

Acute Coronary Syndromes Clinical Care Standard



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Disclaimer

The Australian Commission on Safety and Quality in Health Care has produced this Clinical Care Standard to support the delivery of appropriate care for a defined condition and is based on the best evidence available at the time of development. Health care professionals are advised to use clinical discretion and consideration of the circumstances of the individual patient, in consultation with the patient and/or their carer or guardian when applying information contained within the Clinical Care Standard. Consumers should use the information in the Clinical Care Standard as a guide to inform discussions with their health care professional about the applicability of the Clinical Care Standard to their individual condition.

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Acute Coronary Syndromes Clinical Care Standard



1 A patient presenting with acute chest pain or other symptoms suggestive of an acute coronary syndrome receives care guided by a documented chest pain assessment pathway.



2 A patient with acute chest pain or other symptoms suggestive of an acute coronary syndrome receives a 12-lead electrocardiogram (ECG) and the results are analysed by a clinician experienced in interpreting an ECG within 10 minutes of the first emergency clinical contact.



3 A patient with an acute ST-segment-elevation myocardial infarction (STEMI), for whom emergency reperfusion is clinically appropriate, is offered timely percutaneous coronary intervention (PCI) or fibrinolysis in accordance with the time frames recommended in the current National Heart Foundation of Australia/Cardiac Society of Australia and New Zealand *Guidelines for the Management of Acute Coronary Syndromes*.¹

In general, primary PCI is recommended if the time from first medical contact to balloon inflation is anticipated to be less than 90 minutes, otherwise the patient is offered fibrinolysis.



4 A patient with a non-ST-segment-elevation acute coronary syndrome (NSTEMACS) is managed based on a documented, evidence-based assessment of their risk of an adverse event.



5 The role of coronary angiography, with a view to timely and appropriate coronary revascularisation, is discussed with a patient with a non-ST-segment-elevation acute coronary syndrome (NSTEMACS) who is assessed to be at intermediate or high risk of an adverse cardiac event.



6 Before a patient with an acute coronary syndrome leaves the hospital, they are involved in the development of an individualised care plan. This plan identifies the lifestyle modifications and medicines needed to manage their risk factors, addresses their psychosocial needs and includes a referral to an appropriate cardiac rehabilitation or another secondary prevention program. This plan is provided to the patient and their general practitioner or ongoing clinical provider within 48 hours of discharge.

Introduction

A Clinical Care Standard is a small number of quality statements that describe the clinical care that a patient should be offered for a specific clinical condition. The Clinical Care Standard supports:

- people to know what care may be offered by their healthcare system, and to make informed treatment decisions in partnership with their clinician
- clinicians to make decisions about appropriate care
- health services to examine the performance of their organisation and make improvements in the care they provide.

This Clinical Care Standard was developed by the Australian Commission on Safety and Quality in Health Care (the Commission) in collaboration with consumers, clinicians, researchers and health organisations.^a It complements existing efforts supporting the delivery of appropriate care, such as national initiatives led by the National Heart Foundation, and state and territory-based initiatives led by cardiac networks.^b

For more information about the development of this Clinical Care Standard, visit www.safetyandquality.gov.au/ccs.

Context

An acute coronary syndrome results from a sudden blockage of a blood vessel in the heart, typically by a blood clot (thrombosis) that reduces blood supply to a portion of heart muscle. Where the blockage is severe enough to lead to injury or death of the heart muscle, the event is called an acute myocardial infarction (or 'heart attack'). Acute coronary syndromes also include unstable angina (chest pain usually due to restricted blood flow to the heart muscles), which can lead to a heart attack. The most common cause of an acute coronary syndrome is atherosclerosis (or 'coronary heart disease') where an artery wall thickens due to a build-up of fatty materials such as cholesterol.

Acute coronary syndromes affect thousands of Australians. It is estimated that 69,900 people aged 25 and over had a heart attack in 2011, which equates to around 190 heart attacks a day. Further, coronary heart disease contributed to 15 per cent of all deaths in Australia in 2011.² There is strong evidence that Aboriginal and Torres Strait Islander peoples experience rates of coronary events, such as heart attacks, three times that of non-Aboriginal and Torres Strait Islander Australians.³ Compared with other patients, Aboriginal and Torres Strait Islander peoples admitted to hospital with acute coronary syndromes experience more than twice the in-hospital coronary heart disease death rate, and lower levels of angiography and invasive procedures.⁴

Despite well-developed guidelines for managing acute coronary syndromes, recent research found that not all patients receive appropriate treatments, particularly for invasive management of this condition.⁵ The logistical challenges regarding the provision of timely invasive management to patients in regional, remote and outer metropolitan areas were also highlighted.⁵

The Acute Coronary Syndromes Clinical Care Standard aims to ensure that a patient with an acute coronary syndrome receives optimal treatment from the onset of symptoms through to discharge from hospital. This includes recognition of an acute coronary syndrome, rapid assessment, early management and early initiation of a tailored rehabilitation plan.

a The evidence base for these statements is available at www.safetyandquality.gov.au/ccs.

b This includes the Better cardiac care for Aboriginal and Torres Strait Islander people project, which provides national recommendations for better cardiac care for Aboriginal and Torres Strait Islander peoples.⁶

Central to the delivery of patient-centred care identified in this Clinical Care Standard is an integrated, systems-based approach supported by health services and networks of services.

Key elements of this approach include:

- an understanding of the capacity and limitations of each component of the health care system across metropolitan, regional and remote settings, including pre-hospital, within and across hospitals, through to community and other support services
- clear lines of communication across components of the health care system
- appropriate coordination so that patients receive timely access to optimal care regardless of how or where they enter the system.

Scope

This Clinical Care Standard relates to the care that patients with a suspected acute coronary syndrome receive from the onset of symptoms to the completion of their treatment in hospital. This includes patients who develop a suspected acute coronary syndrome while in hospital for a separate condition.

Goal

To improve the early, accurate diagnosis and management of an acute coronary syndrome to maximise a patient's chances of recovery, and reduce their risk of a future cardiac event.

Monitoring and evaluation

Monitoring quality of care is an effective way of identifying areas that require improvement. It can tell how well health services satisfy the Clinical Care Standards.

Monitoring how well the Clinical Care Standards are met is a key part of the National Safety and Quality Health Service (NSQHS) Standards, particularly *Standard 1: Governance for Safety and Quality*.

Clinical Care Standards can be monitored using a sample set of suggested indicators (see Appendix).

Supporting documentation

The following supporting information for this Clinical Care Standard is available on the Commission's web site at www.safetyandquality.gov.au/ccs

- a consumer fact sheet
- a clinician fact sheet
- indicator specification.

Quality statement 1 – Immediate management

A patient presenting with acute chest pain or other symptoms suggestive of an acute coronary syndrome receives care guided by a documented chest pain assessment pathway.

Purpose

To ensure patients with acute chest pain or other symptoms suggestive of an acute coronary syndrome receive care guided by a documented chest pain assessment pathway.

What the quality statement means

- **For patients.** If you have chest pain or other symptoms that could indicate a heart attack, your treatment from the first time you see a doctor to the moment you leave their care is guided by recommendations developed by clinical experts.
- **For clinicians.** Provide all patients presenting with symptoms of an acute coronary syndrome with care guided by a documented chest pain assessment pathway.
- **For health services.** Ensure that a chest pain assessment pathway is available and used by clinicians.



Quality statement 2 – Early assessment

A patient with acute chest pain or other symptoms suggestive of an acute coronary syndrome receives a 12-lead electrocardiogram (ECG) and the results are analysed by a clinician experienced in interpreting an ECG within 10 minutes of the first emergency clinical contact.

Purpose

To improve the early and appropriate assessment of patients with a suspected acute coronary syndrome.

What the quality statement means

- **For patients.** If you have chest pain or other symptoms that could indicate a heart attack, you have an electrocardiogram (ECG) as soon as possible. The ECG should be interpreted within 10 minutes.
- **For clinicians.** Assess all patients with a suspected acute coronary syndrome with a 12-lead ECG and interpret the results within 10 minutes of the first emergency clinical contact. This may involve facilitating referral to a clinician experienced in performing and/or interpreting an ECG.
- **For health services.** Ensure systems and processes are in place in the pre-hospital and hospital setting to assess patients with symptoms of an acute coronary syndrome using a 12-lead ECG, and for this to be analysed by a clinician experienced in interpreting an ECG within 10 minutes of the first emergency clinical contact.



Quality statement 3 – Timely reperfusion

A patient with an acute ST-segment-elevation myocardial infarction (STEMI), for whom emergency reperfusion is clinically appropriate, is offered timely percutaneous coronary intervention (PCI) or fibrinolysis in accordance with the time frames recommended in the current National Heart Foundation of Australia/Cardiac Society of Australia and New Zealand *Guidelines for the Management of Acute Coronary Syndromes*.¹

In general, primary PCI is recommended if the time from first medical contact to balloon inflation is anticipated to be less than 90 minutes, otherwise the patient is offered fibrinolysis.

Purpose

To ensure patients who are eligible for primary percutaneous coronary intervention or fibrinolysis are offered treatment within time frames recommended in current guidelines.

What the quality statement means

- **For patients.** If you have a heart attack where the artery supplying an area of the heart muscle is completely blocked, your doctor decides whether or not you can have a procedure called percutaneous coronary intervention (PCI). In a PCI, a heart specialist passes a fine probe through an artery to your heart and inflates a small balloon that aims to ease the blockage.

If a PCI cannot be provided within an appropriate time frame, you may be given blood clot-dissolving medicine. This is done urgently.

- **For clinicians.** Offer primary PCI or fibrinolysis to all eligible patients diagnosed with an acute STEMI, within the time frames recommended in the current National Heart Foundation of Australia/Cardiac Society of Australia and New Zealand *Guidelines for the Management of Acute Coronary Syndromes*.¹
- **For health services.** Ensure systems and processes are in place for clinicians to offer primary PCI or fibrinolysis to all eligible patients diagnosed with an acute STEMI within the time frames recommended in the current National Heart Foundation of Australia/Cardiac Society of Australia and New Zealand *Guidelines for the Management of Acute Coronary Syndromes*.¹



Quality statement 4 – Risk stratification

A patient with a non-ST-segment-elevation acute coronary syndrome (NSTEMACS) is managed based on a documented, evidence-based assessment of their risk of an adverse event.^a

Purpose

To assess the risk of an adverse event and provide appropriate therapy to patients with NSTEMACS.

What the quality statement means

- **For patients.** If you have a heart attack where the artery supplying an area of the heart muscle is partly but not fully blocked, your treatment will depend on your risk of having a serious heart problem in the future.
- **For clinicians.** Manage all patients with NSTEMACS based on an assessment of their risk of an adverse event.
- **For health services.** Ensure an evidence-based risk assessment process is available to guide the treatment of all patients with NSTEMACS, and that it is used by clinicians.



a Risk assessment tools for consideration include:

- i. GRACE ACS Risk Calculator⁷
- ii. TIMI Risk Score for UA/NSTEMI⁸
- iii. Acute Coronary Syndromes Treatment Algorithm⁹

Quality statement 5 – Coronary angiography

The role of coronary angiography, with a view to timely and appropriate coronary revascularisation, is discussed with a patient with a non-ST-segment-elevation acute coronary syndrome (NSTEMACS) who is assessed to be at intermediate or high risk of an adverse cardiac event.

Purpose

To ensure the risks and benefits of coronary angiography, performed to determine appropriate coronary revascularisation, are discussed with all eligible patients with NSTEMACS.

What the quality statement means

- **For patients.** If you have a heart attack where the artery supplying an area of the heart muscle is partly but not fully blocked, your doctor works out your risk of having a serious heart problem in the future.

If that risk is medium or high, your doctor talks to you about whether or not you should have a procedure called coronary angiography. In coronary angiography, a specialist passes a fine probe through an artery to your heart, then releases a dye which shows up on X-rays. In this way, your doctors know which arteries are blocked, and how much they are blocked. Then they talk to you about whether it is possible to unblock them, and how best to do so.

- **For clinicians.** If patients are identified to be at intermediate or high risk of an adverse cardiac event, discuss with them and/or their carer the risks and benefits of coronary angiography and appropriate revascularisation.
- **For health services.** Ensure systems and processes are in place for clinicians to offer coronary angiography, and appropriate coronary revascularisation to all eligible patients with NSTEMACS.



Quality statement 6 – Individualised care plan

Before a patient with an acute coronary syndrome leaves the hospital, they are involved in the development of an individualised care plan. This plan identifies the lifestyle modifications and medicines needed to manage their risk factors, addresses their psychosocial needs and includes a referral to an appropriate cardiac rehabilitation or another secondary prevention program. This plan is provided to the patient and their general practitioner or ongoing clinical provider within 48 hours of discharge.

Purpose

To ensure patients with an acute coronary syndrome have an individualised care plan before they leave the hospital.

What the quality statement means

- **For patients.** Before you leave the hospital, your doctors and nurses discuss your recovery with you. They help develop a plan with you which sets out:
 - what changes you may need to make to your lifestyle
 - what medicines you may need to take
 - what rehabilitation clinic or prevention service you are referred to.

You and your regular general practitioner get a copy of this plan within two days after you leave hospital.

- **For clinicians.** Develop an individualised care plan with each patient with an acute coronary syndrome and/or their carer before they leave the hospital. The plan identifies lifestyle changes and medicines, addresses their psychosocial needs and includes a referral to an appropriate cardiac rehabilitation or another secondary prevention program. Provide a copy of the plan to the patient and their general practitioner or ongoing clinical provider within 48 hours of discharge.
- **For health services.** Ensure processes are in place so that clinicians can develop an individualised care plan with patients with an acute coronary syndrome before they leave the hospital, and provide the plan to each patient and their general practitioner or ongoing clinical provider within 48 hours of discharge.



Glossary

Acute coronary syndromes (ACS): The spectrum of acute clinical presentations resulting from underlying coronary heart disease, including heart attack and angina.¹⁰

Acute myocardial infarction: A condition where there is evidence of myocardial necrosis (cell death) consistent with acute myocardial ischaemia.¹¹

Angina: Chest pain due to obstruction or spasm of the coronary artery.

Antiplatelet therapy: Medicines that stop blood cells from sticking together and forming a blood clot.

Atherosclerosis: A process in which fatty and fibre-like deposits build up on the inner walls of arteries, often forming plaques that can then cause blockages. It is the main underlying condition in heart attack, angina, stroke and peripheral vascular disease.

Cardiac event: Any severe or acute cardiovascular condition including acute myocardial infarction, unstable angina or cardiac death.¹²

Cardiac rehabilitation: The sum of activities required to favourably influence the underlying cause of coronary heart disease, as well as the best physical, mental and social conditions, so that patients resume as normal a place as possible in the community.¹³

Cardiac rehabilitation program: Describes all measures used to help people with heart disease return to an active and satisfying life and to prevent recurrence of cardiac events.¹⁴

Care plan (individualised): A written agreement between a consumer and health professional (and/or social services) to help manage day-to-day health.¹⁵ This information is identified in a health record.

Carers: People who provide unpaid care and support to family members and friends who have a disease, disability, mental illness, chronic condition, terminal illness or general frailty. Carers include parents and guardians caring for children.¹⁶

Clinician: A healthcare provider, trained as a health professional. Clinicians include registered and non-registered practitioners, or a team of health professionals, who provide direct clinical care.¹⁶

Coronary angiography: A procedure in which a special X-ray of the heart's arteries (the coronary arteries) is taken to see if they are narrowed or blocked.¹⁷

Coronary heart disease: Caused by a slow build-up of fatty deposits on the inner wall of the blood vessels that supply the heart muscle with blood (the coronary arteries). These fatty deposits gradually clog the arteries and reduce the flow of blood to the heart.¹⁸

Coronary revascularisation: Procedures used to restore good blood supply to the heart, for example, coronary angioplasty, which involves inserting a catheter with a balloon into a narrowed coronary artery.¹⁹ The balloon is inflated to open up the artery and restore blood flow.

Electrocardiogram (ECG): A non-invasive test that records the electrical activity of the heart. A 12-lead ECG records 12 different electrical 'views' of the heart simultaneously. This test is performed to diagnose a STEMI.¹⁰

Fibrinolysis: Specialised drug treatment to dissolve a blood clot blocking a coronary artery during a heart attack. If given early enough, this treatment can reduce damage to the heart muscle.¹⁰

First emergency clinical contact: The time when a patient first encounters a clinician.

Health record: Information about a patient held in hard or soft copy. The health record may comprise clinical records (such as medical history, treatment notes, observations, correspondence, investigations, test results,

photographs, prescription records, medication charts), administrative records (such as contact and demographic information, legal and occupational health and safety records) and financial records (such as invoices, payments and insurance information).²⁰

Health service: A service responsible for the clinical governance, administration and financial management of unit(s) providing health care. A service unit involves a grouping of clinicians and others working in a systematic way to deliver health care to patients and can be in any location or setting, including pharmacies, clinics, outpatient facilities, hospitals, patients' homes, community settings, practices and clinicians' rooms.¹⁶

Heart attack: Life-threatening emergency that occurs when a vessel supplying blood to the heart muscle is suddenly blocked completely by a blood clot.²¹

Hospital: A licensed facility providing healthcare services to patients for short periods of acute illness, injury or recovery.²²

Individualised care plan: See 'care plan'.

Medicine: A chemical substance given with the intention of preventing, curing, controlling or alleviating disease, or otherwise improving the physical or mental welfare of people. Prescription, non-prescription and complementary medicines, irrespective of their administration route, are included.¹⁶

Myocardial ischaemia: Reduced blood flow to the heart muscle.

Non-ST elevation myocardial infarction (NSTEMI): A type of myocardial infarction identified by what is seen on the electrocardiogram. In a NSTEMI, the artery is only partly blocked, so only part of the heart muscle being supplied by that artery is affected.²³

Non-ST-segment-elevation acute coronary syndrome (NSTEMI): A condition where patients have acute chest pain but do not have persistent ST-segment-elevation in their electrocardiogram. NSTEMI is further divided into unstable angina and non-ST elevation myocardial infarction.²³

Percutaneous coronary intervention (PCI): An invasive procedure that restores blood flow through a blocked coronary artery. A special balloon is inserted to open the blocked artery at the point of narrowing, without the need for heart surgery. After PCI is performed, a stent (an expandable metal tube such as a coil or wire mesh) is delivered to the newly dilated site where it is expanded and left in place to keep the artery open.¹⁰

Pre-hospital care: Emergency medical care provided in the community and in transit to hospital.

Reperfusion: The restoration of blood flow (and therefore oxygen supply) to an area of heart muscle that has been deprived of circulation for a period of time (e.g. as a result of a heart attack).¹⁰

Risk factor: Any variable (e.g. smoking, abnormal blood lipids, elevated blood pressure, diabetes) that is associated with a greater risk of a health disorder or other unwanted condition or event.¹⁹

Secondary prevention: Health care designed to prevent recurrence of cardiovascular events (e.g. heart attack) or complications of cardiovascular disease in patients with diagnosed cardiovascular disease. It involves medical care, modification of behavioural risk factors, psychosocial care, education and support for self-management (including adherence to prescribed medicines), which can be delivered in various settings. An example of an evidence-based secondary prevention strategy is cardiac rehabilitation.²⁴

ST-segment-elevation myocardial infarction (STEMI): An acute heart attack for which the diagnosis has been made by a 12-lead ECG test. A heart attack occurs when an area of plaque within a coronary artery ruptures and forms a blood clot, suddenly blocking the supply of blood to a part of the heart muscle and depriving it of oxygen.¹⁰

Thrombosis: Clotting of blood; the term is usually applied to clotting within a blood vessel due to disease, as in a heart attack or a stroke.²⁵

Unstable angina: A form of angina that is more dangerous than normal angina but less so than a heart attack. It can feature chest pain that occurs at rest; in someone who already has angina it can be marked by new patterns of onset with exertion or by pain that comes on more easily, more often or for longer than previously.¹⁹

Appendix

Monitoring quality of care is an effective way of identifying areas that require improvement. It can tell how well health services satisfy the Clinical Care Standards.

Monitoring how well the Clinical Care Standards are met is also a key part of the National Safety and Quality Health Service (NSQHS) Standards, particularly *Standard 1: Governance for Safety and Quality*.

Organisations are likely to already have mechanisms in place that monitor the care provided. However if additional measures are needed then the indicators below are suggested.

Full details on these indicators can be found in the Indicator Specification: Acute Coronary Syndromes Clinical Care Standard available from www.safetyandquality.gov.au/ccs.

Quality statement 1 – Immediate management

- **1a:** Proportion of patients presenting with acute chest pain, or other symptoms suggestive of an acute coronary syndrome, whose care is guided by a documented chest pain assessment pathway.

Quality statement 2 – Early assessment

- **2a:** Proportion of ambulances that respond to acute chest pain calls that are equipped with a 12-lead ECG in the reference ambulance service.
- **2b:** Proportion of patients with chest pain with ECG performed within 10 minutes of first clinical contact, after arrival of ambulance.
- **2c:** Proportion of patients, including patients presenting to emergency department (ED) via ambulance, with acute chest pain or other symptoms suggestive of an acute coronary syndrome, with ECG performed and analysed before or within 10 minutes of arrival to ED.

Quality statement 3 – Timely reperfusion

- **3a:** Proportion of patients with STEMI at first emergency contact presenting within 12 hours of symptom onset and receiving fibrinolysis or percutaneous coronary intervention (PCI).
- **3b:** Proportion of patients with STEMI, whose first emergency clinical contact is within 12 hours of symptom onset, treated with fibrinolysis before or within 30 minutes of hospital arrival.
- **3c:** Proportion of patients with STEMI, treated with PCI, who have a door-to-device time of 90 minutes or less, after arrival at a PCI-capable hospital, or 120 minutes or less if transferred from a non PCI-capable hospital.

Quality statement 4 – Risk stratification

- **4a:** Proportion of patients hospitalised with NSTEMACS who have a documented assessment and risk stratification, using a guideline-recommended tool.
- **4b:** Proportion of patients with NSTEMACS in a hospital without angiography facilities, assessed as being at high risk for a recurrent adverse cardiac event and transferred for angiography elsewhere.

Quality statement 5 – Coronary angiography

- **5a:** Proportion of patients with NSTEMACS who, having been assessed as intermediate or high-risk using a guideline-recommended tool, are informed of the risks and benefits of coronary angiography.

Quality statement 6 – Individualised care plan

- **6a:** Proportion of acute coronary syndrome patients provided with a written, individualised care plan (addressing factors such as gradual physical activity, smoking cessation and therapies addressing psychosocial needs).
- **6b:** Proportion of patients with a final diagnosis of an acute coronary syndrome who are prescribed aspirin or dual antiplatelet therapy at hospital discharge.
- **6c:** Proportion of patients with a final diagnosis of an acute coronary syndrome who are prescribed lipid lowering therapy at hospital discharge.
- **6d:** Proportion of patients with documented referral prior to discharge to a cardiac rehabilitation or an alternative secondary prevention program.
- **6e:** Proportion of patients whose discharge summary is provided to their general practitioner or ongoing clinical provider within 48 hours of discharge.

References

1. Acute Coronary Syndrome Guidelines Working Group. Guidelines for the management of acute coronary syndromes 2006. Medical Journal of Australia. 2006;184(8):S1–S30.
2. Australian Institute of Health and Welfare. Australia's health 2014. Canberra: AIHW, 2014.
3. Australian Institute of Health and Welfare. Aboriginal and Torres Strait Islander people with coronary heart disease: further perspectives on health status and treatment. Canberra: AIHW, 2006.
4. Australian Health Ministers' Advisory Council. Aboriginal and Torres Strait Islander health performance framework 2012 report. Canberra: AHMAC, 2012.
5. Chew DP, French J, Briffa TG, Hammett CJ, Ellis CJ, Ranasinghe I, et al. Acute coronary syndrome care across Australia and New Zealand: the SNAPSHOT ACS study. Medical Journal of Australia. 2013;199(3):185–91.
6. Australian Health Ministers' Advisory Council. Better cardiac care for Aboriginal and Torres Strait Islander people: post-forum report. Canberra: AHMAC, May 2014.
7. GRACE. Centre for Outcomes Research, University of Massachusetts Medical School; [cited May 2014]; Available from: www.outcomes-umassmed.org/grace.
8. MD Calc. TIMI Risk Score for UA/NSTEMI. [cited May 2014]; Available from: <http://www.mdcalc.com/timi-risk-score-for-uanstemi/>.
9. National Heart Foundation of Australia and The Cardiac Society of Australia and New Zealand. Acute coronary syndromes treatment algorithm. NHFA & CSANZ; 2011 [cited May 2014]; Available from: <http://www.heartfoundation.org.au/SiteCollectionDocuments/ACS%20therapy%20algorithm-WEB-secure.pdf>.
10. National Heart Foundation of Australia. A system of care for STEMI: reducing time to reperfusion for patients with ST-segment-elevation myocardial infarction. Canberra: NHFA, 2012.
11. Thygesen K, Alpert JS, Jaffe AS, Simoons ML, Chaitman BR, White HD. The Writing Group on behalf of the Joint ESC/ACCF/AHA/WHF Task Force for the Universal Definition of Myocardial Infarction. Third universal definition of myocardial infarction. Circulation. 2012;126:2020–35.
12. The Free Dictionary. Cardiac Event. 2013 [cited September 2013]; Available from: <http://medical-dictionary.thefreedictionary.com/cardiac+event>.
13. World Health Organization. Needs and action priorities in cardiac rehabilitation and secondary prevention in patients with CHD. Geneva: WHO, 1993.
14. National Heart Foundation of Australia and Australian Cardiac Rehabilitation Association. Recommended framework for cardiac rehabilitation '04. NHFA and ACRA, 2004.
15. National Health Service. What is a care plan. NHS; 2012 [cited October 2013]; Available from: www.nhs.uk/Planners/Yourhealth/Pages/Careplan.aspx.
16. Australian Commission on Safety and Quality in Health Care. National safety and quality health service standards. Sydney: ACSQHC, 2011.
17. National Heart Foundation of Australia. Coronary angiography. NHFA; 2008 [cited October 2013]; Available from: <http://www.heartfoundation.org.au/sitecollectiondocuments/angiography.pdf>.

18. National Heart Foundation of Australia. Cardiovascular conditions. NHFA; 2013 [cited 2013 September 2013]; Available from: <http://www.heartfoundation.org.au/your-heart/cardiovascular-conditions/Pages/default.aspx>.
19. Australian Institute of Health and Welfare. Monitoring acute coronary syndrome using national hospital data: an information paper on trends and issues. Canberra: AIHW, 2011.
20. Australian Commission on Safety and Quality in Health Care. Hospital accreditation workbook. Sydney: ACSQHC, 2012.
21. Australian Institute of Health and Welfare. Cardiovascular disease: Australian facts 2011. Canberra: AIHW, 2011.
22. Australian Commission on Safety and Quality in Health Care. National consensus statement: essential elements for recognising and responding to clinical deterioration. Sydney: ACSQHC, 2010.
23. Patient.co.uk. Acute Coronary Syndrome. Patient.co.uk; 2013 [cited 2013 September 2013]; Available from: <http://www.patient.co.uk/health/acute-coronary-syndrome>.
24. National Heart Foundation of Australia. Secondary prevention of cardiovascular disease. Canberra: NHFA, 2010.
25. Australian Institute of Health and Welfare. Glossary. AIHW; 2013 [cited June 2014]; Available from: <http://www.aihw.gov.au/glossary/>.



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