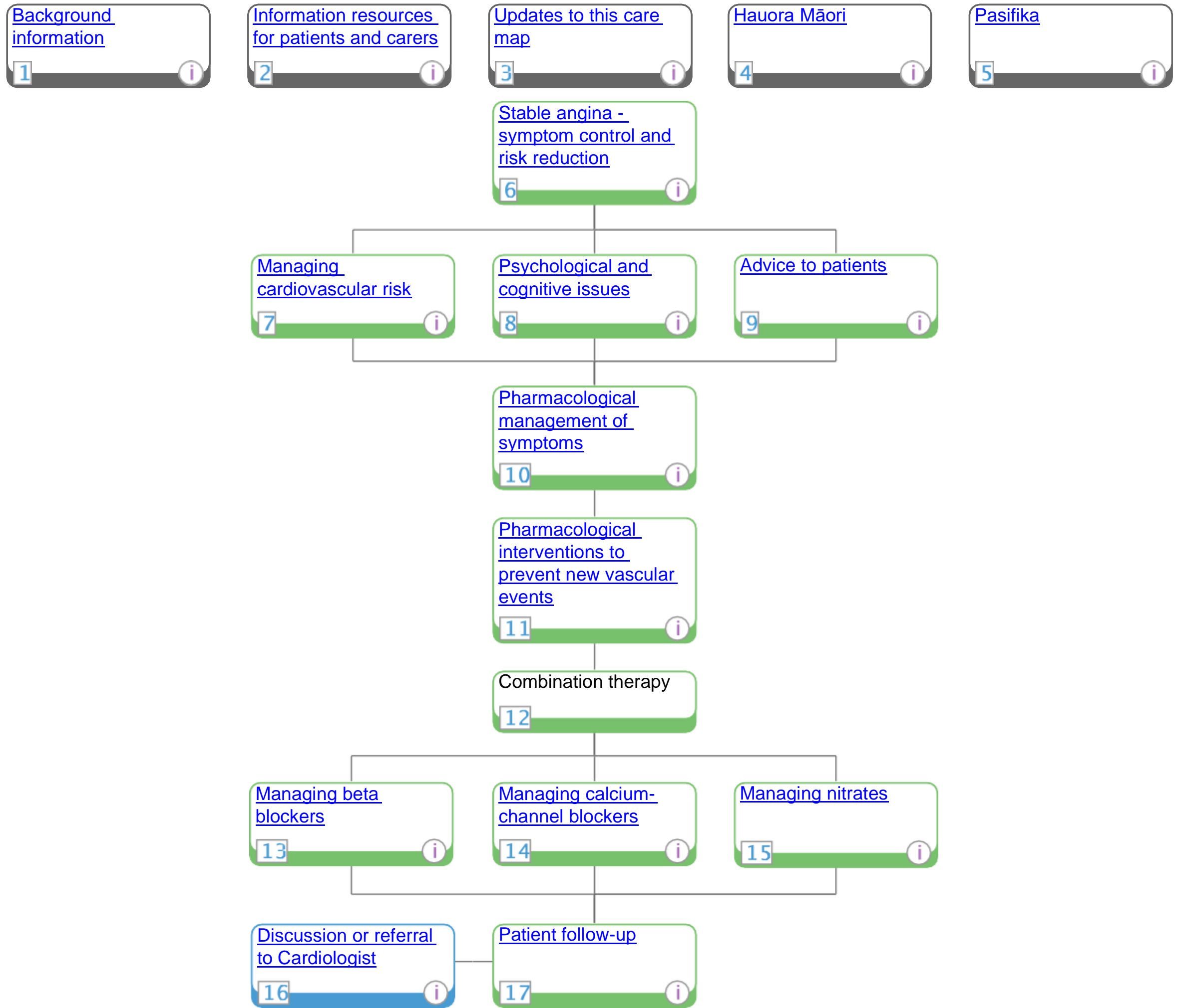
Stable angina – symptom control and risk reduction

Medicine > Cardiology > Stable Angina



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1. Background information

Scope:

- diagnosis and management of stable angina in adults in primary care

Out of scope:

- diagnosis and management of stable angina in children and pregnant women
- diagnosis and management of non-cardiac chest pain
- diagnosis and management of cardiac chest pain not caused by coronary artery disease (CAD)
- management of:
  - acute coronary syndrome (ACS)

Definition:

- angina is chest pain due to transient myocardial ischaemia (MI) which usually occurs with physical activity or emotional stress and is relieved by rest or sublingual nitroglycerin
- angina is common, affecting 3.8% of people in New Zealand
- about half of patients with ischaemic heart disease initially present with symptoms consistent with a pattern of stable angina

Complications:

- cardiovascular complications, such as unstable angina and MI
- anxiety and depression
- reduced general health and quality of life

Risk factors:

- smoking
- hypertension
- dyslipidaemia
- diabetes
- family history of premature CAD [3]
- increasing age

Prognosis:

- the prognosis of stable angina is variable – important indicators of long-term prognosis are the extent and severity of CAD, left ventricular function, exercise duration or effort tolerance, and co-morbidities
- the prognosis depends on the point at which the person is seen e.g. new-onset angina has a worse prognosis than established angina that has remained stable for some time
- a systematic review of six articles investigated the prognosis of angina in people managed in primary care – there was significant heterogeneity among studies, but the findings were:
  - an all-cause mortality rate of 2.8-6.8% per year
  - a cardiovascular death rate of 1.4-6.5% per year
  - a non-fatal myocardial infarction rate of 0.3-5.5% per year
- the Framingham Heart Study found that for men and women with an initial presentation of stable angina, the incidences of non-fatal MI and coronary heart disease death over two years were 14.3% and 5.5% respectively, in men and 6.2% and 3.8% in women

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2. Information resources for patients and carers

Patient and carer information

- Managing your Angina

Patient and carer Action Plans

- Angina Action Plan

3. Updates to this care map

Reviewed in September 2016 and and republished in October 2016.

This pathway has been reviewed in line with consideration to evidenced based guidelines - no updates were necessary.

For further information on contributors and references please see the care map's Provenance.

4. Hauora Māori

Māori are a diverse people and whilst there is no single Māori identity, it is vital practitioners offer culturally appropriate care when working with Māori whānau. It is important for practitioners to have a baseline understanding of the issues surrounding Māori health.

This knowledge can be actualised by (not in any order of priority):

- acknowledging Te Whare Tapa Wha (Māori model of health) when working with Māori whānau
- asking Māori clients if they would like their whānau or significant others to be involved in assessment and treatment
- asking Māori clients about any particular cultural beliefs they or their whānau have that might impact on assessment and treatment of the particular health issue (Cultural issues)
- consider the importance of whānaungatanga (making meaningful connections) with their Māori client / whānau
- knowledge of Whānau Ora, Te Ara Whānau Ora and referring to Whānau Ora Navigators where appropriate
- having a historical overview of legislation that has impacted on Māori well-being

For further information:

- Hauora Māori

5. Pasifika

Pacific Cultural Guidelines (Central PHO) 6MB file

Our Pasifika community:

- is a diverse and dynamic population:
  - more than 22 nations represented in New Zealand
  - each with their own unique culture, language, history, and health status
  - share many similarities which we have shared with you here in order to help you work with Pasifika patients more effectively

The main Pacific nations in New Zealand are:

- Samoa, Cook Islands, Fiji, Tonga, Niue, Tokelau and Tuvalu

Acknowledging *The FonoFale Model (pasifika model of health)* when working with Pasifika peoples and families.

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Acknowledging general pacific guidelines when working with Pasifika peoples and families:

- Cultural protocols and greetings
- Building relationships with your pasifika patients
- Involving family support, involving religion, during assessments and in the hospital
- Home visits
- Contact information

Pasifika Health Service - Better Health for Pasifika Communities:

- the Pasifika Health Service is a service provided free of charge for:
  - all Pasifika people living in Manawatu, Horowhenua, Tararua and Otaki who have long term conditions
  - all Pasifika mothers and children aged 0-5 years
- an appointment can be made by the patient, doctor or nurse
- the Pasifika Health Service contact details are:
  - Palmerston North Office - 06 354 9107
  - Horowhenua Office - 06 367 6433
- Better Health for Pasifika Communities brochure

Additional resources:

- Ala Mo'ui - Pathways to Pacific Health and Wellbeing 2014-2018
- Primary care for pacific people: a pacific health systems approach
- Tupu Ola Moui: The Pacific Health Chart Book 2004
- Pacific Health resources
- Central PHO Pasifika Health Service

6. Stable angina – symptom control and risk reduction

Patients newly diagnosed with angina and those who are immediately pre- and post-interventions and revascularisation, should be given appropriate information to help them understand their condition and how to manage it and any procedure being undertaken.

7. Managing cardiovascular risk

All people with angina are assumed to be at high risk for cardiovascular events and their cardiovascular risk factors should be managed accordingly.

Pay close attention to cardiovascular risk factors:

- diabetic control
- blood pressure (BP) control
- cholesterol treatment
- smoking
- physical activity and rehabilitation following treatment
- attention to diet and body weight

8. Psychological and cognitive issues

Psychological factors exert an influence on patients with angina in several ways:

- limitations and concerns related to living with angina can influence mood, degree of disability, quality of life, and mortality

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- beliefs and misconceptions about heart disease have been shown to influence outcome, and eliciting and reframing unhelpful beliefs decreases disability
- depression and anxiety influence health service use

Patients' beliefs about angina should be assessed when discussing management of risk factors and how to cope with symptoms. Interventions based on psychological principles designed to alter beliefs about heart disease and angina, such as a referral to the **Massey University Psychological Service**, should be considered:

- Massey Psychology Service Brochure
- Massey Psychology Service Referral Form
- Massey Self Distress Rating Form

9. Advice to patients

Advice on driving (New Zealand Transport Agency Guidelines):

- class 1 or class 6 licence and/or a D, F, R, T or W endorsement:
  - when driving should cease:
    - ***individuals with angina at rest or on minimal exertion despite medical therapy should not drive***
  - when driving may resume or may occur:
    - angina is usually absent on mild exertion, and
    - there are no electrocardiographic changes, symptoms, arrhythmias, poorly controlled anticoagulant therapy, severe hypertension or other conditions that would render the individual unfit to drive
- class 2, 3, 4 or 5 licence and/or a P, V, I or O endorsement:
  - when driving should cease:
    - ***individuals with angina at rest or on minimal exertion despite medical therapy should not drive***
  - when driving may resume or may occur:
    - an individual with angina occurring only on strenuous exertion (Canadian Class 1) or previous angina may be fit to drive if there is no evidence of myocardial ischaemia on adequate stress (exercise for > 9 minutes on the Bruce protocol (or equivalent exercise protocol) or pharmacological testing with either echocardiographic or scintigraphic assessment combined with ECG assessment)
    - the NZTA may consider individuals with evidence of minimal myocardial ischaemia if there is a supporting specialist opinion
    - the NZTA may impose licence conditions for regular medical assessment e.g. annual reviews (3)
- the person should check with their insurer that they are still covered for driving

Advice on sexual activity:

- reassure the person that, if they can briskly climb up and down two flights of stairs without any angina symptoms, sexual activity is unlikely to precipitate an episode of angina
- if sexual activity does precipitate an episode of angina, sublingual glyceryl trinitrate (GTN) taken immediately before intercourse may help prevent subsequent attacks
- the concomitant use of nitrates or nicorandil with phosphodiesterase inhibitors (sildenafil, tadalafil, and vardenafil), often used in the treatment of erectile dysfunction, is contraindicated

Advice on work:

- advise people with angina that:
  - many people with angina can continue to work as before
  - if their job involves heavy manual work, they may need to alter their work practices
  - if their job involves driving, they should consult the NZTA
- if the person's employer has an occupational health department, they should be encouraged to discuss the options

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10. Pharmacological management of symptoms

Pharmacological management of angina symptoms includes (2):

- beta blockers
- calcium channel blockers (CCB)
- nitrates

Medication monotherapy:

- first-line therapy:
  - beta blockers and/or calcium channel blockers to control heart rate and symptoms
- glyceryl trinitrate (GTN) spray or tablets should be used for the immediate relief of angina and before performing activities that are known to bring on angina

Combination therapy:

- ensure that the person is taking the maximum tolerated dose
- add a CCB if anginal symptoms are not achieved with beta blockade:
  - add amlodipine
  - if CCB is contraindicated or not tolerated, add a nitrate
- beta blocker not contraindicated:
  - ideally add a beta blocker
  - do not combine a beta blocker with a rate-limiting CCB (diltiazem or verapamil) unless discussed with a cardiologist
- beta blocker is contraindicated or not tolerated:
  - if taking a CCB, add a nitrate
  - if taking a nitrate, add a CCB

11. Pharmacological interventions to prevent new vascular events

All patients with stable angina due to atherosclerotic disease should receive long-term standard aspirin and statin therapy.

It is recommended to use an ACE Inhibitor (or ARB) if presence of other conditions (e.g. heart failure, hypertension or diabetes).

13. Managing beta blockers

Choice of beta blocker:

- metoprolol or bisoprolol are first-choice beta blockers for the management of angina
- for people with angina and heart failure, carvedilol or bisoprolol may be preferred

Titrate the dose of beta blocker to the target dose (or maximum tolerated dose) according to the person's response and heart rate control (at rest and during exercise).

14. Managing calcium-channel blockers

Choice of calcium-channel blocker (CCB):

- monotherapy (when a beta blocker is contraindicated or not tolerated) – a rate-limiting CCB may be preferred (diltiazem)
- combination therapy:
  - people taking a beta blocker – prescribe amlodipine

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  - people not taking a beta blocker – diltiazem may be preferred
- if the person has concomitant heart failure prescribe amlodipine

15. Managing nitrates

Nitrates should be used with caution in people with:

- left ventricular outflow obstruction (significant aortic stenosis or obstructive hypertrophic cardiomyopathy)
- closed-angle glaucoma

The combination of a nitrate and a phosphodiesterase inhibitor (sildenafil, tadalafil, or vardenafil) is contraindicated.

Choice of nitrate:

- short-acting, sublingual glyceryl trinitrate (GTN) should be used for immediate relief of an episode of angina, or before activities that are likely to precipitate angina
- once daily long-acting oral nitrates should be used regularly to decrease the frequency and severity of anginal symptoms e.g. isosorbide mononitrate

16. Discussion or referral to Cardiologist

The Cardiologist on call can be contacted for clinical advice and management options for patients not responding to therapy.
For specific queries regarding patient management, an email can be sent to:

- **cardiology.enquiries@midcentraldhb.govt.nz**

NB: This email is for clinical advice, not for patient referral. Referrals should be sent through to the service in the usual manner.

17. Patient follow-up

Follow-up:

- review the person at least every six months
- check for ongoing symptoms of angina (at rest or with exercise):
  - if the person is taking anti-anginal treatment but has persistent symptoms, optimise medical treatment

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Chest Pain
Provenance Certificate

Overview | Editorial methodology | References | Contributors | Disclaimers

Overview

This document describes the provenance of MidCentral District Health Board's **chest pain** pathway. This localised pathway was last updated on 11 August 2016.

One feature of the "Better, Sooner, More Convenient" (BSMC) Business Case, accepted by the Ministry of Health in 2010, was the development of 33 collaborative clinical pathways (CCP).

The purpose of implementing the CCP Programme in our DHB is to:

- Help meet the Better Sooner More Convenient Business Case aspirational targets, particularly the following:
    - Reduce presentations to the Emergency Department (ED) by 30%
    - Reduce avoidable hospital admissions to Medical Wards and Assessment Treatment and Rehabilitation for over-65-year-olds by 20%
    - Reduce poly-pharmacy in the over-65-year-olds by 10%
- Implement a tool to assist in planning and development of health services across the district, using evidence-based clinical pathways.
- Provide front line clinicians and other key stakeholders with a rapidly accessible check of best practice;
- Enhance partnership processes between primary and secondary health care services across the DHB.

To cite this pathway, use the following format:
Map of Medicine – Chest Pain - MidCentral View. Palmerston North: Map of Medicine; 2016 (Version 3).

Editorial methodology

This care map has been based on a Map of Medicine Care Map developed according to the Map of Medicine editorial methodology. The content of the Map of Medicine care map is based on high quality guidelines and practice-based knowledge provided by contributors with front-line clinical experience (see contributors section of this document). This localised version of the evidence-based, practice informed care map has been peer-reviewed by the CCP Executive Team and with stakeholder groups.

References

This care map has been developed according to the Map of Medicine editorial methodology. The content of this care map is based on high-quality guidelines and practice-based knowledge provided by contributors with front- line clinical experience. This localised version of the evidence-based, practice-informed care map has been peer- reviewed by the CCP Executive Team and with stakeholder groups.

[1] bpac NZ. (2015). The immediate management of acute coronary syndromes in primary care. *Best Practice Journal, 67*, 39-41.

[2] bpac NZ. (2011). Medical management of stable angina pectoris. *Best Practice Journal, 39*, 39-47.

[3] New Zealand Transport Agency (NZTA). Medical aspects of fitness to drive. Wellington; 2009.

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Contributors

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Disclaimers

CCP Executive Team, MidCentral DHB

It is not the function of the CCP Executive Team, MidCentral DHB to substitute for the role of the clinician, but to support the clinician in enabling access to know-how and knowledge. Users of the Map of Medicine are therefore urged to use their own professional judgement to ensure that the patient receives the best possible care. Whilst reasonable efforts have been made to ensure the accuracy of the information on this online clinical knowledge resource, we cannot guarantee its correctness and completeness. The information on the Map of Medicine is subject to change and we cannot guarantee that it is up-to-date.

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