

Cardiac Rehabilitation Guideline

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1. INTRODUCTION

1.1 Rationale

Cardiovascular disease is one of the largest causes of death or disability in the UK. An Economic analysis of treatments reducing coronary heart disease mortality in England and Wales, 2000-2010 found Cardiovascular Rehabilitation to be a cost-effective intervention ⁽¹⁾.

There is overwhelming evidence that comprehensive cardiac rehabilitation is associated with a reduction in both cardiac mortality (26-36%) and total mortality (13-26%) ^(2, 3, 4). Evidence also supports the reduction in costly unplanned admissions (28-56%) ^(5, 6). Cardiovascular Rehabilitation improves functional capacity and perceived quality of life, whilst also supporting early return to work and the development of self-management skills ⁽⁷⁾. These factors combined make cardiovascular rehabilitation one of the most clinically and cost-effective therapeutic interventions in cardiovascular disease management ^(8, 9, 10, 11, 12)

Early intervention in this group of patients is paramount, demonstrating an improvement in uptake and adherence ⁽¹³⁾. Gains from early rehabilitation has the potential to reduce unplanned readmissions within the early discharge period (30 days) ⁽¹⁴⁾.

With a larger proportion of surviving individuals living longer with the burden of cardiovascular disease, coupled with an ageing population, there is a subsequent increase in the number of people developing heart failure ⁽¹⁵⁾. In the UK around 900,000 people have heart failure with the incidence and prevalence increasing steeply with age. This population has known positive benefits from a supervised exercise-based rehabilitation programme which should be made available for all patients in stable heart failure ⁽¹⁶⁾.

The cardiac rehabilitation (CR) service has become an established rehabilitation programme benefitting patients who have coronary heart disease and heart failure. These patients encompass those who have suffered acute damage to the heart. The aim of the service is to provide cardiac patients who fulfil the referral criteria, a patient-centred service in order to optimise health and wellbeing, thus enhancing quality of life and reducing the risk of recurrent cardiac events.

1.2 Scope

The guidelines and CR clinic will apply to the islands community with referrals accepted by in-hospital cardiology, primary care and Oxford discharge summary, other specialist nurses and outpatient cardiology.

The Jersey CR programme is available to any patient with coronary heart disease or who has returned from the UK having had some form of re-vascularisation therapy. This also includes arrhythmia (including ablation therapy) NSTEMI/STEMI and cardiac Acute Coronary Syndrome (ACS) patients who are admitted. The CR service is primarily within the out-patient setting but also has a role in reviewing in-patients. The aim is to bring CR support once they are admitted to hospital.

Patients presenting with post cardiac interventions either after UK or as an elective admission may be referred. A National Audit of Cardiac Rehabilitation (NACR)

questionnaire will be sent out to the patient before clinic (Appendix 1) and this should be brought to the initial assessment, including the Hospital anxiety and Depression Score (HADS).

The CR clinic will serve as a triage for any ongoing rehabilitation assessments to meet the patients' individual needs.

1.3 Practicalities

Part of the CR role is to promote change in all aspects of health appropriate to each individual after a coronary event has taken place. This involves a multi-disciplinary team approach which provides a comprehensive CR programme. Patients are encouraged to join our CR programme which includes exercise sessions, advice on healthy eating, smoking cessation and medication adherence. This provides the patient with the information and support they require to identify their 'risk factors' and choose the appropriate lifestyle changes. The aim is to help the patient understand that the benefit of any lifestyle modifications can reduce their risk of having another cardiac event.

The four phases of CR (Table 1) are outlined by the British Association of Cardiac Rehabilitation (BACR). These phases follow the practice within our island and each phase represents a different component throughout the patients CR journey.

Table 1: Four phases of cardiac rehabilitation

| | |
|---------|---|
| Phase 1 | In Patient Care |
| Phase 2 | Post Discharge Care |
| Phase 3 | Cardiac Rehabilitation Exercise Programme |
| Phase 4 | Long Term Support (introduction to gym memberships and classes, one year follow up, |

Within these four phases our objective is to provide a high quality evidence-based service which is "menu based", meaning that patients can access one or all of the following according to their individual needs:

Individual assessments with a cardiac rehabilitation nurse whilst in hospital, for heart disease prevention, symptom management, risk factor management and lifestyle advice. These Include:

- Individualised patient goal.
- Advice on how to stop smoking/ reduce alcohol content.
- A copy of our in house cardiac care leaflets including personal plan.
- Telephone follow up by cardiac nurse specialist to discuss any problems and queries.
Arrange a clinic appointment, time/date given during phone call.
- Group education sessions - these are for patients and carers, with the aim to address misconceptions about cardiac illness as well as including lifestyle advice, risk factors,

medications and dealing with psychological issues such as anxiety and depression. These involve:

- Supervised exercise sessions at a community setting
- Referral for psychological assessment, if appropriate. Self-referral can also be discussed i.e. drop in service such as listening lounge and talking therapies. Discussions currently taking place to find a faster route for specific CR patient's psychological referral.
- Advice for the long term management of their cardiac condition.

(See Appendix 2 for Jersey CR pathway)

2.0 Guideline and Service Purpose

2.1 Clinic

This will be based in out-patients and a Wednesday morning clinic slot will be available to accommodate patients as necessary, with a 45 minute clinic consultation. This includes-

- Patient history
- Medication history
- Discussion of Oxford discharge summary (where relevant)
- Physical assessment (systems review, blood pressure, oxygen saturation, manual pulse and auscultation/ ECG)
- Further clinical examination including cardiovascular assessment
- A comprehensive assessment in partnership with the patient and our senior cardiac physiotherapist, who will assess the patient also in clinic

Patients will be given a choice to either attend a community CR exercise programme or exercise referral – both now held at a local gym setting. The option of a home exercise programme is also made available. Also a digital platform for CR can also be introduced – My Mhealth, which allows more freedom to those who are computer literate and cannot attend specific class times. Transport where appropriate can be offered to enable attendance.

2.2 Clinic Assessment

Patients will be triaged in clinic as to what exercise group to be best placed under and a start date is given with information about the practicalities of the classes i.e. times, location, clothing to wear, what to expect, contact numbers etc. Full classification strategy is outlined in Appendix 3.

Moderate Intensity Classes:

- Acute coronary syndrome
- Following revascularisation
- Stable heart failure
- Stable angina
- Following implantation of cardiac defibrillators and resynchronisation devices

- Heart valve repair/replacement
- Heart transplantation and ventricular assist devices
- Grown up congenital heart disease (GUGH)

Low Intensity Classes

- Unstable / stable angina
- Decompensated heart failure
- Unable to mobilise independently with no walking aids

2.3 Venue Accessibility

Exercise Venue

The exercise component of CR and patient educational talks are now based in an appropriate community based facility. This facility has the capacity to take all of our classes and room for expansion should we require it.

- The venue brings the classes into the community setting.
- Creates a sense of “moving forwards”, empowering patients’ development.
- Increase the likelihood of the individual’s motivation to carry on in the ‘gym’ environment after CR classes finish.

Rehabilitation exercise classes run throughout the day on a Monday and Thursday – five classes per day – This includes 2 low intensity classes and 3 moderate intensity classes. All patients from all class types are invited to join us and each class is an hour session. Every week there is an additional cardiac health talk for a further 40 minutes:

Health Talks are available to all who attend CR (Dietician, Basic life support (BLS), Alcohol liaison. Help to quit smoking, investigation of the heart and Pharmacy, medication advice.

- 15 minute warm up / Blood pressure and pulse recording
- 30/35 minute exercise training. (Patient’s own “bubble”)
- 15 minute cool down.

Rehabilitation exercise class is approximately 10 weeks duration.

3. The Essence of Cardiac Rehabilitation

- Improving the participant’s cardiovascular fitness, strength and endurance without exceeding safe limits of exercise.
- Education concerning cardiovascular disease, including risk factor identification and reduction.
- Assistance in returning to work when indicated.
- Promotion of psychological adjustment.

Cardiovascular disease and associated heart conditions are the leading causes of death in Jersey, affect one in three of the population and consumes one fifth of the entire health

budget. It is therefore proposed that the current service must transform and expand to meet the needs of our Island's population. ⁽¹⁷⁾

Rehabilitation services have been affected by the pandemic with restrictions on class size and frequency and a new threat to the service is the potential closing of the leisure centre. With increased patient workload, staffing plans need to be established to maintain and expand services over the coming five years

4. OTHER SERVICE ACTIVITY

Copies of all presentations given and reports submitted are available for perusal if requested. Guidelines and patient information leaflets are available on My States. The service works to the NSF (National Service Framework) and respective quality standards, national guidelines (e.g. NICE, BACRP, SIGN).

We are also contributors to The National Audit of Cardiac Rehabilitation (NACR). The results are used for comprehensive audit purposes.

We are committed to the dedicated Jersey Heart Support Group (JHSG) - a patient focussed heart charity helping them fundraise throughout the year.

We are also supporters of the British Heart Foundation (BHF) helping to promote and raise awareness throughout the year via fund raising

5. Audit frequency

Internal audit will be conducted quarterly and reported to the Cardiology Team.

Annual audit will be entered as part of the British Association of Cardiovascular Prevention and Rehabilitation (BACPR) audit and service comparison completed and reported to the Cardiology team. These will include all Key Performance Indicators, but also highlight any areas of risk. This will also include additional Patient Experience Measures (PREM'S) to evaluate the service from a patient perspective.

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7. APPENDICES

Appendix 1: NACOR Questionnaire

NACR Questionnaire Assessment 1



THE QUESTIONNAIRES & NATIONAL AUDIT OF CARDIAC REHABILITATION

Cardiac rehabilitation starts with an assessment to see how we can help you and we would be grateful if you would fill in the attached questionnaire. This information is also used for the National Audit of Cardiac Rehabilitation.

We will ask you to fill the questionnaire in again at the end of the rehab programme and then again 12 months later. The reason for collecting the data is to measure what you achieve on this programme, and through combining everyone's information in the National Audit Programme to find ways to improve cardiac rehabilitation. It is also very helpful for us to compare how we are doing here so that, if necessary, we can improve our programme.

WHAT HAPPENS TO THE INFORMATION?

We enter the information into a computer programme in the hospital and this is treated in the same way as all information you provide to your healthcare team.

The data is collected by NHS Digital (formerly HSCIC) who hold data and information relating to health and social care (<http://content.digital.nhs.uk/>). They anonymise it and send it to the BHF Cardiac Care and Education Research Group at the University of York, who combine the data into an annual report. You can download the previous reports here: <http://www.cardiacrehabilitation.org.uk/reports.htm>

The NACR does not hold any personal data which means it will not share any personal data with any other person or organisation. Data, in an anonymised format, collected by the NACR is used to assess the quality of cardiac rehab and for research that aims to clarify which factors determine the success of cardiac rehab.

For further information please see our Privacy Notice: <http://www.cardiacrehabilitation.org.uk/patient-privacy-notice.htm>

WHO SEES MY INFORMATION?

The staff who treat you here, and staff at NHS Digital if necessary. Staff of the National Audit in York see the same information but with the name/NHS number/address details removed so they don't know who it is from.

DO I HAVE TO TAKE PART?

No you don't, this is completely voluntary so you can Opt-out. If you don't want to take part it will not affect your treatment in any way. If you start but want to stop later that is fine too. The NHS has an Opt-out policy which NHS Digital and NACR follow.

For more detail see: <https://digital.nhs.uk/services/national-data-opt-out-programme>

QUESTIONS?

If you have further questions please ask any of your rehab staff.

THANK YOU FOR YOUR HELP

About you

| | | | |
|--------|---|------|--|
| NHS No | <input type="text" value="[Click here to enter text]"/> | DOB | <input type="text" value="[Click here to enter a date.]"/> |
| Name | <input type="text" value="[Click here to enter text]"/> | Date | <input type="text" value="[Click here to enter a date.]"/> |

Gender

Male

Female

Marital Status (please select)

Single 1

Married 2

Permanent partnership 3

Divorced 4

Widowed 5

Separated 6

What is your ethnic group? (Please select)

We are collecting this information to check that everyone has fair access to the help that they need. Tick the one that describes you best, or, if none of them do, tick number 6 (any other).

White - British A

White Irish B

White - Any other White background C

Mixed - White and Black Caribbean D

Mixed - White and Black African E

Mixed - White and Asian F

Any other mixed background G

Asian or Asian British - Indian H

Asian or Asian British - Pakistani J

Asian or Asian British - Bangladeshi K

Any other Asian background L

Black or Black British - Caribbean M

Black or Black British - African N

Any other Black background P

Other Ethnic Groups - Chinese R

Any other S

Previous Events: Other heart problems you have had, before the current event (please select all that apply)

- | | | | |
|-------------------|-----------------------------|------------------|-----------------------------|
| MI (Heart Attack) | <input type="checkbox"/> 1 | Cardiac Arrest | <input type="checkbox"/> 2 |
| Pacemaker | <input type="checkbox"/> 3 | LV Assist Device | <input type="checkbox"/> 4 |
| Angina | <input type="checkbox"/> 6 | ICD | <input type="checkbox"/> 7 |
| Bypass Surgery | <input type="checkbox"/> 8 | Other Surgery | <input type="checkbox"/> 9 |
| Congenital Heart | <input type="checkbox"/> 10 | Angioplasty/PCI | <input type="checkbox"/> 11 |
| Heart Failure | <input type="checkbox"/> 12 | Transplant | <input type="checkbox"/> 13 |
| Other | <input type="checkbox"/> 14 | No / none | <input type="checkbox"/> 15 |
| Arrhythmia | <input type="checkbox"/> 16 | Unknown | <input type="checkbox"/> 99 |

Other Illnesses You’ve Been Told You Have (Comorbidity)

Have you ever been told by a doctor that you have definitely had any of the following illnesses?

Please answer every question even if they are all NO.

- | | | |
|--------------------------------------|-----------------------------|---------------------------------|
| Angina | NO <input type="checkbox"/> | YES <input type="checkbox"/> 1 |
| Arthritis (osteoarthritis) | NO <input type="checkbox"/> | YES <input type="checkbox"/> 2 |
| Cancer | NO <input type="checkbox"/> | YES <input type="checkbox"/> 3 |
| Diabetes | NO <input type="checkbox"/> | YES <input type="checkbox"/> 4 |
| Rheumatism | NO <input type="checkbox"/> | YES <input type="checkbox"/> 5 |
| A stroke | NO <input type="checkbox"/> | YES <input type="checkbox"/> 6 |
| Osteoporosis | NO <input type="checkbox"/> | YES <input type="checkbox"/> 7 |
| Hypertension | NO <input type="checkbox"/> | YES <input type="checkbox"/> 8 |
| Chronic bronchitis | NO <input type="checkbox"/> | YES <input type="checkbox"/> 9 |
| Emphysema | NO <input type="checkbox"/> | YES <input type="checkbox"/> 10 |
| Asthma | NO <input type="checkbox"/> | YES <input type="checkbox"/> 11 |
| Claudication | NO <input type="checkbox"/> | YES <input type="checkbox"/> 12 |
| Back problems or chronic pain | NO <input type="checkbox"/> | YES <input type="checkbox"/> 13 |
| Anxiety | NO <input type="checkbox"/> | YES <input type="checkbox"/> 14 |

- Depression** NO YES 15
- Family History** NO YES 16
- Erectile Dysfunction** NO YES 17
- Hypercholesterolaemia / dyslipidaemia** NO YES 18
- Other illnesses** NO YES 99

Weight, Height and Waist Measurement

| | | | |
|---------------|--|---|--|
| Weight | KG [Click here to enter text.] | or St [Click here to enter text.] | and Lb [Click here to enter text.] |
| Height | M [Click here to enter text.] | or Ft [Click here to enter text.] | and Inches [Click here to enter text.] |
| Waist | CM [Click here to enter text.] | or Inches [Click here to enter text.] | |

Smoking

- Never smoked 1 Ex-smoker 2
- Stopped smoking since event 3 Currently Smoking 4

Alcohol: How much do you drink a week?

One unit of alcohol is about equal to:

- half a pint of ordinary strength beer, lager or cider (3-4% alcohol by volume);
- a small pub measure (25 ml) of spirits (40% alcohol by volume);
- a standard pub measure (50 ml) of fortified wine such as sherry or port (20% alcohol by volume)

There are one and a half units of alcohol in:

- a small glass (125 ml) of ordinary strength wine (12% alcohol by volume);
- a standard pub measure (35 ml) of spirits (40% alcohol by volume).

Units per Week

[Click here to enter text.]

Physical Fitness and Activity

(Chief Medical Officer (CMO) Physical Activity Questionnaire)

| | |
|---|---|
| <p>Do you take regular moderate physical activity of at least 30 minutes duration on average 5 times a week?<i>(or equivalent e.g. 150 minutes over 7 days).</i></p> <p>Moderate activity means anything that takes as much effort as: brisk walking or house work/carrying a light bag on level ground/ mowing the lawn/general DIY like painting and decorating/sports like easy swimming, easy cycling, ballroom dancing etc.</p> | <p>Yes <input type="checkbox"/> No <input type="checkbox"/></p> |
|---|---|

| | |
|--|---|
| <p>Do you do 75 minutes of vigorous exercise a week?</p> <p>Vigorous activity means anything that takes as much effort as: running/vigorous swimming or cycling/aerobics class/ circuit training/digging in heavy ground/chopping wood/ heavy DIY/sports like football, rugby, squash, netball etc.</p> | <p>Yes <input type="checkbox"/> No <input type="checkbox"/></p> |
|--|---|

Quality of Life (Dartmouth Co-op)

PHYSICAL FITNESS.

During the past week what was the hardest physical activity you could do for at least 2 minutes? (Select the box next to the one you feel best describes your fitness)

| | | |
|--|--------------------------|----------|
| <p>Very heavy, for example: run at a fast pace or carry a heavy load upstairs or uphill (25 lbs / 10 kgs)</p> | <input type="checkbox"/> | <p>1</p> |
| <p>Heavy: for example: jog, slow pace or climb stairs or a hill at moderate pace</p> | <input type="checkbox"/> | <p>2</p> |
| <p>Moderate: for example: walk at medium pace or carry a heavy load on level ground (25 lbs / 10 kgs)</p> | <input type="checkbox"/> | <p>3</p> |
| <p>Light: for example: walk, medium pace or carry a light load on level ground (10 lbs / 5 kgs)</p> | <input type="checkbox"/> | <p>4</p> |
| <p>Very light: for example: walk at a slow pace, wash dishes</p> | <input type="checkbox"/> | <p>5</p> |

FEELINGS.

During the past week how much have you been bothered by emotional problems such as feeling anxious, depressed, irritable or downhearted and blue? (Select the box next to the one you feel best describes your feelings)

| | | |
|-------------------|--------------------------|---|
| Not at all | <input type="checkbox"/> | 1 |
| Slightly | <input type="checkbox"/> | 2 |
| Moderately | <input type="checkbox"/> | 3 |
| Quite a bit | <input type="checkbox"/> | 4 |
| Extremely | <input type="checkbox"/> | 5 |

DAILY ACTIVITIES.

During the past week how much difficulty have you had doing your usual activities or task, both inside and outside the house because of your physical and emotional health?

| | | |
|-----------------------------|--------------------------|---|
| No difficulty at all | <input type="checkbox"/> | 1 |
| A little bit of difficulty | <input type="checkbox"/> | 2 |
| Some difficulty | <input type="checkbox"/> | 3 |
| Much difficulty | <input type="checkbox"/> | 4 |
| Could not do | <input type="checkbox"/> | 5 |

SOCIAL ACTIVITIES.

During the past week has your physical and emotional health limited your social activities with family, friends, neighbours or groups?

| | | |
|-------------------|--------------------------|---|
| Not at all | <input type="checkbox"/> | 1 |
| Slightly | <input type="checkbox"/> | 2 |
| Moderately | <input type="checkbox"/> | 3 |
| Quite a bit | <input type="checkbox"/> | 4 |
| Extremely | <input type="checkbox"/> | 5 |

PAIN.

During the past week how much bodily pain have you generally had?

| | | |
|----------------|--------------------------|---|
| No pain | <input type="checkbox"/> | 1 |
| Very mild pain | <input type="checkbox"/> | 2 |
| Mild pain | <input type="checkbox"/> | 3 |
| Moderate pain | <input type="checkbox"/> | 4 |
| Severe pain | <input type="checkbox"/> | 5 |

CHANGE IN HEALTH.

How would you rate your overall health now compared to a week ago?

| | | |
|-----------------|--------------------------|---|
| Much better | <input type="checkbox"/> | 1 |
| A little better | <input type="checkbox"/> | 2 |
| About the same | <input type="checkbox"/> | 3 |
| A little worse | <input type="checkbox"/> | 4 |
| Much worse | <input type="checkbox"/> | 5 |

OVERALL HEALTH.

During the past week how would you rate your health in general?

| | | |
|-----------|--------------------------|---|
| Excellent | <input type="checkbox"/> | 1 |
| Very good | <input type="checkbox"/> | 2 |
| Good | <input type="checkbox"/> | 3 |
| Fair | <input type="checkbox"/> | 4 |
| Poor | <input type="checkbox"/> | 5 |

SOCIAL SUPPORT.

During the past week was someone available to help you if you needed and wanted help?

For example:

- If you felt nervous, lonely, or blue
- Got sick and had to stay in bed
- Needed someone to talk to
- Needed help with daily chores
- Needed help with taking care of yourself

| | | |
|---------------------------------|--------------------------|---|
| Yes, as much as I wanted | <input type="checkbox"/> | 1 |
| Yes, quite a bit | <input type="checkbox"/> | 2 |
| Yes, some | <input type="checkbox"/> | 3 |
| Yes, a little | <input type="checkbox"/> | 4 |
| No, not at all | <input type="checkbox"/> | 5 |

QUALITY OF LIFE. How have things been going for you during the past week?

| | | |
|-----------------------------------|--------------------------|---|
| Very well: could hardly be better | <input type="checkbox"/> | 1 |
| Pretty good | <input type="checkbox"/> | 2 |
| Good & bad parts about equal | <input type="checkbox"/> | 3 |
| Pretty bad | <input type="checkbox"/> | 4 |
| Very bad: could hardly be worse | <input type="checkbox"/> | 5 |

Check that you have selected one answer for every question on all 3 pages

Hospital Anxiety and Depression Scale (HADS)



Clinicians are aware that emotions play an important part in most illnesses. If your clinician knows about these feelings he or she will be able to help you more.

This questionnaire is designed to help your clinician to know how you feel. Read each item below and **select the reply** which comes closest to how you have been feeling in the past week. Don't take too long over your replies, your immediate reaction to each item will probably be more accurate than a long, thought-out response.

| | |
|--|---|
| I feel tense or 'wound up' | I feel as if I am slowed down |
| <input type="checkbox"/> Most of the time | <input type="checkbox"/> Nearly all the time |
| <input type="checkbox"/> A lot of the time | <input type="checkbox"/> Very often |
| <input type="checkbox"/> From time to time, occasionally | <input type="checkbox"/> Sometimes |
| <input type="checkbox"/> Not at all | <input type="checkbox"/> Not at all |
| I still enjoy the things I used to enjoy | I get a sort of frightened feeling like 'butterflies' in the stomach |
| <input type="checkbox"/> Definitely as much | <input type="checkbox"/> Not at all |
| <input type="checkbox"/> Not quite so much | <input type="checkbox"/> Occasionally |
| <input type="checkbox"/> Only a little | <input type="checkbox"/> Quite often |
| <input type="checkbox"/> Hardly at all | <input type="checkbox"/> Very often |
| I get a sort of frightened feeling as if something awful is about to happen | I have lost interest in my appearance |
| <input type="checkbox"/> Very definitely and quite badly | <input type="checkbox"/> Definitely |
| <input type="checkbox"/> Yes, but not too badly | <input type="checkbox"/> I don't take as much care as I should |
| <input type="checkbox"/> A little, but it doesn't worry me | <input type="checkbox"/> I may not take quite as much care |
| <input type="checkbox"/> Not at all | <input type="checkbox"/> I take just as much care as ever |
| I can laugh and see the funny side of things | I feel restless as if I have to be on the move |
| <input type="checkbox"/> As much as I always could | <input type="checkbox"/> Very much indeed |
| <input type="checkbox"/> Not quite so much now | <input type="checkbox"/> Quite a lot |

| | |
|---|---|
| <input type="checkbox"/> Definitely not so much now | <input type="checkbox"/> Not very much |
| <input type="checkbox"/> Not at all | <input type="checkbox"/> Not at all |
| Worrying thoughts go through my mind | I look forward with enjoyment to things |
| <input type="checkbox"/> A great deal of the time | <input type="checkbox"/> As much as I ever did |
| <input type="checkbox"/> A lot of the time | <input type="checkbox"/> Rather less than I used to |
| <input type="checkbox"/> Not too often | <input type="checkbox"/> Definitely less than I used to |
| <input type="checkbox"/> Very little | <input type="checkbox"/> Hardly at all |
| I feel cheerful | I get sudden feelings of panic |
| <input type="checkbox"/> Never | <input type="checkbox"/> Very often indeed |
| <input type="checkbox"/> Not often | <input type="checkbox"/> Quite often |
| <input type="checkbox"/> Sometimes | <input type="checkbox"/> Not very often |
| <input type="checkbox"/> Most of the time | <input type="checkbox"/> Not at all |
| I can sit at ease and feel relaxed | I can enjoy a good book or radio or television programme |
| <input type="checkbox"/> Definitely | <input type="checkbox"/> Often |
| <input type="checkbox"/> Usually | <input type="checkbox"/> Sometimes |
| <input type="checkbox"/> Not often | <input type="checkbox"/> Not often |
| <input type="checkbox"/> Not at all | <input type="checkbox"/> Very seldom |
| Check that you have answered <i>all</i> the questions | |
| Total | A D |
| <p>HADS copyright © R.P. Snaith and A.S. Zigmond, 1983, 1992, 1994. Record form items originally published in <i>Acta Psychiatrica Scandinavica</i>, 67, 361–70, copyright © Munksgaard International Publishers Ltd, Copenhagen, 1983. This edition first published in 1994 by nferNelson Publishing Company Ltd, 9th Floor, 389 Chiswick High Road, London W4 4AL GL Assessment is part of the GL Education Group This form may not be reproduced by any means without first obtaining permission from the publisher.</p> <p style="text-align: center;">Email: permissions@gl-assessment.co.uk</p> | |

Work and Employment

Please complete your employment status as it is **at the time of filling in this questionnaire**. If you are in paid work, or currently looking for work and could start in the next 2 weeks, or are retraining for work, choose from the Grey box;

If you are not paid, or are on temporary/long term sickness benefits, please choose from the White box. Please choose one item, from one box, only:

| | | | |
|-----------------------------|----------------------------|---------------------------|-----------------------------|
| Employed Full Time | <input type="checkbox"/> 1 | Looking after family/home | <input type="checkbox"/> 7 |
| Employed Part Time | <input type="checkbox"/> 2 | Retired | <input type="checkbox"/> 8 |
| Self-Employed Full Time | <input type="checkbox"/> 3 | Permanently Sick/Disabled | <input type="checkbox"/> 9 |
| Self-Employed Part Time | <input type="checkbox"/> 4 | Temporarily Sick/Injured | <input type="checkbox"/> 10 |
| Unemployed/Looking for work | <input type="checkbox"/> 5 | Student | <input type="checkbox"/> 11 |
| Government Training Scheme | <input type="checkbox"/> 6 | Other Reason Not Working | <input type="checkbox"/> 12 |

Medication / Drugs

Are you currently taking any of these medicines? Please select all those you are taking in each drug class. (We are wanting drugs related to your cardiac event, so do not worry about medication that is not included in the list below.)

| Drug Class | Drug | Tick ✓ |
|-------------------------------------|---------------------|-----------------------------|
| ACE Inhibitors | Captopril | <input type="checkbox"/> 1 |
| | Enalapril | <input type="checkbox"/> 2 |
| | Lisinopril | <input type="checkbox"/> 3 |
| | Perindopril | <input type="checkbox"/> 4 |
| | Ramipril | <input type="checkbox"/> 5 |
| | Trandolapril | <input type="checkbox"/> 6 |
| | Quinapril | <input type="checkbox"/> 7 |
| | Other/Not Specified | <input type="checkbox"/> 8 |
| Angiotensin Receptor Blockers (ARB) | Candesartan | <input type="checkbox"/> 9 |
| | Losartan | <input type="checkbox"/> 10 |
| | Valsartan | <input type="checkbox"/> 11 |
| | Other/Not Specified | <input type="checkbox"/> 12 |
| Heart Rate Meds | Bisoprolol | <input type="checkbox"/> 13 |
| | Carvedilol | <input type="checkbox"/> 14 |
| | Nebivolol | <input type="checkbox"/> 15 |
| | Atenolol | <input type="checkbox"/> 16 |
| | Propranolol | <input type="checkbox"/> 17 |
| | Metoprolol | <input type="checkbox"/> 18 |
| | Ivabradine | <input type="checkbox"/> 19 |
| | Other/Not Specified | <input type="checkbox"/> 20 |

| | | |
|---|---|---|
| Diuretic: loop | Bumetanide Ethacrynic Acid Frusemide Torsemide Other/Not Specified | <input type="checkbox"/> 21 <input type="checkbox"/> 22 <input type="checkbox"/> 23 <input type="checkbox"/> 24 <input type="checkbox"/> 25 |
| Diuretic: Thiazide | Bendroflumethiazide Metolazone Other/Not Specified | <input type="checkbox"/> 26 <input type="checkbox"/> 27 <input type="checkbox"/> 28 |
| Selective Aldosterone Receptor Antagonist (SARA) Diuretic/Antihypertensive | Eplerenone Spironolactone Other/Not Specified | <input type="checkbox"/> 29 <input type="checkbox"/> 30 <input type="checkbox"/> 31 |
| Antiplatelet | Aspirin Clopidogrel Other/Not Specified | <input type="checkbox"/> 32 <input type="checkbox"/> 33 <input type="checkbox"/> 34 |
| Antiarrhythmics | Digoxin Amiodarone Other/Not Specified | <input type="checkbox"/> 35 <input type="checkbox"/> 36 <input type="checkbox"/> 37 |
| Calcium Channel Blockers (CCBs) | Amlodipine Felodipine Diltiazem Verapamil Other/Not Specified | <input type="checkbox"/> 38 <input type="checkbox"/> 39 <input type="checkbox"/> 40 <input type="checkbox"/> 41 <input type="checkbox"/> 42 |
| Therapy for Lipids (Statins) | Atorvastatin Pravastatin Rosuvastatin Simvastatin Other/Not Specified | <input type="checkbox"/> 43 <input type="checkbox"/> 44 <input type="checkbox"/> 45 <input type="checkbox"/> 46 <input type="checkbox"/> 47 |
| Anticoagulant | Warfarin Other/Not Specified | <input type="checkbox"/> 48 <input type="checkbox"/> 49 |
| Vasodilators | Nitrates (incl GTN Spray) Other/Not Specified | <input type="checkbox"/> 50 <input type="checkbox"/> 51 |
| Current Diabetes Therapy | Metformin Sulphonylurea Glitazone Insulin Other/Not Specified | <input type="checkbox"/> 52 <input type="checkbox"/> 53 <input type="checkbox"/> 54 <input type="checkbox"/> 55 <input type="checkbox"/> 56 |

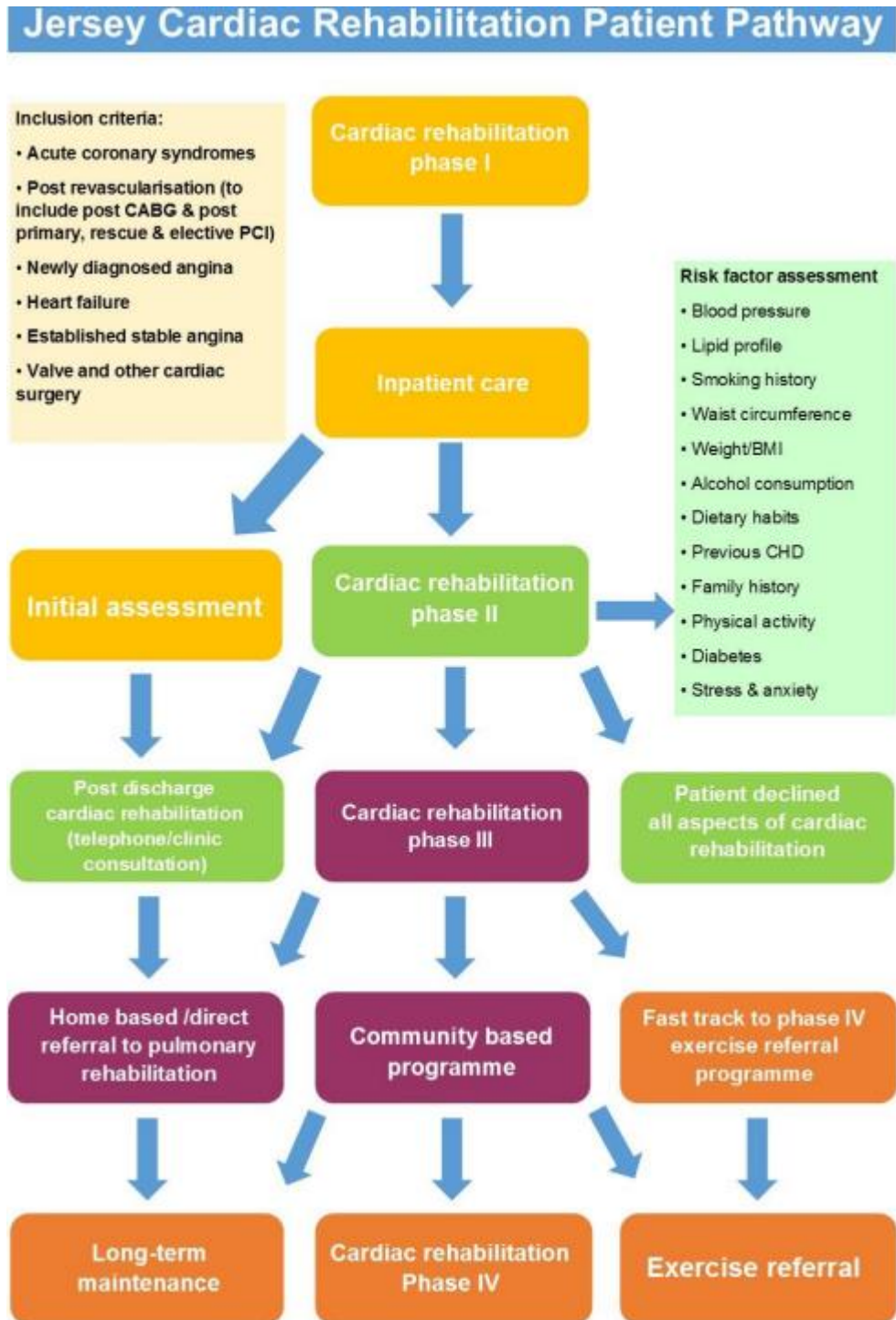
Total Activity Measure

We'd like to know how active you've been in the last week, and how many minutes one of these activities typically lasts. Please put a score in **all 6 boxes** even if the answer is 0. In this questionnaire the last week refers to the week nearest to the point of starting the formal exercise part of your rehabilitation.

NB: If you are filling in this questionnaire at home, and are finding this question difficult, please leave it, and fill it in when you are at your first rehab appointment or clinic – your clinician will be able to help you with it.

| | |
|--|---|
| 1. In the last week, how many times did you do strenuous activities? | [Click here to enter text.] |
| Typically, how many minutes did one of those strenuous activities last? | |
| Strenuous activity means anything that takes as much effort as: running / vigorous swimming or cycling/aerobics class/ circuit training / digging in heavy ground/chopping wood/ heavy DIY/sports like football, rugby, squash, netball etc. | [Click here to enter] |
| 2. In the last week, how many times did you do moderate activities? | [Click here to enter] |
| Typically, how many minutes did one of those moderate activities last? | |
| Moderate activity means anything that takes as much effort as: brisk walking or house work/carrying a light bag on level ground/ mowing the lawn/general DIY like painting and decorating/sports like easy swimming, easy cycling, ballroom dancing etc. | [Click here to enter] |
| 3. In the last week, how many times did you do mild activities? | [Click here to enter] |
| Typically, how many minutes did one of those mild activities last? | |
| Mild activity means anything that takes as much effort as: easy walking or very light housework/browsing in shops/slow dancing/hand weeding in the garden/sports like bowls, river fishing, golf etc. | [Click here to enter] |

Appendix 2: Jersey cardiac Rehabilitation patient Pathway and guide



| Cardiac Rehabilitation Pathway Guide | |
|--------------------------------------|---|
| Phase 1 | <ul style="list-style-type: none"> • Patient identified for cardiac rehabilitation as an inpatient • Give information on: diagnosis, treatment and recovery • Give written information (BHF booklets and Jersey guidance for cardiac patients referred off-island for treatment) • Referred to specialist services if need identified (e.g. smoking cessation, specialist dietary advice, psychology service, counselling and psychological support, etc.) • On discharge, patient is referred to local cardiac rehabilitation team for ongoing management |
| Phase 2 | <ul style="list-style-type: none"> • Telephone contact within 2-5 working days • Give information on: diagnosis, treatment, recovery and secondary prevention • Offer clinic appointment within 2 weeks +/- medicines management and secondary prevention • Patient assessment of symptoms and risk stratification • Psychological/quality of life status (including HAD psychological assessment) • Functional status: functional assessment of activities of daily living • Medication review: patient understanding and compliance • Education and goal setting: patient understanding of diagnosis and risk factors • Symptom recognition and management • Activity advice and goals |
| Phase 3 | <ul style="list-style-type: none"> • Programmes provide for a minimum of 8 weeks participation (three times weekly) • Programmes are delivered by an appropriately trained team consisting of: nurses, physiotherapists and rehabilitation assistants • Programmes provide the option of a 'structured supervised exercise session' or supported 'home-based exercise programme' as appropriate • Programmes provide patients with access to health education & secondary prevention / risk factor management with relevant supporting literature as appropriate i.e. dieticians, pharmacists, clinical psychologists, smoking cessation and alcohol liaison • Programmes provide patients with feedback and on-going support with goal setting and support with social / vocational / leisure / occupational issues • Programmes provide access to psychological support and stress management • Programmes provide the option of family support / engagement |
| Phase 4 | <ul style="list-style-type: none"> • On completion of phase 3 programme, each patient is offered a plan for ongoing maintenance • Patient is offered supervised exercise referral scheme at Active local leisure centres • Alternatively offer community support group i.e. Jersey Heart Support Group or private gentle exercise programme |
| 12 month post CR | <ul style="list-style-type: none"> • Patients are contacted approximately 12 months after completing their cardiac rehabilitation programme. This is an initial telephone consultation regarding their ongoing lifestyle management • They are offered a clinic consultation if required to reflect on their progress and future plan |

Appendix 3: Low/Moderate Criteria

Low/Moderate Criteria

The risk stratification for this class is made up of ischaemic burden, Arrhythmic potential, LV function, functional capacity, valve disease and post event complications. This includes the following

Low Intensity

- Presence of angina +/- ST depression
- Unpredictable angina, not well managed.
- FFR – 0.75
- Ongoing AF
- Cardiac defibrillator/ ICD with recent shocks or anti -tachy pacing delivered
- Presence of heart failure symptoms
- Echo ejection fraction ~ 40% (moderate to severe)
- Aortic stenosis and severe aortic regurgitation
- Diabetes not well controlled or self-managed
- Compliance issues with medication
- High supervised needs e.g. hard of hearing, poor balance

Moderate Intensity

- Predictable/well managed angina/ newly diagnosed
- Evidence of myocardial ischaemia successful revascularisation of culprit lesion
- Minor plaque disease present
- Moderate aortic regurgitation
- Ongoing AF (with controlled ventricular rate)
- Implantable cardiac defibrillator with no events or reprogramming required in the last 8 weeks
- Resting ejection fraction 40-49%
- Post MI thrombus
- Poorly controlled hypertension
- Systematic postural hypotension
- Significant other valve pathology
- Diabetes well controlled
- Compliant with exercise regime

Appendix 4 – CR In- patient form

Cardiac Rehabilitation Service, Cardiology Department, General Hospital, St. Heller, JED 406
Tel: 442747, Bleep 305

States of Jersey

CARDIAC REHABILITATION OUTPATIENT ASSESSMENT PHASE 2

Date _____ Ward _____ URN _____

Hospital Sticker

Was the patient referred to the cardiac team? Yes No

Was the patient referred for Echo? Yes No

How long did it take to be performed? _____

Consultant _____

Diagnosis _____

Discharge Date _____ Admission Date _____ Revisit Date _____

| Risk Factors | | | |
|------------------------------------|--------------------------|--------------------------|--------------------------|
| | YES | NO | NEVER |
| Smoker | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Received Smoking cessation advice? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Hypertension | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Cholesterol | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Statin | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Diabetic | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Years stopped _____

Currently Smoking _____ per day

Current BP _____ Pulse _____

Total _____ HDL _____ LDL _____

TG _____

New Diagnosis Yes / No

Diast _____

Weight _____ Height _____ BMI _____ Alcohol _____ Units per Week

Family History Yes / No

BMI / Other literature given _____

Exercise level Never Rarely Occasionally Frequently

Outstanding Tests _____

Medication Aspirin B Blocker Statin ACE GTN Clopidogrel

Other Please specify _____

Comments / Recommendations _____

Occupation _____ Returning to Work Yes / No

| Diagnosis | | | |
|---|--|--|---|
| <input type="checkbox"/> Angioplasty / Stenting | Date | <input type="checkbox"/> Valve Surgery | Date |
| No. of Vessels | Location | Valve | AVR / MVR |
| <input type="checkbox"/> CABG | Date | Type | Mechanical / Tissue |
| No. of Grafts | Location | Wound | |
| | | Complications | |
| <u>Presenting Symptoms</u> | | | |
| | | | |
| Investigations - Results | | | |
| <input type="checkbox"/> ECHO | Date | <u>Troponin</u> | |
| LV Systolic Dysfunction | None / Mild / Moderate / Severe / Segmental / Global | | |
| Other abnormalities | | | |
| <input type="checkbox"/> Exercise Test | Date | Protocol Type | |
| <u>Medication</u> | | | |
| Medication | Name / Dose | Medication | Name / Dose |
| Aspirin | | Splronolactone | |
| Clopidogrel | | Digoxin | |
| Warfarin | | Antiarrhythmic | |
| Beta-blocker | | <u>Other Medication - Name / Dose</u> | |
| Ace Inhibitor | | Diuretic | |
| Statins | | Nitrate | |
| Co-antagonist | | | |
| K+ Activator | | | |
| <u>Social History / Housing</u> | | | |
| Lives alone—no support | House—uses stairs | Upside's flat with stairs | |
| Lives alone—support available | House—cannot use stairs | Nursing / Care home | |
| Lives with family/partner/carer | Bungalow | | |
| Carer for other person | Ground floor flat | | |
| Social services support | Upside's flat with lift | | |
| <u>Stress</u> | | | |
| | HAD | A / D | |
| | GMS | N / P | |
| <u>Phase 3</u> | | | |
| Pre-assessment date | Start date | Completion date | |
| <u>Reason for non-attendance</u> | | | |
| <input type="checkbox"/> Transport problems | <input type="checkbox"/> Deceased | <input type="checkbox"/> Symptoms re-occurring | <input type="checkbox"/> Disability / poor mobility |
| <input type="checkbox"/> Visitor | <input type="checkbox"/> No longer wished to attend | <input type="checkbox"/> Declined | <input type="checkbox"/> Ongoing Investigations |
| | | <input type="checkbox"/> Returned to work | |

