Guideline 14 - Acute Coronary Syndromes

Overview and Summary

Following the International Liaison Committee on Resuscitation (ILCOR) process that led to the International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science with treatment recommendations (CoSTR) document for 2015, ILCOR decided to merge the acute coronary syndromes task force into the Advanced Life Support (ALS) Task Force. It was felt that in some jurisdictions there was significant overlap with existing Society and College guidelines. ANZCOR decided to continue to produce guidelines in this area but to shift the focus onto prehospital and emergency department care. In-hospital acute coronary syndromes and the subsequent management of prehospital events (including perioperative issues) is beyond the scope of this document and is dealt with by specialty guidelines.

In this guideline the previous 2016 ANZCOR and 2015 CoSTR have been built on using acute coronary syndrome and related guidelines from the Heart Foundation/CSANZ, other international guidelines and subsequent systematic reviews to produce a locally relevant document. ANZCOR continues to work with the Heart Foundation and CSANZ to provide a document that parallels and complements their guidelines as they are produced.

Where GRADE methodology has been used in a systematic review, GRADE assessment nomenclature is used. In the remainder the quality assessment, where available is in the referenced publications.

The recently released ESC 2023 document and anticipated CSANZ/HF 2025 document will be included in the next update in 2025.

Introduction and Definitions

Acute Coronary Syndromes (ACS) encompass a spectrum of cardiovascular conditions, with ST-elevation myocardial infarction (STEMI) and non-ST elevation ACS (NSTEACS) being the two major categories. These conditions are medical emergencies and require prompt evaluation and management. ACS typically presents with acute chest discomfort, often described as retrosternal pain, pressure, or heaviness, which may radiate to the arm, jaw, or neck. Additional symptoms like dyspnoea, sweating, nausea, and syncope may also occur. The identification and prompt treatment of ACS are critical to prevent further myocardial damage and improve patient outcomes.

The management of ACS involves several diagnostic and therapeutic strategies. In patients with suspected ACS, a 12-lead electrocardiogram (ECG) should be acquired and interpreted as soon as possible after the first medical contact. Depending on the ECG findings, appropriate reperfusion strategies, including primary percutaneous coronary intervention (PPCI) or fibrinolytic therapy, should be initiated to restore coronary blood flow and minimize myocardial necrosis. In cases where PPCI is not feasible within the recommended time frame, fibrinolytic therapy may be considered.

Cardiac biomarkers, particularly cardiac troponins, play a vital role in the diagnosis of myocardial infarction. Their dynamic elevation, along with clinical presentation consistent with myocardial ischemia, helps confirm the diagnosis of acute MI. Several diagnostic algorithms utilize high-sensitivity cardiac troponin measurements in combination with risk-scoring systems to aid in the diagnosis of ACS and to determine the need for further investigations, such as coronary angiography.

Additionally, symptomatic therapy is essential for providing relief to ACS patients. Supplemental oxygen, nitrates, and opioids may be used for symptom control, while antiplatelet and anticoagulant therapies help prevent further thrombotic events. Beta-blockers, angiotensin-converting enzyme (ACE) inhibitors, and HMG CoA-reductase inhibitors are also recommended for long-term secondary prevention in ACS patients.

Furthermore, regional STEMI networks and cardiac arrest/shock centres are essential components of a well-structured system of care for ACS patients. Timely diagnosis and treatment, facilitated by pre-hospital 12-lead ECGs and early activation of reperfusion strategies, can significantly improve patient outcomes. Overall, a comprehensive approach, combining diagnostic accuracy, early intervention, and optimal medical therapy, is crucial for effectively managing ACS and reducing its morbidity and mortality rates.

In this text, we will explore the various aspects of ACS management, including diagnosis, reperfusion strategies, medical therapy, and the importance of well-established cardiac care networks in optimizing patient care. Through timely and coordinated efforts, healthcare providers can enhance patient outcomes and improve the overall prognosis for individuals experiencing ACS.

About this Guideline

Search date/s	This review was completed in October 2023
Questions/PICOs:	This guideline has been developed from the previous ANZCOR guideline 2016 and questions included in the ILCOR 2015 and 2022 CoSTR
Method:	Literature review of the most recent acute coronary syndrome and related guidelines from the Australian Heart Foundation / Cardiac Society of Australia and NZ (2016), the European Society of Cardiology (2020) in addition to related ILCOR reviews to produce a locally relevant document.
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Other consultation:	N/A
Worksheet:	N/A
Approved:	December 2024
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Referencing this guideline

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