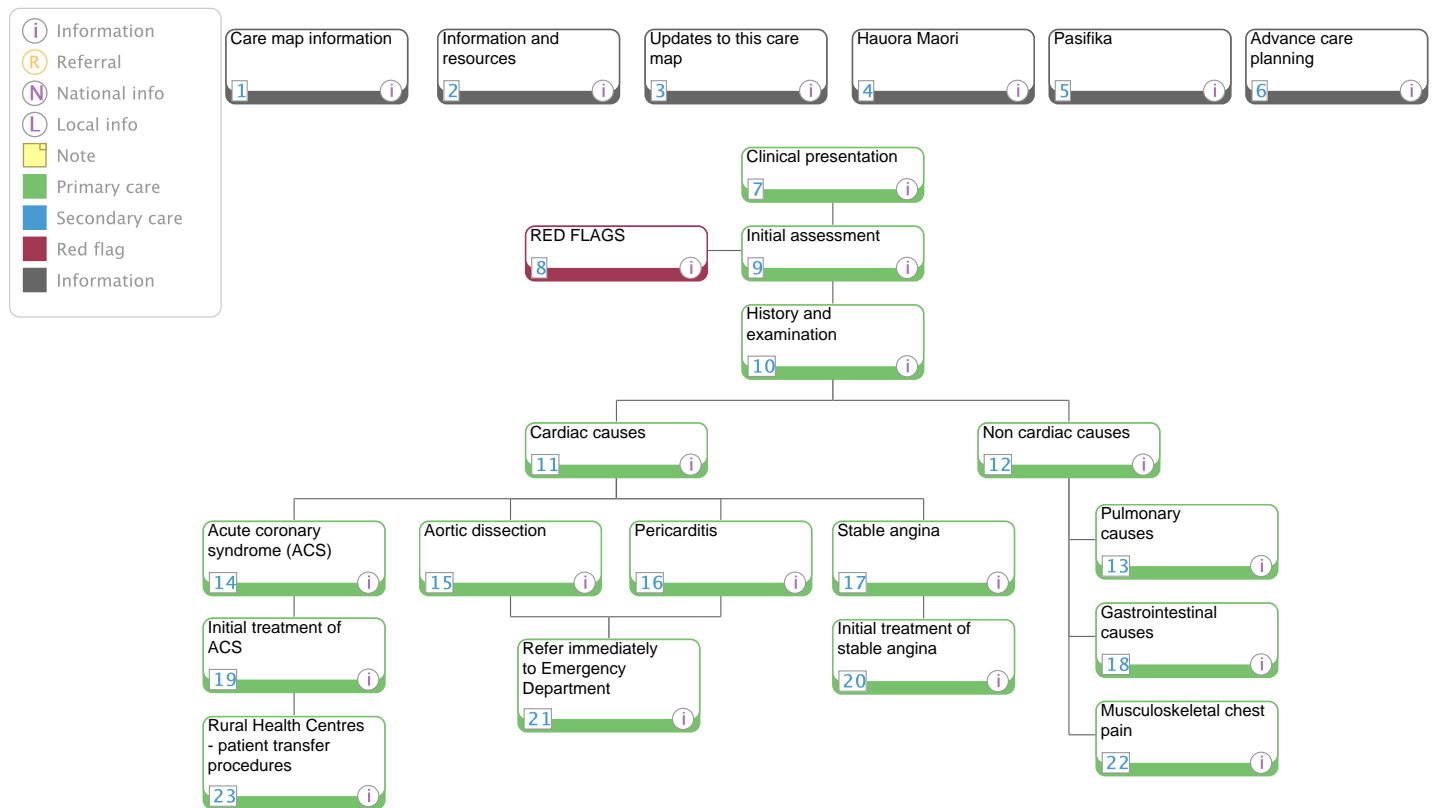


Chest Pain - Assessment of Acute Chest Pain

Medicine > Cardiology > Assessment of Acute Chest Pain



Chest Pain - Assessment of Acute Chest Pain

Medicine > Cardiology > Assessment of Acute Chest Pain

1 Care map information

Quick info:

Scope:

This Pathway is designed to quickly assess and diagnose the cause of chest pain in adults, and to guide initial treatment options for patients with chest pain of cardiac origin.

Out of scope:

- condition-specific specialist management
- chronic chest pain

This pathway should be used only for patients in which it will influence the patient management. It is to be used as a guide and doesn't replace clinical judgement.

Definition:

Chest pain is one of the most common challenges for clinicians, diagnosis includes:

- conditions affecting organs throughout the thorax and abdomen
- implications that vary from benign to life-threatening
- potentially serious complications including:
 - ischaemic heart disease
 - aortic dissection
 - tension pneumothorax
 - pulmonary embolism (PE)
- overly conservative management of low-risk patients leads to unnecessary hospital admissions, test and investigations, procedures and anxiety

See provenance certificate for full list of references and contributors.

2 Information and resources

Quick info:

Chest pain

The Health Navigator website has patient-focused information on [causes of chest pain and advice on what to do](#). There are printable patient leaflets at the bottom of this webpage.

NICE - [chest pain of recent onset, assessment and diagnosis](#)

[Minimum standards](#) for referral and access. Central region.

Heart disease:

- [types of heart conditions](#)
- heart disease [statistics](#)
- how the heart works - [video clip](#)
- [common tests](#) for heart function and health
- [common treatments](#) for heart conditions
- [glossary](#) of heart words

Healthy living/lowering heart disease risk:

- [Heart Foundation advice on living with heart disease](#)
- Heart Help - a list of Hawke's Bay [cardiac support groups](#)
- [lowering risk and staying well](#)
- [manage your risk](#) of heart disease
- heart -healthy [diet tips](#)
- [healthy living information](#)

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- [green prescription](#) information

Language translation assistance:

HBDHB Interpreting Service. To make an appointment (charges may apply):

- phone 06 878 8109 ext 5805 or
- email interpreting@hawkesbaydhb.govt.nz

These websites may help with simple words and phrases:

- [Babelfish](#)
- [Google translate](#)

[Language Line](#) - Professional interpreters are available, free of charge, for telephone-based sessions (44 languages are supported).

- Phone 0800 656 656
- Monday - Friday 9am - 6pm
- Saturday 9am - 2pm

Bookings are not usually necessary. For longer consultations (for example, a nurse consultation for a newly diagnosed patient) it is best to make a booking at least 24 hours in advance by calling the above number or emailing language.line@dia.govt.nz and providing your contact details and a summary of the service you require (time and date of the meeting, language, approximate length of the appointment, gender of interpreter (if relevant)).

3 Updates to this care map

Quick info:

Date of publication: November 2015

Date of review and republication: October 2017

Next review due: October 2019

This care map has been developed in line with consideration to evidenced based guidelines.

For further information on contributors and references please see the Pathway's Provenance Certificate

4 Hauora Maori

Quick info:

Maori are a diverse people and whilst there is no single Maori identity, it is vital practitioners offer culturally appropriate care when working with Maori whanau. It is important for practitioners to have a baseline understanding of the issues surrounding Maori health. This knowledge can be actualised by (not in any order of priority):

- considering the importance of introductions ('whanaungatanga') - a process that enables the exchange of information to support interaction and meaningful connections between individuals and groups. This means taking a little time to ask where this person is from or to where they have significant connections
- asking Maori people if they would like their whanau or significant others to be involved in assessment and treatment
- asking Maori people about any particular cultural beliefs they or their whanau have that might impact on assessment and treatment of the particular health issues

Maori health services

HBDHB contracts Maori health providers to deliver community based nursing and social support services. Practitioners should discuss, where appropriate, information about relevant Maori health services. A referral to one of these providers may assist Maori people to feel more comfortable about receiving services following discussions.

Central Hawke's Bay:

[Central Health](#)

Cnr Herbert & Ruataniwha Streets, Waipukurau

Phone: 06 858 9559 Fax: 06 858 9229

Email: reception@centralhealth.co.nz

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[Referral Form](#)

Hastings:

[Te Taiwhenua o Heretaunga](#)

821 Orchard Road, Hastings 4156

Phone: 06 871 5350 Fax: 06 871 535

Email: taiwhenua.heretaunga@ttoh.iwi.nz

[Referral Form](#)

[Kahungunu Health Services](#) (Choices)

500 Maraekakaho Road, Hastings

Phone: 06 878 7616

Email: kahungunu@paradise.net.nz

[Referral Form](#)

Napier:

[Te Kupenga Hauora](#)

5 Sale Street, Napier

Phone: 06 835 1840

Email: info@tkh.org.nz

[Referral Form](#)

Wairoa:

Kahungunu Executive (no website)

65 Queen Street, Wairoa 4108

Phone: 06 838 6835 Fax: 06 838 7290

Email: kahu-exec@xtra.co.nz

Secondary care Maori Health Services:

Hawke's Bay DHB - Te Wahanga Hauora Maori Health Services

Phone: 06 878 8109 ext. 5779, 06 878 1654 or 0800 333 671 Email: admin.maorihealth@hawkesbaydhb.govt.nz

Further Information

Practitioners should be versed in the knowledge of:

- historical overview of legislation that impacted on Maori well-being
- Maori models of health, such as [Te Whare Tapa Wha](#) and Te Wheke when working with Maori whanau
- national Maori Health Strategies:
 - **Mai Maori Health Strategy 2014-2019** - [Full file](#) or [Summary diagram](#)
 - **He Korowai Oranga:** Maori Health Strategy - sets the [Government's overarching framework](#) to achieving the best health outcomes for Maori
- local [Hawke's Bay health sector's strategies and initiatives](#) for improving Maori health and wellbeing
- [Medical Council of New Zealand competency standards](#)

Cultural Competency Training

Training is available through the Hawke's Bay DHB to assist you to better understand Maori culture and to better engage with Maori people. Contact the coordinator

Email: education@hbdhb.govt.nz to request details of the next courses.

5 Pasifika

Quick info:

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Pacific people value their culture, language, families, education and their health and wellbeing. Many Pacific families have a religious affiliation to a local church group.

The Pacific people are 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 in order to help you work with Pacific people more effectively
- for many families language, cost and access to care are barriers

Pacific ethnic groups in Hawke's Bay include Samoa, Cook Islands, Fiji, Tonga, Niue, Tokelau, Kiribati and Tuvalu. Samoan and Cook Island groups are the largest and make up two thirds of the total Pacific population. There is a growing trend of inter-ethnic relationships and New Zealand born Pacific populations.

Acknowledge [The FonaFale Model](#) (Pacific model of health) when working with Pacific people and families.

General guidelines when working with Pacific people and families (information developed by Central PHO, Manawatu):

- [Cultural protocols and greetings](#)
- [Building relationships](#) with your Pacific people
- [Involving family support and religion](#) during assessments and in the hospital
- [Home visits](#)

Hawke's Bay-based resources:

- [HBDHB interpreting service website](#) or phone 06 8788 109 ext. 5805 (no charge for the hospital; charges may apply for community-based translations) or contact coordinator at interpreting@hbdhb.govt.nz
- Pacific Navigation Services Ltd Phone: 027 971 9199
- services to assist Pacific people to access healthcare ([SIA](#))
- [Improving the Health of Pacific People in Hawke's Bay](#) - Pacific Health action Plan

Ministry of Health resources:

- [Ala Mo'ui](#) Pathways to Pacific Health and wellbeing 2014-2018
- [Primary Care for Pacific people](#): a Pacific and health systems approach
- Health education resources in [Pacific languages](#) (links to a web page where you can download resources)

6 Advance care planning

Quick info:

Advance Care Planning:

Advance Care Planning is a voluntary process of discussion and shared planning for future health care. It involves the person who is preparing the plan, and usually involves family/whanau and health care professionals.

Advance Care Plan:

An Advance Care Plan is the outcome of Advance Care Planning. It is formulated by the person and sets out their views about care towards the end of their life. It may also include views about medical care and a wide range of other matters. An Advance Care Plan may include an Advance Directive.

Advance Directive:

An Advance Directive is a statement a person makes about their medical care in the future and becomes effective if a person ceases to be competent to make decisions for themselves. An Advance Directive is legally binding if made in appropriate circumstances.

Competency and Advance Care Planning:

Competent people have the right to make autonomous decisions that as medical professionals we may regard as imprudent, and sometimes such decisions are a reflection of the person's longstanding personality, beliefs or lifestyle. This right is described in the Health and Disability Consumers Rights Acts.

According to ACP - A Guide for the NZ Health Care Workforce - "in the context of ACP, competency relates to an individual's ability to make a decision regarding their own health care (that is, competence at decision-making or decision-capacity). At a minimum, decision making capacity requires the ability to understand and communicate, to reason and deliberate, and the possession of a set of values".

Helpful websites:

- [The code of rights](#)
- [Advance care planning guide Ministry of Health](#)
- [Advance care planning resources](#)

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7 Clinical presentation

Quick info:

Causes of chest pain include [2]:

- cardiac, including vascular causes:
 - stable angina
 - acute coronary syndrome
 - aortic dissection
 - pericarditis
- pulmonary:
 - pulmonary embolism (PE)
 - pneumonia
 - pneumothorax
 - pleuritis
- gastrointestinal:
 - gastro-oesophageal reflux disease (GORD)
 - oesophagitis
 - oesophageal perforation
 - oesophageal motility disorders, including oesophageal spasm
 - peptic ulcer disease
 - pancreatitis
 - biliary disease
- chest wall pathology:
 - costochondritis
 - rib fracture or trauma
 - painful xiphoid syndrome
 - sternoclavicular arthritis
 - precordial catch syndrome
 - herpes zoster or postherpetic neuralgia
- psychogenic:
 - panic disorder
 - anxiety
 - depression
 - somatoform disorders

References:

[2] National Institute for Health and Clinical Excellence (NICE). Chest pain of recent onset: assessment and diagnosis. Clinical guidelines 95. London: NICE; 2016. Available from: <https://www.nice.org.uk/guidance/cg95>

8 RED FLAGS

Quick info:

Even if acute coronary syndrome is unlikely, arrange immediate transfer to ED for acute assessment for those patients with chest pain and [2]:

- hypotension or other signs of underperfusion
- tachycardia or bradycardia
- pulmonary oedema, cyanosis
- breathlessness at rest

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- pale, sweaty, or clammy
- distressed

The following conditions require a rapid assessment and immediate emergency transfer to hospital by ambulance [1]:

- pneumothorax
- aortic dissection
- pulmonary embolism
- oesophageal perforation

The referring clinician is required to arrange the transfer of care.

A clinical handover should take place with the necessary clinical documentation faxed to ED (06 878 1353) and the original sent with the patient:

- ECG
- referral letter or electronic discharge summary from rural site

Please Note: The Emergency Department requires formal documentation (clinical assessment, investigations and working diagnosis/ problem list and any intervention to date).

References:

[1] Map of Medicine (MoM) Clinical Editorial team and fellows. London: MoM; 2011

[2] National Institute for Health and Clinical Excellence (NICE). Chest pain of recent onset: assessment and diagnosis. Clinical guidelines 95. London: NICE; 2016. Available from: <https://www.nice.org.uk/guidance/cg95>

9 Initial assessment

Quick info:

Assessment and management of chest pain [2]:

- needs to be decisive and quick
- the main challenge is not to miss cardiac or other life threatening causes, such as:
 - acute coronary syndrome
 - pneumothorax
 - aortic dissection
 - pulmonary embolism
 - oesophageal perforation

History taking must NOT delay interventions or definitive care [2].

An initial assessment should include [2]:

- a quick assessment of the symptoms – typical acute coronary syndrome symptoms include:
 - central crushing or band-like chest pain
 - radiation to neck, jaw or upper limbs
 - associated nausea, vomiting, sweating, or shortness of breath
- previous history of ischaemic heart disease, as this increases risk of further episodes
- age and gender – risk increases with age and male sex
- review of cardiac risk factors present, e.g:
 - smoking
 - diabetes
 - hyperlipidaemia
 - hypertension
 - family history of ischaemic heart disease

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- **an ECG recording - strongly recommended.** Take the ECG as soon as possible but do not delay transfer to hospital. When people are referred, send the ECG electronically to the accepting doctor before the patient arrives, and a copy with the patient if possible

Recommendations for action [3]:

Refer people to hospital as an emergency (ambulance) if an Acute Coronary Syndrome (ACS) is suspected and:

- currently have chest pain, or
- currently pain free, but have had chest pain in the last 12 hours, and a resting 12-lead ECG is abnormal or not available

If an ACS is suspected and there are no reasons for emergency referral, refer for urgent same day hospital assessment (Acute Medical Registrar 0277654459) if:

- they have had chest pain in the last 12 hours, but are now pain free with a normal resting 12 lead ECG
- the last episode of pain was 12-72 hours ago

Refer people for assessment in hospital if an ACS is suspected and:

- the pain has resolved **and**
- there are signs of complications such as pulmonary oedema. Use clinical judgement to decide whether referral should be as an emergency or urgent same-day assessment

If a recent ACS is suspected in people whose last episode of chest pain was more than 72 hours ago and who have no complications such as pulmonary oedema:

- carry out a detailed clinical assessment
- confirm the diagnosis by resting 12 lead ECG and blood troponin level
- take into account the length of time since the suspected ACS when interpreting the troponin level
- use clinical judgement to decide whether referral is necessary and how urgent this should be (consider discussing with local cardiologist)

Refer to hospital as an emergency if they have a recent (confirmed or suspected) ACS and develop further chest pain.

When an ACS is suspected, start management immediately in the order appropriate to the circumstances and take a resting 12 lead ECG.

If acute coronary syndrome is suspected, arrange immediate emergency transfer to hospital by ambulance [2].

Other conditions, aside from acute coronary syndrome also require a rapid assessment and immediate emergency transfer to hospital by ambulance [2].

References:

[2] National Institute for Health and Clinical Excellence (NICE). Chest pain of recent onset: assessment and diagnosis. Clinical guidelines 95. London: NICE; 2016. Available from: <https://www.nice.org.uk/guidance/cg95>

[3] National Institute for Health and Clinical Excellence (NICE). Venous thromboembolism: reducing the risk for patients in hospital. Clinical guidelines 92. London: NICE; 2015. Available from: <https://www.nice.org.uk/guidance/cg92>

10 History and examination

Quick info:

Consider the following questions:

- when did the pain start? – consider the following options:
 - abrupt onset with greatest intensity at start may indicate:
 - aortic dissection
 - pneumothorax
 - pulmonary embolism
- what were you doing when the pain started? Were you at rest, eating, walking?
- can you describe the pain to me? – consider the following:
 - quality:
 - pleuritic pain – may indicate pulmonary embolism (PE), pleurisy, pneumonia, pericarditis, pneumothorax
 - burning – oesophageal

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- squeezing, tightness, pressure, heavy weight on chest – myocardial ischaemia
- sharp, tearing, ripping pain – may indicate aortic dissection
- location – if very localized, consider chest wall pain or pain of pleural origin
- does it radiate anywhere? – consider ischaemia if pain radiates to neck, jaw, down either arm
- have you had any associated symptoms? – consider the following:
 - fever, chills, respiratory infection symptoms, productive cough – may indicate pneumonia
 - nausea, vomiting, diaphoresis, shortness of breath – may indicate myocardial infarction (MI)
 - shortness of breath – may indicate PE, pneumothorax, MI, pneumonia, chronic obstructive pulmonary disorder (COPD) / asthma
 - with new onset neurological findings or limb ischemia – consider dissection
 - pain with swallowing, acid taste in mouth – oesophageal disease
- have you been on any long plane trips, car rides, recent surgeries? Have you been bed-bound? Have you noticed any swelling in your legs? – if asymmetric swelling of legs consider deep vein thrombosis (DVT)
- does anything make the pain better or worse? – consider:
 - aggravating symptoms:
 - activity – consider ischaemic heart disease
 - food – consider oesophageal disease
 - respiration – consider PE, pneumothorax, pneumonia, pleurisy
 - position – consider oesophageal disease, pericarditis
 - swallowing – consider oesophageal disease
 - movement – consider chest wall pain
 - palpation – consider chest wall pain
 - alleviating symptoms:
 - rest/cessation of activity – ischaemic
 - nitroglycerin – cardiac or oesophageal
 - sitting up – consider pericarditis
 - antacids – usually GI system
- have you ever had this type of pain before? If so what was your diagnosis at that time?:
 - have previous episodes had this kind of pain before?
 - does this feel like prior cardiac pain?
 - what diagnostic work-up have you had so far? e.g. last echocardiogram, last stress test, last angiogram, last esophagogastroduodenoscopy (OGD)

Review risk factors:

- for ischaemia:
 - hypertension
 - diabetes
 - high cholesterol
 - smoking
 - family history
- for PE:
 - long journey
 - recent surgery or immobility
 - hypercoagulable state
 - family history
 - smoking
- for pleurisy:
 - autoimmune rheumatological diseases
- smoking – for:

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- pneumothorax
- chronic obstructive pulmonary disease (COPD)
- ischaemia
- PE

Chest pain examination:

- review vital signs:
 - fever
 - blood pressure in both arms
 - decreased saturations
 - unexplained sinus tachycardia
- neck:
 - look for tracheal deviation
 - look for jugular venous distension
 - look for accessory muscle use
- chest wall exam:
 - look for lesions
 - palpate for localised tenderness
- lung exam:
 - decreased breath sounds/hyperresonance (pneumothorax)
 - dull percussion note, bronchial breathing (consolidation)
 - listen for wheezing/prolonged expiration (exacerbation of COPD, asthma)
- cardiovascular exam:
 - assess heart rate
 - listen for murmurs
 - listen for S3/S4
 - pericardial friction rub
 - muffled heart sounds
 - assess distal pulses

Basic investigations:

- vital signs
- 12 Lead ECG
- consider troponin test

11 Cardiac causes

Quick info:

Patients with:

- uncertain symptoms and high cardiovascular risk
- symptoms consistent with acute cardiac cause regardless of cardiovascular risk

12 Non cardiac causes

Quick info:

Patients with atypical symptoms and low cardiovascular risk.

13 Pulmonary causes

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Quick info:

Pulmonary causes of chest pain include [1]:

- pulmonary embolism (PE)
- pneumonia
- pneumothorax
- pleurisy

Reference:

[1] Map of Medicine (MoM) Clinical Editorial team and Fellows. London: MoM; 2011.

14 Acute coronary syndrome (ACS)

Quick info:

The following symptoms may indicate acute coronary syndrome (ACS):

- tight, dull, or heavy pain in the chest (retrosternal or left chest) and/or other areas, e.g. arms, back, or jaw, lasting longer than 15 minutes
- chest pain associated with:
 - nausea and vomiting
 - marked sweating
 - breathlessness
 - a combination of the above
- chest pain associated with haemodynamic instability
- new onset chest pain, or abrupt deterioration in previously stable angina, with:
 - recurrent chest pain occurring frequently; and
 - with little or no exertion; and
 - episodes often lasting longer than 15 minutes

ECG changes:

- ST segment elevation
- ST segment depression
- T wave inversion
- pathological Q waves
- new LBBB
- note that a normal resting 12-lead ECG **does not rule out ACS**

15 Aortic dissection

Quick info:

Clinical features:

- abrupt onset of chest pain, or pain between the scapulae
- pain tearing or ripping in nature
- pain often worst at symptom onset
- as other vessels become involved, will see:
 - stroke symptoms (carotid artery)
 - cardiac tamponade (aortic root)
 - aortic regurgitation (aortic root)
 - abdominal/flank pain/limb ischaemia (abdominal aorta/renal arteries, iliac arteries)
- decreased pulsation in radial, femoral and carotid arteries
- significant blood pressure (BP) differences between extremities

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16 Pericarditis

Quick info:

Typical features of acute pericarditis are as follows:

- retrosternal or left precordial chest pain:
 - radiates to the trapezius ridge
 - sharp or stabbing in nature
 - can be pleuritic or simulate ischaemia
 - varies with posture, e.g worse when lying down – sitting up relieves pain
- shortness of breath (orthopnoea)
- fever – may be absent in elderly patients
- malaise
- myalgia
- nausea

Characteristic findings of ECG:

- resembles acute myocardial infarction
- tachycardia
- concave ST segment elevation
- PR segment **depression** in Lead II and PR segment **elevation** in aVR

17 Stable angina

Quick info:

Suspect angina in people presenting with tight, dull, or heavy chest discomfort which is [4,5]:

- retrosternal or left-sided, radiating to the left arm, neck, jaw, or back
- associated with exertion or emotional stress and relieved within several minutes by rest or glyceryl trinitrate (GTN)
- precipitated by cold weather or a meal

Some people present with atypical symptoms, including:

- breathlessness
- nausea
- epigastric discomfort or burping

Atypical symptoms are particularly likely in:

- older people
- women
- those with diabetes:
 - pain may be absent
 - may present simply with breathlessness and evidence of heart failure

Angina pain:

- is not usually sharp or stabbing or influenced by respiration
- is reproducible
- usually only lasts for minutes

ECG changes consistent with coronary artery disease [1]:

- ischaemia or previous infarction:
 - pathological Q waves in particular
 - left bundle branch block (LBBB)
 - ST-segment and T wave abnormalities, eg flattening or inversion
- results may not be conclusive – consider resting 12-lead ECG changes together with people's clinical history and risk factors

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- note that a normal resting 12-lead ECG **does not rule out** stable angina

References:

- [1] Map of Medicine (MoM) Clinical Editorial team and fellow. London: MoM; 2011
- [4] Clinical Knowledge Summaries (CKS). Angina. May 2012. Newcastle upon Tyne: CKS; 2012
- [5] Scottish Intercollegiate Guidelines Network (SIGN). Management of stable angina. SIGN Publication no 96. Edinburgh: SIGN; 2007. Available from: <http://www.sign.ac.uk/sign-96-management-of-stable-angina.html>

18 Gastrointestinal causes

Quick info:

Gastrointestinal causes of chest pain include [1]:

- oesophageal perforation/rupture
- GORD
- oesophagitis
- oesophageal spasm

Reference:

- [1] Map of Medicine (MoM) Clinical Editorial team and Fellows. London: MoM; 2011.

19 Initial treatment of ACS

Quick info:

Initial treatment:

- 300mg Aspirin - orally
- GTN 1-2 puffs
- morphine - 2.5-5mg IV titrated to pain and response
- do not routinely administer oxygen. Only offer supplementary oxygen to:
 - patients with saturations less than 94% for patients without COPD
 - for COPD patients at risk of hypercapnic respiratory failure, target oxygen saturation of 88-92%

STEMI: call ambulance and follow their protocol.

20 Initial treatment of stable angina

Quick info:

Consider:

- Aspirin
- beta-blocker
- statins
- nitrates (e.g. GTN spray)

Referral to cardiology outpatient clinic unless age and co-morbidity might make local management more favourable.

21 Refer immediately to Emergency Department

Quick info:

The referring clinician is required to arrange the transfer of care.

A clinical handover should take place with the necessary clinical documentation faxed to ED (06 878 1353) and the original sent with the patient:

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- ECG (include the most recent ECG if relevant)
- referral letter or electronic discharge summary from rural site

Please Note: The Emergency Department requires formal documentation (clinical assessment, investigations and working diagnosis/ problem list and any intervention to date).

22 Musculoskeletal chest pain

Quick info:

Features of musculoskeletal pain include [1]:

- usually localised
- ache or sharp
- positional
- may be reproduced on turning or arm movement
- rheumatological diseases may cause musculoskeletal pain via thoracic joint involvement

Costochondritis [1]:

- inflammation of costal cartilages
- may include sternal articulations
- no swelling

Painful xiphoid syndrome [1]:

- pain over xiphoid process reproduced by palpation

Rib fracture or trauma – pain over involved rib [1].

Chest wall pain should be treated with analgesia, e.g. NSAIDs.

Reference:

[1] Map of Medicine (MoM) Clinical Editorial team and Fellows. London: MoM; 2011.

23 Rural Health Centres - patient transfer procedures

Quick info:

Wairoa

For transfer to Regional:

1. GP to Phone ICU consultant to arrange air transfer (as per [Wairoa Referrals and Transportation Policy](#))
2. Nursing staff to complete Patient Transfer Form and liaise with duty manager
3. Continue initial treatment in discussion with Cardiologist
4. Chart transfer medications as per [Chest Pain Transport Management Policy](#)

Central Hawke's Bay (CHB)

Patients presenting to general practice with ongoing or recent chest pain are clinically assessed:

- ECG recorded
- troponin (see below)
- Aspirin given
- GTN (if indicated)
- IV access
- urgent ambulance referral to ED

NB: Thrombolysis is not initiated at CHB (in either the general practice or inpatient ward).

The CHB laboratory does point of care testing for:

- troponin I (Istat)
- INR

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- electrolytes

Results are interim only, and are to be interpreted with caution.

A venous sample is also taken and sent to the Hawkes Bay Hospital laboratory for confirmation. This test is requested by the general practitioner. Where patients are immediately transported to Hawke's Bay Hospital (Hastings), the venous sample is sent with the patient in the ambulance, other wise it it should be sent by routine courier to the Hastings laboratory (there are four couriers per day).

Thrombolysis during transportation to Hawke's Bay Hospital.

St Johns paramedics will initiate thrombolysis if indicated per their [protocols](#) (ECG and check list). Patients with ANY chest pain have ECG, Aspirin 300mg, and GTN with transport to ED, unless it is trauma or chest infection causing pain.

NB: If a paramedic is not on duty they call for back up and do everything else.

Any patient with chest pain who calls the ward at CHB Health Centre after hours is advised to call for ambulance assessment immediately.

St Johns medics assess patients with irregular rapid heart rate , ECG, ask patient if they have AF (as some do know). If heart rate is slow and patient not compromised they transport the patient to general practice, otherwise following the treatment plan they are transported to ED if symptomatic/compromised.

The helicopter can be used at times if remote, compromised patient status and ST elevation on ECG.

Chest Pain Provenance Certificate – review and republish

Overview

This document describes the provenance of Hawke's Bay's District Health Board's Chest Pain Pathway. It was developed in June-August 2015 and first published in December 2015. A review of this pathway was completed by the clinical leads in September 2017 and was re-published in November 2017. A further review of the Pathway is due in November 2019.

The Collaborative Clinical Pathways programme is one initiative stemming from the *Transform and Sustain* agenda. The main aims of CCP are to:

- Identify opportunities to improve how health and disability care is planned and delivered within the district to improve patient access to a wider range of health services that are both closer to home and reduce avoidable hospital admissions.
- Provide health professionals throughout the Hawke's Bay district with best practice, evidence-based clinical pathways that are available at the point of care.

Outcomes we expect to achieve include faster access to definitive care, improved health equity and outcomes, better value from publically-funded resources, and better patient experience through clear expectations, improved access and greater health literacy. These outcomes are clearly aligned to the NZ healthcare *Triple Aim* and *Better, Sooner, More Convenient* policy directions.

Editorial methodology

This Pathway was based on high-quality information and known Best Practice guidelines from New Zealand and around the world including Map of Medicine editorial methodology. It was developed by individuals with front-line clinical experience (see Contributors section of this document) and has undergone consultation to gain feedback and input from the wider clinical community.

Map of Medicine Pathways are constantly updated in response to new evidence. Continuous evidence searching means that Pathways can be updated rapidly in response to any change in the information landscape. Indexed and grey literature is monitored for new evidence, and feedback is collected from users year-round. The information is triaged so that important changes to the information landscape are incorporated into the Pathways through the quarterly publication cycle.

An update to this Pathway is scheduled for 12 months after first publication. However, feedback is welcomed at any time, with important updates added at the earliest opportunity within the Map of Medicine publishing schedule (the third Friday of each month).

References

This Pathway has been developed according to the Map of Medicine editorial methodology. Its content is based on high-quality guidelines and practice-based knowledge provided by contributors with front-line clinical experience. Feedback on this Pathway was received from stakeholders during a consultation process.

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Disclaimers

Clinical Pathways Steering Group, Hawke's Bay DHB and Health Hawke's Bay – Te Oranga Hawke's Bay

It is not the function of the Clinical Pathways Steering Group, Hawke's Bay DHB and Health Hawke's Bay – Te Oranga Hawke's Bay 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.