



# Acute Coronary Syndromes

## Clinical Care Standard

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# Contents

<b>Acute Coronary Syndromes Clinical Care Standard</b>	<b>4</b>	<b>Appendix A Indicators to support local monitoring</b>	<b>20</b>
<b>Indicators for local monitoring</b>	<b>5</b>	<b>Appendix B Measuring and monitoring patient experiences</b>	<b>21</b>
<b>About the clinical care standards</b>	<b>6</b>	<b>Appendix C Integration with the National Safety and Quality Health Service Standards</b>	<b>22</b>
<b>Acute coronary syndromes</b>	<b>8</b>	<b>Glossary</b>	<b>24</b>
<b>About this clinical care standard</b>	<b>9</b>	<b>Acknowledgements</b>	<b>26</b>
<b>How to use this clinical care standard</b>	<b>10</b>	<b>References</b>	<b>27</b>
<b>Immediate management</b>	<b>12</b>		
<b>Early assessment</b>	<b>13</b>		
<b>Timely reperfusion</b>	<b>14</b>		
<b>Risk stratification</b>	<b>16</b>		
<b>Coronary angiography</b>	<b>17</b>		
<b>Individualised care plan</b>	<b>18</b>		

# Acute Coronary Syndromes Clinical Care Standard

## Quality statements

### 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.

### 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.

### 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.<sup>1</sup>

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 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.

### 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.

### 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.

# Indicators for local monitoring

Indicators have been developed to support monitoring of the care described in this clinical care standard.

**Indicator 1a:** Proportion of patients presenting with symptoms suggestive of an acute coronary syndrome (ACS) whose care is guided by a documented chest pain assessment pathway.

**Indicator 2a:** Proportion of patients with symptoms suggestive of acute coronary syndrome (ACS) with an electrocardiogram (ECG) performed and interpreted within 10 minutes of first clinical contact.

**Indicator 3a:** Proportion of patients with ST-segment-elevation myocardial infarction (STEMI) receiving fibrinolysis or percutaneous coronary intervention (PCI).

**Indicator 3b:** Proportion of patients with ST-segment-elevation myocardial infarction (STEMI) receiving fibrinolysis before or within 30 minutes of hospital presentation.

**Indicator 3c:** Proportion of patients with ST-segment-elevation myocardial infarction (STEMI) treated with percutaneous coronary intervention (PCI) within 90 minutes of first clinical contact.

**Indicator 4a:** Proportion of patients with non-ST-segment-elevation acute coronary syndrome (NSTEMI) who have a documented assessment and risk stratification using a guideline-recommended tool.

**Indicator 4b:** Proportion of patients with non-ST-segment-elevation acute coronary syndrome (NSTEMI) transferred to a hospital with angiography facilities.

**Indicator 6a:** Proportion of patients with acute coronary syndrome (ACS) provided with an individualised care plan.

**Indicator 6b:** Proportion of patients with acute coronary syndrome (ACS) on aspirin or dual antiplatelet therapy on separation from hospital.

**Indicator 6c:** Proportion of patients with acute coronary syndrome (ACS) prescribed lipid-lowering therapy on separation from hospital.

**Indicator 6d:** Proportion of patients with myocardial infarction who had their left ventricular ejection fraction (LVEF) measured prior to separation from hospital.

**Indicator 6e:** Proportion of patients with reduced left ventricular ejection fraction (LVEF) prescribed a beta blocker and angiotensin-converting enzyme (ACE) inhibitor on separation from hospital.

**Indicator 6f:** Proportion of patients with acute coronary syndrome referred to cardiac rehabilitation or other secondary prevention program.

**Indicator 6g:** Proportion of patients with acute coronary syndrome whose discharge summary was provided to their general practitioner or ongoing clinical provider within 48 hours of separation from hospital.

Clinicians and health service organisations can use these indicators to monitor their implementation of the care described in each quality statement and the clinical care standard as a whole. See Appendix A.

The full specifications are available at <https://meteor.aihw.gov.au/content/index.phtml/itemId/719380>.

# About the clinical care standards

**Clinical care standards aim to support the delivery of appropriate evidence-based clinical care, and promote shared decision making between patients, carers and clinicians.**

A clinical care standard contains a small number of quality statements that describe the clinical care a patient should be offered for a specific clinical condition or when undergoing a specific procedure. It is based on the best available evidence at the time of development. Some of the quality statements are linked to indicators that can be used by health service organisations to monitor how well they are implementing the care recommended in the clinical care standard.

A clinical care standard differs from, and is not intended to be, a clinical practice guideline. Rather than describing all the components of care recommended for managing a clinical condition or performing a certain procedure, a clinical care standard addresses areas of the patient pathway where the need for quality improvement is greatest.

Clinicians are advised to use clinical judgement and consider an individual patient's circumstances, in consultation with the patient, or their carer or guardian, when applying the information in a clinical care standard. Health service organisations are responsible for ensuring that local policies, processes and protocols to guide

clinical practice are in place, so that clinicians can apply the information described in the clinical care standard, and so that clinicians and health service organisations can monitor the delivery of appropriate care.

Clinical care standards aim to support key groups of people in the healthcare system by:

- Educating the public about the care that the healthcare system should offer, and helping people to make informed treatment decisions in partnership with their clinicians
- Providing clear information to clinicians to help them make decisions about appropriate care
- Outlining the systems required by health service organisations so that they are better able to review their performance and make improvements in the care that they provide.

The Australian Commission on Safety and Quality in Health Care (the Commission) developed the Acute Coronary Syndromes Clinical Care Standard in collaboration with consumers, clinicians, researchers and health service organisations. The clinical care standard complements existing efforts, including state- and territory-based initiatives, that support care for people with an acute coronary syndrome in hospital and follow-up care in the community.

For more information about this clinical care standard, visit [www.safetyandquality.gov.au/ccs](http://www.safetyandquality.gov.au/ccs).

## Updates in 2019

A review of the evidence sources used to develop the original Acute Coronary Syndromes Clinical Care Standard was undertaken by the Commission as part of this update. The evidence base for the standard remained largely unchanged, so no change was made to the quality statements. Changes in this revision of the clinical care standard are minor, and are largely based on aligning the clinical care standard and indicators to the National Heart Foundation of Australia and Cardiac Society of Australia and New Zealand *Australian Clinical Guidelines for the Management of Acute Coronary Syndromes 2016*.<sup>1</sup> Other additions reflect changes in the National Safety and Quality Health Service (NSQHS) Standards (second edition), which now explicitly support the use of clinical care standards developed by the Commission as part of providing evidence-based care and addressing clinical variation.

## About the Australian Commission on Safety and Quality in Health Care

The Commission is an Australian Government agency that leads and coordinates national improvements in the safety and quality of health care based on the best available evidence. By working in partnership with the Australian Government, state and territory governments, the private sector, clinical experts, and patients and carers, the Commission aims to ensure that the health system is better informed, supported and organised to deliver safe and high-quality care.

### Acute coronary syndromes...



include heart attacks and other blockages of the blood vessels in the heart



cause more than  
**200**  
hospital admissions  
per day

### Interventions to remove blockages...



save lives when given in time

are received less often by:



- women
- Aboriginal or Torres Strait Islander peoples
- people living outside major cities

# Acute coronary syndromes

An acute coronary syndrome (ACS) 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. If 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 muscle), which can lead to a heart attack. The most common cause of an ACS is atherosclerosis (or 'coronary heart disease'), in which an artery wall thickens as a result of a build-up of fatty materials such as cholesterol.

Acute coronary syndromes affect thousands of Australians. It is estimated that ACS events in Australia will cost governments alone \$1.93 billion in 2017–18.<sup>2</sup> In addition, there were more than 1.1 million hospital admissions for cardiovascular disease in 2015–16.<sup>3</sup> There is strong evidence that Aboriginal and Torres Strait Islander peoples experience rates of coronary events, such as heart attacks, at twice the rate of non-Indigenous Australians.<sup>3</sup> 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.<sup>4</sup>

## Quick facts about ACS

- Acute coronary syndromes include heart attacks and other blockages in the blood vessels in the heart, which can be fatal if not treated appropriately.
- In 2014–15, 77,007 Australians (over 200 per day) were admitted to hospital because of an acute coronary syndrome.<sup>2</sup>
- Not all patients who could benefit from surgical and procedural interventions receive them as recommended. This includes women<sup>5</sup>, Aboriginal and Torres Strait Islander peoples<sup>4</sup>, and those living outside major cities.<sup>6</sup>



# About this clinical care standard

## Why this is needed

Despite well-developed guidelines for managing ACS, not all patients receive appropriate treatments, particularly for invasive management of this condition.<sup>5</sup> The logistical challenges in providing prompt invasive management to patients in regional, remote and outer metropolitan areas have been highlighted.<sup>6</sup>

Initiatives such as the Lighthouse Project, which was developed to improve the quality of care for Aboriginal and Torres Strait Islander peoples with ACS, have been introduced in recent years; however, improvements in care delivery are still needed.<sup>7</sup>

## Goal

The Acute Coronary Syndromes Clinical Care Standard aims to ensure that a patient with an ACS receives the best treatment from the onset of symptoms through to discharge from hospital. This includes recognition of an ACS, rapid assessment, early management and early initiation of a tailored rehabilitation plan, to maximise the patient's chances of recovery, and reduce their risk of a future cardiac event.

## Scope

This clinical care standard relates to the care that patients with a suspected ACS receive from the onset of symptoms to the completion of their treatment in hospital. It includes patients who develop a suspected ACS while in hospital for another condition.

## Evidence that underpins this clinical care standard

Key evidence sources that underpin the Acute Coronary Syndromes Clinical Care Standard are current clinical guidelines from the Heart Foundation of Australia and Cardiac Society of Australia and New Zealand: *Australian Clinical Guidelines for the Management of Acute Coronary Syndromes 2016*.<sup>1</sup>

The Better Cardiac Care for Aboriginal and Torres Strait Islander People project has also informed the development of this document. It provides national recommendations for better cardiac care for Aboriginal and Torres Strait Islander peoples.<sup>8</sup>

## Supporting documents

A suite of supporting documents for this clinical care standard is available on the Commission's website at [www.safetyandquality.gov.au/ccs](http://www.safetyandquality.gov.au/ccs).

# How to use this clinical care standard

This clinical care standard describes the key components of care to ensure that a patient with an ACS receives the best treatment from the onset of symptoms through to discharge from hospital. It should be used as part of providing high-quality, evidence-based care, taking into account the context in which care is provided, local variation in care, and the quality improvement priorities of the individual health service organisation.

When implementing the clinical care standard, health service organisations and clinicians should consider the following:

- Indicators for the Acute Coronary Syndromes Clinical Care Standard – these are listed with each quality statement; see Appendix A
- Other quality measures such as patient-reported outcome measures and patient experience measures – see Appendix B
- The [NSQHS Standards](#) – see Appendix C.

## General principles of care

Clinicians are advised to use clinical judgement and consider an individual patient's circumstances, in consultation with the patient, or their carer or guardian, when applying the information in this clinical care standard.

Health service organisations are responsible for ensuring that local policies, processes and protocols to guide clinical practice are in place. This enables clinicians and health service organisations to apply the information in the clinical care standard and monitor the delivery of appropriate care.

## Person-centred care

Person-centred care is health care that is respectful of, and responsive to, the preferences, needs and values of patients and consumers.<sup>9</sup>

Clinical care standards support the key principles of person-centred care, namely:

- Treating patients with dignity and respect
- Encouraging patient participation in decision making
- Communicating with patients about their clinical condition and treatment options
- Providing patients with information in a format that they understand so they can participate in decision making.<sup>10</sup>

For Aboriginal and Torres Strait Islander patients, care should be provided in a way that is respectful of, and responsive to, cultural beliefs and practices, while recognising the disparities faced by Aboriginal and Torres Strait Islander peoples.<sup>11</sup>

## Multidisciplinary care

During a hospital admission and following discharge from hospital, patients are likely to need specific types of care provided by various clinicians. In this document, the term 'clinician' refers to all types of health professionals who provide direct clinical care to patients. Multidisciplinary care refers to comprehensive care provided by different clinicians (for example, doctors, nurses, pharmacists, physiotherapists and other allied health professionals) from one or more organisations, who work collectively with the aim of addressing as many of a patient's health and other needs as possible.<sup>12</sup>

A coordinated multidisciplinary team approach is essential for improving the care delivered to patients with an ACS. Multidisciplinary care of patients can improve health outcomes, and offers more efficient use of health resources. Planning, coordination and regular communication between clinicians are essential components of multidisciplinary care.<sup>12</sup>

## Carers and family members

Carers and family members play an important role in prevention, early recognition, assessment and recovery relating to a patient's health condition. They often know the patient very well, and can provide detailed information about the patient's history, routines or symptoms, which may assist in determining treatment and ongoing support.<sup>9</sup>

Although this clinical care standard does not specifically refer to carers and family members, each quality statement should be understood to mean that carers and family members are involved in clinicians' discussions with patients about their care, if the patient prefers carer involvement.

## Integrated approach to care

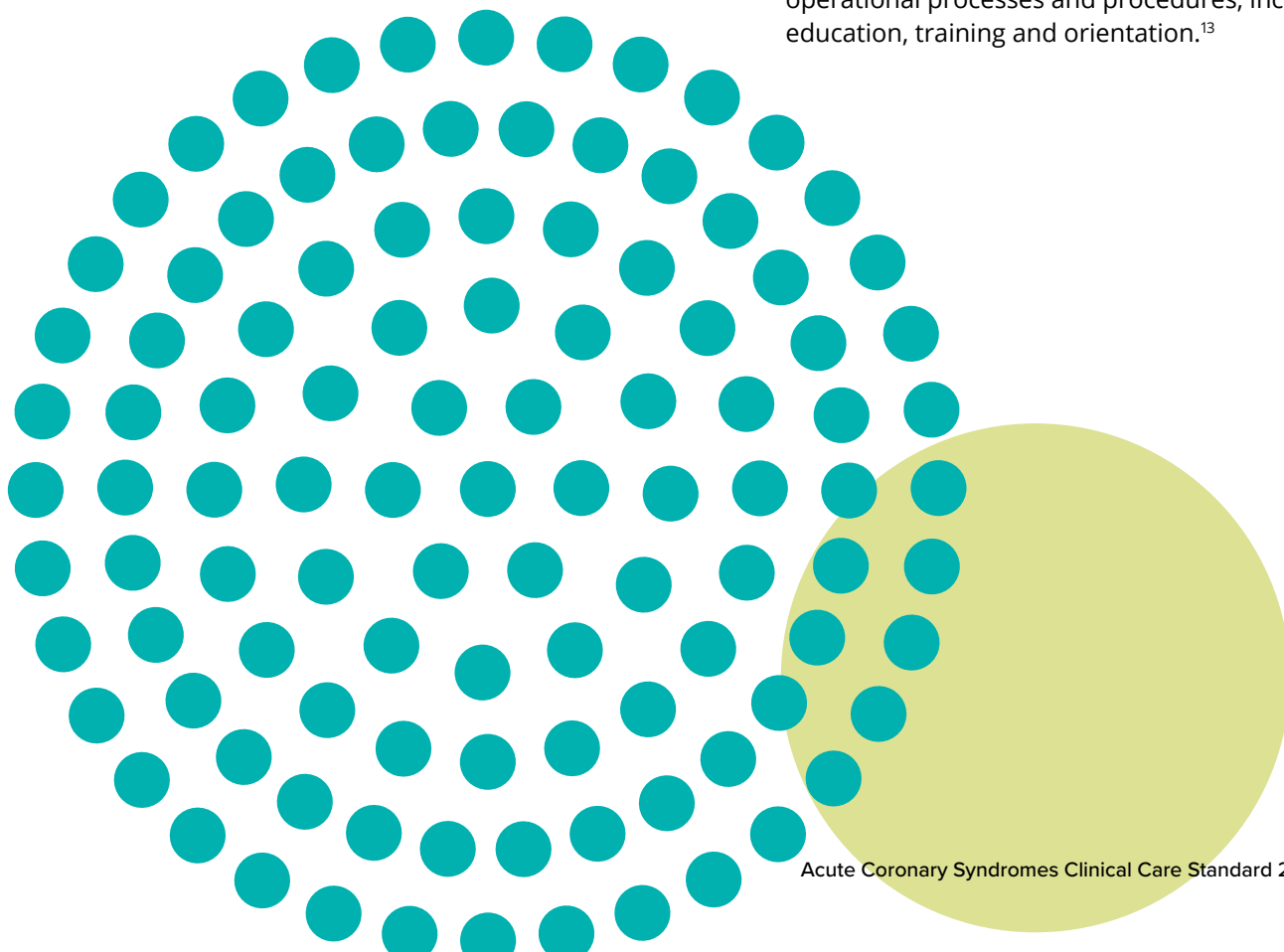
An integrated, systems-based approach supported by health service organisations and their networks is central to the delivery of person-centred care as identified in this clinical care standard. The workforce will need access to resources, policies, processes and procedures.

Key aims of an integrated approach include:

- Understanding the capacity and limitations of each component of the healthcare system across metropolitan, regional, rural and remote settings
- Developing clear lines of communication between components of the healthcare system, including primary care, hospital, subacute and community services
- Ensuring appropriate coordination so that people receive prompt access to the best care, regardless of how or where they enter the system.

To achieve these aims, health service organisations implementing this standard may need to:

- Deploy an active implementation plan and feedback mechanisms
- Include agreed protocols and guidelines, decision support tools and other resource material
- Employ a variety of incentives and sanctions to influence behaviours, and encourage compliance with policies, protocols, regulations and procedures
- Integrate risk management, governance, and operational processes and procedures, including education, training and orientation.<sup>13</sup>



# 1

## 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 that patients with acute chest pain or other symptoms suggestive of an ACS 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. Your treatment will be discussed with you to ensure that you are able to understand your options and provide your consent.

#### ■ For clinicians

Use a documented chest pain assessment pathway to provide care to all patients who present with symptoms of an ACS. Ensure that your patients understand what is happening and why.

#### ■ For health service organisations

Ensure that a chest pain assessment pathway is available and used consistently by clinicians. A chest pain assessment pathway taken from the national guideline is available from the Heart Foundation.<sup>14</sup>

### Indicator for local monitoring

**1a.** Proportion of patients presenting with symptoms suggestive of an acute coronary syndrome (ACS) whose care is guided by a documented chest pain assessment pathway

METeOR link: [meteor.aihw.gov.au/content/index.phtml/itemId/719382](https://meteor.aihw.gov.au/content/index.phtml/itemId/719382)

More information about this indicator, and the definitions needed to collect and calculate it can be found online in the above METeOR link.

# 2

## 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 provide early and appropriate assessment of patients with a suspected ACS.

#### What the quality statement means

##### ■ For patients

If you have chest pain or other symptoms that could indicate a heart attack, you will have an ECG as soon as possible. The ECG should be interpreted within 10 minutes so that any necessary emergency treatment can be provided.

##### ■ For clinicians

Assess all patients with a suspected ACS 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 or interpreting an ECG.

##### ■ For health service organisations

Ensure that systems and processes are in place in the pre-hospital and hospital settings to assess patients with symptoms of an ACS using a 12-lead ECG, and for the ECG to be analysed by a clinician experienced in interpreting an ECG within 10 minutes of the first emergency clinical contact.

#### Indicator for local monitoring

**2a.** Proportion of patients with symptoms suggestive of acute coronary syndrome (ACS) with an electrocardiogram (ECG) performed and interpreted within 10 minutes of first clinical contact

METeOR link: [meteor.aihw.gov.au/content/index.phtml/itemId/719385](https://meteor.aihw.gov.au/content/index.phtml/itemId/719385)

More information about this indicator, and the definitions needed to collect and calculate it can be found online in the above METeOR link.

# 3

## 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.<sup>1</sup>

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 that patients who are eligible for primary PCI 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 in which the artery supplying an area of the heart muscle is completely blocked, your doctor decides whether you can have a procedure called 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 a medicine that dissolves blood clots. This is done urgently.

Your doctor will discuss your treatment with you so that you understand the risks and benefits, and can provide your consent.

#### ■ For clinicians

Offer primary PCI or fibrinolysis to all eligible patients diagnosed with an acute STEMI, within the time frames recommended in the current Heart Foundation of Australia/Cardiac Society of Australia and New Zealand guidelines for the management of acute coronary syndromes.<sup>1</sup> Ensure that the patient understands the risks and benefits of their proposed treatment, and provides their consent.

#### ■ For health service organisations

Ensure that 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 Heart Foundation of Australia/Cardiac Society of Australia and New Zealand guidelines for the management of acute coronary syndromes.<sup>1</sup>

## Indicators for local monitoring

**3a.** Proportion of patients with ST-segment-elevation myocardial infarction (STEMI) receiving fibrinolysis or percutaneous coronary intervention (PCI)

**METeOR link:** [meteor.aihw.gov.au/content/index.phtml/itemId/719388](https://meteor.aihw.gov.au/content/index.phtml/itemId/719388)

**3b.** Proportion of patients with ST-segment-elevation myocardial infarction (STEMI) receiving fibrinolysis before or within 30 minutes of hospital presentation

**METeOR link:** [meteor.aihw.gov.au/content/index.phtml/itemId/719390](https://meteor.aihw.gov.au/content/index.phtml/itemId/719390)

**3c.** Proportion of patients with ST-segment-elevation myocardial infarction (STEMI) treated with percutaneous coronary intervention (PCI) within 90 minutes of first clinical contact

**METeOR link:** [meteor.aihw.gov.au/content/index.phtml/itemId/719392](https://meteor.aihw.gov.au/content/index.phtml/itemId/719392)

More information about these indicators, and the definitions needed to collect and calculate them can be found online in the above METeOR links.

# 4

## 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.

### Purpose

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

### What the quality statement means

#### ■ For patients

If you have a heart attack in which 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. Your doctor will discuss your individual level of risk with you, and work with you to make sure you have the information you need to make choices about your treatment.

#### ■ For clinicians

Use an evidence-based risk assessment tool to stratify the patient's risk of future cardiac events. Discuss the identified level of risk with the patient, and use a shared decision making process to plan their treatment based on their risk of an adverse event and their treatment preferences.

Risk assessment tools include:

- GRACE ACS Risk Calculator<sup>15</sup>
- TIMI Risk Score for UA/NSTEMI<sup>16</sup>
- Decision making and timing considerations in reperfusion for STEMI.<sup>17</sup>

#### ■ For health service organisations

Ensure that an evidence-based risk assessment process is available to guide the treatment of all patients with an NSTEMACS, and that clinicians use it consistently.

### Indicators for local monitoring

**4a.** Proportion of patients with non-ST-segment-elevation acute coronary syndrome (NSTEMACS) who have a documented assessment and risk stratification using a guideline-recommended tool

METeOR link: [meteor.aihw.gov.au/content/index.phtml/itemId/719394](https://meteor.aihw.gov.au/content/index.phtml/itemId/719394)

**4b.** Proportion of patients with non-ST-segment-elevation acute coronary syndrome (NSTEMACS) transferred to a hospital with angiography facilities

METeOR link: [meteor.aihw.gov.au/content/index.phtml/itemId/719396](https://meteor.aihw.gov.au/content/index.phtml/itemId/719396)

More information about these indicators, and the definitions needed to collect and calculate them can be found online in the above METeOR links.



# 5

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

#### What the quality statement means

##### ■ For patients

If you have a heart attack in which 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 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 that 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 the risks and benefits of coronary angiography and appropriate revascularisation.

##### ■ For health service organisations

Ensure that systems and processes are in place for clinicians to offer coronary angiography and appropriate coronary revascularisation to all eligible patients with an NSTEMACS.

# 6

## 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 that patients with an ACS 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 that 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 ACS before they leave the hospital. The plan identifies lifestyle changes and medicines, addresses the patient's psychosocial needs and includes a referral to an appropriate cardiac rehabilitation or other 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 service organisations

Ensure that processes are in place so that clinicians can develop an individualised care plan with patients with an ACS 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.

## Indicators for local monitoring

**6a.** Proportion of patients with acute coronary syndrome (ACS) provided with an individualised care plan

**METeOR link:** [meteor.aihw.gov.au/content/index.phtml/itemId/719398](https://meteor.aihw.gov.au/content/index.phtml/itemId/719398)

**6b.** Proportion of patients with acute coronary syndrome (ACS) on aspirin or dual antiplatelet therapy on separation from hospital

**METeOR link:** [meteor.aihw.gov.au/content/index.phtml/itemId/719400](https://meteor.aihw.gov.au/content/index.phtml/itemId/719400)

**6c.** Proportion of patients with acute coronary syndrome (ACS) prescribed lipid-lowering therapy on separation from hospital

**METeOR link:** [meteor.aihw.gov.au/content/index.phtml/itemId/719402](https://meteor.aihw.gov.au/content/index.phtml/itemId/719402)

**6d.** Proportion of patients with myocardial infarction who had their left ventricular ejection fraction (LVEF) measured prior to separation from hospital

**METeOR link:** [meteor.aihw.gov.au/content/index.phtml/itemId/719404](https://meteor.aihw.gov.au/content/index.phtml/itemId/719404)

**6e.** Proportion of patients with reduced left ventricular ejection fraction (LVEF) prescribed a beta blocker and angiotensin-converting enzyme (ACE) inhibitor on separation from hospital

**METeOR link:** [meteor.aihw.gov.au/content/index.phtml/itemId/719406](https://meteor.aihw.gov.au/content/index.phtml/itemId/719406)

**6f.** Proportion of patients with acute coronary syndrome referred to cardiac rehabilitation or other secondary prevention program

**METeOR link:** [meteor.aihw.gov.au/content/index.phtml/itemId/719409](https://meteor.aihw.gov.au/content/index.phtml/itemId/719409)

**6g.** Proportion of patients with acute coronary syndrome whose discharge summary was provided to their general practitioner or ongoing clinical provider within 48 hours of separation from hospital

**METeOR link:** [meteor.aihw.gov.au/content/index.phtml/itemId/719411](https://meteor.aihw.gov.au/content/index.phtml/itemId/719411)

More information about these indicators, and the definitions needed to collect and calculate them can be found online in the above METeOR links.

# Appendix A

## Indicators to support local monitoring

The Commission has developed a set of indicators to support healthcare providers and local health service organisations in monitoring how well they implement the care described in this clinical care standard. The indicators are a tool to support local quality improvement activities. No benchmarks are set for any indicator.

The process to develop the indicators specified in this document comprised:

- A review of existing local and international indicators
- Prioritisation, review and refinement of the indicators with the Acute Coronary Syndromes Clinical Care Standard Topic Working Group.

Most of the data underlying these indicators are collected from local sources, mainly through prospective data collection or a retrospective chart review. Where an indicator refers to 'local arrangements', these can include clinical guidelines, policies, protocols, care pathways or any other documentation providing guidance to clinicians on the care of patients with an ACS, both in hospital and following discharge from hospital.

Monitoring the implementation of the clinical care standard will help health service organisations to meet some of the requirements of the NSQHS Standards. Information about the NSQHS Standards is available at the [Commission's website](#).

In this document, the indicator titles and hyperlinks to the specifications are included with the relevant quality statement under the heading 'Indicators for local monitoring'. Full specifications of the Acute Coronary Syndromes Clinical Care Standard indicators can be found in the Metadata Online Registry (METeOR) at <https://meteor.aihw.gov.au/content/index.phtml/itemId/719380>.

METeOR is Australia's web-based repository for national metadata standards for the health, community services and housing assistance sectors. Hosted by the Australian Institute of Health and Welfare, METeOR provides users with online access to a wide variety of nationally endorsed data and indicator definitions.

# Appendix B

## Measuring and monitoring patient experiences

Systematic, routine monitoring of patients' experiences of health care is an important way to ensure that the patient's perspective drives service improvements and patient-centred care. This is the case in all health service organisations, including those providing care for people with an ACS.

### Patient-reported outcome measures

In Australia, patient-reported outcome measures (PROMs) are an emerging method of assessing the quality of health care. The Commission is leading a national work program to support the consistent and routine use of PROMs to drive quality improvement.

PROMs are standardised, validated questionnaires that patients complete, without any input from health professionals. They are often administered at least twice to an individual patient – at baseline and again after an intervention or at regular intervals during a chronic illness. The information contributed by patients filling out PROMs questionnaires can be used to support and monitor the movement of health systems towards person-centred, value-based health care.

PROMs are being used to evaluate healthcare effectiveness at different levels of the health system, from the individual level to service and system levels. There is growing interest across Australia and internationally in the routine interrogation of patient-reported outcome information for evaluation and decision making activities at levels of the health system beyond the clinical consultation.

### Patient experience measures

This clinical care standard does not include indicators specific to measuring patient experiences. The Commission strongly encourages health service organisations to adopt the Australian Hospital Patient Experience Question Set (AHPEQS). AHPEQS is a 12-question generic patient experience survey that has been found to be reliable and valid for both day-only and admitted hospital patients across many clinical settings.

The AHPEQS question set is available for both private and public sector health services, and has been translated into 20 languages. It can be downloaded at: [www.safetyandquality.gov.au/ahpeqs](http://www.safetyandquality.gov.au/ahpeqs).

# Appendix C

## Integration with the National Safety and Quality Health Service Standards

The Commission developed the NSQHS Standards in collaboration with the Australian Government, state and territory governments, clinical experts, and consumers. The NSQHS Standards aim to protect the public from harm and improve the quality of health service provision. They provide a quality assurance mechanism that tests whether relevant systems are in place to ensure that expected standards of safety and quality are met.

The second edition of the NSQHS Standards was launched in November 2017, and health service organisations have been assessed against the new standards since January 2019.

In the NSQHS Standards (2nd ed.), the Clinical Governance Standard and the Partnering with Consumers Standard combine to form the clinical governance framework for all health service organisations.

The Clinical Governance Standard aims to ensure that systems are in place within health service organisations to maintain and improve the reliability, safety and quality of health care.

The Partnering with Consumers Standard aims to ensure that consumers are partners in the design, delivery and evaluation of healthcare systems and services, and that patients are given the opportunity to be partners in their own care, to the extent that they choose.

Under the NSQHS Standards (2nd ed.), health service organisations are expected to support clinicians to use the best available evidence, including clinical care standards such as the Acute Coronary Syndromes Clinical Care Standard, where relevant (see Action 1.27b in the NSQHS Standards).

Health service organisations are expected to implement the NSQHS Standards in a way that suits the clinical services provided and their associated risks. Other aspects of the NSQHS Standards (2nd ed.) that are relevant to care for people with an ACS include those listed in Table 1.

Table 1: Aspects of the NSQHS Standards relevant to this clinical care standard

<b>Clinical Governance Standard</b>	<b>Partnering with Consumers Standard</b>	<b>Medication Safety Standard</b>	<b>Communicating for Safety Standard</b>	<b>Recognising and Responding to Acute Deterioration Standard</b>
Governance, leadership and culture (1.1 and 1.2)	Informed consent (2.3–2.5)	Clinical governance and quality improvement to support medication management (4.1–4.4)	Communication of critical information (6.9)	Responding to deterioration (8.10)
Safety and quality monitoring, including incident reporting systems (1.8 and 1.11)	Sharing decisions and planning care (2.6 and 2.7)	Documentation of patient information (4.5–4.9)	Documentation of information (6.11)	
Policies and procedures (1.7)	Information for consumers (2.9) and communication of clinical information (2.10)	Continuity of medication management (4.10–4.12)		
Credentialing and scope of clinical practice (1.23 and 1.24)		Management of high-risk medicines (4.15)		
Evidence-based care (1.27)				
Variation in clinical practice and health outcomes (1.28)				

# Glossary

Term	Definition
acute coronary syndrome (ACS)	The spectrum of acute clinical presentations resulting from underlying coronary heart disease, including heart attack and angina. <sup>18</sup>
acute myocardial infarction	A condition in which there is evidence of acute myocardial injury, with clinical evidence consistent with acute myocardial ischaemia (reduced blood flow to the heart muscle). <sup>19</sup>
angina	Chest pain due to obstruction or spasm of the coronary artery.
atherosclerosis	A process in which fatty and fibre-like deposits build up on the inner walls of arteries, often forming plaques that can 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. <sup>20</sup>
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. <sup>21</sup>
cardiac rehabilitation program	All measures used to help people with heart disease return to an active and satisfying life, and to prevent recurrence of cardiac events. <sup>22</sup>
care pathway	A complex intervention that supports mutual decision-making and organisation of care processes for a well-defined group of patients during a well-defined period. <sup>23</sup>
care plan	A document describing agreed goals of care, and outlining planned medical, nursing and allied health activities for a patient. <sup>23</sup>
carer	A person who provides personal care, support and assistance to another individual who needs these because they have a disability, medical condition (including a terminal or chronic illness) or mental illness, or they are frail or aged. An individual is not a carer merely because they are a spouse, de facto partner, parent, child, other relative or guardian to an individual who requires care. A person is not considered a carer if they are paid, a volunteer for an organisation, or caring as part of a training or education program. <sup>23</sup>
clinician	A healthcare provider, trained as a health professional, including registered and non-registered practitioners. Clinicians may provide care within a health service organisation as an employee, a contractor or a credentialed healthcare provider, or under other working arrangements. They include nurses, midwives, medical practitioners, allied health practitioners, technicians, scientists and other clinicians who provide health care, and students who provide health care under supervision. <sup>23</sup>
coronary angiography	An X-ray procedure or test to check the arteries of the heart. An angiography provides information on the extent and location of any narrowing in the coronary arteries. <sup>24</sup>
coronary heart disease	A condition in which the coronary arteries get narrower and reduce the blood flow to the heart. Coronary heart disease is the usual underlying cause of a heart attack. <sup>25</sup>



Term	Definition
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. <sup>26</sup> 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 (see <b>ST-segment-elevation myocardial infarction (STEMI)</b> ). <sup>18</sup>
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. <sup>18</sup>
first emergency clinical contact	The time when a patient first encounters a clinician.
health service organisation	A separately constituted health service that is responsible for implementing clinical governance, administration and financial management of a service unit or service units providing health care at the direction of the governing body. A service unit involves a group of clinicians and others working in a systematic way to deliver health care to patients. It can be in any location or setting, including pharmacies, clinics, outpatient facilities, hospitals, patients’ homes, community settings, practices and clinicians’ rooms. <sup>23</sup>
heart attack	Life-threatening emergency that occurs when a vessel supplying blood to the heart muscle is suddenly blocked completely by a blood clot. <sup>27</sup>
hospital	A licensed facility providing healthcare services to patients for short periods of acute illness, injury or recovery. <sup>28</sup>
individualised care plan	See <b>care plan</b> .
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. These include prescription, non-prescription, investigational, clinical trial and complementary medicines, regardless of how they are administered. <sup>23</sup>
non-ST-elevation myocardial infarction (NSTEMI)	See <b>non-ST-segment-elevation acute coronary syndrome (NSTEMI)</b> .
non-ST-segment-elevation acute coronary syndrome (NSTEMI)	A condition in which patients have a heart attack that is either short lived or affects only a small part of the heart muscle. An electrocardiogram (ECG) will often show either no abnormality or subtle changes. It is also known as a non-ST-elevation myocardial infarction. <sup>29</sup>
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. <sup>18</sup>
pre-hospital care	Emergency medical care provided in the community and in transit to hospital.
reperfusion	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 (for example, as a result of a heart attack). <sup>18</sup>

## Acknowledgements

Term	Definition
risk factor	Any variable (for example, 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. <sup>26</sup>
secondary prevention	Health care designed to prevent recurrence of cardiovascular events (for example, 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. <sup>30</sup>
ST-segment-elevation myocardial infarction (STEMI)	An acute heart attack that was diagnosed using 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. <sup>18</sup>
thrombosis	Formation or presence of a blood clot in a blood vessel. <sup>31</sup>
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. <sup>26</sup>

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