



New Zealand Cardiac Support and Secondary Prevention (Cardiac Rehabilitation) Core Components

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The New Zealand secondary prevention core components have been developed to update previous guidance for cardiac secondary prevention and cardiac rehabilitation, in line with similar guidance from international organisations such as the Australian Cardiac Rehabilitation Association (ACRA) and the British Cardiac Rehabilitation Association (BCRA).

The aim of the current guidance is to emphasize a more holistic, patient centric approach. This involves needs based assessment and programme design, attention to psychological and social of both non-engagement and cardiac risk, working in partnership with the patient, utilising multiple modalities of delivery for patient convenience and practice that aligns with Maori cultural values.

The guidance centres around 6 core components which provide a framework for minimum standards of care in secondary prevention in Aotearoa/New Zealand. It also sets a number of KPIs to encourage uniformity of care in the country.

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Background

Ischaemic Heart Disease is a major cause of morbidity and mortality in New Zealand/Aotearoa and this imposes a large social and economic burden on all levels of society; including the individual, whanau/family, businesses and the state¹. These factors in turn can increase the risk to patients².

A first ischaemic event strongly predicts subsequent ischaemic events and 43% of acute presentations with an ischaemic event in New Zealand are in patients who have suffered a previous event^{3,4}. Engagement and participation with secondary prevention services is well proven to improve both short and long-term outcomes and quality of life via reduction of a number of modifiable risk factors⁵⁻⁷. This requires sustained lifelong changes in behaviours for patients including uptake of secondary prevention medication and adopting a healthy lifestyle.

District health boards provide secondary prevention services, post discharge to empower lifelong healthy behaviours, however, a number of issues have been identified; for example uptake by patients is low at 30% nationally for a variety of complex reasons and there is inconsistent service delivery and availability across the country⁸. Moreover the transition from secondary prevention services to primary care is not well established and is under resourced^{9,9}.

Whilst secondary prevention has previously been prescriptive and paternalistic, there is increased awareness that this approach is not fit for purpose¹⁰. This approach ignored cultural, social, spiritual and the psychological needs of the individual and did not encourage patients to take control of their own health. In addition, data suggests that patients at highest risk of ischaemic events have the greatest difficulty in accessing services and have the lowest engagement rates¹¹. The burden of disease falls most heavily on Maori, Pacifica¹², the poor and elderly and these patients confront the greatest difficulty in accessing services^{8,11,13}. Nevertheless, they are also the patients who would benefit most from support and secondary prevention. Studies have shown that attention and respect for cultural considerations

in Maori patients confers no additional cost , but impacts positively on engagement , satisfaction and clinical outcomes ^{14,15}.

Modern secondary prevention is evolving into a partnership between health workers, patients and whanau to empower lifelong healthy changes¹⁶⁻¹⁹. This collaborative approach requires delivery of services in a way that best suits patients and their personal circumstances^{20,21}.

To facilitate this, cardiac support and secondary prevention professionals are required to have sufficient knowledge, expertise and support to manage the complex, specialised cardiac needs of a patient who may have significant co-morbidities. They can also facilitate other members of the health care team to better manage patients with cardiac disease and lead cardiac nursing practice and service development²².

National core components of cardiac support and secondary prevention are required to ensure that patients have equitable access to the best evidence based care and to improve uptake of secondary prevention. These needs to incorporate a patient-centric approach that is more responsive to social and cultural factors that currently limit patient engagement. It will set measurable key performance indicators (KPIs) that will allow organisations to identify gaps in services to be rectified and promote a coordinated, nationally equitable service.

Aim

This document sets goals which are measurable, achievable and reportable for cardiac rehabilitation in New Zealand. It promotes models of care that are collaborative and holistically focused on patients' individual needs, maximise equity of access for all New Zealanders and are specifically relevant to New Zealand/Aotearoa. This includes mandatory reflection and audit to maintain quality, equity, innovation and nationwide benchmarking.

These core components include an expectation that health professionals engaging with patients do so understanding the Hui Process²³, acknowledging the importance of a person's culture in their health care and allowing flexibility of process and programmes so as to be able to incorporate cultural aspects as required.

Core Components

The principles of the minimum standards are based around 6 core components:

1. Referral and engagement

- Cardiac support and secondary prevention is the standard of care for all patients following an ischaemic cardiac disease diagnosis
- All patients newly diagnosed or with acute presentation regardless of previous engagement, age, frailty or treatment are considered to be eligible for cardiac rehabilitation and includes, but is not limited to:
 - i. Newly diagnosed stable angina
 - ii. Acute presentations with ACS
 - iii. Post revascularisation
 - iv. Other cardiac related disorders
- Engagement with patients starts preferably whilst in hospital, or by phone within the first week and should be continued as soon as possible after discharge
- Referrals and reasons for non-referral e.g. patient declines services, must be electronically registered in the National Cardiac Rehabilitation System (NCARS) database

- Primary care physicians should be informed when a patient is referred to the service, patient engagement with the service and their progress.
- Access to interpreters/cultural support workers is encouraged where required
- Accurate referral information including:
 - Diagnosis
 - Treatment plan
 - Demographic information

2. Individualised Assessment of Patients' Needs

Following 1st contact an assessment of the patient's needs is undertaken which should include:

- Demographic information
- Risk factors, including
 - Smoking
 - Family history
 - Previous history of IHD
 - Waist circumference/BMI
 - Lipids
 - Diabetes
 - Hypertension
 - Dietary pattern
 - Exercise
 - Drug use
 - Social stressors
- Co-morbidities
- Diagnosis and patient's understanding of condition
- Treatment plan and patient's understanding of treatment plan
- Current symptomatic state
- Whanau/family/carers/social supports/dependants as appropriate
- Occupation and social circumstances
- Pre-morbid functional state
- Expectations and aspirations
- Medications and understanding of use/rationale

- Psychological assessment of depression/stress/anxiety with referral to support services as appropriate.
- Quality of life using a recognised tool validated for a secondary prevention population
- Risk factors for possible long term non concordance (for example, health beliefs) should be recorded and addressed as far as possible.

3. Individualised, needs based support and secondary prevention

The patient and health carer will work in partnership to identify the needs of the patient and set achievable goals. Then, design a program that best suits the patient. All patients will be offered a menu of options based upon areas of need identified at initial assessment.

This will include incorporating and acknowledging the patients cultural and health beliefs.

Delivery of the service may be performed through a variety of means and settings including:

- Telephone based consultation and education
- Electronic/virtual health based consultation and education
- Home visits
- Community or secondary care based clinic appointments
- Community or secondary care based education and exercise group classes

The choice of setting should be based on patient need/wishes and aim to maximise patient comfort and engagement. The participation of key whanau/family/carers/social support should be welcomed and encouraged to support patient comfort, engagement, understanding and to help continue and supplement support outside of the programme.

The programme will consist of the following elements dependent on need:

- Education, including:
 - Disease pathophysiology
 - Treatment
 - Medication use/rationale
 - Modifiable risk factors: Smoking, Weight, Cholesterol, Diabetes, Diet, Hypertension and Exercise
 - Angina action plan
 - Sexual activity
 - Return to work/normal activities
 - Compliance with relevant legislation for example Ministry of Transport
- Smoking cessation
 - Ask about and document every person's smoking status.
 - Give Brief advice to stop to every person who smokes.
 - Strongly encourage every person who smokes to use Cessation support (a combination of behavioural support and stop-smoking medicine works best) and offer to help them access it.
 - Refer to, or provide, cessation support to everyone who accepts the offer.
- Medication concordance
- Psychological assessment and counselling/referral to psychological services as appropriate
- Referral for mandatory vocational assessments e.g. driving
- Symptom monitoring and referral to GP/secondary care physician if symptoms are poorly controlled/deteriorate
- Blood pressure, lipid, blood sugar monitoring
- Optimisation of secondary prevention medication
- Individualised long term maintenance plan to be drawn up with patient and whanau/family/carers
- General exercise advice
- Close coordination with the primary care physician as to the patient's progress by the service is encouraged

4. Exercise program

- Risk stratification for exercise (based on heart function, arrhythmic potential, METS prior to event etc.)
- Individualised Exercise prescription
- Structured exercise classes – individual or group at least twice a week for 6-8weeks duration.

5. Completion of Programme and Transfer of Care

Completion of a programme will consist of:

- Achievement of patient's goals as defined in the initial assessment where practicable.

At completion, a final assessment should be undertaken documenting the following:

- Risk factor control: Smoking status, Weight/BMI, Cholesterol, Diabetes, Diet, Hypertension, Exercise
- Functional capacity
- Medication concordance
- Lifestyle changes and advice
- Psychological status
- Long term maintenance plan
- Access to regular healthcare provider

It is critical to the patient's long-term care that cardiac support and secondary prevention programmes work in concert with the patient's primary physician. The final assessment detailing the patient's treatment, progress and outcome will be documented in a transfer of care notification to the patient's primary

care clinician to aid future care. The patient will be provided with information on local long-term support networks.

6. Continuous improvement

- Data entry of key performance indicators into the National Cardiac Rehabilitation System (NCARS)
- Integrate data with the ANZACS QI database
- Regular audit of programme effectiveness (ideally involving patient groups to ensure programme meets the communities needs)
- A long-term follow-up assessment should be undertaken between 6 and 12 months following transfer of care from the service. Meaningful outcomes such as symptomatic status (CCS/NYHA class), smoking status, medication uptake, lifestyle change, quality of life and/or return to work.
- All health carers working in this field should be encouraged to participate where possible in primary research/audit that inform and improve care for cardiac rehab patients.
- The core components will be reviewed and updated 3 yearly to incorporate new research and best practice.

Conclusion

Cardiac rehabilitation has evolved into a healthy heart program whose main aim is to empower the patient, whanau and health carers to work in partnership to improve all modifiable risk factors and reduce the risk of recurrent cardiovascular events. An individualised personalised approach to ensure the patient and the whanau needs are met is key to ensuring the best long-term outcome.

Key Performance Indicators

Key Performance Indicators	Rationale
All patients diagnosed with ischaemic heart disease will be referred to a secondary prevention programme.	All patients and or their carers benefit from advice, education and support following a diagnosis of ischaemic heart disease.
Patients and/or whanau will receive secondary prevention advice regardless of comorbidity.	Even in patients with high levels of co-morbidity, patients and or carers will benefit from understanding diagnosis and treatment as well as advice for future disease management.
Patient engagement in secondary prevention will begin in hospital or if this is not possible, within 1 week of hospital discharge. Primary care physicians should be informed of referral and engagement with the service.	Early contact increases the likelihood of patient engagement and may pick up difficulties and worries which frequently occur following hospital discharge. Where a patient is not contactable or is disinclined to engage with the service the primary care physician may help and encourage the patient.
At engagement, a need based assessment is undertaken which must include the patient's understanding of diagnosis, treatment including medications, disease, risk factors and modifiable lifestyle factors. It will also assess physical capacity, comorbidities, family/whanau support, cultural needs, psycho/social situation and the patient's long-term goals.	Ischaemic heart disease affects a wide variety of patients with differing risk profiles, needs and goals. Individualised assessment will allow secondary prevention programmes to better address patient needs.
Practitioners will agree and undertake with patients a programme of support, education and secondary prevention appropriate to the patient's needs and goals, in collaboration with the patient's primary care physician.	A collaborative, individualised approach to the secondary prevention programme will increase engagement and personal value to patient. It is vital to work with and keep primary care informed of the patient's progress to facilitate long term care.
As far as possible, family/whanau/carers will be invited to participate in the programme.	Whanau/family/carer involvement allows support for patient and reinforces programme goals outside of the programme. Family/whanau often share risk factor profiles with patients and will also benefit from similar education.
Smoking status will be recorded and appropriate smoking cessation advice given. In collaboration with the primary care physician, smokers should be encouraged to use cessation support and medication where applicable and help should be offered to access this.	Smoking is a serious risk factor for ischaemic heart disease. A multidisciplinary approach with multiple professionals collaborating in smoking cessation advice and support improves cessation rates.

Other modifiable risk factors such as obesity, lipids, hypertension, diet, diabetes and exercise will be recorded and addressed, in collaboration with the primary care physician and other health care professionals as required.	Addressing modifiable risk factors is well proven to improve prognosis. Many require a multidisciplinary approach to achieve optimal results.
Secondary prevention medication will be optimised and concordance recorded in collaboration with the primary and secondary care physicians.	Secondary prevention medications are well validated to improve prognosis. Many patients leave hospital on fewer than recommended medications and at less than optimal doses. These issues can be addressed in secondary prevention. Medication concordance is improved by encouragement and facilitation of access by secondary prevention professionals
An exercise programme/prescription will be offered to the patient tailored to the patient's needs.	Exercise is well validated to improve outcome in ischaemic heart disease.
On completion of a patient's goals, as far as possible, a final assessment will be made of the patient's progress and documented for transfer of care to the patient's primary care physicians	A collaborative, individualised approach with the patient means that patients should be transferred from the care of once goals have been met. Clear documentation of patient progress is critical for long term patient management.
Data on referral, engagement, programme as well as a follow-up assessment at 6-12 months will be entered in to the national secondary prevention database, the National Cardiac Rehabilitation System (NCARS), linked to ANZACS QI	Data allows regular audit of services to ensure quality and equity of services and provide information for quality improvement.
Practitioners will participate in regular professional development and where possible, research.	Cardiology is a rapidly advancing field and professionals need to be aware of new innovations to provide optimal care. Research is recommended to aid advancement in the field of secondary prevention and disseminate good practice.

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