

Initial Assessment

Aim of module

To identify the individual needs of CR participants, which will inform the agreed personalised goals and initiation of appropriate CR services.

Logic

- All the major CR guidelines recommend that individualised assessments should be provided in the initial stages of CR and re-assessed prior to completion.
- Collaborative goal-setting and shared decision-making is essential to fostering self-care in a chronic disease population.¹ This process should commence at the initial assessment and continue to be reviewed throughout the CR program.

Initial Assessment

CR programs should undertake a comprehensive initial assessment that enables the needs of the CR participant to be understood and leads to an individualised care plan.

Essential components of the initial assessment include:

- socio-demographic information
- clinical history
- exercise capacity
- lifestyle risk factors (physical activity, diet, smoking, alcohol)
- psychosocial health (depression, anxiety)
- medications

Other **desirable components** to consider at the initial assessment include:

- adiposity (waist circumference)
- medical risk factors (blood pressure, lipids, blood glucose)
- quality of life
- return to activities of daily living

NHMRC Level of Evidence: Expert Opinion

- Enter assessment data directly into an electronic database to enable easy review of participant goals, progress and outcomes and to facilitate data extraction, analysis, outcome evaluation and report generation.²



Cardiac rehab:

if it's not offered they can't attend – **the conversation is vital**

Example Content

Table 1. Core elements to include in an initial patient assessment common to all clinical conditions adapted from Piepoli et al. (2014)³ and Woodruffe et al. (2015)²

| | |
|-----------------------------|--|
| Socio-demographics | Including name, medical record number, gender, residential postcode, date of birth, living circumstance, culturally and linguistically diverse background, language spoken at home, Aboriginal or Torres Strait Islander status, employment status, education level, social support. |
| Clinical history | Principal referral diagnosis, cardiac interventions/ complications, past and current medical history, symptom and wound pain review (frequency, severity, management, medical review required), sternal instability, required aids: hearing aids, glasses, gait aids. Tool option: Sternal instability: sternal instability scale . |
| Exercise capacity | Assessment: Symptom-limited exercise testing, either on bicycle ergometer or on treadmill, may be considered. Other options include sub-maximal exercise evaluation and/or Six-Minute Walk Test or Incremental Shuttle Walk Test. Mobility/physical limitations that impede exercise should be assessed. If feasible, peak exercise capacity assessment may be considered. |
| Adiposity | Assessment: Measure waist circumference (cm) Target: men: <94cm; women <80cm |
| Medical risk factors | |
| Lipid management | Assessment: Total cholesterol, low density lipoprotein (LDL), high density lipoprotein (HDL), Triglycerides. <ul style="list-style-type: none"> • Target: Secondary prevention targets in CVD: Low-density lipoprotein cholesterol (LDL-C) < 1.8 mmol/L • High-density lipoprotein cholesterol (HDL-C) > 1.0 mmol/L • Triglyceride (TG) < 2.0 mmol/L. |
| Blood pressure | Assessment: Blood pressure using the Heart Foundation hypertension guidelines . Target: <140/90mmHg. |
| Diabetes | Screening: Assess presence of diagnosed Type 1 or 2 diabetes. Document glycosylated haemoglobin (HbA1c) and fasting blood glucose level (BGL) where available. Target: HbA1c < 7mmol/L or individualised target set by healthcare provider based on duration of diabetes, presence of CVD and hypoglycaemic risk. |

| Lifestyle risk factors | |
|-------------------------------|---|
| Physical activity | <p>Assessment: domestic, occupational, and recreational needs; activities relevant to daily life; barriers to increased physical activity, upper limb assessment.</p> <p>Tool option: Validated self-report: e.g., EPIC Physical Activity Questionnaire; Objective measures: physical activity monitors and Apps (e.g. Fitbit, Apple watch), step counters (e.g. pedometry). Difficulty Questionnaire (FDQ) for upper limb ADLs.</p> <p>Target: Minimum of 150mins/week of moderate intensity physical activity.</p> |
| Diet/nutrition | <p>Screening: Assessment of nutritional status.</p> <p>Tool option: Healthy Eating Quiz (University of Newcastle), Mini Nutritional Assessment.</p> <p>Target: Adoption of a healthy dietary pattern.</p> |
| Tobacco use | <p>Screening: History of tobacco use. Determine if current smoker (within 1 month of assessment); Ex-smoker (quit >1 month); or never smoked; previous attempts at quitting.</p> <p>Target: Tobacco cessation.</p> |
| Alcohol use | <p>Screening: History of alcohol intake.</p> <p>Target: < 2 standard drinks per day.</p> |
| Illicit substances | <p>Screening: History or current use of illicit substance use.</p> |
| Psychosocial health | |
| Depression | <p>Screening: Past history of depression; screen for current signs of depression using a validated tool.</p> <p>Tool option: Initial screening tools such as PHQ-2. Participants who screen positive should have further evaluation with the longer form (PHQ-9). Alternatively, use nominated screening tool of health service or consider Cardiac Depression Scale (CDS), Hospital Anxiety and Depression Screener (HADS), BDI-II.</p> |
| Anxiety | <p>Screening: Past history of anxiety, screen for current signs of anxiety using nominated screening tool of health service.</p> |
| Quality of life | <p>Use nominated screening tool of health service or consider WHOQOL-BREF, AQoL (e.g. AQoL-4D), EQ-5D-5L.</p> |
| Medications | |
| Medications | <p>Assessment: List all cardiac medications (dose and frequency); assess adherence to pharmacotherapy and understanding of medications.</p> |

Activities of daily living

Return to activities of daily living

Screening: Has the participant:

- Graded return to work (as applicable) and time after event
- Returned to driving (as applicable) and time after event
- Resumed sexual activities (if applicable) and time after event
- Recorded reasons/concerns for not achieving the above.

Goal-setting

Following the initial assessment, CR participants should be encouraged to set achievable goals with support from CR staff.

NHMRC Level of Evidence: Expert Opinion

Example content:

- Use the needs determined in the initial assessment to inform the goal-setting process.
- Assess CR participants continuously throughout the program and review their goals regularly based upon the initial assessment.
- Ensure each participant has a copy of their CR management plan.
- Give a copy of the care plan to the participant's cardiologist and general practitioner.

Rationale: Many international guidelines identify goal-setting as a critical component of CR. Goal-setting has been shown to be an effective intervention to increase engagement for participants in CR.⁴ The British and Scottish guidelines recommend assessment after completion of the CR program to determine achievement of goals during the program and to formulate plans for transition into long-term management.^{4,5}

Resources for clinicians

- Sample data collection tool (see Table 2)

References

1. Department of Health and Human Services. Care for people with chronic conditions. Guide for the Community Health Program (Internet). Melbourne: Victorian Government; 2016 Nov (cited 2018 May 28). Available from: <https://www2.health.vic.gov.au/primary-and-community-health/community-health/community-health-program/chronic-care-guide>
 2. Woodruffe S, Neubeck L, Clark RA, Gray K, Ferry C, Finan J, et al. Australian Cardiovascular Health and Rehabilitation Association (ACRA) Core Components of Cardiovascular Disease Secondary Prevention and Cardiac Rehabilitation. Heart, Lung and Circulation. 2014.
 3. Piepoli MF, Corra U, Adamopoulos S, Benzer W, Bjarnason-Wehrens B, Cupples M, et al. Secondary prevention in the clinical management of patients with cardiovascular diseases. Core components, standards and outcome measures for referral and delivery: a policy statement from the cardiac rehabilitation section of the European Association for Cardiovascular Prevention & Rehabilitation. Endorsed by the Committee for Practice Guidelines of the European Society of Cardiology. European Journal of Preventive Cardiology. 2014;21(6):664–681.
 4. Scottish Intercollegiate Guidelines Network. Cardiac rehabilitation. A national clinical guideline. (Internet). Edinburgh: SIGN; 2017 (cited 2018 Feb 1). Report No.: SIGN publication no. 150. Available from: <http://www.sign.ac.uk>
 5. British Association for Cardiovascular Prevention and Rehabilitation. The BACPR Standards and Core Components for Cardiovascular Disease Prevention and Rehabilitation 2017 (3rd Edition) (Internet). 2017 (cited 2018 Jan 2). Available from: http://www.bacpr.com/resources/BACPR_Standards_and_Core_Components_2017.pdf
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Table 2. Sample data collection tool of each component during and after a CR program adapted from Piepoli et al (2014)

| | | | |
|--|------------------|---|------------|
| Patient Name: | | Patient Identifier: | |
| Address: | | | Post code: |
| Date of Birth: | Medicare Number: | Gender: <input type="checkbox"/> M <input type="checkbox"/> F <input type="checkbox"/> Indeterminate/unspecified | |
| Are you of Aboriginal or Torres Strait Islander origin? <input type="checkbox"/> N <input type="checkbox"/> Y Aboriginal <input type="checkbox"/> Y Torres Strait Islander | | Culturally and linguistically diverse: <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> Unknown Language spoken at home: | |
| Employment status: | | Social support: | |
| Current Cardiac Diagnosis: a) Cardiothoracic surgery b) STEMI c) NSTEMI d) Unstable angina/IHD/Angina e) Congestive Heart Failure / Cardiomyopathies f) Atrial fibrillation/Flutter/SVT g) ICD h) PPM i) Elective Percutaneous Coronary Intervention (POBA/Stent/Rotoblator/DEB) j) Percutaneous Cardiac Interventions (TAVI/ASD repair/volvotomies) k) Other | | | |
| Interventions received/complications: a) Cardiothoracic surgery b) Primary Percutaneous Cardiac Interventions c) Cardiogenic shock/Congestive Heart Failure d) Atrial fibrillation/flutter/SVT e) ICD/LifeVest f) PPM e) Elective/Staged Percutaneous Coronary Intervention | | | |
| Date of event/s: | | | |
| Other Medical history: | | | |
| Required aids: (hearing aids, glasses, gait aids) | | | |
| GP name: | | GP contact details: | |
| Cardiologist name: | | Cardiologist contact details: | |

| <i>Date</i> | Target goal | Initial Assessment | Intervention Plan and Communication | Re-assessment Prior to Completion | Changes in Intervention Plan and Communications |
|--|---|--|--|--|---|
| Physical activity/sedentary behaviour | Minimum 150 mins/week of moderate intensity physical activity Aim to increase awareness around sedentary behaviour and reduce periods of sedentary behaviour | <input type="checkbox"/> At target <input type="checkbox"/> Below target | <input type="checkbox"/> Education completed concerning optimal physical activity, barriers to increasing physical activity. <i>Complete only if below target</i> <input type="checkbox"/> Intervention plan developed with the CR participant | <input type="checkbox"/> At target <input type="checkbox"/> Below target | <i>Complete only if below target</i> <input type="checkbox"/> Intervention plan developed with the CR participant <input type="checkbox"/> Health care provider notified |
| Exercise capacity | Assessment of exercise tolerance and development of an individualised exercise prescription | <input type="checkbox"/> Assessment and tailored exercise prescription completed <input type="checkbox"/> Assessment and tailored exercise prescription not completed | <input type="checkbox"/> Exercise prescription communicated to the patient and health care provider | <input type="checkbox"/> Re-assessment and exercise prescription completed <input type="checkbox"/> Re-assessment and exercise prescription not completed | <input type="checkbox"/> Revised exercise prescription communicated to the patient and health care provider |
| Diet/Nutritional counselling | Heart healthy dietary pattern, wide variety; e.g. DASH, Mediterranean diet | <input type="checkbox"/> Assessment of eating pattern completed <input type="checkbox"/> Assessment of eating pattern not assessed | Education completed: <input type="checkbox"/> Target dietary pattern <input type="checkbox"/> Recommended portion sizes <input type="checkbox"/> Interpreting nutritional information and food panels <input type="checkbox"/> Referral to a dietitian if complex dietary requirements | <i>Complete only if below target on initial assessment</i> <input type="checkbox"/> At target <input type="checkbox"/> Below target | <input type="checkbox"/> Communicate with health care provided as needed <input type="checkbox"/> Referral to a dietitian if required |
| Adiposity | Waist circumference: men <94cm women <80cm | <input type="checkbox"/> At target <input type="checkbox"/> Above target | <input type="checkbox"/> Education completed concerning target goals, diet, regular physical activity <input type="checkbox"/> Provided strategies to enhance self-monitoring of weight <input type="checkbox"/> Referral to a dietitian / weight management program if required/available | <input type="checkbox"/> At target <input type="checkbox"/> Above target | <i>Complete only if remains above target</i> <input type="checkbox"/> Additional education completed concerning target goals, diet, behaviour change, exercise <input type="checkbox"/> Referral to a dietitian / weight management program <input type="checkbox"/> Health care provider notified of above target |

| | | | | | |
|-------------------------------|--|--|--|---|---|
| Lipid control | <p>Low-density lipoprotein cholesterol (LDL-C) < 1.8 mmol/L§</p> <ul style="list-style-type: none"> • High-density lipoprotein cholesterol (HDL-C) > 1.0 mmol/L • Triglyceride (TG) < 2.0 mmol/ | <input type="checkbox"/> Optimal control <input type="checkbox"/> Suboptimal control | <p><i>Applies to all participants with CVD. Education completed:</i></p> <input type="checkbox"/> Target lipid goals <input type="checkbox"/> Medication compliance <input type="checkbox"/> Lifestyle modification | <p><i>Complete only if suboptimal control on initial assessment</i></p> <input type="checkbox"/> Patient encouraged to contact healthcare provider about reassessment | <input type="checkbox"/> Policy in place to communicate with health care provider as needed |
| Blood pressure control | <140/90mmHg | <input type="checkbox"/> Participant with diagnosis of treated or untreated hypertension <input type="checkbox"/> Not hypertensive | <p><i>Complete only if participant has a diagnosis of hypertension:</i></p> <p>Education completed:</p> <input type="checkbox"/> Target BP goals <input type="checkbox"/> Medication compliance <input type="checkbox"/> Lifestyle modification | <input type="checkbox"/> Intermittent monitoring of BP during CR | <input type="checkbox"/> Policy in place to communicate with health care provider, including thresholds for communication |
| Diabetes status | <ul style="list-style-type: none"> • HbA1c ≤ 7mmol/L. Or individualised target set by healthcare provider based on duration of diabetes, presence of CVD and hypoglycaemic risk | <input type="checkbox"/> Participant with diagnosis of treated or untreated diabetes <input type="checkbox"/> Not diabetic | <p><i>Complete only if participant has a diagnosis of diabetes:</i></p> <p>Education completed:</p> <input type="checkbox"/> Target BP goals <input type="checkbox"/> Medication compliance <input type="checkbox"/> Lifestyle modification | <p><i>Complete only if suboptimal control on initial assessment</i></p> <input type="checkbox"/> Patient encouraged to contact healthcare provider about reassessment | <input type="checkbox"/> Policy in place to communicate with health care provider, including thresholds for communication |
| Tobacco use | <p>Complete cessation of tobacco</p> | <input type="checkbox"/> Never <input type="checkbox"/> Ex-smoker (quit > 1 month ago) <input type="checkbox"/> Current (within 1 month of assessment) | <p><i>Complete only if current or recent tobacco use</i></p> <input type="checkbox"/> Brief intervention provided using the Ask, Advise, Help model <input type="checkbox"/> Offered referral to a tobacco cessation program (e.g. QUIT) <input type="checkbox"/> Healthcare provider notified | <input type="checkbox"/> Abstaining <input type="checkbox"/> Still smoking | <p><i>Complete only if still smoking</i></p> <input type="checkbox"/> Individual education and counselling <input type="checkbox"/> Encouraged to use nicotine patches or medications <input type="checkbox"/> Referral to a tobacco cessation program <input type="checkbox"/> Healthcare provider notified |
| Alcohol use | < 2 standard drinks per day | <input type="checkbox"/> Does not drink or below target levels <input type="checkbox"/> At target <input type="checkbox"/> Above target | <p><i>Complete only if above target levels:</i></p> <input type="checkbox"/> Education/counselling provided <input type="checkbox"/> Healthcare provider notified | <input type="checkbox"/> At target <input type="checkbox"/> Above target | <p><i>Complete only if drinking above target levels</i></p> <input type="checkbox"/> Individual education and counselling <input type="checkbox"/> Healthcare provider notified |
| Psychosocial health | <p>Screen for depression and anxiety. HRQoL using a valid and reliable screening tool</p> | <input type="checkbox"/> Participant screened for depression/anxiety <input type="checkbox"/> Participant not screened for depression/anxiety | <input type="checkbox"/> Results discussed with participant <p><i>Complete only if screening tool indicates possible distress</i></p> <input type="checkbox"/> Healthcare provider notified | <input type="checkbox"/> Participant re-screened for depression/anxiety <input type="checkbox"/> Participant not re-screened | <p><i>Complete only if screening indicates possible distress</i></p> <input type="checkbox"/> Results discussed with participant <input type="checkbox"/> Healthcare provider notified |

| | | | | | |
|--|---|---|---|---|--|
| <p>Medications</p> | <p>Understanding of basic indications and benefits of commonly prescribed cardiac medications</p> <p>Improving medication adherence</p> | <p><input type="checkbox"/> Participant has been prescribed preventive medications by his/her health care provider</p> <p><input type="checkbox"/> Participant has not been prescribed preventive medications by his/her health care provider</p> | <p><input type="checkbox"/> Education and counselling about the importance of adherence to appropriate preventive medications</p> | <p><input type="checkbox"/> Participant has been prescribed preventive medications by his/her health care provider</p> <p><input type="checkbox"/> Participant has not been prescribed preventive medications by his/her health care provider</p> | <p><input type="checkbox"/> Participant is encouraged to discuss questions or concerns about prescribed medication with his/her healthcare provider</p> |
| <p>Return to daily activities</p> | <p>Return to previous activities including (as applicable), return to work, return to driving, return to sexual activities</p> | <p><input type="checkbox"/> Returned to daily activities</p> <p><input type="checkbox"/> Not returned to daily activities</p> | <p><input type="checkbox"/> Discussed barriers/concerns the participant has regarding returning to daily activities</p> <p><input type="checkbox"/> Provided education/resources to assist participant to return to daily activities e.g. information on driving restrictions</p> <p><input type="checkbox"/> Referral to occupational therapist if available</p> | <p><i>Complete only if not returned to daily activities</i></p> <p><input type="checkbox"/> Returned to daily activities</p> <p><input type="checkbox"/> Not returned to daily activities</p> | <p><i>Complete only if not returned to daily activities</i></p> <p><input type="checkbox"/> Participant is encouraged to discuss questions or concerns</p> <p><input type="checkbox"/> Healthcare provider notified</p> <p><input type="checkbox"/> Referral to occupational therapist</p> |

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