are particular gaps in relation to diet and psychosocial health, reflecting the make-up of the core teams
3. While ACS and surgery continue to be the core business, most programmes are expanding to include those receiving Percutaneous Coronary Intervention (PCI) and other patient groups
4. Individualised assessment of need is reported by all NHS Boards but with wide variation in the nature and timing of the assessment
5. There is little evidence of an outcome focused approach based on formal goal-setting, leading to self and long term management
6. Across Scotland, all CR programmes are using a similar model of delivery encompassing a health behavioural change approach but primarily based on exercise and disease specific education
7. There is a lack of consistent data collection
8. There is a wide variation of funding and staffing attached to CR services, with no apparent formulae

Recommendations:

1. Rehabilitation programmes should adopt a consistent approach to the assessment of patients, using health behaviour change skills to identify individual needs and client-centred goal-setting, to agree measurable outcomes based on self-management

2. NHS Boards should ensure staff have access to up to date training, thus providing the core CR staff with the necessary skills and knowledge to undertake an assessment in line with the BACPR Standards recommended approach and deliver all seven core components

3. SG should support the identification, at a national level, of appropriate psychology training for core staff and, working in partnership with colleagues across Scotland, deliver this training where there are gaps

4. CR teams should ensure that the programmes they deliver give equal emphasis to all seven core components to deliver patient goals in line with the needs assessed, building better links and working in partnership with other agencies out-side the NHS, where necessary, to promote and encourage patients to continue life-long health and fitness

5. The CR community should define and promote outcome measures that are meaningful for CR services in Scotland

6. SG should support and encourage CR programmes to travel in the direction of non-medical prescribing to reduce cardiovascular risk

Scoping of Cardiac Rehabilitation Services in Scotland 2015

2. Purpose:

The purpose of this report is to detail the outcome of a scoping exercise of CR services across the 14 NHS Boards in Scotland, against the BACPR Standards. This piece of work was commissioned by the SG in 2015.

3. AIM of the scoping exercise:

- Explore the current situation of CR services and ascertain whether NHS Boards are aligned to BACPR Standards
- Promote the 2020 CR Vision as the new model of service delivery across Scotland
- Support the implementation of an Improvement Plan at local and national level

4. Background:

The BACPR Standards document was released in 2012. This document details seven standards with prevention, behaviour change and education at the forefront to ensure CR programmes are delivering high quality care. There is a strong link to long term condition management, with the standards endorsing a multidisciplinary integrated approach that enables the patient and their family to manage their condition with the support of a proactive health and social care system.

The SG published the HDIP in August 2014, which makes a commitment to further improve Heart Disease Management and CR in Scotland. Priority 4 of the Plan states that its aim is to support people with Heart Disease to live longer, healthier and independent lives with an action to modernise CR services.

Following consultation in November 2013 with key stakeholders across Scotland, the remit of the then CR Sub Group was to agree the way forward for CR in Scotland and identify key drivers to facilitate service redesign. On the back drop of The Healthcare Quality Strategy for NHSScotland (May 2010), with the focus on safe, effective and person centred care, the 2020 CR Vision statement was developed stating that "*CR will be delivered by an integrated, clinically, competent, multidisciplinary team with a central focus on* ***specialised assessment*** *providing an* ***individualised programme of care*** *to improve patient outcomes."*

The 2020 CR Vision was presented to the National Advisory Committee on Heart Disease at its February 2014 meeting, with support and agreement that it should be the vehicle for improvement and used as an effective mechanism for modernising CR services.

In December 2014, a CR Clinical Champion was appointed to the SG one day a week for one year with, the aim of facilitating the implementation of the Improvement Programme. The specific tasks of the role were: to champion the 2020 CR Vision as the new model of service delivery across Scotland; design a self-assessment process informed by the BACPR Standards; support NHS Boards to undertake the self assessment; encourage the development of local improvement plans aligned to the 2020 CR Vision and BACPR Standards. A briefing note with an overview of the project, and announcing the appointment of the CR Clinical Champion, was sent to Heart Disease Managed Clinical Network (MCN) Managers.

A very successful CR National meeting was organised by the CR Clinical Champion and held in Glasgow on the 8th May 2015, where representatives from all 14 NHS Boards were in attendance. The purpose of this meeting was to inform the CR community about the work being undertaken by the CR Clinical Champion, promote the 2020 CR Vision as the new way of delivering CR services and, also, as a useful networking exercise, sharing good practice and innovations currently being employed across Scotland.

5. Methodology:

The scoping exercise allowed individual NHS Boards the opportunity to self-assess their current provision of CR services against the BACPR Standards, thus providing a comprehensive picture across Scotland.

An assessment tool was designed, underpinning the BACPR Standards, which was piloted in four NHS Boards across Scotland: Ayrshire and Arran, Forth Valley, Tayside and Lothian, with the visits to these NHS Boards taking place in May and June 2015. The tool was further evaluated and adapted in response to feedback from the pilot sites. The four pilot sites were chosen in respect of the four Senior Nurses who were already involved in the development of the 2020 CR Vision and the national CR Sub Group.

The remaining 10 NHS Boards were visited between June and September 2015. In order to gain robust data from each visit, it was thought that the best people to meet with would be the actual CR teams who were responsible for delivering the service within a NHS Board area. Prior to the visit, the self-assessment tool was sent to the lead clinician for completion, in order to provide the basis for discussion on the day of the visit. As part of the assessment tool, NHS Boards were asked to score themselves using the Benchmarking Criteria: developing; implementation; monitoring; reviewing, which had previously been adapted from Healthcare Improvement Scotland (HIS) and used in respect of the HDIP. The timings of the visits were dictated by the lead clinician, which helped to ensure that as many of the team were able to be at the discussion meeting, thus providing a more in-depth understanding of service provision.

6. Findings:

The BACPR Standards SG Evaluation 2015 (Appendix I) provides an overview of CR service provision across Scotland as reported by individual NHS Boards, indicating their perceived position in respect of the BACPR Standards. The majority of programmes were reported as being at the monitoring or reviewing stage for standard 1-5 & 7, and either developing or implementing for standard 6.

Standard 1: The delivery of seven core components employing an evidence-based approach

Standard 1 indicates that programmes should deliver the seven essential core components to ensure clinically effective care and achieve sustainable health outcomes. The core components are health behaviour change and education; lifestyle risk factor management; psychosocial health; medical risk factor management; cardioprotective therapies; long-term management; audit and evaluation.

All 14 NHS Boards reported working to the principles of the seven core components as defined in the BACPR Standards. Generally all programmes are similar in structure, offering in-patient and out-patient components, consisting of support, advice, education and exercise. This structure is further supported by various written materials which have been developed locally or sourced from third sector organisations. Individual programme content varies according to staff resource, knowledge, skills and competence of the team employed by individual NHS Board.

On the surface, there appears to be a move towards a more individualised approach, however, exercise remains the dominant feature of all programmes, with physical activity being the health behaviour most likely to be addressed. The duration of programmes differ across Scotland from 6-12 weeks, either once or twice weekly.

Although most NHS Boards report compliance with a health behavioural change approach, individual goal setting is patchy and variable across Scotland, ranging from being undertaken in a very structured fashion, for example at the first, mid and final assessment, to a very ad hoc and impromptu approach. There is very little evidence to support the view that effective outcomes are being achieved.

In terms of lifestyle risk factor modification, most CR programmes offer brief intervention for smoking cessation, and have well established networks with good evidence of partnership working in the development of referral pathways from CR programmes to this specialist service. On the other hand, however, dietetic input is scarce with only a few NHS Boards having dieticians linked to their CR service.

All programmes incorporate healthy eating as one of their core education session, with the majority of programmes showing little or no evidence of weight management. Some NHS Boards have established links to their local weight management team, however, this varies greatly across Scotland and there appears to be strict criteria as to who should be referred and by whom. It was apparent during the NHS Board visits that most CR staff are equipped and knowledgeable to deliver basic healthy eating information. However, where dieticians were involved patients were given much more individualised and appropriate support.

Psychosocial health has been reported by all 14 NHS Boards as being an integral part of their CR programme, but again, input is determined by the resource employed by the service. Most teams have undergone training in psychological techniques, such as motivational interviewing and behavioural change, although many staff highlighted the need to update these skills. It is widely recognised that further training in this field would increase the skills and knowledge of the core CR team and allow them to apply basic interventions where appropriate, with referral to mental health services for more in-depth intervention if required.

Again as with dieticians, not all CR services have a Psychologist or Occupational Therapist attached to the team, therefore, screening for emotional issues such as anxiety and depression, social isolation and vocational issues very much depends on the existing knowledge and skill of the core team. It was noted, however, that where a Psychologist was a member of the team, other team members were better informed and staff felt adequately equipped to assess, triage and refer appropriately for further intervention accordingly. A few teams reported temporary funding for psychology to support services, however, their intervention was minimal and often, only offered to a very small number of patients. Where services do not have access to a trained Psychologist, patients are often referred back to the GP with a recommendation that a psychology referral should be considered, however, there is no evidence to suggest that this is acted upon.

Medical risk factor management and cardioprotective therapies are considered in all programmes. However, practise varies greatly across Scotland and, again, is dependent on staff resource, skills and knowledge as to how much intervention occurs. As a general rule, medical risk factors are discussed within the education component of the programme. However, issues like raised blood pressure etc. will be communicated to the GP. In most programmes, medication changes will also be communicated to the GP. In some programmes this is done at different stages of the patient's journey, however, in most circumstances this happens generally at discharge. There are a few examples where teams moving towards non medical prescribing, reported this as a vital link to improving patient care and experience, with less visits to GP practice.

The last core component states that CR programmes should formally audit and evaluate their service. This should include information on individual patient clinical outcomes and data on service performance, together with patient satisfaction. This particular project found that audit and evaluation was sparse, carried out on an ad hoc basis, with little consistency not only across Scotland, but also within local services. Most programmes are collecting activity data with some quality aspects such as patient experience, however, this is poorly analysed and evaluated, with little evidence of measuring good clinical outcomes to support long term management.

There is appetite and commitment within local teams to ensure services are working towards an outcome focussed approach, however, the frustration appears to come from the lack of manpower and IT systems to move this agenda forward.

Standard 2: An integrated multidisciplinary team consisting of qualified and competent practitioners, led by a clinical coordinator

The graph below provides an overview of the number of whole time equivalent staff per 100,000 population for each NHS Board with the Scottish average highlighted in red .

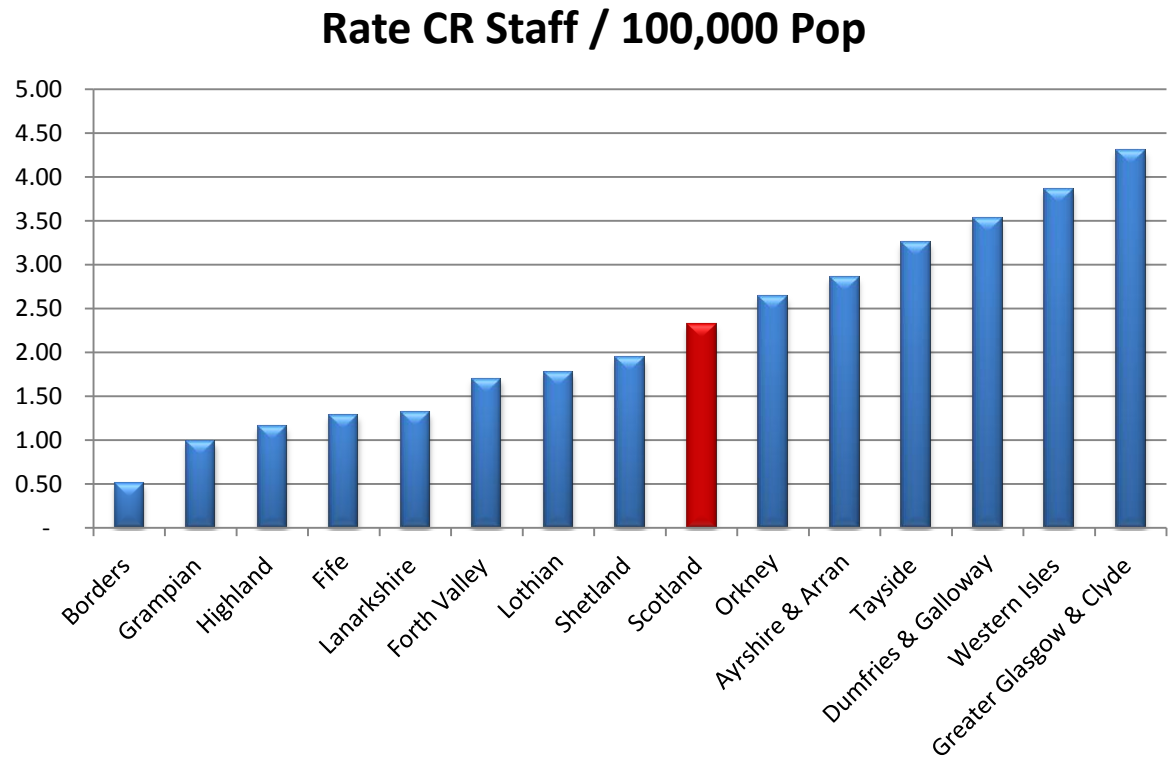

Table 1 overleaf illustrates the range of different professionals responsible for the delivery of the core components across Scotland, with the most prevalent being nursing and physiotherapy. It is worth noting the gap in other allied health professionals, such as Dieticians, Psychologists and Occupational Therapists. In some areas, it was reported that patients are not given access to appropriate specialist support and, as alluded to previously, often the extent of intervention relies on the knowledge and skills of the core team.

Table 1: Range of professionals responsible for delivery of core components of CR

	NHS Ayrshire & Arran	NHS Borders	NHS Dumfries & Galloway	NHS Fife	NHS Forth Valley	NHS Grampian	NHS Greater Glasgow & Clyde	NHS Highland (not Argyle & Bute)	NHS Lanarkshire	NHS Lothian	NHS Orkney	NHS Shetland	NHS Tayside	NHS Western Isles
Lead Clinical Co-ordinator	✓	✓	✓		✓	✓	✓			✓	✓	✓	✓	✓
Consultant										✓		+		
Nurse	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Physiotherapist	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓		✓	✓
Occupational Therapist						✓		✓		✓	+			
Clinical Psychologist	✓					✓	✓			✓				
Dietician	+		+		+	✓	✓		+		+	+	+	✓
Healthcare Support Worker/Physio Ass	✓			✓	✓	✓	✓	✓	✓	✓	✓		✓	
Administration	✓		✓	✓	✓	✓	✓	✓	✓	✓	+		✓	+
Exercise Specialist	+								+	+				+
Community Facilitators/Volunteer									+	+			+	
Pharmacists	+		+			+	+		+			+	+	
Smoking Cessation	+		+						+			+		
Health Coach				✓										

✓ Staff directly employed to deliver CR Service

\+ Other staff involved in the delivery of the CR Service but NOT directly employed

The bulk of the workforce holds registration with their own individual profession and, although there is no clear evidence of life-long learning records being held by individual NHS Boards, there appears to be a consistent model in place as to what training/education is required to ensure competence. Apart from ad hoc study days, the most prevalent being health behavioural change, BACPR accredited courses, immediate life support and accredited courses in formal education. Although contentious for some, non medical prescribing has been taken forward in a few of the health board areas and is seen as an innovation that could improve patient care and experience.

Standard 3: Identification, referral and recruitment of eligible patient populations
According to Standard 3, programmes should aim to offer CR irrespective of age, sex, ethnic group and clinical condition to the following patients:

- acute coronary syndrome
- following revascularisation
- stable heart failure
- following implantation of cardiac defibrillators and resynchronisation devices
- heart valve repair/replacement
- heart transplantation and ventricular assist devices
- grown up congenital heart disease (GUCH)
- other atherosclerotic disease e.g. peripheral arterial disease, transient ischaemic attack

The findings of this study showed that across Scotland, CR programmes routinely recruit the ACS and cardiac surgery (CABG, valve) cohorts of patients, which is consistent with the traditional inclusion criteria. These patients are generally recruited whilst in-patients and in most areas are seen by the CR team. This process is more or less consistent across Scotland and there appears to be good working relationships between ward areas and CR teams. In light of the NHS Quality Improvement Scotland (now HIS) Heart Disease Clinical Standards (April 2010) and the BACPR Standards, there has been a move to incorporate a wider and more diverse group of cardiac patients, the most obvious being those that have undergone PCI with a slight increase in the number of heart failure patients being referred.

Heart transplantation and ventricular devices, along with GUCH, are not routinely referred but, when asked, most programmes stated that they would be happy to recruit if appropriate. The last category would generally only be offered if in the context of an acute cardiac event.

Standard 4: Early initial assessment of individual patient needs in each of the core components, ongoing assessment and reassessment upon programme completion
Within this standard there are two suggested time frames: patients should be contacted within three operational days of receipt of referral; and receive a CR assessment within two weeks of discharge or diagnosis. It also highlights that a care plan should be implemented and shared with the patient.

The scoping exercise suggested that all programmes report carrying out a CR assessment, however, when, how and by whom, is extremely diverse across Scotland. The time frames for assessment have been reported anywhere from the in-patient stage to approximately six weeks from discharge. A few centres have moved to using the telephone as the first contact, with the offer of either a formal CR assessment or a date for commencement of a formal programme. Most centres offer mid and discharge assessments, either in an ad hoc or formal way, but with no consistent approach.

Assessment documentation is inconsistent nationally and also within individual NHS Boards, where there is more than one site delivering CR. Documentation on the whole, captures aspects of lifestyle risk factors and the use of cardio protective therapies. The collection of psychosocial information is again variable, with most centres using the HAD score to assess mood. However, the interpretation and analysis of the tool was patchy. Functional capacity testing, such as the shuttle walk/Chester step test, is used inconsistently across the country, with some centres not assessing functional capacity at all, some only doing so for patients attending the exercise component and some for snap shot audit and outcome assessment.

Although there was a degree of evidence of individual care planning, formal health behavioural goal setting was found to be limited in many programmes. Care plan documentation was very different across Scotland with little evidence of it being shared with individual patients.

Standard 5: Early provision of a cardiac rehabilitation programme, with a defined pathway of care, which meets the core components and is aligned with patient preference and choice

This standard links to the operational time frames of the assessment and care planning and recommends a menu-based approach, incorporating individual patient choice.

Overall, services provided appear to be dictated more by historical arrangements and allocated funding rather than by the development of CR services to meet individual patient need. Nationally, programmes are of similar set up offering both education and exercise but heavily weighted to the latter. There is no uniformity of duration of programmes and these vary between 6 – 12 weeks, usually once a week with a few still offering twice weekly. All programmes provide a menu of options, however, menus are dependent on the staffing resource attached to individual teams with exercise being the mainstay of all programmes across the country. Psychology, dietetics and vocational rehabilitation are less featured within the core menu of options.

There is some evidence, although patchy, to suggest that individual areas have developed good links with other healthcare professionals and outside agencies, either to signpost or refer patients.

Standard 6: Registration and submission of data to the National Audit for Cardiac Rehabilitation (NACR)

According to this standard, every CR service should register their programme with NACR and submit data to be analysed for the national annual report. It also highlights that formal audit and evaluation of CR services should include data on clinical outcomes, patient satisfaction and service performance.

There are no programmes in Scotland who currently submit data to the NACR, most programmes collect information on IT systems that have been created by individual NHS Boards. However, often with little administration resource attached, and although data is being stored, it is in some cases, not being analysed and evaluated. Most services could provide basic activity data as in numbers referred, seen and recruited, however, providing evidence of good clinical outcomes remains a challenge. Many programmes collect patient satisfaction information periodically and act accordingly if appropriate.

Standard 7: Establishment of a business case including a cardiac budget which meets the full service costs

In essence, this standard advocates that funding for each CR Service should be based on local population need and agreed service outcomes, taking into consideration staff costs and non pay costs with the Lead Clinician being responsible for that funding.

There is a wide variation in the amount of funding attached to CR in each individual NHS Board, with no apparent correlation between the size of the population or the serving area.

The budget holder varies greatly with very few areas holding the complete budget. It is often split between disciplines with each discipline manager being responsible for their own particular staff group. Staff costs in general have been reported as being accounted for, however, it was difficult to ascertain non staff costs. Some programmes rely on non-NHS funding to support patient and staff education materials and equipment.

It was apparent during the discussion with individual teams that if funding was devolved to the Clinical Lead for part or whole of their service, the Lead appeared to have more of a say as to how monies were spent with the autonomy to deploy according to need of the service.

7. Identified areas of development and innovation:

As part of the scoping exercise, the following areas of development and innovation were identified, which will assist in the future delivery of the 2020 CR Vision:

- SG funding to identify the extent of person-centred activities for people with respiratory, cardiac and stroke conditions (PARCS)
- Activate Your Heart On-line CR Programme - NHS Lothian and NHS Forth Valley
- SG HDIP Fund allocation to support development of:
  - patient reported outcome measure (PROM) - NHS Ayrshire and Arran
  - patient workbook - NHS Lothian
- Chief Science Officer funded research study 'Predictors of attendance at cardiac rehabilitation' - NHS Tayside
- Multi-morbidity project - NHS Ayrshire and Arran
- Non medical prescribing within CR programmes

8. Key Findings:

1. While programmes are reporting delivery of the seven core components, the menu of options available is determined by the skill-mix and knowledge of the team
2. There are particular gaps in relation to diet and psychosocial health, reflecting the make-up of the core teams
3. While ACS and surgery continue to be the core business, most programmes are expanding to include those receiving PCI and other patient groups
4. Individualised assessment of need is reported by all NHS Boards but with wide variation in the nature and timing of the assessment
5. There is little evidence of an outcome focused approach based on formal goal-setting, leading to self and long term management
6. Across Scotland, all CR programmes are using a similar model of delivery encompassing a health behavioural change approach but primarily based on exercise and disease specific education
7. There is a lack of consistent data collection
8. There is a wide variation of funding and staffing attached to CR services, with no apparent formulae

9. Recommendations:

1. Rehabilitation programmes should adopt a consistent approach to the assessment of patients, using health behaviour change skills to identify individual needs and client-centred goal-setting, to agree measurable outcomes based on self-management

2. NHS Boards should ensure staff have access to up to date training, thus providing the core CR staff with the necessary skills and knowledge to undertake an assessment in line with the BACPR Standards recommended approach and deliver all seven core components

3. SG should support the identification, at a national level, of appropriate psychology training for core staff and, working in partnership with colleagues across Scotland, deliver this training where there are gaps

4. CR teams should ensure that the programmes they deliver give equal emphasis to all seven core components to deliver patient goals in line with the needs assessed, building better links and working in partnership with other agencies out-side the NHS, where necessary, to promote and encourage patients to continue life-long health and fitness

5. The CR community should define and promote outcome measures that are meaningful for CR services in Scotland

6. SG should support and encourage CR programmes to travel in the direction of non-medical prescribing to reduce cardiovascular risk

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The Scottish Government

BRITISH ASSOCIATION FOR CARDIOVASCULAR PREVENTION AND REHABILITATION STANDARDS
SCOTTISH GOVERNMENT EVALUATION 2015

NHS Board	Standard 1	Standard 2	Standard 3	Standard 4	Standard 5	Standard 6	Standard 7
Dumfries & Galloway	Reviewing	Reviewing	Reviewing	Monitoring	Reviewing	Monitoring	Reviewing
Ayrshire & Arran	Reviewing	Reviewing	Monitoring	Reviewing	Monitoring	Monitoring	Reviewing
Lanarkshire	Monitoring	Implementing	Implementing	Monitoring	Monitoring	Developing	Implementing
Greater Glasgow & Clyde	Reviewing	Reviewing	Monitoring	Reviewing	Reviewing	Implementing	Monitoring
Forth Valley	Reviewing	Reviewing	Reviewing	Reviewing	Reviewing	Reviewing	Reviewing
Western Isles	Monitoring	Monitoring	Reviewing	Reviewing	Monitoring	Implementing	Developing
Highland	Monitoring	Monitoring	Monitoring	Reviewing	Reviewing	Implementing	Developing
Orkney	Reviewing	Reviewing	Implementing	Reviewing	Reviewing	Reviewing	Developing
Shetland	Reviewing	Reviewing	Reviewing	Reviewing	Monitoring	Implementing	Monitoring
Grampian	Reviewing	Reviewing	Reviewing	Reviewing	Reviewing	Reviewing	Reviewing
Tayside	Monitoring	Monitoring	Monitoring	Monitoring	Monitoring	Implementing	Monitoring
Fife	Reviewing	Reviewing	Reviewing	Monitoring	Reviewing	Developing	Reviewing
Lothian	Reviewing	Monitoring	Reviewing	Reviewing	Monitoring	Implementing	Reviewing
Borders	Reviewing	Reviewing	Reviewing	Monitoring	Implementing	Developing	Developing
Scotland	Reviewing	Reviewing	Monitoring	Reviewing	Monitoring	Implementing	Monitoring

DEVELOPING (1)	IMPLEMENTING (2)	MONITORING (3)	REVIEWING (4)

APPENDIX II

CARDIAC REHABILITATION TEAM ESTABLISHMENT (WTE)

NHS Board	Population	CR Referrals	Nurses	Physio	Physio Ass	OT	Dietician	Psych-ologist	Admin	Other	Total Staff	Rate CR Referrals / 1,000 Pop	Rate Staff/ 100 CR	Rate CR Staff / 100,000 Pop
Dumfries & Galloway	149,940	586	4	1	0	0	0	0	0.28	0	5.28	3.91	0.90	3.52
Ayrshire & Arran	371,110	1,274	4.5	3	1	0	0	0.5	1.6	0	10.6	3.43	0.83	2.86
Lanarkshire	653,310	1,622	4.74	2.5	0	0	0	0	0.86	0.51	8.61	2.48	0.53	1.32
Greater Glasgow & Clyde	1,142,580	3,673	18.6	14.24	1.81	0	1.9	2.3	6.2	4.13	49.18	3.21	1.34	4.30
Forth Valley	300,410	656	3	1.7	0.4	0	0	0	0	0	5.1	2.18	0.78	1.70
Western Isles	27,250	118	0.3	0.55	0	0	0.2	0	0	0	1.05	4.33	0.89	3.85
Highland	320,760	750	1.2	1.16	0.88	0.04	0	0	0.43	0	3.71	2.34	0.49	1.16
Orkney	21,590	71	0.25	0.16	0.16	0	0	0	0	0	0.57	3.29	0.80	2.64
Shetland	23,230	70	0.45	0	0	0	0	0	0	0	0.45	3.01	0.64	1.94
Grampian	584,240	1,320	2.72	1.47	0.35	0.46	0.06	0.06	0.65	0	5.77	2.26	0.44	0.99
Tayside	413,800	1,318	8.6	2.75	0.3	0	0	0	1.8	0	13.45	3.19	1.02	3.25
Fife	367,260	758	2	0	0.9	0	0	0	1	0.8	4.7	2.06	0.62	1.28
Lothian	858,090	1,826	5.3	2.5	0.9	1.3	0	1.2	3.5	0.5	15.2	2.13	0.83	1.77
Borders	114,030	272	0.5	0.07	0	0	0	0	0	0	0.57	2.39	0.21	0.50
Scotland	**5,347,600**	**14,314**	**56**	**32**	**6**	**2**	**2**	**4**	**16**	**6**	**124**	**2.68**	**0.87**	**2.32**