‘Australian Safety and Quality Goals for Health Care’

Submission in response to the consultation paper

February 2012
The National Heart Foundation of Australia is an independent charity. Over the past five decades, the Heart Foundation has championed the hearts of Australians by funding world class research, supporting health professionals in their practice and promoting health in the community.

The Heart Foundation’s mission is to reduce suffering and death from heart, stroke and blood vessel disease in Australia. Our vision is for Australians to have the best cardiovascular health in the world. Among the key aims of our current strategy ‘Championing Hearts’ (2008-12), the Heart Foundation aims to ensure that all Australians have improved access to prevention and treatment of cardiovascular disease (CVD).

Cardiovascular disease (defined as heart, stroke and blood vessel disease):
- kills one Australian almost every 10 minutes
- affected one in six Australians in 2009 (>3.5 million Australians) and impacted 2 out of 3 families
- prevents 1.4 million people from living a full life because of disability

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Executive Summary

The Heart Foundation commends the Australian Commission on Safety and Quality in Healthcare for identifying acute coronary syndromes (ACS), encompassing the spectrum of myocardial ischaemia, acute myocardial infarction, non-ST-segment-elevation ACS, unstable and stable angina, as a priority disease area for the development of a national Goal towards improving patient care.

Given its significant disease burden, ACS is an expensive disease, both financially and in the quality of life of those surviving an acute coronary event. The estimated total cost of ACS in 2009 was $3.5 billion (predominately direct costs associated with the healthcare system), with an average total cost of $204,000 to the community per ACS event. A national Goal will require a number of essential supporting components to considerably improve the quality of care received by patients with ACS (see summary of key recommendations).

Summary of Key Recommendations

The Heart Foundation recommends that any Goal which seeks to ensure the delivery of appropriate care for acute coronary syndromes is supported by the development of:

1. A national capability framework for healthcare services that are involved in the management of ACS
2. A national set of quality and safety indicators for ACS and establishment of a national ACS registry
3. Service-level strategies that improve the implementation and adherence to evidence-based guidelines for the management of ACS.

The Heart Foundation recommends that any Goal which seeks to ensure the delivery of appropriate care for acute coronary syndromes, accounts for:

4. High risk population groups, including Aboriginal and Torres Strait Islander peoples and their associated disparity of care
5. The role of systems for improving coordination of treatment for ACS across the health care continuum and reducing time to care.
These recommendations are described in detail within the body of this submission. The Heart Foundation welcomes the ongoing opportunity to provide a valuable contribution to the development and implementation of a national Goal for the appropriate, evidence-based care of people living with acute coronary syndromes.

**Introduction**

The Heart Foundation welcomes the opportunity from the Australian Commission on Safety and Quality in Health Care to provide a considered and detailed response to the consultation paper – *Australian safety and quality goals for health care*. Safety and quality Goals should be underpinned by the following key components:

- sustainable Capability Framework
- evidence-based guidelines
- data and monitoring
- translational research

As described in detail within the consultation paper, a national Goal that seeks to improve the delivery of evidence-based care must be integrated into each level of the healthcare system:

- patients and consumers (awareness and access to care)
- intra-health service delivery (provision of care)
- inter-health service networks and collaboration (systems of care)
- government and policy makers (standards of care)

The scope of this submission will be confined to the disease priority area of acute coronary syndromes.

**Goal 2: Appropriateness of care**

<table>
<thead>
<tr>
<th>That people receive appropriate, evidence-based care. Initial priorities are for:</th>
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<tbody>
<tr>
<td>- people living with type 2 diabetes</td>
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<tr>
<td>- people living with <strong>acute coronary syndrome</strong></td>
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<tr>
<td>- people who have had a stroke</td>
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</table>

The Heart Foundation has structured its response by addressing each one of the consultation questions outlined.
Response to the consultation questions

1. **How do you think national safety and quality Goals could add value to your existing efforts to improve the safety and quality of care?**

A well-defined safety and quality Goal for people living with acute coronary syndromes (ACS) will add significant value to the current shift towards improving ACS management for all Australians. A number of jurisdictions across the country have developed various quality improvements initiatives, predominately on the back of significant leadership and vision from engaged clinicians and state/territory clinical networks. However, significant variation and fragmentation in ACS management remains largely the status quo. The development of a specific Goal for ACS will:

- set a standard of care for the prevention/treatment of ACS across Australia
- affirm the impact of ACS as a leading burden of disease and cause of mortality within the Australian community
- acknowledge the variance of care that currently exists across the Australian healthcare system
- recognise the various layers of service provision that ACS encompasses, and the appropriate performance and monitoring measures required
- raise attention to issues of lack of awareness, complacency in practice and non-adherence to evidence-based guidelines.

2. **Do you agree with the topics that have been included as Goals and priority areas? Are there other areas that should be considered?**

The Heart Foundation is strongly supportive that ACS has been identified as a specific priority disease area for the development for a national quality and safety Goal. Primarily, ACS requires specific attention due to the:

- significant burden of disease and mortality contributed to ACS
- high rate of hospitalisations as a result of an ACS event
- significant public concern regarding equitable access to services for ACS
- exorbitant cost that ACS has on the healthcare system and wider community.

Furthermore, ACS presents a unique opportunity as:

- it is a specific and definable disease state
- there is genuine potential to achieve targets and improve patient outcomes
- its treatment and management is supported by evidence-based guidelines.
3. **What do you think about the specificity of the Goals and priority areas? Are they too broad or too specific?**

As stated previously, the Heart Foundation strongly feels ACS (encompassing the spectrum of myocardial ischaemia, acute myocardial infarction, non-ST-segment-elevation ACS, unstable and stable angina) is an appropriate priority area requiring unconditional attention. The Heart Foundation anticipates that the safety and quality Goals will be expanded over time to encompass other significant conditions resulting from cardiovascular disease (CVD), such as chronic heart failure.

4. **Do you think there should be specific targets attached to the Goal or priority area? If so, what form should such a target take?**

It is imperative that indicators and targets are developed for a national ACS Goal, supported by the necessary data and monitoring framework and resources to achieve them. Specific targets should encompass the following three key streams:

**(i) Clinical targets**
- in-hospital mortality
- in-hospital adverse events (i.e. procedural-related)
- ACS risk factor management (primary and secondary prevention) within primary care

**(ii) Process of care targets**
- time to assessment and treatment
- delivery of reperfusion therapies
- appropriate medicines upon discharge
- tailored patient-centred management plan, developed on discharge
- referral to cardiac rehabilitation programs
- adherence to sustainable lifestyle change programs (including but not limited to cardiac rehabilitation programs)
- Evidence-based screening for avoidable premature coronary events, such as sudden cardiac death (SCD) and familial hypercholesterolaemia (FH)

**(iii) Population-based targets**
- death and disability from ACS
- avoidable hospital admissions for ACS
- prescribing levels, patterns and quality use of prescribed medicines
- provision of Automated External Defibrillators (AEDs) within high-volume community spaces and places.
The establishment and subsequent implementation of these targets should be conducted in a staged manner, beginning with the development of a universally accepted set of Australian ‘process of care’ targets for ACS.

**Process of care targets**

The time taken to receive treatment for ACS, particularly reperfusion therapy for ST segment elevation myocardial infarction (STEMI), is a well described predictor of clinical outcome and survival. Within Australia, only 23% of STEMI patients receive reperfusion therapy within recommended timeframes. Measuring time to treatment for STEMI has traditionally been confined to the in-hospital environment (i.e. ED Door-to-balloon, ED Door-to-fibrinolysis). As the delivery of reperfusion therapy for STEMI moves more and more towards a systems-based model, time to treatment targets should reflect this approach. The Heart Foundation hosted a roundtable discussion on systems of care for STEMI, attended by cardiac clinical network leaders and representatives from peak medical bodies in September 2011. A key discussion point was around STEMI patients who require prompt transfer from a non-percutaneous coronary intervention (PCI) facility to a PCI capable facility for primary PCI. Recent analysis of Door-in/Door-out processes within the United States demonstrates that the majority of STEMI patients who require transfer to a PCI facility are not transferred within clinically optimal timeframes. Time to treatment targets reflecting a ‘systems’ approach to prompt delivery of care, should encompass:

- time from symptom onset to first medical contact
- time from first medical contact to fibrinolysis
- time from first medical contact to primary PCI
- time from arrival at PCI referral centre to discharge from PCI referral centre (Door-in to Door-out time)
- time from arrival at PCI referral centre to primary PCI

Cardiac rehabilitation is strongly recommended by the Heart Foundation and World Health Organization. Data from Victoria shows only 30% of eligible patients access cardiac rehabilitation services. Cardiac rehabilitation referral is a key driver to cardiac rehabilitation attendance and should be recognised as a formal indicator. As identified within the consultation paper, initial analysis of the CONCORDANCE registry shows significant variance in cardiac rehabilitation referral processes with approximately 40% of patients not referred to a cardiac rehabilitation program.
American College of Cardiology and the American Heart Association have developed a set of ACS indicators; incorporating the areas listed above (see Appendix). \(^\text{10}\)

Early detection of hereditary heart conditions is an emerging area. Process of care targets should include adherence to contemporary approaches for assessment of inherited conditions associated with an increased risk of acute coronary events, including genetic testing of familial hypercholesterolaemia (where clinically appropriate) to ascertain a definitive diagnosis. \(^\text{11}\)

5. **How do you see the Goals applying in different healthcare settings or for different population groups?**

The appropriate management of ACS broadly spans across the continuum of care (Figure 1), beginning with the vital recognition of ACS signs/symptoms by the individual and the prompt activation of emergency medical services. Given this breadth, a common goal for ACS requires a unified approach; incorporating systematic collaboration and formal linkages across various health services. For example; system-based strategies designed to reduce the time to reperfusion therapy for STEMI patients involve the sequential and seamless activation of services (patient → Ambulance → Emergency → Cardiac Catheterisation Lab). Examples of this ‘systems model of care’ for STEMI management have been successfully demonstrated within a number of jurisdictions, particularly New South Wales (PAPA, formerly ETAMI) \(^\text{12}\) and Victoria (Pre-notification of STEMI, formerly MonAMI). \(^\text{13}\)

**Figure 1: ‘Continuum of Care’ for acute coronary syndrome**

Such a collaborative approach across services is needed for post-discharge management of ACS, notwithstanding appropriate linkages to cardiac rehabilitation and general practice.
In-hospital disparities of care among Aboriginal and Torres Strait Islander peoples with ACS

ACS affects Aboriginal and Torres Strait Islander peoples at much higher rates than non-Indigenous Australians. Aboriginal people are twice as likely to have coronary heart disease, three times as likely to experience major coronary events like heart attack, and twice as likely to be hospitalised for such conditions.\textsuperscript{14}

Evidence demonstrates that Aboriginal and Torres Strait Islander people who are hospitalised for suspected ACS do not receive the equivalent level of care compared with other Australians.\textsuperscript{15} Specifically, Aboriginal and Torres Strait Islander people experience:

- 40% lower rate of angiographic investigation
- 40% lower rate of Percutaneous Coronary Intervention (PCI)
- 20% lower rate of coronary artery bypass graft surgery (CABGS)

Unpublished Victorian data further highlights this disparity in ACS in-hospital care, with 52% lower rates of PCI reported.\textsuperscript{16} Provisional work conducted by the Heart Foundation has identified that the reasons for this disparity are multi-faceted, however ‘systems issues’ are of particular consequence.\textsuperscript{17} Safety and quality indicators regarding cultural safety and competency need to be developed which are supported by the implementation of appropriate and relevant quality improvement in-hospital processes.

6. What systems, policies, strategies, programs, processes and initiatives already exist that could contribute to achievement of the Goals?

Various current and past initiatives exist which aim to improve the quality of care received by ACS patients, which the Heart Foundation has traditionally strong supported. Unfortunately, such initiatives are largely restricted within their scope and/or reach across jurisdictions and healthcare services. Furthermore, many of these initiatives are not adequately resourced to drive sustainable improvements in patient care. These initiatives spans across the following (some have been described in response to previous questions):

- development and implementation of evidence-based guidelines
- reducing time to reperfusion
- data collection and performance monitoring
- quality use of medicines
- access to secondary prevention programs, such as cardiac rehabilitation
• Genetic screening and use of management tools for avoidable premature coronary events, such as SCD and FH

In 2006, the Heart Foundation, in partnership with the Cardiac Society of Australia and New Zealand, developed guidelines for the management of acute coronary syndromes, with addendums following in 2007 and most recently in 2011. These outline evidence-based recommendations to inform equitable ACS care across Australia. The Heart Foundation continues to advocate and foster the implementation of best-practice guidelines among clinicians and government, and systems-based approaches that enable evidence-based strategies to be fully implemented across Australia.

A number of time-bound ACS registry initiatives, both within Australia and overseas, have demonstrated that it is possible to effectively collect and monitor worthwhile clinical data to compare benchmarking and improve safety and quality (i.e. GRACE, ACACIA, CONCORDANCE, etc). The Australian Cardiac Procedures Registry (ACPR), which is no longer in operation due to limited funding, showed that a purposely designed registry model can successfully recruit healthcare services, monitor volume of procedures and clinical outcomes for cardiac procedures including PCI. GRACE, ACACIA, the ACPR and more recently CONCORDANCE, are excellent examples of ACS-orientated registries which are relevant to clinicians, thereby successfully fostering increased adherence to evidence-based guidelines and patient care.

The National ‘Snapshot ACS’ initiative, planned for a two-week period in May 2012, will collect important clinical data on patients with ACS (similar to that which has previously occurred in New Zealand). Snapshot ACS will also collect data on the services, workforce and systems of care available in each hospital, providing vital information about real time gaps in service delivery and showing how different models impact on patient management. This important audit of ACS care is endorsed and supported by the Australian Commission on Safety and Quality in Health Care, the Heart Foundation, the Cardiac Society of Australia and New Zealand, and every state and territory-based cardiac/cardiovascular clinical network in the country. The Heart Foundation anticipates that the findings from Snapshot ACS will significantly shape the development of an ACS capability framework (systems of care), registry data elements, and safety and quality indicators and targets.
The discharge management of acute coronary syndromes (DMACS) project (2008–2009) coordinated by the National Prescribing Service (NPS), sought to improve management of ACS at the point of discharge, through optimising:

- prescription of cardiovascular medications
- provision of education on lifestyle modifications to patients
- communication between hospitals and patients/carers as well as community healthcare providers regarding post-discharge management of patients.

As highlighted within the consultation paper, the DMACS initiative was successful in improving various care processes including the:  

- initiation of long-term ACS management plans
- use of evidence-based ACS guideline recommended medications
- number of referrals to cardiac rehabilitation/secondary prevention programs.
- improved communication of ACS management plans with patients/carers at discharge and with general practitioners (GPs) after discharge.

The Heart Foundation has invested significant time and energy to develop a strategy that will support clinicians to support their patients with adherence to cardiovascular medicines. 

7. **What do you think should be the initial priorities for action under the Goals?**

The Heart Foundation recommends that one of the initial priorities for action should be the development and implementation of a *National capability framework for acute coronary syndromes* (Figure 2). A National capability framework for ACS requires a two-tiered modelling approach, with the primary level consisting of the following essential components:

- workforce (capacity, appropriately skilled, training, inter-professional/multi-skilled teams)
- infrastructure (facilities, equipment, information technology, AEDs, etc)
- connections (intra/inter-service communication and collaboration, etc)

Supporting the primary components of a National capability framework for ACS is a second-level which requires the implementation of:

- evidence-based guidelines (i.e. NHF Guidelines for the management of ACS)
- universal data elements (i.e. National ACS registry)
- performance monitoring and auditing (i.e. safety and quality standards for ACS)
- systems-based research (i.e. successful MonAMI trial, funded by the Heart Foundation)

Figure 2: Example - National ACS Capability Framework flowchart

Back in 2007, the Heart Foundation hosted a ‘National ACS Implementation Forum’ attended by expert representatives across clinical cardiology, nursing, cardiac rehabilitation, emergency medicine, government, general practice and rural health. Some of the key ‘call to action’ outcomes from the forum which are still relevant today are:

- collect core quality care indicators as part of a minimum data set
- collect local data to inform quality improvement and practice improvement programs
- provide timely access for all to 12-lead ECG, troponin testing, stress testing and fibrinolysis
- optimise utilisation of cardiac catheterisation laboratories
- accuracy of risk stratification of non-ST-segment-elevation ACS (NSTEACS) should be improved using clinical pathways that integrate ambulance, medical and nursing care
• utilise innovative solutions to ensure equity of care for Indigenous people, including access, workforce issues, specific secondary prevention programs and outreach services
• provide access to cardiac rehabilitation/alternative secondary prevention programs for all.

8. How could the different stakeholders within the healthcare system be engaged in working towards achievement of the Goals?

Achieving a Goal for appropriate ACS care requires the engagement of a range of key stakeholders across the healthcare sector including:

• Clinical Networks (cardiac/cardiovascular, emergency)
• representative peak bodies (i.e. CSANZ, ACEM, ACRA)
• non-government organisations (i.e. Heart Foundation)
• Medicare Locals
• Lead Clinician Groups (national and local)
• Local Hospital Networks

The Heart Foundation recommends state and territory clinical networks (or representative of) are included in the ongoing consultation process. As outlined in detail in the response to Q6, state and territory clinical networks (particularly cardiac and emergency) have been the drivers for improving the quality of care for ACS patients and developing local solutions. It will be advantageous to engage and consult with all relevant clinical networks across jurisdictions to:

• map current strategies and objectives
• understand the barriers and enablers to improving ACS care, based on jurisdictional experiences
• obtain ‘buy-in’ from jurisdictions into working towards a national Goal for ACS

Current National Health Reform activity shaping emerging clinical governance structures (i.e. development of Medicare Locals, Lead Clinician Groups, etc) will need to be closely considered.

In addition to consulting with the appropriate overarching representative bodies (i.e. Heart Foundation, Cardiac Society of Australian and New Zealand), it will also be important to engage the sector at a practice-service level to ensure the best possibility of success, as previously demonstrated by the Safety and Quality
Commission with the work achieved on infection control. Finally, a balance of national coordination and priority setting, with the allowance for local innovation and development of solutions will be required.

9. **What barriers exist in achieving the Goals? How could these be overcome?**

A number of existing and potential barriers will need to be addressed to successfully achieve a national Goal for ACS. These include:

- current fragmentation of care across the ACS continuum
- lack of Governance and accountability (‘champions’ not engaged)
- lack of a universally defined, common dataset (absence of registries)
- mixed skill-set and need for robust workforce planning
- lack of guiding national framework
- inadequate resourcing

The engagement of national stakeholders and local service providers will be critical to the success of achieving a national Goal for ACS. The initial data coming out of CONCORDANCE demonstrates the current fragmentation of care, particularly regarding linkages to secondary prevention and ongoing management post-hospital discharge. The current lack of comparable data and performance monitoring is another critical barrier, as it is well documented that formalised data collection improves adherence to evidence-based care. A national Goal for ACS will require an appropriate level of funding directly attached to it, not only for the development of national strategies, but importantly funds which can be used at the service-level to support on-the-ground implementation (i.e. data collection and reporting).

**Conclusion**

The Heart Foundation believes the establishment of a national Goal for ACS is an exciting opportunity to improve the delivery of evidence-based care, reduce mortality, and improve the long term health outcomes of many Australian men and women. As identified by the Australian Commission on Safety and Quality in Health Care, a significant amount of leadership and commitment is needed to foster the necessary shift among various stakeholders across the healthcare sector, to ultimately drive change at the service provision level. The Heart Foundation will gladly address any queries relating to this submission and welcomes the opportunity to provide ongoing input and participation into the development of a national Goal for ACS.
## Appendix 1: Proposed set of clinical performance indicators for a National Australian ACS Registry

<table>
<thead>
<tr>
<th>PERFORMANCE MEASURE</th>
<th>MEASURE DESCRIPTION</th>
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<tbody>
<tr>
<td><strong>ACC/AHA Definitions</strong></td>
<td></td>
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<tr>
<td>Aspirin at arrival</td>
<td>AMI patients who received aspirin within 24 h before or after hospital arrival</td>
</tr>
<tr>
<td>Aspirin prescribed at discharge</td>
<td>AMI patients who are prescribed aspirin at hospital discharge</td>
</tr>
<tr>
<td>Beta-blocker prescribed at discharge</td>
<td>AMI patients who are prescribed a beta-blocker at hospital discharge</td>
</tr>
<tr>
<td>Statin at discharge</td>
<td>AMI patients who are prescribed a statin at hospital discharge</td>
</tr>
<tr>
<td>Evaluation of LVSF</td>
<td>AMI patients with documentation in the hospital record that LVSF was evaluated during hospitalization or is planned after discharge</td>
</tr>
<tr>
<td>ACEI or ARB for LVSD</td>
<td>AMI patients with LVSD who are prescribed an ACEI or ARB at hospital discharge (for purposes of this measure, LVSD is defined as chart documentation of an LVEF less than 40% or a narrative description of LVSF consistent with moderate or severe systolic dysfunction)</td>
</tr>
<tr>
<td>Time to fibrinolytic therapy</td>
<td>Median time from hospital arrival to administration of fibrinolytic therapy in AMI patients with ST-segment elevation or LBBB on the ECG performed closest to hospital arrival time; AMI patients with ST-segment elevation or LBBB on the ECG closest to hospital arrival time receiving fibrinolytic therapy during the hospital stay with a time from hospital arrival to fibrinolysis of 30 min or less</td>
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<tr>
<td>Time to PCI</td>
<td>Median time from hospital arrival to primary PCI in AMI patients with ST-segment elevation or LBBB on the ECG performed closest to arrival time; AMI patients with ST-segment elevation or LBBB on the ECG closest to hospital arrival time receiving primary PCI during the hospital stay with a time from hospital arrival to PCI of 90 min or less</td>
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<td>Reperfusion therapy</td>
<td>AMI patients with ST-segment elevation or LBBB on the ECG performed closest to arrival receiving either fibrinolysis or primary PCI or who are transferred to another facility for primary PCI</td>
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<tr>
<td>Time from ED arrival at STEMI referral facility to ED discharge from STEMI referral facility in patients transferred for</td>
<td>Median time from ED arrival at STEMI referral facility to ED discharge from STEMI referral facility for AMI patients with ST-segment elevation or LBBB on the ECG performed closest to hospital arrival time who are transferred to a STEMI receiving facility for primary PCI</td>
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<tr>
<td><strong>primary PCI</strong></td>
<td><strong>AIHW Criteria</strong></td>
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<tr>
<td>Time from ED arrival at STEMI referral facility to primary PCI at STEMI receiving facility among transferred patients</td>
<td>Reperfusion for Acute Myocardial Infarction Hospitals</td>
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<tr>
<td>Adult smoking cessation advice/counseling</td>
<td>The number of eligible patients (patients identified as candidates for emergency reperfusion) with an AMI requiring reperfusion who received:</td>
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<tr>
<td>Cardiac rehabilitation patient referral from an inpatient setting</td>
<td>- Fibrinolysis within 30 minutes and/or</td>
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**AIHW Criteria**

<table>
<thead>
<tr>
<th>Discharge medication management for acute myocardial infarction</th>
<th>The number of patients with a diagnosis of AMI on discharge who receive a discharge prescription or supply of medication for:</th>
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<tbody>
<tr>
<td></td>
<td>- Antiplatelet medication</td>
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<td>- Beta-blocker</td>
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<td>- Angiotensin-modifying medication</td>
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<tr>
<td></td>
<td>- Lipid-modifying medication</td>
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</tbody>
</table>
References


16. Data presented by the Onemda Koori Health Unit at a seminar jointly hosted by the Heart Foundation and Onemda on 12 October 2010.


