Essential Service Standards for Equitable National Cardiovascular Care

for Aboriginal and Torres Strait Islander people

Phase Two
Measurement Indicators
April 2015
ACKNOWLEDGEMENTS

We acknowledge the traditional owners of country throughout Australia, and their continuing connection to land, sea and community. We pay our respects to them and their cultures, and to elders both past and present.

The ESSENCE Measurement Indicators have been developed with funding provided by the Federal Government Department of Health and the Centre of Research Excellence to Reduce Inequality in Heart Disease.

Many individuals and organisations have freely given their time and expertise in the development of the ESSENCE Measurement Indicators. In particular, the Chairs would like to thank the ESSENCE II Steering Committee and other key experts who have given their time and advice.

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- Ms Kathy Mott, SAHMRI
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Aboriginal Health Council of Western Australia
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Apunipima Health Council
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Australian Bureau of Statistics
Australian Institute of Health and Welfare
Australian Stroke Clinical Registry
Baker IDI
Cardiac Society of Australia and New Zealand
Central Australia Health Service
Department for Health and Ageing, Government of South Australia
Department of Health, Government of Western Australia
Department of Health, Northern Territory Government
Department of Health, Queensland Government
Department of Health and Ageing, Australian Government
Department of Health and Human Services, Victorian Government
Department of Prime Minister and Cabinet, Australian Government
Heart Foundation
Improvement Foundation
Kidney Health Australia
National Aboriginal Community Controlled Health Organisation
Members of National Aboriginal and Torres Strait Islander Health Standing Committee
Members of National Advisory Group on Aboriginal and Torres Strait Islander Health Information and Data
National Health Performance Authority
New South Wales Ministry of Health
Productivity Commission
RHDAustralia
Rural Doctors Association of Australia
Stroke Foundation
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SECTION 1

SETTING THE SCENE: ESSENCE MEASUREMENT INDICATORS
OVERVIEW + FRAMEWORK

The Essential Service Standards for Equitable National Cardiovascular care for Aboriginal and Torres Strait Islander people (ESSENCE) Measurement Indicator project was established to guide the development and implementation of policies that serve to reduce the gap in life expectancy between Aboriginal and Torres Strait Islander peoples and other Australians.

Cardiovascular diseases are the single largest cause of death for all Australians and remains the primary contributor to the life expectancy gap. Focussed, well informed investment in this area has potential to have far reaching benefit for all Aboriginal and Torres Strait Islander people across Australia.

This project aims to develop a set of measurement indicators with which we can measure the performance of health care systems with respect to evidence based care for Aboriginal and Torres Strait Islander people at risk of or with cardiovascular disease.

The indicators:
• are agreed on through consensus;
• demonstrate strong alignment with the ESSENCE Standards;
• measure the key standards that have the potential to drive significant improvement in the mortality and morbidity associated with cardiovascular disease in Aboriginal and Torres Strait Islander peoples;
• align with existing indicators that are already being collected across Australia where ever possible;
• extend beyond measurement to support improvements in health service delivery; and
• guide reform and planning.

This document outlines the agreed set of ESSENCE Measurement Indicators. It covers both ESSENCE Measures and Cardiovascular Outcome Measures.

A full implementation and data development plan is required as the next steps for implementation.
1.1 WHY A FOCUS ON CARDIOVASCULAR DISEASE IN ABORIGINAL AND TORRES STRAIT PEOPLE?

Evidence indicates that the gap in life expectancy could be reduced by 37 percent if Aboriginal and Torres Strait Islander people shared the same cardiovascular mortality profile as non-Indigenous Australians. A focused effort on reducing disparities in cardiovascular disease and care can have a significant impact on the future prosperity of Aboriginal and Torres Strait Islander people.

Aboriginal and Torres Strait Islander people are 20 percent more likely to have cardiovascular disease, and have 1.5 times the age-standardised mortality rate compared to non-Indigenous Australians.

The incidence and mortality pattern of cardiovascular disease experienced by Aboriginal and Torres Strait Islander people is characterised by early onset and significant differentials, most notably at young ages. Aboriginal and Torres Strait Islander people are more likely to have multiple risk factors than non-Indigenous Australians, including smoking, physical inactivity, obesity, diabetes and high blood pressure.

Approaches to reduce the burden of cardiovascular disease on morbidity and mortality therefore need to be holistic and address risk and disease progression across the continuum. It is evident that systematic approaches to delivering care, “systems of care”, are needed.
1.2 THE VISION FOR ESSENCE

The Essential Service Standards for Equitable National Cardiovascular CarE for Aboriginal and Torres Strait Islander people (ESSENCE) project was established to develop a systematic, policy-targeted approach to addressing inequities in cardiovascular health care based on sound evidence and consensus. It was recognised that until we can move from social, policy and political intent to practical and resourced implementation of equitable care for all Australians, the gap between Australians as defined by culture, ethnicity, location and socioeconomic status may continue to widen.

1.2.1 THE ESSENCE STANDARDS – SEE APPENDIX 1

The ESSENCE Standards were developed in 2011-12 to articulate existing evidence and guidelines into a clear, coherent form that could be translated into practice. The ESSENCE Standards are essential standards that outline the minimum, acceptable level of care below which activity should not be permitted to fall. They represent the best available evidence and expert consensus. The standards articulate what elements of care are necessary to reduce disparities in access and outcomes for critical cardiovascular conditions including coronary heart disease, stroke, chronic heart failure, rheumatic heart disease and hypertension.

The ESSENCE Standards were developed by a national Steering Committee of experts in Aboriginal and Torres Strait Islander cardiovascular care, with funding from the Commonwealth Department of Health. Also at that time, momentum from the Close the Gap agenda, and support from the National Indigenous Health Equality Council and the Cardiac Society of Australia and New Zealand helped drive the creation of the ESSENCE Standards.

The ESSENCE Standards are aligned with 10 policy relevant targets:

1. Closing the life expectancy gap;
2. Reducing population levels of cardiovascular disease;
3. Improving health literacy in the population;
4. Monitoring the burden of cardiovascular disease in the community;
5. Improving access to care;
6. Enhancing access to time critical services;
7. Integration across the continuum of care;
8. Ensuring and improving the quality of cardiovascular disease care;
9. Reducing patient and family suffering; and
10. Monitoring the impact of cardiovascular disease health care reform over time.

The ESSENCE Standards have been endorsed by the Heart Foundation and the Cardiac Society of Australia and New Zealand.

1.2.2 IMPLEMENTING THE ESSENCE STANDARDS

The development of the ESSENCE Standards was the first phase of a long-term strategy to improve cardiovascular disease outcomes for Aboriginal and Torres Strait Islander people.

In 2014, the first stages of the ESSENCE implementation was funded by the Federal Department of Health. As part of a comprehensive approach, outlined below, two projects have been undertaken with this funding.

The first of these projects, the development of ESSENCE Measurement Indicators, is a key foundation stone of eventual full implementation of the ESSENCE Standards. The Measurement Indicators were developed to establish a comprehensive set of measures to monitor key processes and outcomes for reducing disparities in cardiovascular health for Aboriginal and Torres Strait Islander people.

The second project funded in 2014 was the development of a resource kit to inform evidence based commissioning of cardiovascular care in primary health. This project was timely given the commencement of Primary Health Networks in July 2015, introducing a new structure of primary health care delivery based on a model of commissioning.
The next elements of implementing ESSENCE are:

- developing a primary care resource for service providers;
- reporting of the ESSENCE Measurement Indicators set across Australia;
- implementation of the ESSENCE Standards relevant to primary care into service commissioning, planning and service delivery practices;
- the establishment of clinical registries to monitor cardiovascular surgical interventions;
- the establishment of integrated regional service delivery networks across Australia;
- undertaking a gap analysis to consider required versus existing services;
- developing a master plan to drive all elements into coordinated practice with suitable mechanisms to evaluate and monitor.

Diagram 1, on page 10, provides an overview of the evolution and future directions of ESSENCE.

It is likely that other key features will emerge as valuable inclusions as we move along this journey of improving Aboriginal and Torres Strait Islander cardiovascular health. Additionally there will be a range of existing resources, processes, services, initiatives and strategies at local, regional, state and national levels that will be recognised and incorporated into this vision as it progresses.

1.2.3 THE ESSENCE STANDARDS WITHIN A NATIONAL AGENDA

Since 2007, there has been a national agenda focussed at closing the life expectancy gap for Aboriginal and Torres Strait Islander people. In 2009, discussions commenced with key cardiovascular stakeholders on the significant and devastating impact that cardiovascular disease has on the lives of Aboriginal and Torres Strait Islander people. In 2011, with the support of the Cardiac Society of Australia and New Zealand and the Federal Government, the ESSENCE vision was developed to target cardiovascular disease. ESSENCE adopted a systematic, evidence-based, whole of life approach as an exemplar to closing the gap.

In 2013, the Australian Health Ministers’ Advisory Council established the Better Cardiac Care for Aboriginal and Torres Strait Islander people agenda. This agenda was informed and shaped by the ESSENCE Standards, and members of the ESSENCE Steering Committee were strongly represented in these activities. The Better Cardiac Care for Aboriginal and Torres Strait Islander people agenda has developed agreed priority action areas and a set of measures to monitor action. In 2014, the Better Cardiac Care for Aboriginal and Torres Strait Islander people agenda was signed off by Australian Health Ministers’ Advisory Council and is now within the jurisdiction of State and Territory governments with data compilation occurring through the Australia Institute of Health and Welfare. The ESSENCE Standards, ESSENCE Measurement Indicators, and ESSENCE resource kit for Primary Health Networks are aligned with Better Cardiac Care for Aboriginal and Torres Strait Islander people and can be used to guide the implementation by each state and territory.

The ESSENCE vision also aligns with other federally funded activities in the Aboriginal and Torres Strait Islander cardiovascular health space, including RHDAustralia and the Lighthouse project being undertaken by the Heart Foundation and Australian Healthcare and Hospitals Association.

ESSENCE has been aligned to activities which are occuring nationally in a broader cardiovascular context. For example, the Measurement Indicator project has taken into consideration the work of many key groups including The Health Performance Authority, the Australian Commission for Safety and Quality in Healthcare, the Heart Foundation and Stroke Foundation.
ESSENCE Measurement Indicators

ESSENCE Standards
Developed 2011/2012
Published 2014

Standards span prevention to tertiary care, and include systems of care.

Specific focus on Coronary Heart Disease, Stroke, Heart Failure, Rheumatic Heart Disease and Hypertension

ESSENCE Resource Kit for Primary Health Networks

Current Project

Implementation of ESSENCE Standards
Performance Indicators set across Australia including measurement, synthesis and reporting

The inclusion of the Primary Care ESSENCE Standards into service commissioning, planning and service delivery practices

The establishment of clinical registries to monitor CHD and Stroke interventions

The establishment of integrated Regional Service Delivery Networks across Australia

A gap analysis of existing services against care as outlined in the ESSENCE Standards

A development plan to drive all elements into coordinated practice with suitable mechanism to evaluate and monitor

INPUTS

Closing the Gap
Cardiac Society of Aust. & NZ Support
National Indigenous Health Equality Council
Commonwealth Department of Health Funding
1.3 THE ESSENCE MEASUREMENT INDICATOR FRAMEWORK

1.3.1 OVERVIEW

The ESSENCE Measurement Indicator framework is grounded on the continuum of care for Aboriginal and Torres Strait Islander people at risk of or with cardiovascular disease. This approach defines six domains of the ESSENCE indicators which measure the quality of care against the ESSENCE Standards and cardiovascular health outcomes. The specific conditions - coronary heart disease, stroke, chronic heart failure, rheumatic heart disease and hypertension - are spread across the domains as appropriate.

The six domains of the ESSENCE Measurement Indicators are:

Societal health
Societal health recognises the geographical, social, economic and historical context that plays out in the cardiovascular wellbeing of Aboriginal and Torres Strait Islander people. It considers how these factors influence cardiovascular health in a contemporary context for individuals and affects the risk factors of cardiovascular disease. Impacting on societal health domain will support targets of:

- reducing population levels of cardiovascular disease
- improved access to care
- improved health literacy in the population

Maintaining health and managing risk
Maintaining health and managing risk is focused on the maintenance of wellbeing and assessment and managing cardiovascular risk and disease in a timely manner. Impacting the domain of maintaining health and managing risk will support targets of:

- improved access to care
- monitoring the burden of cardiovascular disease in the community

Care of acute disease
Care of acute disease is targeted at the access and delivery of time-critical, specialised acute care of cardiovascular disease, including heart attack and stroke. Impacting care of acute disease will support target of:

- enhanced access to time-critical services

Ongoing care of disease
Ongoing care of disease is the care of chronic cardiovascular disease in the community, and incorporates discharge following an acute event, ongoing management in primary care, and palliative and end of life care. Impacting the ongoing care of disease will support targets of:

- improved access to care
- reducing patient and family suffering

Systems of care
Systems of care is focused on the systems which should be in place to support the pathway of care across the continuum. These systems consider coordination, data collection and system monitoring. Impacting on the systems of care will support targets of:

- improved access to care
- integration across the continuum of care
- ensuring and improving the quality of cardiovascular care

The cardiovascular outcome indicators focus on measuring the target of:

- monitoring the impact of cardiovascular health care reform over time.
Diagram 2 shows the domains and their link to the improving health cardiovascular outcomes. It also reflects the way the domains and their indicators are reflected along the continuum of care with the ‘systems of care’ being all encompassing. The coloured dots highlight the link with each specific condition.

In Diagram 3 all indicators are presented with their corresponding measures. There are 16 indicators that represent 33 measures and an additional 6 cardiovascular outcome indicators with 10 measures.

Whilst the indicators are unapologetically specific to the continuum of care for cardiovascular disease, the framework recognises that cardiovascular care sits within a holistic approach to improving the physical, spiritual, cultural, emotion and social wellbeing of Aboriginal and Torres Strait Islander people.

This framework directly reflects the way the ESSENCE Standards have been developed.

The document is divided into 2 sections, in Section 1 the ESSENCE Measurement Indicators are presented in summary tables to facilitate easy access to all the indicators and measures.

Each measure is explained by stage of measurement development and relevant health sector. If a measure has been identified in an existing indicator set, this indicator set has been listed.

In Section 2 each indicator and measure is articulated in detail, with inclusion of the technical specifications.

Appendix 2 explains the process used to identify and select indicators and measures that have now been included in this set.
ESSENCE Measurement Indicators

1. Socioeconomic determinants
2. Comprehensive primary health care
3. Health behaviours
4. Smoking cessation
5. Risk Assessment
6. Risk Management
7. Secondary prevention & management of ARF/RHD

Care of acute disease
8. Rapid assessment
9. Timely treatment
10. Specialised care

Ongoing care of disease
11. Discharge medications
12. Coordination from hospital to community
13. Rehabilitation

Systems of care
14. Integrated regional clinical network
15. RHD control Program
16. Surgical procedures registry

Cardiovascular Outcomes
1. CVD Mortality
2. Coronary Heart Disease
3. Chronic Heart Failure
4. Stroke
5. RHD
6. Hypertension

Dot corresponds to condition covered in indicator: ● Coronary Heart Disease ● Chronic Heart Failure ● Stroke ● Acute Rheumatic Fever/Rheumatic Heart Disease ● Hypertension

Societal Health
Maintaining health and managing risk
Ongoing care of disease
Care of acute disease

Holistic Approach: Improvements of Aboriginal and Torres Strait Islander peoples.

Diagram 2
ESSENCE Measurement Indicator Framework

Cardiovascular Outcomes
## DIAGRAM 3
Snapshot - ESSENCE Indicators and Measures assessing the quality of care against the ESSENCE Standards

### Societal Health
1. **Socioeconomic determinants**
   - Household crowding
   - Attainment of Year 12 education or equivalent
   - Workforce participation
2. **Comprehensive primary health care**
   - Aboriginal and Torres Strait Islander access to primary health care relative to need
3. **Health behaviours**
   - Rate of current smokers
   - Tobacco smoking during pregnancy
   - People meeting guidelines for adequate intake of fruit and vegetables
   - Adults meeting sufficient levels of physical activity

### Maintaining health and managing risk
4. **Smoking cessation**
   - Smokers receiving nicotine replacement therapy
5. **Risk assessment**
   - Absolute cardiovascular risk assessment for people aged 35 years and over
   - MBS Health Assessment within the previous 12 months
   - Number of people with relevant Medicare-listed diagnostic items claimed in the previous 12 months

### Care of acute disease
8. **Rapid assessment**
   - CHD: ECG performed and interpreted within 10 minutes of arrival for ACS
   - Acute exacerbation of CHF: Receipt of echocardiography in the index admission
   - Stroke: Brain imaging within 1 hour of presentation for thrombolysis eligible patients; and 3 hours for all other patients; of arrival to hospital

9. **Timely treatment**
   - CHD: STEMI patients receiving fibrinolysis or PCI
   - CHD: STEMI patients receiving fibrinolysis within 30 minutes of hospital arrival
   - Stroke: Presentation and intravenous thrombolysis within 4.5 hours of symptom onset

10. **Specialised care**
    - CHD & stroke: ACS and stroke patients admitted into a cardiac or stroke unit

### Ongoing care of disease
11. **Discharge medications**
    - CHD, CHF, stroke & RHD: Patients prescribed appropriate, condition specific medications at discharge
    - CHD, CHF, stroke & RHD: Patients prescribed medications remaining on them at least 12 months

12. **Coordination from hospital to community**
    - CHD, stroke & RHD: Individualised care plan
    - CHD, CHF & RHD: Review by a primary health care professional within 1 week of discharge

13. **Rehabilitation**
    - Stroke: Rehabilitation therapy within 48 hours of initial assessment
    - CHD, CHF & stroke: Patients referred to an appropriate rehabilitation or other secondary program
    - CHD, CHF & stroke: Patients completing an appropriate rehabilitation or other secondary program

### Systems of care
14. **Integrated regional clinical network**
    - Integrated regional clinical network scorecard
15. **RHD control programme**
    - RHD control programme scorecard
16. **Surgical procedures registry**
    - Services with a surgical procedures registry
Cardiovascular Outcome Indicators

1. Cardiovascular Mortality
   a. Cardiovascular mortality rate

2. Coronary Heart Disease
   a. Coronary Heart Disease (I20-I25) hospitalisation rate
   b. 12 month mortality following hospitalisation for Acute Myocardial Infarction (I21)

3. Chronic Heart Failure
   a. Chronic Heart Failure (I50) hospitalisation rate

4. Stroke
   a. Stroke (I60-I69) hospitalisation rate
   b. 12 month mortality following hospitalisation for Stroke (I60-I69)

5. Rheumatic Heart Disease
   a. Acute Rheumatic Fever (I00-I02) incidence
   b. Acute Rheumatic Fever (I00-I02) recurrences
   c. Acute Rheumatic Fever (I00-I02) & Rheumatic Heart Disease (I05-I09) hospitalisation rate

6. Hypertension
   a. Hypertension (I10) prevalence
1.4 DATA CONSIDERATIONS FOR THE ESSENCE MEASUREMENT INDICATORS

1.4.1 DATA LIMITATIONS

In undertaking the development of measurement indicators, a number of data limitations have been identified. Commentary is provided on some of these limitations.

Indigenous identification
Indigenous identification is a self-reported measure of cultural identity. Due to contextual issues in self-reporting personal information, Australia’s history of racism and contemporary concerns by some staff to not offend patients and clients, it is widely observed that Indigenous status is inaccurately and inconsistently recorded. Routinely, the count of persons for whom Indigenous status is “unknown” is double the count of persons identifying themselves as Indigenous. Reasons for this inadequate recording can include where:

• the individual is concerned they may receive a poorer service if they identify
• the reason why the question has been asked is not clear
• the individual is not able to consider the question properly (e.g., they are unconscious or traumatised) at the point it is asked
• the healthcare worker concerned is uncertain how to ask the question and/or whether it should be asked of all service users regardless of their physical appearance indicating a likelihood that they may be of Indigenous descent.

Under-identification of Indigenous status is a significant issue in developing effective responses to the high burden of disease. There are national efforts currently underway to improve the recording of Indigenous status. (4)

Quality of care as defined by the client experience
In recent years a series of initiatives have sought to create objective nationally applied criteria for measuring quality in healthcare as defined by the client. However, to date there is minimal data on quality of care as defined by Aboriginal and Torres Strait Islander clients, and initiatives that have included the views of Aboriginal and Torres Strait Islander people in their design have not been systematically applied and have not been at a national level.

The ESSENCE Steering Committee recognises that the quality of care as defined by the client is a critical element in measuring performance of a system, and enables factors such as cultural safety to be measured. However, given the lack of data in this space and the difficulty of collecting such data, the ESSENCE Measurement Indicators do not incorporate such measures. Instead, the ESSENCE Measurement Indicators assess quality against the delivery of evidence-based care.

Primary Care data availability
In general, there is no systematic collection of data on the quality of care provided to Aboriginal and Torres Strait Islander clients by General Practitioners (GPs), and no national database providing such data from State run primary health care services. Data on quality in healthcare service delivery from Aboriginal Community Controlled Health Organisations is available and reported nationally.

The ESSENCE Steering Committee acknowledges the quality of high standard of data collected through Aboriginal Community Controlled Health Organisations that should be applied across the primary care sector.
1.4.2 CURRENT STATUS OF THE MEASUREMENT INDICATORS

The indicators and measures differ in the stage of indicator and data development. Whilst some measures are already collected and reported on, others require both data and measure specification development. Measures are categorised into four stages of development:

- Measure currently collected as specified (Currently collected)
- Measure collected as specified, but not comprehensively collected across all relevant services across Australia. Further work remaining to ensure full coverage (Partially collected)
- Measure requires development, but there are existing data sources to inform measure (Requires development – Data exists)
- Measure requires data collection development and new data collection (Requires development – No data exists)

The development of the ESSENCE Measurement Indicator specifically targeted inclusion of measures that are recognised in existing indicator sets and/or collected in existing data sets. Existing indicator sets which have been considered and aligned are:

- Overcoming Indigenous Disadvantage;
- Aboriginal and Torres Strait Islander Health Performance Framework;
- National Indigenous Reform Agreement;
- nKPI - Indigenous primary health care key performance indicators
- Better Cardiac Care for Aboriginal and Torres Strait Islander people 2014;
- RHDAustralia Acute Rheumatic Fever/Rheumatic Heart Disease key performance indicators;
- Australian Commission on Safety and Quality in Health Care Acute Coronary Syndrome and Stroke Clinical Care Standards; and the
- Australian Council on Healthcare Standards.

1.4.3 INDICATOR AND DATA DEVELOPMENT PLANS

When considering the next steps it will be important to develop indicator and data development plans. This would specifically consider the following:

- Measures that are “currently collected” could be incorporated into a short term implementation plan, focussed on information collation and reporting.
- Measures that are “partially collected” may need concerted advocacy with other key stakeholders to expand their remit to ensure they are integrated into current practice across the whole country to provide an accurate and representative picture of current practice.
- Measures that “require development - existing data” will fall into a medium term development plan. Some of these represent indicator priorities already established with other projects. Collective voices will be needed to drive implementation of the indicators to enable reporting from existing data sets.
- Measures that “require development - no data” will fall into a long term, aspirational development plan. Implementation of these will require significant resource investment as well as strong political will at a range of levels.

A sophisticated data development plan, underpinned by evidence, community need and expert opinion, will be an important tool to advocate for improved reporting capability in this sphere.
SECTION 2

ESSENCE MEASUREMENT INDICATORS SUMMARY

HEADLINE MEASURES

Ten headline measures have been identified from the range of 43 measures. These measures have been selected based their potential impact to guide and measure significant improvements in cardiovascular outcomes for Aboriginal and Torres Strait Islander people.

Eight measures assess quality of care against the ESSENCE Standards, and two measures are Cardiovascular Outcome measures.

<table>
<thead>
<tr>
<th>#</th>
<th>Measure</th>
<th>Stage of data development</th>
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<tbody>
<tr>
<td></td>
<td><strong>Cardiovascular Outcome Indicators</strong></td>
<td></td>
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<tr>
<td>1a</td>
<td>Cardiovascular mortality rate</td>
<td>Currently collected</td>
</tr>
<tr>
<td>2b</td>
<td>12 month mortality following hospitalisation for AMI (I21)</td>
<td>Requires development – data exists</td>
</tr>
<tr>
<td></td>
<td><strong>Quality of care Indicators</strong></td>
<td></td>
</tr>
<tr>
<td>2a</td>
<td>Aboriginal and Torres Strait Islander access to primary health care</td>
<td>Requires development, data exists</td>
</tr>
<tr>
<td></td>
<td>relative to need</td>
<td></td>
</tr>
<tr>
<td>3a</td>
<td>Rate of current smokers</td>
<td>Currently collected</td>
</tr>
<tr>
<td>5a</td>
<td>Absolute cardiovascular risk assessment for people aged 35 years and</td>
<td>Requires development, no data exists</td>
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<td>over</td>
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<td>9a</td>
<td>CHD: STEMI Patients receiving fibrinolysis or PCI</td>
<td>Requires development, no data exists</td>
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<tr>
<td>9c</td>
<td>Stroke: Presentation and intravenous thrombolysis within 4.5 hours</td>
<td>Partially collected through clinical audit</td>
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<td></td>
<td>of symptom onset</td>
<td></td>
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<tr>
<td>11a</td>
<td>CHD, CHF &amp; stroke: patients discharged with appropriate,</td>
<td>Partially collected through clinical audit and registry</td>
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<tr>
<td></td>
<td>condition specific medications</td>
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<tr>
<td>13c</td>
<td>CHD, CHF &amp; stroke: Patients completing an appropriate,</td>
<td>Requires development, no data exists</td>
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<tr>
<td></td>
<td>condition-specific rehabilitation or other secondary prevention</td>
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<td></td>
<td>program</td>
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<tr>
<td>14a</td>
<td>Integrated regional clinical network</td>
<td>Requires development, no data exists</td>
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The ESSENCE Measurement Indicators outline a total 22 indicators covering 43 measures. This number is in recognition that this is a comprehensive set of indicators covering the continuum of cardiovascular risk and disease. These span over the six domains.

Measures highlighted in orange are headline measures.

**SOCIETAL HEALTH INDICATORS**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Relevant ESSENCE Standard</th>
<th>Existing indicator set</th>
<th>Stage of data development</th>
<th>Reporting level</th>
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<tbody>
<tr>
<td>Indicator 1: Socioeconomic determinants</td>
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<tr>
<td>1a. Household crowding</td>
<td>I.1.1: Socioeconomic determinants</td>
<td>OID, HPF</td>
<td>Currently collected</td>
<td>Jurisdiction National</td>
</tr>
<tr>
<td>1b. Attainment of Year 12 education or equivalent</td>
<td>I.1.1: Socioeconomic determinants</td>
<td>HPF, NIRA, OID</td>
<td>Currently collected</td>
<td>Jurisdiction National</td>
</tr>
<tr>
<td>1c. Workforce participation i. Employment to population ratio ii. Unemployment rate iii. Labour force participation rate</td>
<td>I.1.1: Socioeconomic determinants</td>
<td>HPF, NIRA, OID</td>
<td>Currently collected</td>
<td>Jurisdiction National</td>
</tr>
<tr>
<td>Indicator 2: Comprehensive Primary Health Care</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2a. Aboriginal and Torres Strait Islander access to primary health care relative to need</td>
<td>I.1.2: Comprehensive primary health care</td>
<td>HPF, AIHW</td>
<td>Requires development - data exists</td>
<td>* Regional Jurisdiction National</td>
</tr>
<tr>
<td>Indicator 3: Health Behaviours</td>
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<tr>
<td>3a. Rate of current smokers</td>
<td>I.1.1: Socioeconomic determinants</td>
<td>HPF</td>
<td>Currently collected</td>
<td>* Service Regional Jurisdiction National</td>
</tr>
<tr>
<td>3b. Tobacco smoking during pregnancy</td>
<td>I.1.1: Socioeconomic determinants</td>
<td>HPF, NIRA, OID</td>
<td>Currently collected</td>
<td>* Service Regional Jurisdiction National</td>
</tr>
<tr>
<td>3c. People meeting guidelines for adequate intake of fruit and vegetables</td>
<td>I.2.1: Socioeconomic determinants</td>
<td>HPF, NIRA, OID</td>
<td>Currently collected</td>
<td>* Regional Jurisdiction National</td>
</tr>
<tr>
<td>3d. Adults meeting sufficient levels of physical activity</td>
<td>I.1.1: Socioeconomic determinants</td>
<td>HPF</td>
<td>Currently collected</td>
<td>* Regional Jurisdiction National</td>
</tr>
</tbody>
</table>

Key:
OID - Overcoming indigenous Disadvantage, HPF – Aboriginal and Torres Strait Islander Health Performance Framework, NIRA – National Indigenous Reform Agreement, AIHW - Australian Institute of Health and Welfare

* It is recommended that there be reporting at this level. However, this measure is not currently reported at this level.

See ESSENCE Standards for details of standards.
# MAINTAINING HEALTH AND MANAGING RISK INDICATORS

<table>
<thead>
<tr>
<th>Measure</th>
<th>Relevant ESSENCE Standard</th>
<th>Existing indicator set</th>
<th>Stage of data development</th>
<th>Reporting level</th>
</tr>
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<tbody>
<tr>
<td><strong>Indicator 4: Smoking cessation</strong></td>
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<tr>
<td>4a. Smokers receiving nicotine replacement therapy</td>
<td>I.2.3: Supporting smoking cessation</td>
<td>-</td>
<td>Requires development - no data exists</td>
<td>Service Regional Jurisdiction National</td>
</tr>
</tbody>
</table>

| **Indicator 5: Risk assessment** | | | | |
| 5a. Absolute cardiovascular risk assessment for people aged 35 years and over | I.2.1: Identifying and managing risk | Proposed nKPIs | Requires development – no data exists | Service Regional |
| 5b. MBS Health Assessment within the previous 12 months | I.2.1: Identifying and managing risk | | HPF, BCC | Currently collected * Service Regional |
| 5c. People with relevant Medicare-listed diagnostic items claimed in the previous 12 months | I.2.1: Identifying and managing risk | | BCC | Requires development – data exists Service Regional |

| **Indicator 6: Risk management** | | | | |
| 6a. Hypertension: Antihypertensive medications prescribed | VI.2: Medication | - | Requires development – no data exists | Service Regional |
| 6b. Documented evidence of primary care practitioner follow-up for people with elevated risk of cardiac disease | I.2.1: Identifying and managing risk | | BCC | Requires development – no data exists Service Regional |

| **Indicator 7: Secondary prevention and management of ARF and RHD** | | | | |
| 7a. People indicated for and who receive BPG secondary prophylaxis | V.3.1: Long acting penicillin | RHDA KPIs | Partially collected – selected jurisdictions Jurisdiction National |
| 7b. Priority 1 and 2 RHD cases receiving serial echocardiography | V.3.2: Echocardiography | RHDA KPIs | Partially collected – selected jurisdictions * Regional National |

**Key:**
HPF – Aboriginal and Torres Strait Islander Health Performance Framework, NIRA – National Indigenous Reform Agreement, nKPIs – National Key Performance Indicators, BCC – Better Cardiac Care for Aboriginal and Torres Strait Islander people, RHDA KPIs – Rheumatic Heart Disease Australia ARF/RHD Key Performance Indicators

* It is recommended that there be reporting at this level. However, this measure is not currently reported at this level.

See ESSENCE Standards for details of standards
## CARE OF ACUTE DISEASE INDICATORS

<table>
<thead>
<tr>
<th>Measure</th>
<th>Relevant ESSENCE Standard</th>
<th>Existing indicator set</th>
<th>Stage of data development</th>
<th>Reporting level</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Indicator 8: Rapid assessment</strong></td>
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<tr>
<td>8a. CHD: ECG performed and interpreted within 10 minutes of arrival for ACS</td>
<td>I.3.1: Medical transport for streamlined access to the appropriate level of care I.6.1: Transport and referral protocol development II.2.2: Early ECG</td>
<td>-</td>
<td>Requires development – no data exists</td>
<td>Service Regional National</td>
</tr>
<tr>
<td>8b. Acute exacerbation of CHF: Receipt of echocardiography in the index admission</td>
<td>I.3.1: Medical transport for streamlined access to the appropriate level of care I.6.1: Transport and referral protocol development III.2.1: Establishment of cause</td>
<td>-</td>
<td>Requires development – no data exists</td>
<td>Service Regional National</td>
</tr>
<tr>
<td>8c. Stroke: Brain scan within: i. 1 hour of presentation for thrombolysis eligible patients ii. 3 hours for all other patients</td>
<td>I.3.1: Medical transport for streamlined access to the appropriate level of care I.6.1: Transport and referral protocol development IV.1.2: Rapid assessment and risk stratification IV.1.3: Brain imaging</td>
<td>-</td>
<td>Partially collected – clinical audit</td>
<td>Service Regional National</td>
</tr>
<tr>
<td><strong>Indicator 9: Timely treatment</strong></td>
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<tr>
<td>9a. CHD: STEMI Patients receiving fibrinolysis or PCI</td>
<td>II.2.4: Reperfusion therapy for STEMI</td>
<td>ACSQHC ACS CCS</td>
<td>Requires development – data exists</td>
<td>Service Regional National</td>
</tr>
<tr>
<td>9b. CHD: STEMI patients receiving fibrinolysis within 30 minutes of hospital arrival</td>
<td>II.2.4: Reperfusion therapy for STEMI</td>
<td>ACSQHC ACS CCS</td>
<td>Requires development – data exists</td>
<td>Service Regional National</td>
</tr>
<tr>
<td>9c. Stroke: Presentation and intravenous thrombolysis within 4.5 hours of symptom onset</td>
<td>IV.1.5: Access to thrombolysis</td>
<td>ACSQHC Stroke CCS</td>
<td>Partially collected – clinical audit</td>
<td>Service Regional National</td>
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<tr>
<td><strong>Indicator 10: Specialised care</strong></td>
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<tr>
<td>10a. CHD &amp; Stroke: ACS and stroke patients admitted into a cardiac or stroke unit i. Cardiac unit ii. Stroke unit</td>
<td>II.2.8: Cardiac units IV.1.4: Stroke units</td>
<td>ACSQHC Stroke CCS</td>
<td>Partially collected – registry</td>
<td>Service Regional National</td>
</tr>
</tbody>
</table>

**Key:**
- ACSQHC ACS CCS – Australian Commission on Safety and Quality in Health Care Acute Coronary Syndrome Clinical Care Standards
- ACHS – Australian Council on Healthcare Standards, ACSQHC Stroke CCS - Australian Commission on Safety and Quality in Health Care Stroke Clinical Care Standards
- * It is recommended that there be reporting at this level. However, this measure is not currently reported at this level.

See ESSENCE Standards for details of standards
### Ongoing Care of Disease Indicators

<table>
<thead>
<tr>
<th>Measure</th>
<th>Relevant ESSENCE Standard</th>
<th>Existing indicator set</th>
<th>Stage of data development</th>
<th>Reporting level</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Indicator 11: Discharge medications</strong></td>
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<tr>
<td>i. CHD: aspirin or other antiplatelet agent, a statin, an ACE inhibitor or angiotensin receptor blocker, and a beta-blocker, as appropriate</td>
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<tr>
<td>ii. CHF: Patients prescribed ACEI or A2RA and beta blocker</td>
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<tr>
<td>iii. Haemorrhagic stroke: antihypertensive medication</td>
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<tr>
<td>iv. Ischaemic stroke: statin therapy, antihypertensive and antithrombotic medication</td>
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</tr>
<tr>
<td>11b. CHD, CHF &amp; Stroke: Patients prescribed medications remaining on them at 12 months</td>
<td>I.2.4: Access to essential medicines I.3.2: Ongoing support post-discharge I.4.1: Patient education I.2.10: Adjunct medical therapy</td>
<td>-</td>
<td>Requires development – no data exists</td>
<td>Service National</td>
</tr>
<tr>
<td>i. CHD: aspirin or other antiplatelet agent, a statin, an ACE inhibitor or angiotensin receptor blocker, and a beta-blocker, as appropriate</td>
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<tr>
<td>ii. CHF: Patients prescribed ACEI or A2RA and beta blocker</td>
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<tr>
<td>iii. Haemorrhagic stroke: antihypertensive medication</td>
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<tr>
<td>iv. Ischaemic stroke: statin therapy, antihypertensive and antithrombotic medication</td>
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<tr>
<td><strong>Indicator 12: Coordination from hospital to community</strong></td>
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<tr>
<td>12a. CHD, Stroke &amp; RHD: Individualised care plan</td>
<td>I.3.2: Ongoing support post-discharge</td>
<td>ACSQHC ACS CCS; ACSQHC Stroke CCS</td>
<td>Requires development – no data exists</td>
<td>Service Regional National</td>
</tr>
<tr>
<td>i. Care plan for ACS</td>
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<tr>
<td>ii. Care plan for Stroke</td>
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<tr>
<td>iii. Care plan for RHD</td>
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<tr>
<td>12b. CHD, CHF &amp; RHD: Review by a primary health care professional within 1 week of discharge</td>
<td>I.3.2: Ongoing support post-discharge</td>
<td>-</td>
<td>Requires development – no data exists</td>
<td>Regional National</td>
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<tr>
<td></td>
<td>I.3.3: Clinical communication and handover</td>
<td>BCC</td>
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<tr>
<td><strong>Indicator 13: Rehabilitation</strong></td>
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<tr>
<td>13b. CHD, CHF &amp; Stroke: Patients referred to an appropriate condition-specific rehabilitation or other secondary prevention program</td>
<td>I.4.1: Patient education I.4.3: Community rehabilitation I.4.4: Lifestyle modification III.3.2: Cardiac rehabilitation</td>
<td>ACSQHC ACS CCS; ACHS; ACSQHC Stroke CCS</td>
<td>Partially collected - clinical audit</td>
<td>* Service Regional National</td>
</tr>
<tr>
<td>i. ACS patients</td>
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<tr>
<td>ii. CHF patients</td>
<td></td>
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<tr>
<td>iii. Stroke patients</td>
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<tr>
<td>13c. CHD, CHF &amp; Stroke: Patients completing an appropriate condition-specific rehabilitation or other secondary prevention program</td>
<td>I.4.1: Patient education I.4.3: Community rehabilitation I.4.4: Lifestyle modification III.3.2: Cardiac rehabilitation</td>
<td>Requires development – no data exists</td>
<td>Service Regional National</td>
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</tr>
<tr>
<td>i. ACS patients</td>
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<tr>
<td>ii. CHF patients</td>
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<tr>
<td>iii. Stroke patients</td>
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</tbody>
</table>

**Key:**
- BCC – Better Cardiac Care for Aboriginal and Torres Strait Islander people, ACHS – Australian Council on Healthcare Standards, ACSQHC Stroke CCS - Australian Commission on Safety and Quality in Health Care Stroke Clinical Care Standards, ACSQHC ACS CCS – Australian Commission on Safety and Quality in Health Care Acute Coronary Syndrome Clinical Care Standards,
- *It is recommended that there be reporting at this level. However, this measure is not currently reported at this level. See ESSENCE Standards for details of standards*
# Systems of Care Indicators

<table>
<thead>
<tr>
<th>Measure</th>
<th>Relevant ESSENCE Standard</th>
<th>Existing indicator set</th>
<th>Stage of development</th>
<th>Reporting level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicator 14: Integrated regional clinical network</td>
<td>I.6.4: Standard service elements</td>
<td>-</td>
<td>Requires development – no data exists</td>
<td>Regional Jurisdiction National</td>
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<tr>
<td>14a. Integrated regional clinical network scorecard</td>
<td></td>
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<tr>
<td>Indicator 15: RHD control programme</td>
<td>V.4.1: RHD control programme</td>
<td>-</td>
<td>Requires development – no data exists</td>
<td>Jurisdiction National</td>
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<tr>
<td>15a. RHD control programme scorecard</td>
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<tr>
<td>Indicator 16: Surgical procedures registry</td>
<td>I.6.5: Data monitoring and performance of outcomes</td>
<td>-</td>
<td>Requires development – no data exists</td>
<td>Jurisdiction National</td>
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<tr>
<td>16a. Services with a surgical procedures registry</td>
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**Key:**
See ESSENCE Standards for details of standards
## Cardiovascular Outcome Indicators

<table>
<thead>
<tr>
<th>Measure</th>
<th>Relevant ESSENCE Standard</th>
<th>Existing indicator set</th>
<th>Stage of development</th>
<th>Reporting level</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cardiovascular Outcome Indicator 1: Cardiovascular mortality</strong></td>
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<tr>
<td>1a. Cardiovascular mortality rate</td>
<td>All ESSENCE Standards</td>
<td>HPF, NIRA, OID</td>
<td>Currently collected</td>
<td>Jurisdiction National</td>
</tr>
<tr>
<td>i. All cardiovascular (I00-I99)</td>
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<tr>
<td>ii. CHD (I20-I25)</td>
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<td>iii. CHF (I50)</td>
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<tr>
<td>iv. Stroke (I60-I69)</td>
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<tr>
<td>v. ARF (I00-I02) &amp; RHD (I05-I09)</td>
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<tr>
<td><strong>Cardiovascular Outcome Indicator 2: Coronary Heart Disease</strong></td>
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<tr>
<td>2a. CHD (I20-I25) hospitalisation rate</td>
<td>All overarching CVD standards (I) All standards for CHD (II)</td>
<td>HPF</td>
<td>Currently collected</td>
<td>* Regional Jurisdiction National</td>
</tr>
<tr>
<td>2b. 12 month mortality following hospitalisation for AMI (I21)</td>
<td>All overarching CVD standards (I) All standards for CHD (II)</td>
<td>BCC</td>
<td>Requires development – data exists</td>
<td>Regional Jurisdiction National</td>
</tr>
<tr>
<td><strong>Cardiovascular Outcome Indicator 3: Chronic Heart Failure</strong></td>
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<tr>
<td>3a. CHF (I50) hospitalisation rate</td>
<td>All overarching CVD standards (I) All standards for CHF (III)</td>
<td>HPF</td>
<td>Currently collected</td>
<td>Jurisdiction National</td>
</tr>
<tr>
<td><strong>Cardiovascular Outcome Indicator 4: Stroke</strong></td>
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<tr>
<td>4a. Stroke (I60-I69) hospitalisation rate</td>
<td>All overarching CVD standards (I) All standards for stroke (IV)</td>
<td>HPF</td>
<td>Currently collected</td>
<td>* Regional Jurisdiction National</td>
</tr>
<tr>
<td>4b. 12 month mortality following hospitalisation for Stroke (I60-I69)</td>
<td>All overarching CVD standards (I) All standards for stroke (IV)</td>
<td>-</td>
<td>Requires development – no data exists</td>
<td>Jurisdiction National</td>
</tr>
<tr>
<td><strong>Cardiovascular Outcome Indicator 5: Rheumatic Heart Disease</strong></td>
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<tr>
<td>5a. ARF (I00-I02) incidence</td>
<td>All overarching CVD standards (I) All standards for RHD (V)</td>
<td>RDHA KPIs, HPF</td>
<td>Partially collected - registry</td>
<td>Jurisdiction National</td>
</tr>
<tr>
<td>5b. ARF (I00-I02) recurrences</td>
<td>All overarching CVD standards (I) All standards for RHD (V)</td>
<td>RDHA KPIs, HPF</td>
<td>Partially collected - registry</td>
<td>Jurisdiction National</td>
</tr>
<tr>
<td>5c. ARF (I00-I02) &amp; RHD (I05-I09) hospitalisation rate</td>
<td>All overarching CVD standards (I) All standards for RHD (V)</td>
<td>HPF</td>
<td>Currently collected</td>
<td>* Regional Jurisdiction National</td>
</tr>
<tr>
<td>i. ARF (I00-I02)</td>
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<tr>
<td>ii. RHD (I05-I09)</td>
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<tr>
<td><strong>Cardiovascular Outcome Indicator 6: Hypertension</strong></td>
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<tr>
<td>6a. Proportion of population with self-reported/measured hypertension (I10)</td>
<td>All overarching CVD standards (I) All standards for hypertension (VI)</td>
<td>HPF</td>
<td>Currently collected</td>
<td>* Regional Jurisdiction National</td>
</tr>
</tbody>
</table>

**Key:**
- HPF – Aboriginal and Torres Strait Islander Health Performance Framework, NIRA – National Indigenous Reform Agreement, BCC – Better Cardiac Care for Aboriginal and Torres Strait Islander people, RHDA KPIs – Rheumatic Heart Disease Australia ARF/RHD Key Performance Indicators
- * It is recommended that there be reporting at this level. However, this measure is not currently reported at this level.
- See ESSENCE Standards for details of standards
SECTION 3

INDICATOR AND MEASURE SPECIFICATIONS
**INDICATOR 1: SOCIOECONOMIC DETERMINANTS**

**Rationale:**
The relationship between the socioeconomic status of an individual and their health and wellbeing is well established.

**Relevant ESSENCE Standards:**
I.1.1 Primordial prevention - Socioeconomic determinants
All Aboriginal and Torres Strait Islander Australians should have improved access to all necessary healthful social and environmental resources in their day to day lives, including enhanced access to education, improved living and working conditions, and safe environments. People should be able to live in an environment that encourages and supports healthy lifestyle choices.

**Measures:**
The indicator for socio-economic determinants has 3 measures which are currently collected across a range of agencies and reporting structures. The specific measures are:
   a) Household crowding
   b) Attainment of Year 12 education or equivalent
   c) Workforce participation
**Indicator 1: Socioeconomic determinants**

**Measure 1a: Household crowding**

**Description:** Proportion of people, of all ages, who live in overcrowded houses

**ESSENCE Standard:** I.1.1: Socioeconomic determinants

**Stage of development:** Measure currently collected as specified

**Existing indicator set:** Overcoming Indigenous Disadvantage, Aboriginal and Torres Strait Islander Health Performance Framework

**Reporting level:** Jurisdictional
National

**Sector:** Across government

**Computation:** 100 x (Numerator ÷ Denominator)

**Numerator:** Number of people who live in ‘overcrowded’ housing

**Denominator:** Total population who reside in private dwellings

**Disaggregation:** National, and State/Territory, by remoteness area and Indigenous status

**Data Source:**

*Numerator:* Australian Bureau of Statistics Australian Aboriginal and Torres Strait Islander Health Survey, NATSIHS component; Australian Bureau of Statistics National Aboriginal and Torres Strait Islander Social Survey; Australian Bureau of Statistics Australian Health Survey, NHS component; Australian Bureau of Statistics Census of Population and Housing

*Denominator:* Australian Bureau of Statistics Australian Aboriginal and Torres Strait Islander Health Survey, NATSIHS component; Australian Bureau of Statistics National Aboriginal and Torres Strait Islander Social Survey; Australian Bureau of Statistics Australian Health Survey, NHS component; Australian Bureau of Statistics Census of Population and Housing

**Note:** ‘Overcrowding’ is defined according to the Australian modification of the Canadian National Occupancy Standard as the indicator of housing utilisation (and therefore overcrowding).

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**For more information** on this measure as specified in the Overcoming Indigenous Disadvantage reports, refer to the 2014 Report. (5)

**For more information** on the Australian modification of the Canadian Occupancy Standard, refer to the Overcoming Indigenous Disadvantage Report 2014 (Box 10.1.2). (5)
# Indicator 1: Socioeconomic Determinants

## Measure 1b: Attainment of Year 12 Education or Equivalent

**Description:**
Proportion of the 20-24 year old population having attained at least a Year 12 or equivalent or Australian Qualifications Framework Certificate level II or above.

**ESSENCE Standard:**
I.1.1: Socioeconomic determinants

**Stage of development:**
Measure currently collected as specified

**Existing indicator set:**
Aboriginal and Torres Strait Islander Health Performance Framework, National Indigenous Reform Agreement, Overcoming Indigenous Disadvantage

**Reporting level:**
Jurisdictional
National

**Sector:**
Across government

**Computation:**
100 x (Numerator ÷ Denominator)

**Numerator:**
People aged 20–24 years who have completed Year 12 or equivalent or whose level of highest non-school qualification is at Australian Qualifications Framework Certificate level II or above.

**Denominator:**
Total population of people aged 20–24 years

**Disaggregation:**
National, and state/territory by remoteness area by Indigenous status and sex [Refer to notes]
Remoteness area by Indigenous status and sex [Refer to notes]

**Data Source:**
Numerator: Australian Bureau of Statistics Australian Aboriginal and Torres Strait Islander Health Survey, Core component; Australian Bureau of Statistics National Aboriginal and Torres Strait Islander Social Survey; Australian Bureau of Statistics Australian Health Survey, NHS component; Australian Bureau of Statistics Census of Population and Housing

Denominator: Australian Bureau of Statistics Australian Aboriginal and Torres Strait Islander Health Survey, Core component; Australian Bureau of Statistics National Aboriginal and Torres Strait Islander Social Survey; Australian Bureau of Statistics Australian Health Survey, NHS component; Australian Bureau of Statistics Census of Population and Housing

**Note:**
The ESSENCE Steering Committee recommends that this measure be disaggregated by sex.

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**For more information** on this measure as specified in the Aboriginal and Torres Strait Islander Health Performance Framework, refer to health.gov.au/indigenous-hpf

**For measure specifications** as outlined in the National Indigenous Reform Agreement, refer to meteor.aihw.gov.au
**INDICATOR 1: SOCIOECONOMIC DETERMINANTS**

**MEASURE 1C: WORKFORCE PARTICIPATION**

**I. EMPLOYMENT TO POPULATION RATIO**

**II. UNEMPLOYMENT RATE**

**III. LABOUR FORCE PARTICIPATION RATE**

**Description:** The level of workforce participation as measured by employment, unemployment and labour force participation rates.

**ESSENCE Standard:** I.1.1: Socioeconomic determinants

**Stage of development:** Measure currently collected as specified

**Existing indicator set:** Aboriginal and Torres Strait Islander Health Performance Framework, National Indigenous Reform Agreement, Overcoming Indigenous Disadvantage

**Reporting level:** Jurisdictional

National

**Sector:** Across government

**Computation:**

i. – iii. Rate: $100 \times \frac{\text{Numerator}}{\text{Denominator}}$.

Rate ratio: Indigenous rate divided by non-Indigenous rate.

Rate difference: Indigenous rate minus non-Indigenous rate.

**Numerator:**

i. Number of employed people aged 15–64 years excluding those whose Indigenous status and labour force status were not stated and overseas and temporary visitors

ii. Number of unemployed people aged 15–64 years excluding those whose Indigenous status and labour force status were not stated and overseas and temporary visitors.

iii. Number of people aged 15–64 years in the labour force excluding those whose Indigenous status and labour force status were not stated and overseas and temporary visitors.

**Denominator:**

i. Total population aged 15–64 years excluding those whose Indigenous status and labour force status were not stated and overseas and temporary visitors.

ii. Total number of people in the labour force aged 15–64 years whose Indigenous status and labour force status were not stated and overseas and temporary visitors.

iii. Total number of people aged 15–64 years excluding those whose Indigenous status and labour force status were not stated and overseas and temporary visitors.

**Disaggregation:**

National and state/territory, by Indigenous status

Remoteness area, by Indigenous status
Data Source:

Numerator: Australian Bureau of Statistics Australian Aboriginal and Torres Strait Islander Health Survey, Core component; Australian Bureau of Statistics National Aboriginal and Torres Strait Islander Social Survey; Australian Bureau of Statistics Australian Health Survey, Core component; Australian Bureau of Statistics Census of Population and Housing

Denominator: Australian Bureau of Statistics Australian Aboriginal and Torres Strait Islander Health Survey, Core component; Australian Bureau of Statistics National Aboriginal and Torres Strait Islander Social Survey; Australian Bureau of Statistics Australian Health Survey, Core component; Australian Bureau of Statistics Census of Population and Housing

For more information on this measure as specified in the Aboriginal and Torres Strait Islander Health Performance Framework, refer to health.gov.au/indigenous-hpf

For measure specifications as outlined in the National Indigenous Reform Agreement, refer to meteor.aihw.gov.au
INDICATOR 2: COMPREHENSIVE PRIMARY HEALTH CARE

Rationale:
Comprehensive primary health care system is internationally acknowledged as an essential element of health care, and that such care should be universally accessible to all individuals. It can be defined as all inclusive, integrated health care.

Relevant ESSENCE Standards:
1.1.2 Primordial prevention - Comprehensive Primary Health Care
All Australians should have access to comprehensive, adequately resourced, and appropriately supported primary health care services.

Measures:
The indicator for comprehensive primary health care has 1 measure:

a) Aboriginal and Torres Strait Islander access to primary health care relative to need
MEASURE 2A: ABORIGINAL AND TORRES STRAIT ISLANDER ACCESS TO PRIMARY HEALTH CARE RELATIVE TO NEED

Description: Yet to be defined

ESSENCE Standard: I.1.2: Comprehensive primary health care

Stage of development: Measure requires data collection development

Existing indicator set: Aboriginal and Torres Strait Islander Health Performance Framework, Australian Institute of Health and Welfare

Reporting level: Regional
Network
Jurisdictional
National

Sector: Primary health

Note: The ESSENCE Steering Committee recommends that there be a measure on the Aboriginal and Torres Strait Islander access to primary health care relative to need.

There is ongoing work to develop a measure for this indicator, being undertaken by the Australian Institute of Health and Welfare and the Aboriginal and Torres Strait Islander Health Performance Framework.

For information on this measure as specified by the Australian Institute of Health and Welfare, refer to the report, Access to primary health care relative to need for Indigenous Australians. (6)

For information on this measure as specified in the Aboriginal and Torres Strait Islander Health Performance Framework, refer to health.gov.au/indigenous-hpf

Given that there is ongoing work to refine this measure, the ESSENCE Steering Committee feels that this indicator requires specification development beyond progress to date.

In the interim, use of the ‘Access Relative to Need index’, as developed by the Australian Institute of Health and Welfare; and the ‘Aboriginal and Torres Strait Islander access to care compared to need’ as used by the Aboriginal and Torres Strait Islander Health Performance Framework.
INDICATOR 3: HEALTH BEHAVIOURS

Rationale:
Health behaviours such as smoking, healthy eating and physical activity are significant risk factors of cardiovascular disease, and are mediated by the socioeconomic environment.

Relevant ESSENCE Standards:
I.1.1 Primordial prevention - Socioeconomic determinants
All Aboriginal and Torres Strait Islander Australians should have improved access to all necessary healthful social and environmental resources in their day to day lives, including enhanced access to education, improved living and working conditions, and safe environments. People should be able to live in an environment that encourages and supports healthy lifestyle choices.

I.1.3 Primordial prevention - Improving nutrition
All families should be able to access a standard healthy food basket (or supply) for a cost of less than 25% of their available weekly income.

Measures:
The indicator for health behaviours has 4 measures:

a) Rate of current smokers
b) Tobacco smoking during pregnancy
c) People meeting guidelines for adequate intake of fruit and vegetables
d) Adults meeting sufficient levels of physical activity
### Measure 3A: Rate of Current Smokers

**Description:** Proportion of people aged 15 years and over who are current smokers, by Indigenous status

**ESSENCE Standard:** I.1.1: Socioeconomic determinants

**Stage of development:** Measure currently collected as specified

**Existing indicator set:** Aboriginal and Torres Strait Islander Health Performance Framework

**Reporting level:**
- Service: *It is recommended that there be reporting at this level. However, this measure is not currently reported at the service level.*
- Regional network: *It is recommended that there be reporting at this level. However, this measure is not currently reported at the regional network level.*
- Jurisdictional
- National

**Sector:** Community health
Primary health

**Computation:**
- Crude rate: 100 x (Numerator ÷ Denominator).
- Age-specific rate: 100 x (Numerator ÷ Denominator), using 10 year age groups from 5 years to 75 years and over. [Refer to notes]
- Age-standardised rate: calculated using the direct method with the 2001 Australian population as at 30 June as the standard.

**Numerator:** People aged 15 years and over who currently smoke tobacco

**Denominator:** Total populations (Indigenous and non-Indigenous) aged 15 years and over

**Disaggregation:**
- Crude rate: National, state/territory, remoteness area: by Indigenous status
- Age-specific rate: National, state/territory, remoteness area: by Indigenous status
- Age-standardised rate: National, state/territory, remoteness area: by Indigenous status

**Data Source:**
- **Numerator:** Australian Bureau of Statistics National Aboriginal and Torres Strait Islander Social Survey; Australian Bureau of Statistics Australian Aboriginal and Torres Strait Islander Health Survey, Core component; Australian Bureau of Statistics Australian Health Survey, Core component
- **Denominator:** Australian Bureau of Statistics National Aboriginal and Torres Strait Islander Social Survey; Australian Bureau of Statistics Australian Aboriginal and Torres Strait Islander Health Survey, Core component; Australian Bureau of Statistics Australian Health Survey, Core component

**Note:** The ESSENCE Steering Committee recommends that this measure be presented using age-specific rates, however this measure is not currently reported using this computation.

**For measure specifications as outlined in the National Indigenous Reform Agreement, refer to meteor.aihw.gov.au**
**MEASURE 3B: TOBACCO SMOKING DURING PREGNANCY**

**Description:** Proportion of mothers who smoked during pregnancy, by Indigenous status

**ESSENCE Standard:** I.1.1: Socioeconomic determinants

**Stage of development:** Measure currently collected as specified

**Existing indicator set:** Aboriginal and Torres Strait Islander Health Performance Framework, National Indigenous Reform Agreement, Overcoming Indigenous Disadvantage

**Reporting level:** Service [It is recommended that there be reporting at this level. However, this measure is not currently reported at the service level]
Regional network
Jurisdictional
National

**Sector:** Community health
Primary health

**Computation:**
- Crude rate: 100 x (Numerator ÷ Denominator).
- Age-specific rate: 100,000 x (Numerator ÷ Denominator), using 10 year age groups from 15 years to 44 years. [Refer to notes]
- Age-standardised rate: calculated using the direct method with the 2001 Australian population as at 30 June as the standard. Five year age groups are used from 15-19 to 40-44 years old to be consistent with published estimates by the Australian Bureau of Statistics. Age-standardisation should be done in accordance with the National Indigenous Reform Agreement Performance Information Management Group agreed principles for direct age-standardisation.(7)

**Numerator:** Number of women who smoked during pregnancy

**Denominator:** Total number of women who gave birth with known smoking status during pregnancy.

**Disaggregation:**
- Crude rate: Total and state/territory and remoteness area, by Indigenous status and smoking status.
- Age-specific rate: Total and state/territory and remoteness area, by Indigenous status and smoking status.
- Age-standardised rate: Total and state/territory and remoteness area (from 2012 onwards), by Indigenous status

**Data Source:**
- **Numerator:** Australian Institute of Health and Welfare National Perinatal Data Collection
- **Denominator:** Australian Institute of Health and Welfare National Perinatal Data Collection

**Note:** The ESSENCE Steering Committee recommends that this measure be presented as age-specific rates, however this measure is not currently reported using this computation.

For information on this measure as specified in the Aboriginal and Torres Strait Islander Health Performance Framework, refer to [health.gov.au/indigenous-hpf](http://health.gov.au/indigenous-hpf)

For measure specifications as outlined in the National Indigenous Reform Agreement, refer to [meteor.aihw.gov.au](http://meteor.aihw.gov.au)
MEASURE 3C: PEOPLE MEETING GUIDELINES FOR ADEQUATE INTAKE OF FRUIT AND VEGETABLES

Description: Proportion of Australians meeting NHMRC Australian Dietary Guidelines 2013 for adequate intake of:
  i. fruit
  ii. vegetables

ESSENCE Standard: I.1.1: Socioeconomic determinants
                   I.1.3 Improving nutrition

Stage of development: Measure currently collected as specified

Existing indicator set: Aboriginal and Torres Strait Islander Health Performance Framework

Reporting level: Regional Network [It is recommended that there be reporting at this level. However, this measure is not currently reported at the regional network level]
                 Jurisdictional
                 National

Sector: Community health

Computation: i. & ii. Crude rate: 100 x (Numerator ÷ Denominator).
            Age-specific rate: 100 x (Numerator ÷ Denominator), from 2 to 5 years old and then 10 year age groups from 5 years to 55 years and over

Numerator: i. Number of persons aged 2 and over consuming the recommended serves of fruit per day (1 serve of fruit per day for persons aged 2-3 years; 1 1/2 serves for persons aged 4-8 years; 2 serves for persons aged 9 years and over)
           ii. Number of persons aged 2 and over consuming the recommended serves of vegetables per day (2 1/2 serves of vegetables for persons aged 2-3 years; 4 1/2 serves for persons aged 4-8 years; 5 serves for persons aged 9 years and over; 6 serves for males aged 18-49 years)

Denominator: i. & ii. Population 2 years and over

Disaggregation: Crude rate: National and state/territory by Indigenous status and sex
                 Age-specific rate: National and state/territory by Indigenous status and sex

Data Source: i. & ii. Numerator: Australian Bureau of Statistics Australian Aboriginal and Torres Strait Islander Health Survey, Core component; Australian Bureau of Statistics Australian Health Survey, Core component
             Denominator: Australian Bureau of Statistics Australian Aboriginal and Torres Strait Islander Health Survey, Core component; Australian Bureau of Statistics Australian Health Survey, Core component

This measure requires specification development
MEASURE 3D: PROPORTION OF ADULTS MEETING SUFFICIENT LEVELS OF PHYSICAL ACTIVITY

Description: Adults undertaking sufficient (at least 150 minutes over 5 or more sessions) in a week

ESSENCE Standard: I.1.1: Socioeconomic determinants

Stage of development: Measure currently collected as specified

Existing indicator set: Aboriginal and Torres Strait Islander Health Performance Framework

Reporting level: Regional Network [It is recommended that there be reporting at this level. However, this measure is not currently reported at the regional network level]

Jurisdictional

National

Sector: Community health

Computation: Crude rate: $100 \times \frac{\text{Numerator}}{\text{Denominator}}$.
Age-specific rate: $100 \times \frac{\text{Numerator}}{\text{Denominator}}$, using age groups from 18-24 years and then 10 year to 64 years

Numerator: Number of adults aged 18-64 who undertake at least 150 minutes of physical activity over 5 or more sessions in one week

Denominator: Number of adults aged 18-64

Disaggregation: Crude rate: National and state and territory by: Indigenous status, sex
Age-specific rate: National and state and territory by: Indigenous status, sex

Data Source: Numerator: Australian Bureau of Statistics Australian Aboriginal and Torres Strait Islander Health Survey, Core component; Australian Bureau of Statistics Australian Health Survey, Core component

Denominator: Australian Bureau of Statistics Australian Aboriginal and Torres Strait Islander Health Survey, Core component; Australian Bureau of Statistics Australian Health Survey, Core component

For information on this measure as specified in the Aboriginal and Torres Strait Islander Health Performance Framework, refer to health.gov.au/indigenous-hpf
**INDICATOR 4: SMOKING CESSATION**

**Rationale:**
Smoking is a significant risk factor for cardiovascular disease. Prevalence of smoking in Aboriginal and Torres Strait Islander populations is disproportionally high. Supporting smoking cessation in this population is important in reducing the morbidity and mortality of cardiovascular disease for Aboriginal and Torres Strait Islander people.

**Relevant ESSENCE Standards:**
1.2.3 Primary prevention - Supporting smoking cessation
All individuals should have their smoking status assessed, receive smoking cessation advice and be able to access affordable nicotine replacement therapy (or other smoking cessation therapies) and smoking cessation support.

**Measures:**
The indicator for smoking has 1 measure of smoking cessation:

a) Smokers receiving nicotine replacement therapy
INDICATOR 4: SMOKING CESSATION

MEASURE 4A: SMOKERS RECEIVING NICOTINE REPLACEMENT THERAPY

Description: Proportion of clients of health services who have had their smoking status assessed within the last 1 year and identified as a smoker have received a prescription for nicotine replacement therapy

ESSENCE Standard: I.2.3: Supporting smoking cessation

Relevant Conditions: Coronary Heart Disease
Chronic Heart Failure
Stroke
Hypertension

Stage of development: Measure requires data collection development

Existing indicator set: -

This measure requires specification development
INDICATOR 5: RISK ASSESSMENT

Rationale:
Regular risk assessment and timely management are critical in reducing the burden of cardiovascular disease for Aboriginal and Torres Strait Islander people. Young Aboriginal and Torres Strait Islander people are disproportionately over-burdened with cardiovascular risk factors and disease.(3)

Relevant ESSENCE Standards:
I.2.1 Primary prevention - Identifying and managing risk
All Aboriginal and Torres Strait Islander people aged 15 years and over should be offered cardiovascular risk assessment at least once every year. Risk identification should involve assessment of: Body Mass Index, smoking status, blood pressure, blood lipid levels, psychosocial stress (e.g. depression), physical activity, diet, blood glucose level, renal function and urine albumin. All over the age of 35 should be stratified using a validated risk assessment tool.

All patients (and the families of patients) who are identified to be at elevated risk should receive appropriate information about their condition(s), lifestyle advice, support and long-term pharmacological and non-pharmacological treatment to reduce their risk according to evidence-based guidelines delivered within the context of an adequately resourced primary care service. The advice should be provided in a culturally appropriate format and disseminated in a manner that encourages, facilitates and supports lifestyle modification.

VI.1.3 Primary prevention - Early identification
All people with systolic blood pressure >140 or diastolic blood pressure >90 mm Hg on at least two separate occasions should receive a full clinical assessment in accordance with locally relevant clinical guidelines. This should include identification of all risk factors or secondary causes of hypertension and detection of target-organ damage.

Measures:
The indicator for risk assessment has 3 measures:

a) Absolute risk assessment for people aged 35 years and over
b) Medicare Benefits Schedule Health Assessment within the previous 12 months
c) Number of people with relevant Medicare-listed diagnostic items claimed in the previous 12 months
ESSENCE STANDARD PERFORMANCE INDICATOR 5: RISK ASSESSMENT

MEASURE 5a: ABSOLUTE RISK ASSESSMENT FOR PEOPLE AGED 35 YEARS AND OVER

Description: Proportion of clients with no known cardiovascular disease, aged 35 to 74 years, with information available to calculate their absolute cardiovascular disease risk in the last 2 years

ESSENCE Standard: I.2.1: Identifying and managing risk

Stage of development: Measure requires data collection development

Existing indicator set: PROPOSED - Indigenous primary health care key performance indicators

Reporting level: Service
Regional network

Sector: Primary health

Computation: \( \frac{\text{Numerator}}{\text{Denominator}} \times 100 \)

Numerator: Number of Aboriginal and Torres Strait Islander regular clients without known cardiovascular disease, aged 35 to 74 years, who have had all of the following information recorded in the past 24 months:
- Tobacco smoking
- Diabetes
- Systolic blood pressure
- Total cholesterol and high-density lipoprotein cholesterol levels
- Age
- Sex

Denominator: Total number of Indigenous regular clients without known cardiovascular disease, aged 35 to 74 years

Disaggregation: By Indigenous status and sex

Data Source: -

Note: It is anticipated that this data will be collected through the Indigenous primary care data collection in the future. However, no data currently exists.

The ESSENCE Steering Committee recommends that this measure be reported by all primary health care services, not just Aboriginal Community Controlled Health Organisations.

For more information on this measure as proposed in the Indigenous primary health care key performance indicators, refer to meteor.aihw.gov.au
### Indicator 5: Risk Assessment

#### Measure 5b: MBS Health Assessment within the Previous 12 Months

**Description:**
Proportion of people aged 15 and over who have received an Medicare Benefits Schedule Health Assessment within the previous 12 months.

**ESSENCE Standard:**
I.2.1: Identifying and managing risk  
VI.1.3: Early identification of hypertension

**Stage of development:**
Measure currently collected as specified

**Existing indicator set:**
Aboriginal and Torres Strait Islander Health Performance Framework, Better Cardiac Care for Aboriginal and Torres Strait Islander people

**Reporting level:**
Service [It is recommended that there be reporting at this level. However, this measure is not currently reported at the service level].  
Regional network [It is recommended that there be reporting at this level. However, this measure is not currently reported at the regional network level].  
Jurisdictional

**Sector:**
Primary health

**Computation:**
(Numerator ÷ Denominator) x 100

**Numerator:**
Number of people who had an Medicare Benefits Schedule Health Assessment (Item 715, A14, 701, 703, 705 or 707) billed to the Medicare Benefits Schedule within the financial year

**Denominator:**
Population at the middle of the financial year, calculated from the average of the populations at 30 June at the beginning and end of the financial year

**Disaggregation:**
By Indigenous status, sex and age

**Data Source:**
**Numerator:** Medicare Benefits Schedule data  
**Denominator:** Australian Bureau of Statistics Estimates and Projections, Aboriginal and Torres Strait Islander Australians, 2001 to 2026; Australian Bureau of Statistics Population Projections, Australia, 2012 to 2101

**Note:**
This measure is being investigated by the Australian Institute of Health and Welfare as part of the Better Cardiac Care for Aboriginal and Torres Strait Islander people 2014 work.

This indicator is similar to that used in the Indigenous primary health care key performance indicators.(7)
INDICATOR 5: RISK ASSESSMENT

MEASURE 5C: PEOPLE WITH RELEVANT MEDICARE-LISTED DIAGNOSTIC ITEMS CLAIMED IN THE PREVIOUS 12 MONTHS

Description: Proportion of people who had relevant Medicare-listed cardiac related diagnostic items claimed in the previous 12 months

ESSENCE Standard: I.2.1: Identifying and managing risk
I.2.2: Managing risk

Stage of development: Measure requires development, but there are existing data sources to inform measure

Existing indicator set: Better Cardiac Care for Aboriginal and Torres Strait Islander people

Reporting level: Service
Regional network

Sector: Primary health

Computation: \((\text{Numerator} \div \text{Denominator}) \times 100\)

Numerator: Number of people who had relevant Medicare-listed cardiac related diagnostic items claimed in the financial year. A final list of diagnostic items is yet to be determined, and is currently being investigated by the Australian Institute of Health and Welfare.

Denominator: Population at the middle of the financial year, calculated from the average of the populations at 30 June at the beginning and end of the financial year

Disaggregation: By Indigenous status, sex and age

Data Source: 

\begin{itemize}
\item **Numerator:** Medicare Benefits Schedule data
\item **Denominator:** Australian Bureau of Statistics Estimates and Projections, Aboriginal and Torres Strait Islander Australians, 2001 to 2026; Australian Bureau of Statistics Population Projections, Australia, 2012 to 2011
\end{itemize}

This measure requires further specification development.

This measure is being investigated by the Australian Institute of Health and Welfare as part of the Better Cardiac Care for Aboriginal and Torres Strait Islander people 2014 work. There is data available through Medicare Benefits Schedule (unpublished data). The measure would not be able to distinguish whether people are clients of health services.
**INDICATOR 6: RISK MANAGEMENT**

**Rationale:**
Timely management of risk factors should be provided to all people who have been identified as being at risk.

**Relevant ESSENCE Standards:**

1.2.1 Primary prevention - Identifying and managing risk

All Aboriginal and Torres Strait Islander people aged 15 years and over should be offered cardiovascular risk assessment at least once every year. Risk identification should involve assessment of: Body Mass Index, smoking status, blood pressure, blood lipid levels, psychosocial stress (e.g. depression), physical activity, diet, blood glucose level, renal function and urine albumin. All over the age of 35 should be stratified using a validated risk assessment tool.

All patients (and the families of patients) who are identified to be at elevated risk should receive appropriate information about their condition(s), lifestyle advice, support and long-term pharmacological and non-pharmacological treatment to reduce their risk according to evidence-based guidelines delivered within the context of an adequately resourced primary care service. The advice should be provided in a culturally appropriate format and disseminated in a manner that encourages, facilitates and supports lifestyle modification.

1.2.2 Primary prevention - Managing risk

When managing risk, priority focus should be on assessment and support for smoking cessation; encouraging increased physical activity; healthy nutrition; controlling blood lipid and glucose levels, and blood pressure.

1.2.3 Primary prevention - Supporting smoking cessation

All individuals should have their smoking status assessed, receive smoking cessation advice and be able to access affordable nicotine replacement therapy (or other smoking cessation therapies) and smoking cessation support.

1.2.4 Primary prevention - Access to essential medicines

All patients considered eligible for pharmacological therapy to reduce cardiovascular risk should be able to access affordable medications as close as possible to their home or within their primary care clinic.

VI.2 Rehabilitation and secondary prevention - Medication

All Aboriginal and Torres Strait Islander peoples with hypertension should be considered for immediate antihypertensive therapy. In particular, all individuals should be considered high risk and offered drug therapy if they have (a) high absolute cardiovascular risk (> 15% probability of a cardiovascular event within the next 5 years) (b) existing cardiovascular disease, (c) target organ damage, or (d) diabetes. Structured titration schedules and additional blood pressure-lowering medications should be added to the treatment regime and reviewed regularly in accordance with the evidence-based guidelines.

**Measures:**

The indicator for risk management has 2 measures:

a) Hypertension: Antihypertensive medications prescribed

b) Documented evidence of primary care practitioner follow-up for people with elevated risk of cardiac disease
INDICATOR 6: RISK MANAGEMENT

MEASURE 6A: HYPERTENSION: ANTIHYPERTENSIVE MEDICATIONS PRESCRIBED

Description: Proportion of Aboriginal and Torres Strait Islander people with a confirmed diagnosis of hypertension (Grade 1-3) who are prescribed antihypertensive medications

ESSENCE Standard: VI.2: Medication
Stage of development: Measure requires data collection development
Existing indicator set: -
Reporting level: Service
Regional network
Sector: Primary health

This measure requires specification development
**Indicator 6: Risk Management**

**Measure 6b: Documented Evidence of Primary Care Practitioner Follow-up for People with Elevated Risk of Cardiac Disease**

**Description:**
Proportion of those Aboriginal and Torres Strait Islander people identified as having elevated risk of cardiac disease in the previous 2 years, with documented evidence of primary care practitioner follow-up, including the proportion commenced on anti-hypertensive and lipid-lowering therapy and proportion of smokers offered an evidence-based smoking cessation intervention.

**ESSENCE Standard:**
I.2.1: Identifying and managing risk  
I.2.2: Managing risk  
I.2.3: Supporting smoking cessation  
I.2.4: Access to essential medicines

**Stage of Development:** Measure requires data collection development

**Existing Indicator Set:** Better Cardiac Care for Aboriginal and Torres Strait Islander people

**Reporting Level:** Service  
Regional network

**Sector:** Primary health

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**This measure requires specification development**

This measure is being investigated by the Australian Institute of Health and Welfare as part of the Better Cardiac Care for Aboriginal and Torres Strait Islander people 2014 work. This measure requires data from clinical audits or surveys. There is currently no data available for this measure.
**INDICATOR 7: SECONDARY PREVENTION AND MANAGEMENT OF ACUTE RHEUMATIC FEVER/ RHEUMATIC HEART DISEASE**

**Rationale:**
All people who have experienced acute rheumatic fever should receive secondary prevention measures to prevent the development or progression of rheumatic heart disease.

**Relevant ESSENCE Standards:**

**V.3.1 Long-term management and secondary prevention - Long acting penicillin (benzathine penicillin G)**
All patients with a history of acute rheumatic fever/rheumatic heart disease should receive benzathine penicillin G every 21-28 days for an extended period of time (minimum of 10 years or until age 21, which ever is longer). benzathine penicillin G should be delivered by a patient’s regular primary care provider or outreach community staff, with the support of appropriate protocols, recall and quality use of medicines (QUM) systems.

**V.3.2 Long-term management and secondary prevention - Echocardiography**
All patients with acute rheumatic fever/rheumatic heart disease should undergo serial echocardiographic assessments in the long-term, according to disease severity and evidence-based guidelines.

**Measures:**
The indicator for secondary prevention of rheumatic heart disease has 2 measures:

a) People indicated for and who receive benzathine penicillin G secondary prophylaxis

b) Priority 1 and 2 rheumatic heart disease cases receiving serial echocardiography
**MEASURE 7A: PROPORTION OF ALL PEOPLE INDICATED FOR AND WHO RECEIVE BENZATHINE PENICILLIN G SECONDARY PROPHYLAXIS**

**Description:**
Proportion of all people indicated for benzathine penicillin G secondary prophylaxis administration who received <50%, 50-79% and greater than or equal to 80% of scheduled doses in the previous calendar year.

**ESSENCE Standard:**
V.3.1: Long acting penicillin

**Stage of development:**
Measure currently collected in part, with further work remaining to ensure full coverage.

**Existing indicator set:**
RHDAustralia Acute Rheumatic Fever / Rheumatic Heart Disease Key Performance Indicators

**Reporting level:**
Jurisdictional
National

**Sector:**
Community health
Primary health

**Computation:**
In development

**Numerator:**
In development

**Denominator:**
In development

**Disaggregation:**
Sex and age group;
Ethnicity and age group;
Median percentage of all scheduled doses.

**Data Source:**
**Numerator:** Rheumatic Heart Disease Control Program Data Collection System

**Denominator:** Rheumatic Heart Disease Control Program Data Collection System

**Note:**
Data is only available for Queensland, the Northern Territory, South Australia and Western Australia. Acute rheumatic fever and rheumatic heart disease data is already collected by the Rheumatic Heart Disease Control Programs in Queensland, the Northern Territory, South Australia and Western Australia. The Rheumatic Heart Disease Control Program Data Collection System is establishing mechanisms and infrastructure to enable consistent data collection across the jurisdictions. The Data Collection System will provide mandatory reports to the Commonwealth as well as analytical reports to support the control programs with their performance monitoring measures.(9)

Specific details for the RHDAustralia Key Performance Indicators are currently in development and will be available through RHDAustralia.
MEASURE 7B: PRIORITY 1 AND 2 RHEUMATIC HEART DISEASE CASES RECEIVING SERIAL ECHOCARDIOGRAPHY

Description: Echocardiograms performed within designated timeframes for priority level 1 and 2 rheumatic heart disease cases

ESSENCE Standard: V.3.2: Echocardiography

Stage of development: Measure currently collected in part, with further work remaining to ensure full coverage

Existing indicator set: RHDAustralia Acute Rheumatic Fever / Rheumatic Heart Disease Key Performance Indicators

Reporting level: Regional network [It is recommended that there be reporting at this level. However, this measure is not currently reported at the regional network level]
National

Sector: Community health
Primary health

Computation: In development

Numerator: In development

Denominator: In development

Disaggregation: Priority level 1 within the previous: 6 months; 7-12 months, >12 months; Priority level 2 with the previous: 12 months, 13-24 months, >24 months; Ethnicity

Data Source:

Numerator: Rheumatic Heart Disease Control Program Data Collection System

Denominator: Rheumatic Heart Disease Control Program Data Collection System

Note: Data is only available for Queensland, the Northern Territory, South Australia and Western Australia. Acute rheumatic fever and rheumatic heart disease data is already collected by the Rheumatic Heart Disease Control Programs in Queensland, the Northern Territory, South Australia and Western Australia. The Rheumatic Heart Disease Control Program Data Collection System is establishing mechanisms and infrastructure to enable consistent data collection across the jurisdictions. The data collection system will provide mandatory reports to the Commonwealth as well as analytical reports to support the control programs with their performance monitoring measures. (9)

The ESSENCE Steering Committee has not included Priority 3 given that it requires significantly lower levels of follow-up.

Specific details for the RHDAustralia Key Performance Indicators are currently in development and will be available through RHDAustralia.
**INDICATOR 8: RAPID ASSESSMENT**

**Rationale:**
Rapid assessment for acute cardiovascular events require timely access to emergency care. Rapid assessment incorporates the elements of access to care, including transport, timely coordination, including triage and referrals, and timely assessment and stratification in the appropriate facility.

**Relevant ESSENCE Standards:**

I.3.1 Acute care - Medical transport for streamlined access to the appropriate level of care

All patients suffering from acute, time critical, cardiovascular events that require transfer from the point of first medical contact to a higher level facility should be transferred via dedicated medical transportation services whose care and triaging processes are fully integrated with the referring and receiving medical facilities. Coordination and integration of care for acute patients across different health care sectors should be the responsibility of appropriately configured and resourced regional Clinical Networks.

I.6.1 Systems of care - Transport and referral protocol development

Alongside the availability and use of clinical guidelines, specific local protocols should be developed by local staff across the continuum of care for use with all people with suspected acute cardiovascular events. Local protocols should outline early risk stratification, transfer, immediate treatment and transportation; rapid referrals; 24 hour consultation and advice, access to imaging and other diagnostic tests; and streamlined discharge processes.

II.2.1 Acute care - Access to care

All people experiencing acute chest pain of possible ischaemic origin should be able to access emergency care that includes focussed clinical history and examination by a competent practitioner (paramedic, nurse, doctor), an electrocardiogram and initial treatment within 1 hour of onset of their symptoms. All points of first medical contact should have cardiac defibrillation capability and advanced life support trained staff. At first hospital contact, this assessment should include a biochemical marker of myocardial necrosis with results available within 30-60 minutes of arrival.

II.2.2 Acute care - Early electrocardiogram

All emergency medical care facilities should be able to perform a digital 12 lead electrocardiogram within 10 minutes of patient arrival and where necessary transmit and receive immediate (<10 minutes) diagnostic support from a hospital or cardiology network to aid risk stratification, rapid initial treatment decisions, particularly regarding thrombolysis for ST elevation myocardial infarction, and triage to the most appropriate hospital facility.

III.2.1 Acute care - Establishment of cause

All patients with acute exacerbations of chronic heart failure should undergo urgent investigations including electrocardiography and echocardiography to identify (and if possible, inform measures to correct) the cause of the exacerbation. Patients potentially eligible for revascularisation should undergo urgent subsequent angiography.

IV.1.1 Acute care - Access to care

All people experiencing sudden onset of neurological symptoms should be able to access emergency care within 1 hour of recognition of their symptoms.
IV.1.2 Acute care - Rapid assessment and risk stratification

Every patient with neurological symptoms who presents to a health centre or emergency service should undergo rapid assessment and risk stratification using a validated pre-hospital stroke-screening tool. The referral hospital should receive advance notification of a possible stroke patient and assessment documentation and transportation should be arranged as a matter of priority according to the patient’s defined level of risk. On arrival, the hospital should assess the patient with a validated in-hospital stroke screening tool.

IV.1.3 Acute care - Brain imaging

All patients with suspected stroke should undergo immediate brain imaging to aid assessment for suitability of thrombolysis and other acute management.

Measures:

There are no indicators available which measure the presence of protocols which outline early risk stratification, transfer, immediate treatment and transportation; rapid referrals; 24 hour consultation and advice, access to imaging and other diagnostic tests; and streamlined discharge processes. Proxy measures of receipt of timely assessment can be used to measure the availability of transport for streamlined access to the appropriate level of care. The indicator for rapid assessment has 3 measures:

a) Acute coronary heart disease: electrocardiogram performed and interpreted within 10 minutes of arrival for acute coronary syndrome

b) Acute exacerbation of chronic heart failure: receipt of echocardiography in the index admission

c) Acute stroke: brain scan within:

i. 1 hour of presentation for thrombolysis eligible patients

ii. 3 hours for all other patients
Indicator 8: Rapid Assessment

**Measure 8a:** Coronary Heart Disease: Electrocardiogram Performed and Interpreted Within 10 Minutes of Arrival for Acute Coronary Syndrome

**Description:**
Proportion of emergency department patients presenting with acute chest pain or other symptoms suggestive of acute coronary syndrome, with electrocardiogram performed and analysed before or within 10 minutes of first medical contact.

**ESSENCE Standard:**
I.3.1: Medical transport for streamlined access to the appropriate level of care  
I.6.1: Transport and referral protocol development  
II.2.1: Access to care  
II.2.2: Early electrocardiogram

**Stage of development:**
Measure requires data collection development

**Existing indicator set:**
-

**Reporting level:**
Service  
Regional network  
National

**Sector:**
Acute

**Computation:**
(Numerator ÷ denominator) x 100

**Numerator:**
Total number of emergency department patients with acute chest pain or other symptoms suggestive of acute coronary syndrome, with electrocardiogram performed and analysed before or within 10 minutes of first medical contact.

**Denominator:**
Total number of emergency department patients with acute chest pain or other symptoms suggestive of acute coronary syndrome. This includes all patients with acute chest pain or other symptoms suggestive of acute coronary syndrome presenting to the emergency department.

**Disaggregation:**
Not yet developed

**Data Source:**
n/a

This measure requires specification development
**INDICATOR 8: RAPID ASSESSMENT**

**MEASURE 8B:** **ACUTE EXACERBATION OF CHRONIC HEART FAILURE: RECEIPT OF ECHOCARDIOGRAPHY IN THE INDEX ADMISSION**

**Description:**
Proportion of patients with acute exacerbation of heart failure, with an echocardiography performed and analysed within the index admission.

**ESSENCE Standard:**
I.3.1: Medical transport for streamlined access to the appropriate level of care  
I.6.1: Transport and referral protocol development  
III.2.1: Establishment of cause

**Stage of development:**
Measure requires data collection development

**Existing indicator set:**
-

**Reporting level:**
Service  
Regional network  
National

**Sector:**
Acute

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This measure requires specification development
**INDICATOR 8: RAPID ASSESSMENT**

**MEASURE 8C: STROKE: BRAIN SCAN WITHIN:**

I. 1 HOUR OF PRESENTATION FOR THROMBOLYSIS ELIGIBLE PATIENTS

II. 3 HOURS FOR ALL OTHER PATIENTS

**Description:**
Brain imaging within:

i. 1 hour of presentation for thrombolysis eligible patients; and

ii. 3 hours for all other patients;

**ESSENCE Standard:**

I.3.1: Medical transport for streamlined access to the appropriate level of care
I.6.1: Transport and referral protocol development
IV.1.1: Access to care
IV.1.2: Rapid assessment and risk stratification
IV.1.3: Brain imaging

**Stage of development:**
Measure currently collected in part, with further work remaining to ensure full coverage

**Existing indicator set:**
-

**Reporting level:**
Service
Regional network
National

**Sector:**
Acute

**Computation:**
i. & ii. (Numerator ÷ denominator) x 100

**Numerator:**
i. Total number of patients admitted to hospital following presentation with suspected stroke and eligible for thrombolysis, with a brain scan performed within 1 hour of arrival

ii. Total number of patients admitted to hospital following presentation with suspected stroke and not eligible for thrombolysis, with a brain scan performed within 3 hour of arrival

**Denominator:**
i. Total number of patients admitted to hospital with suspected stroke and eligible for thrombolysis

ii. Total number of patients admitted to hospital with suspected stroke and not eligible for thrombolysis

**Disaggregation:**
i. & ii. Type of episode by Indigenous status, sex and age

**Data Source:**

Numerator: National Stroke Audit - Acute Services

Denominator: National Stroke Audit - Acute Services

**Note:**
The National Stroke Audit – Acute Services is conducted biennially to provide longitudinal data on clinical performance. The Clinical Audit of hospital care involves the retrospective review of the medical records of consecutive patients admitted to participating hospitals during a defined time frame.

The most recent Clinical Audit (2013) provided data from 124 hospitals on 26,156 (94%) patients reported to be admitted for acute stroke care. (12)
Indicator 9: Timely Treatment

Rationale:
Timely treatment for an acute cardiovascular event is considered critical for long-term wellbeing and requires timely access to care and assessment.

Relevant ESSENCE Standards:

II.2.4 Acute care - Reperfusion therapy for ST elevation myocardial infarction
All patients with a confirmed ST elevation myocardial infarction should be considered for acute reperfusion by primary percutaneous coronary intervention or thrombolysis. Patients for whom first medical contact to balloon inflation times (primary percutaneous coronary intervention) are likely to exceed 90 minutes, should receive thrombolysis (with a 3rd generation, fibrin-specific thrombolytic) within 60 minutes and ideally within 30 minutes of presentation.

II.2.5 Acute care - Early invasive strategy for ST elevation myocardial infarction (I)
Thrombolysed ST elevation myocardial infarction patients who fail to show signs of reperfusion within 90 minutes of initiation of therapy should be considered for transfer to a percutaneous coronary intervention capable facility for rescue percutaneous coronary intervention, if such a facility and treatment are available within 12 hours of onset of the ST elevation myocardial infarction.

II.2.6 Acute care - Early invasive strategy for ST elevation myocardial infarction (II)
All patients receiving thrombolysis for ST elevation myocardial infarction should be considered for transfer to the nearest hospital capable of diagnostic angiography as soon as possible and certainly during the index admission.

II.2.7 Acute care - Early invasive strategy for NSTEACS
All patients experiencing non-ST Elevation ACS (NSTEACS) with intermediate and high risk features should be involved in a discussion about their treatment, which should consider invasive investigations and therapies as soon as possible and certainly within the index admission.

IV.1.5 Acute care - Access to thrombolysis
Ischaemic stroke patients should receive intravenous thrombolysis (if specifically indicated and if computed tomography/magnetic resonance imaging excludes haemorrhage) within 4.5 hours of symptom onset in a hospital with staff who are trained in stroke management and delivery and monitoring of patients receiving thrombolytic therapy, have transfer protocols for these patients or have access to tele-health for clinical decision-making and support.

Measures:
The indicator for timely treatment has 4 measures:

a) Coronary heart disease: ST elevation myocardial infarction patients receiving fibrinolysis or percutaneous coronary intervention

b) Coronary heart disease: ST elevation myocardial infarction patients receiving fibrinolysis within 30 minutes of hospital arrival

c) Coronary heart disease: People with acute coronary syndrome who received diagnostic angiography or definitive revascularisation within index admission and 30 days

d) Stroke: Presentation and intravenous thrombolysis within 4.5 hours of symptom onset
**Indicator 9: Timely Treatment**

**Measure 9a: Coronary Heart Disease: ST Elevation Myocardial Infarction Patients Receiving Fibrinolysis or Percutaneous Coronary Intervention**

**Description:**
Proportion of patients with ST elevation myocardial infarction at first emergency contact presenting within 12 hours of symptom onset and receiving fibrinolysis or percutaneous coronary intervention.

**ESSENCE Standard:** II.2.4: Reperfusion therapy for ST elevation myocardial infarction

**Stage of development:** Measure requires development, but there are existing data sources to inform measure.

**Existing indicator set:** Australian Commission on Safety and Quality in Health Care Acute Coronary Syndromes Clinical Care Standards

**Reporting level:** Service, Regional network, National

**Sector:** Acute

**Computation:** \((\text{Numerator} \div \text{denominator}) \times 100\)

**Numerator:**
Total number of patients with ST elevation myocardial infarction presenting to hospital within 12 hours of symptom onset, who receive fibrinolysis or percutaneous coronary intervention. This includes people with one or more of the following diagnoses AND undergoing the one of the following procedures:

- Acute transmural myocardial infarction of anterior wall (I21.0)
- Acute transmural myocardial infarction or inferior wall (I21.1)
- Acute transmural myocardial infarction of other sites (I21.2)
- Acute transmural myocardial infarction of unspecified site (I21.3)
- Administration of fibrinolytic drugs
- Percutaneous transluminal balloon angioplasty of 1 coronary artery (38300-00, [block 670])
- Percutaneous transluminal balloon angioplasty of >=2 coronary arteries (38303-00, [block 670])
- Percutaneous insertion of 1 transluminal stent into single coronary artery (38306-00, [block 671])
- Percutaneous insertion of >=2 transluminal stents into single coronary artery (38306-01, [block 671])
- Percutaneous insertion of >=2 transluminal stents into multiple coronary arteries (38306-02, [block 671])
- Open insertion of 1 transluminal stent into single coronary artery (38306-03, [block 671])

Exclusions are those patients with a ST elevation myocardial infarction who receive fibrinolysis or percutaneous coronary intervention, where presentation is more than 12 hours after symptom onset OR patients with left bundle branch block.
Denominator: Total number of patients with ST elevation myocardial infarction presenting to hospital within 12 hours of symptom onset. This includes people with one or more of the following diagnoses:

- Acute transmural myocardial infarction of anterior wall (I21.0)
- Acute transmural myocardial infarction or inferior wall (I21.1)
- Acute transmural myocardial infarction of other sites (I21.2)
- Acute transmural myocardial infarction of unspecified site (I21.3)

Exclusions include patients with ST elevation myocardial infarction who present more than 12 hours after symptom onset OR patients with left bundle branch block, OR patients for whom percutaneous coronary intervention and fibrinolysis are contraindicated, and for whom the contraindication is documented. Contraindications for percutaneous coronary intervention and fibrinolysis may include advanced care directives, being on a palliative care pathway, and clinical judgement, subject to discussion with patients, family and carers.

Disaggregation: Not yet developed [Refer to notes]

Data Source:

Numerator: Coronary Angiogram Database of South Australia (CADOSA); Victorian Cardiac Outcomes Registry (VCOR)

Denominator: Coronary Angiogram Database of South Australia (CADOSA); Victorian Cardiac Outcomes Registry (VCOR)

Note: The Australian Commission on Safety and Quality in Health Care have developed a set of suggested measurement indicators to assist with the implementation of the Acute Coronary Syndromes Clinical Care Standards. The specification of the indicators aims to support consistent local collection of data.(10) There is no established data collection or reporting implementation plan for this indicator.

There is partial data currently available for South Australia and Victoria.

The Victorian Cardiac Outcomes Registry is a centralised quality assurance project that aims to improve the quality of care provided to patients with cardiovascular disease, and collects data on cardiac procedures performed, clinical profiles of patients, any complications that develop, and the outcomes of these procedures.

The Coronary Angiogram Database of South Australia (CADOSA) collects data on patients who receive an angiogram within South Australia, procedures performed, clinical profile, complications and patient outcomes.

Identification of patients by Indigenous status is required to enable this measurement.

For more information on this measure as specified in the ACSQHC Acute Coronary Syndrome Clinical Care Standards, refer to safetyandquality.gov.au
INDICATOR 9: TIMELY TREATMENT

MEASURE 9B: CORONARY HEART DISEASE: ST ELEVATION MYOCARDIAL INFARCTION PATIENTS RECEIVING FIBRINALYSIS WITHIN 30 MINUTES OF HOSPITAL ARRIVAL

Description: Proportion of patients with ST elevation myocardial infarction, whose first emergency clinical contact is within 12 hours of symptom onset, treated with fibrinolysis before or within 30 minutes of hospital arrival

ESSENCE Standard: II.2.4: Reperfusion therapy for ST elevation myocardial infarction

Stage of development: Measure requires development, but there are existing data sources to inform measure

Existing indicator set: Australian Commission on Safety and Quality in Health Care Acute Coronary Syndromes Clinical Care Standards

Reporting level: Service
Regional network
National

Sector: Acute

Computation: \( \left( \frac{\text{Numerator}}{\text{denominator}} \right) \times 100 \)

Numerator: Total number of patients with ST elevation myocardial infarction presenting to first emergency clinical contact within 12 hours of symptom onset, receiving fibrinolysis before or within 30 minutes of hospital arrival. This includes people with one or more of the following diagnoses AND undergoing the one of the following procedures:

- Acute transmural myocardial infarction of anterior wall (I21.0)
- Acute transmural myocardial infarction or inferior wall (I21.1)
- Acute transmural myocardial infarction of other sites (I21.2)
- Acute transmural myocardial infarction of unspecified site (I21.3)
- Administration of fibrinolytic drugs
- Percutaneous transluminal balloon angioplasty of 1 coronary artery (38300-00, [block 670])
- Percutaneous transluminal balloon angioplasty of >=2 coronary arteries (38303-00, [block 670])
- Percutaneous insertion of 1 transluminal stent into single coronary artery (38306-00, [block 671])
- Percutaneous insertion of >=2 transluminal stents into single coronary artery (38306-01, [block 671])
- Percutaneous insertion of >=2 transluminal stents into multiple coronary arteries (38306-02, [block 671])
- Open insertion of 1 transluminal stent into single coronary artery (38306-03, [block 671])

Exclusions are those patients with a ST elevation myocardial infarction who receive fibrinolysis or percutaneous coronary intervention, where presentation is more than 12 hours after symptom onset OR patients with left bundle branch block.
**Denominator:**
Total number of patients with ST elevation myocardial infarction presenting at first emergency clinical contact within 12 hours of symptom onset.

This includes people with one or more of the following diagnoses

- Acute transmural myocardial infarction of anterior wall (I21.0)
- Acute transmural myocardial infarction or inferior wall (I21.1)
- Acute transmural myocardial infarction of other sites (I21.2)
- Acute transmural myocardial infarction of unspecified site (I21.3)

Exclusions include patients with ST elevation myocardial infarction who present more than 12 hours after symptom onset OR patients with left bundle branch block, OR patients for whom percutaneous coronary intervention and fibrinolysis are contraindicated, and for whom the contraindication is documented. Contraindications for percutaneous coronary intervention and fibrinolysis may include advanced care directives, being on a palliative care pathway, and clinical judgement, subject to discussion with patients, family and carers.

**Disaggregation:**
Not yet developed  [Refer to notes]

**Data Source:**

- **Numerator:** Coronary Angiogram Database of South Australia (CADOSA); Victorian Cardiac Outcomes Registry (VCOR)
- **Denominator:** Coronary Angiogram Database of South Australia (CADOSA); Victorian Cardiac Outcomes Registry (VCOR)

**Note:**
*Identification of patients by Indigenous status is required to enable this measurement.*

The ACSQHC Guidelines reference both absolute and relative contraindications to the administration of fibrinolysis. The Australian Commission on Safety and Quality in Health Care have developed a set of suggested measurement indicators to assist with the implementation of the Acute Coronary Syndromes Clinical Care Standards. The specification of the indicators aims to support consistent local collection of data.(10) There is no established data collection or reporting implementation plan for this indicator.

There is partial data currently available for South Australia and Victoria.

The Victorian Cardiac Outcomes Registry is a centralised quality assurance project that aims to improve the quality of care provided to patients with cardiovascular disease, and collects data on cardiac procedures performed, clinical profiles of patients, any complications that develop, and the outcomes of these procedures.

The Coronary Angiogram Database of South Australia (CADOSA) collects data on patients who receive an angiogram within South Australia, procedures performed, clinical profile, complications and patient outcomes.

**For more information** on this measure as specified in the ACSQHC ACS Clinical Care Standards, refer to safetyandquality.gov.au
INDICATOR 9: TIMELY TREATMENT

MEASURE 9C: STROKE: PRESENTATION AND INTRAVENOUS THROMBOLYSIS WITHIN 4.5 HOURS OF SYMPTOM ONSET

Description: Proportion of patients with ischaemic stroke presenting to hospital within 4.5 hours of symptom onset, with documentation that intravenous thrombolysis was administered.

ESSENCE Standard: IV.1.5: Access to thrombolysis

Stage of development: Measure currently collected in part, with further work remaining to ensure full coverage

Existing indicator set: Australian Commission on Safety and Quality in Health Stroke Clinical Care Standards

Reporting level: Service Regional network [It is recommended that there be reporting at this level. However, this measure is not currently reported at the regional network level] National

Sector: Acute

Computation: \((\text{Numerator} ÷ \text{denominator}) \times 100\)

Numerator: Total number of patients with a final diagnosis of ischaemic stroke who presented to hospital within 4.5 hours of symptom onset, with documentation that intravenous thrombolysis was administered. Patients with unknown time of symptom onset are excluded.

Denominator: Total number of patients with a final diagnosis of ischaemic stroke who presented to hospital within 4.5 hours of symptom onset.

Patients with unknown time of symptom onset, or for whom thrombolysis is contraindicated and the contraindication is documented are excluded. Contraindications for thrombolysis may include advanced care directives, being on a palliative care pathway, and clinical judgement, subject to discussion with patients, family and carers.

Disaggregation: By type of episode, Indigenous status [Refer to notes], sex and age

Data Source:
- Numerator: National Stroke Audit – Acute Services
- Denominator: National Stroke Audit – Acute Services

Note: Identification of patients by Indigenous status is required to enable this measurement.

The Australian Commission on Safety and Quality in Health Care have developed a set of draft measurement indicators to assist with the implementation of the draft Stroke Clinical Care Standards. The specification of the indicators aims to support consistent local collection of data.(11)
The National Stroke Audit – Acute Services is conducted biennially to provide longitudinal data on clinical performance. The Clinical Audit of hospital care involves the retrospective review of the medical records of consecutive patients admitted to participating hospitals during a defined time frame.

The most recent Clinical Audit (2013) provided data from 124 hospitals on 26,156 (94%) patients reported to be admitted for acute stroke care.(12)

The ACSQHC Stroke Clinical Care Standards are currently in development. For the most up to date information the Standards, refer to safetyandquality.gov.au
**Indicator 10: Specialised Care**

**Rationale:**
There is clear evidence of reduced morbidity and mortality when patients experiencing an acute cardiovascular event receive care within a specialised unit.

**Relevant ESSENCE Standards:**

**II.2.8 Acute care - Cardiac units**
All patients diagnosed with an acute coronary syndrome with high risk features should be admitted to a cardiac care unit or to a dedicated unit with cardiac monitoring, cardiac defibrillation capability, staff trained in advanced life support, and with ready access to on-site or off-site cardiac team support, including Cardiologists and cardiac-trained nursing staff.

**IV.1.4 Acute care - Stroke units**
All patients with suspected stroke should be transported and admitted directly to a specialist Stroke Unit where they exist (or a unit with medical, nursing and allied health expertise in stroke care) within 3 hours of symptom onset for treatment by a multidisciplinary team.

**Measures:**
The indicator for specialised care has 1 measure:

- a) Coronary heart disease & Stroke: Percentage of acute coronary syndrome and stroke patients admitted into a cardiac or stroke unit
  
  i. Cardiac unit
  
  ii. Stroke unit
INDICATOR 10: SPECIALISED CARE

MEASURE 10A: CORONARY HEART DISEASE & STROKE: ACUTE CORONARY SYNDROME AND STROKE PATIENTS ADMITTED INTO A CARDIAC OR STROKE UNIT

I. CARDIAC UNIT

II. STROKE UNIT

Description: Proportion of patients with a final diagnosis of acute coronary syndrome or acute stroke who have documented treatment in a cardiac or stroke unit at any time during their hospital stay.

ESSENCE Standard:

II.2.8: Cardiac units
IV.1.4: Stroke units

Stage of development:

i. Measure requires data collection development
ii. Measure currently collected in part, with further work remaining to ensure full coverage

Existing indicator set:

i. -
ii. Australian Commission on Safety and Quality in Health Care Stroke Clinical Care Standards

Reporting level:

Service [It is recommended that there be reporting at this level. However, this measure is not currently reported at the service level]
Regional network [It is recommended that there be reporting at this level. However, this measure is not currently reported at the regional network level]
National

Sector: Acute

Computation: \[(\text{Numerator} \div \text{denominator}) \times 100\]

Numerator:

i. Total number of patients with a final diagnosis of acute coronary syndrome who have documented evidence of treatment in a cardiac unit at any time during their acute hospital admission.
ii. Total number of patients with a final diagnosis of acute stroke who have documented evidence of treatment in a stroke unit at any time during their acute hospital admission.
Stroke patients undergoing a neurosurgical procedure, where specialised neurosurgical care takes priority over stroke unit care, or stroke patients for whom care in a stroke unit is not indicated and is documented, are excluded. Contraindications for care in a stroke unit may include patients with advanced care directives, those diagnosed with haemorrhagic stroke and admitted under a neurosurgical unit, or other clinical judgement, subject to discussion with patients, family and carers.

Denominator:

i. Total number of patients with a final diagnosis of acute coronary syndrome who were admitted to hospital.
ii. Total number of patients with a final diagnosis of acute stroke who were admitted to hospital.
Stroke patients undergoing a neurosurgical procedure, where specialised neurosurgical care takes priority over stroke unit care, or stroke patients for whom care in a stroke unit is not indicated and is documented, are excluded.
Contraindications for care in a stroke unit may include patients with advanced care directives, those diagnosed with haemorrhagic stroke and admitted under a neurosurgical unit, or other clinical judgement, subject to discussion with patients, family and carers.

**Disaggregation:**

i. By Indigenous status [Refer to notes], sex and age
ii. Type of episode; by Indigenous status [Refer to notes], sex and age

**Data Source:**

i. n/a
ii. **Numerator:** Australian Stroke Clinical Registry

**Denominator:** Australian Stroke Clinical Registry

**Note:**

*Identification of patients by Indigenous status is required to enable this measurement.*

i. This measure requires specification development

ii. The Australian Commission on Safety and Quality in Health Care have developed a set of draft measurement indicators to assist with the implementation of the draft Stroke Clinical Care Standards. The specification of the indicators aims to support consistent local collection of data.(11)

The Australian Stroke Clinical Registry is a prospective method for collecting important stroke patient data that is nationally representative. The Australian Stroke Clinical Registry was established in 2009 to provide national data on the process of care and outcomes for patients admitted to hospital with acute stroke or transient ischaemic attack. The Australian Stroke Clinical Registry develops an annual report on data from the registry. The registry currently (as of January 2015) collects data from 50 hospitals.(13) Further information is available from Australian Stroke Clinical Registry.

**The ACSQHC Stroke Clinical Care Standards are currently in development. For the most up to date information the Standards, refer to safetyandquality.gov.au**
**INDICATOR 11: DISCHARGE MEDICATIONS**

**Rationale:**

Ongoing support post-discharge improves patient outcomes following hospitalisation. Discharge medications are a key element of this.

**Relevant ESSENCE Standards:**

I.2.4 Primary prevention - Access to essential medicines

All patients considered eligible for pharmacological therapy to reduce cardiovascular risk should be able to access affordable medications as close as possible to their home or within their primary care clinic.

I.3.2 Acute care - Ongoing support post-discharge

Before discharge, all patients experiencing acute coronary syndrome, stroke, transient ischaemic attack, heart failure or rheumatic heart disease should have a discharge plan (including tailored action plan) developed in collaboration with their primary care providers (and family/carers), and be informed of necessary follow-up requirements (including device/medication review schedules and rehabilitation), equipment needs, available social and medical supports, other non-pharmacological interventions, and the financial impact of their life-long condition. Action plans should be communicated in a tailored, respectful and culturally-appropriate format. Discharge medication should be reviewed and prescribed in concordance with the evidence-based guidelines and patients should receive a 30 day supply of medications upon discharge.

I.3.3 Acute care - Clinical communication and handover

Information about the patient’s diagnosis, treatment, medication and future management plans should reach the patient’s primary care provider(s) and referring hospital (where appropriate) within 48 hours of discharge. The clinical communication must include clear information regarding the patient’s diagnosis, level of cardiovascular disease (if appropriate), routine recall plans and specific information about non-routine care requirements. All patients should attend primary care within 7-10 days of discharge at little or no cost to the patient. All patients without a designated GP or primary care provider should be integrated into a community program for home- or centre-based therapy and education following hospital discharge and be assisted in accessing appropriate primary care services.

I.4.1 Rehabilitation and secondary prevention - Patient education

All patients with cardiovascular disease and their families/carers (where appropriate) should receive education about their condition, its causes, pharmacological and non-pharmacological treatments, ways to reduce risk and complications and long term management plans in a tailored, respectful and culturally appropriate format. This should happen across the continuum of care, including community awareness, in primary care settings, during hospitalisation and during and/or following contact with specialist services.

II.2.10 Acute care - Adjuvant medical therapy

All acute coronary syndrome patients should be considered for and receive appropriate adjuvant medical therapy, including anti-platelet agent(s), β-blocker, ACE inhibitor, statin and other therapies according to current evidence-based acute coronary syndrome guidelines.

III.2.2 Acute care - Adjuvant medical therapy

All heart failure patients should be considered for and receive appropriate adjuvant medical therapy, including devices [including cardiac-synchronisation therapy, implantable defibrillators], influenza and pneumococcal vaccinations, β-blocker, ACE inhibitor and other therapies in accordance with evidence-based guidelines, and receive a 30 day supply of medications at time of discharge.
IV.2.1 Rehabilitation - Adjuvant medical therapy

All stroke and transient ischaemic attack patients should receive blood pressure lowering therapy unless contraindicated. New blood pressure lowering therapy should commence as soon as is clinically safe. Patients should also be considered for and receive appropriate adjuvant medical therapy, including anti-platelet agent(s), statin and other therapies, as appropriate, and receive a 30 day supply of medications at time of discharge.

Measures:

The indicator for discharge medications has 2 measures, covering coronary heart disease, chronic heart failure and stroke:

a) Coronary heart disease, chronic heart failure & stroke: Patients prescribed appropriate, condition-specific medications at discharge
   i. Coronary heart disease: aspirin or other antiplatelet agent, a statin, an Angiotensin-converting-enzyme (ACE) inhibitor or angiotensin receptor blocker (ARB), and a beta-blocker, as appropriate
   ii. Chronic heart failure: Angiotensin-converting-enzyme inhibitor (ACE) or Angiotensin-II Receptor Antagonist (A2RA) and beta blocker
   iii. Haemorrhagic stroke: antihypertensive medication
   iv. Ischaemic stroke: statin therapy, antihypertensive and antithrombotic medication

b) Coronary heart disease, chronic heart failure & stroke: Patients prescribed medications remaining on them at 12 months
   i. Coronary heart disease: aspirin or other antiplatelet agent, a statin, an Angiotensin-converting-enzyme (ACE) inhibitor or angiotensin receptor blocker, and a beta-blocker, as appropriate
   ii. Chronic heart failure: Angiotensin-converting-enzyme (ACE) inhibitor or angiotensin-II receptor antagonist and beta blocker
   iii. Haemorrhagic stroke: antihypertensive medication
   iv. Ischaemic stroke: statin therapy, antihypertensive and antithrombotic medication
**INDICATOR 11: DISCHARGE MEDICATIONS**

**MEASURE 11A:** **CORONARY HEART DISEASE, CHRONIC HEART FAILURE & STROKE: PATIENTS DISCHARGED WITH APPROPRIATE, CONDITION-SPECIFIC MEDICATIONS**

I. **CORONARY HEART DISEASE:** aspirin or other antiplatelet agent, a statin, an angiotensin-converting-enzyme (ACE) inhibitor or angiotensin receptor blocker (ARB), and a beta-blocker, as appropriate

II. **CHRONIC HEART FAILURE:** angiotensin-converting-enzyme (ACE) inhibitor or angiotensin receptor blocker (ARB) and beta-blocker

III. **HAEMORRHAGIC STROKE:** antihypertensive medication

IV. **ISCHAEMIC STROKE:** statin therapy, antihypertensive and antithrombotic medication

**Description:**
Proportion of people with a diagnosis of coronary heart disease, chronic heart failure and stroke discharged with medications, as appropriate to the condition

**ESSENCE Standard:**
I.2.4: Access to essential medicines
I.3.2: Ongoing support post-discharge
I.4.1: Patient education
II.2.10: Adjuvant medical therapy
III.2.2: Adjuvant medical therapy
IV.2.1: Adjuvant medical therapy

**Stage of development:**
i. Measure requires development, but there are existing data sources to inform measure
ii. Measure requires data collection development
iii. Measure currently collected in part, with further work remaining to ensure full coverage
iv. Measure currently collected in part, with further work remaining to ensure full coverage

**Existing indicator set:**
i. Better Cardiac Care for Aboriginal and Torres Strait Islander people
ii. -
iii. Australian Commission on Safety and Quality in Health Care Stroke Clinical Care Standards
iv. Australian Commission on Safety and Quality in Health Care Stroke Clinical Care Standards

**Reporting level:**
Service [It is recommended that there be reporting at this level. However, this measure is not currently reported at the service level] National

**Sector:**
Acute

**Computation:**
i. Yet to be developed
ii. Yet to be developed
iii. (Numerator ÷ denominator) x 100
iv. (Numerator ÷ denominator) x 100
**Numerator:**

i. Yet to be developed

ii. Yet to be developed

iii. Total number of patients with a final diagnosis of haemorrhagic stroke patients discharged from hospital on antihypertensive medication.

iv. Patients with a final diagnosis of ischaemic stroke discharged on statin therapy, antihypertensive and/or antithrombotic medication.

**Denominator:**

i. Yet to be developed

ii. Yet to be developed

iii. Total number of patients with a final diagnosis of haemorrhagic stroke who are discharged from hospital. Patients for whom antihypertensives are contraindicated, and for whom the contraindication is documented are excluded.

iv. Patients with a final diagnosis of stroke who were discharged from hospital. Patients for whom statin therapy, antihypertensive or antithrombotic medication is contraindicated, and for whom the contraindication is documented are excluded. Contraindications for antihypertensives or statin or antithrombotic may include patient refusal, advanced care directives, being on a palliative care pathway, and clinical judgement, subject to discussion with patients, family and carers.

**Disaggregation:**

i. – iv. By Indigenous status *[Refer to notes]*, sex and age

**Data Source:**

i. Numerator: Coronary Angiogram Database of South Australia (CADOSA); Victorian Cardiac Outcomes Registry (VCOR)

   Denominator: Coronary Angiogram Database of South Australia (CADOSA); Victorian Cardiac Outcomes Registry (VCOR)

ii. n/a

iii. Numerator: Australian Stroke Clinical Registry

   Denominator: National Stroke Audit – Acute Services

**Note:**

*Identification of patients by Indigenous status is required to enable this measurement*

i. There is partial data potentially currently available for South Australia and Victoria.

The Victorian Cardiac Outcomes Registry is a centralised quality assurance project that aims to improve the quality of care provided to patients with cardiovascular disease, and collects data on cardiac procedures performed, clinical profiles of patients, any complications that develop, and the outcomes of these procedures.

The Coronary Angiogram Database of South Australia (CADOSA) collects data on patients who recieve an angiogram within South Australia, procedures performed, clinical profile, complications and patient outcomes.

**This measure requires specification development**

This measure is being investigated by the AIHW as part of the Better Cardiac Care for Aboriginal and Torres Strait Islander people 2014 work. This measure requires on medications prescribed on release from hospital and data linkage between the AIHW National Morbidity database.
iii. – iv. The Australian Commission on Safety and Quality in Health Care have developed a set of draft measurement indicators to assist with the implementation of the draft Stroke Clinical Care Standards.

The specification of the indicators aims to support consistent local collection of data. (11)

The Australian Stroke Clinical Registry is a prospective method for collecting important stroke patient data that is nationally representative. The Australian Stroke Clinical Registry was established in 2009 to provide national data on the process of care and outcomes for patients admitted to hospital with acute stroke or transient ischaemic attack. The Australian Stroke Clinical Registry develops an annual report on data from the registry. The registry currently (as of January 2015) collects data from 50 hospitals. (13) Further information is available from Australian Stroke Clinical Registry.

The National Stroke Audit – Acute Services is conducted biennially to provide longitudinal data on clinical performance. The Clinical Audit of hospital care involves the retrospective review of the medical records of consecutive patients admitted to participating hospitals during a defined time frame. The most recent Clinical Audit (2013) provided data from 124 hospitals on 26,156 (94%) patients reported to be admitted for acute stroke care. (12) Further information on the National Stroke Audit is available from the National Stroke Foundation.
ESSENCE STANDARD PERFORMANCE INDICATOR 11: DISCHARGE MEDICATIONS

MEASURE 11B: CORONARY HEART DISEASE, CHRONIC HEART FAILURE & STROKE: PATIENTS PRESCRIBED MEDICATIONS REMAINING ON THEM AT 12 MONTHS

I. CORONARY HEART DISEASE: ASPIRIN OR OTHER ANTIPLATELET AGENT, A STATIN, AN ANGIOTENSIN-CONVERTING-ENZYME (ACE) INHIBITOR OR ANGIOTENSIN RECEPTOR BLOCKER (ARB), AND A BETA-BLOCKER, AS APPROPRIATE

II. CHRONIC HEART FAILURE: ACEI OR ANGIOTENSIN-II RECEPTOR ANTAGONIS (A2RA) AND BETA BLOCKER

III. HAEMORRHAGIC STROKE: ANTIHYPERTENSIVE MEDICATION

IV. ISCHAEMIC STROKE: STATIN THERAPY, ANTIHYPERTENSIVE AND ANTITHROMBOTIC MEDICATION

Description: Proportion of people with a diagnosis of coronary heart disease, chronic heart failure and stroke discharged with medications, as appropriate to the condition remaining on their medications at 12 months post-discharge, by region.

ESSENCE Standard: I.2.4: Access to essential medicines
I.3.2: Ongoing support post-discharge
I.4.1: Patient education
II.2.10: Adjuvant medical therapy

Stage of development: Measure requires data collection development

Existing indicator set: i. Better Cardiac Care for Aboriginal and Torres Strait Islander people
ii. – iv: -

Reporting level: Service
National

Sector: Acute

This measure requires specification development

i. is being investigated by the AIHW as part of the Better Cardiac Care for Aboriginal and Torres Strait Islander people 2014 work. This measure requires on medications prescribed on release from hospital and data linkage between the AIHW National Morbidity database and the Pharmaceutical Benefits Scheme Database to get data on medications at 12 months post discharge. There is currently no data available for this measure.
INDICATOR 12: COORDINATION FROM HOSPITAL TO COMMUNITY

Rationale:
Good coordination from hospital to the community is critical for successful reintegration into the community and the efficient use of limited resources.

Relevant ESSENCE Standards:

I.3.2 Acute care - Ongoing support post-discharge
Before discharge, all patients experiencing acute coronary syndrome, stroke, transient ischaemic attack, heart failure or Rheumatic heart disease should have a discharge plan (including tailored action plan) developed in collaboration with their primary care providers (and family/carers), and be informed of necessary follow-up requirements (including device/medication review schedules and rehabilitation), equipment needs, available social and medical supports, other non-pharmacological interventions, and the financial impact of their life-long condition. Action plans should be communicated in a tailored, respectful and culturally-appropriate format. Discharge medication should be reviewed and prescribed in concordance with the evidence-based guidelines and patients should receive a 30 day supply of medications upon discharge.

I.3.3 Acute care - Clinical communication and handover
Information about the patient’s diagnosis, treatment, medication and future management plans should reach the patient’s primary care provider(s) and referring hospital (where appropriate) within 48 hours of discharge. The clinical communication must include clear information regarding the patient’s diagnosis, level of cardiovascular disease (if appropriate), routine recall plans and specific information about non-routine care requirements. All patients should attend primary care within 7-10 days of discharge at little or no cost to the patient. All patients without a designated GP or primary care provider should be integrated into a community program for home- or centre-based therapy and education following hospital discharge and be assisted in accessing appropriate primary care services.

Measures:
The indicator for coordination of care between hospital and the community has 2 measures:

a) Coronary heart disease, stroke & rheumatic heart disease: Individualised care plan
   i. Care plan for acute coronary syndrome
   ii. Care plan for stroke
   iii. Care plan for rheumatic heart disease

b) Coronary heart disease, chronic heart failure & rheumatic heart disease: Review by a primary health care professional within 1 week of discharge
INDICATOR 12: COORDINATION FROM HOSPITAL TO COMMUNITY

MEASURE 12A: CORONARY HEART DISEASE & STROKE: INDIVIDUALISED CARE PLAN

I. CARE PLAN FOR ACUTE CORONARY SYNDROME

II. CARE PLAN FOR STROKE

III. CARE PLAN FOR RHEUMATIC HEART DISEASE

Description: Proportion of patients with a final diagnosis of acute coronary syndrome or stroke provided with a written, individualised care plan.

ESSENCE Standard: I.3.2: Ongoing support post-discharge

Stage of development:
i. Measure requires data collection development

ii. Measure currently collected in part, with further work remaining to ensure full coverage

iii. Measure requires data collection development

Existing indicator set:
i. Australian Commission on Safety and Quality in Health Care Stroke Clinical Care Standards

ii. Australian Commission on Safety and Quality in Health Care Acute Coronary Syndromes Clinical Care Standards

iii. -

Reporting level: Service

Regional Network

National

Sector: Primary Health

Acute

Computation: i. - iii. (Numerator ÷ denominator) x 100

Numerator:
i. Total number of acute coronary syndrome patients (including final diagnosis of unspecified angina or acute myocardial infarction) provided with a written, individualised care plan (addressing factors such as gradual physical activity, smoking cessation and therapies addressing psychosocial needs). Patients discharged on palliative care pathway, or where adherence to a secondary prevention plan is not indicated are excluded.

ii. Total number of patients with a final diagnosis of stroke with evidence that a documented plan for their ongoing care in the community was developed with and provided to the patient/family prior to discharge into the community. Patients refusing a care plan are excluded.

iii. Yet to be developed

Denominator:
i. Total number of acute coronary syndrome patients (including final diagnosis of unspecified angina or acute myocardial infarction) discharged from hospital. Patients discharged on palliative care pathway, or where adherence to a secondary prevention plan is not indicated are excluded.

ii. Total number of patients with a final diagnosis of stroke who were discharged into the community. Patients refusing a care plan are excluded.

iii. Yet to be developed
Disaggregation:
i. By Indigenous status [Refer to notes], sex and age
ii. By type of episode, Indigenous status [Refer to notes], sex and age
iii. Yet to be developed

Data Source:
i. n/a
ii. Numerator: Australian Stroke Clinical Registry
   Denominator: Australian Stroke Clinical Registry
iii. n/a

Note:
i. For more information on the Acute Coronary Syndrome element of this measure as specified in the ACSQHC Acute Coronary Syndrome Clinical Care Standards, refer to safetyandquality.gov.au

i. & ii. Resources provided to patients who do not speak English may require translation into other languages.

The Australian Commission on Safety and Quality in Health Care have developed a set of measurement indicators to assist with the implementation of the Acute Coronary Syndromes Clinical Care Standards, and draft measurement indicators to assist with the implementation of the draft Stroke Clinical Care Standards. The specification of the indicators aims to support consistent local collection of data. For acute coronary syndrome, there is no established data collection or reporting implementation plan for this indicator.

Identification of patients by Indigenous status is required to enable this measurement.

ii. The Australian Stroke Clinical Registry is a prospective method for collecting important stroke patient data that is nationally representative. The Australian Stroke Clinical Registry was established in 2009 to provide national data on the process of care and outcomes for patients admitted to hospital with acute stroke or transient ischaemic attack. The Australian Stroke Clinical Registry develops an annual report on data from the registry. The registry currently (as of January 2015) collects data from 50 hospitals. Further information is available from Australian Stroke Clinical Registry.

The ACSQHC Stroke Clinical Care Standards are currently in development. For the most up to date information the Standards, refer to safetyandquality.gov.au

iii. This measure requires specification development
MEASURE 12B: CORONARY HEART DISEASE, CHRONIC HEART FAILURE & RHEUMATIC HEART DISEASE: REVIEW BY A PRIMARY HEALTH CARE PROFESSIONAL WITHIN 1 WEEK OF DISCHARGE

Description: Proportion of people reviewed by a primary health care professional within 1 week of discharge.

ESSENCE Standard: I.3.2: Ongoing support post-discharge
I.3.3: Clinical communication and handover

Stage of development: Measure requires data collection development

Existing indicator set: Better Cardiac Care for Aboriginal and Torres Strait Islander people

Reporting level: Regional Network
National

Sector: Primary Health
Acute

Note: The ESSENCE Steering Committee recommends that chronic heart failure and rheumatic heart disease clients be included in this measure.

This measure requires specification development

This measure is being investigated by the AIHW as part of the Better Cardiac Care for Aboriginal and Torres Strait Islander people 2014 work. This measure requires data linkage between the AIHW National Morbidity database and Medicare Benefits Schedule data. There is currently no data available for this measure.
**INDICATOR 13: REHABILITATION**

**Rationale:**
Rehabilitation provides a comprehensive approach to supporting individuals to restore their cardiovascular health, and has benefits that individual’s overall health and wellbeing.

**Relevant ESSENCE Standards:**

I.4.1 Rehabilitation and secondary prevention - Patient education

All patients with cardiovascular disease and their families/carers (where appropriate) should receive education about their condition, its causes, pharmacological and non-pharmacological treatments, ways to reduce risk and complications and long term management plans in a tailored, respectful and culturally appropriate format. This should happen across the continuum of care, including community awareness, in primary care settings, during hospitalisation and during and/or following contact with specialist services.

I.4.3 Rehabilitation and secondary prevention - Community rehabilitation

All patients who are admitted to hospital with stroke; acute coronary syndromes; diagnosed with angina or heart failure; or have received cardiac revascularisation, surgery (including valvular) or device implantation should receive cardiac rehabilitation within 8 weeks of discharge from hospital, delivered through a hospital-based program or through their primary care providers or via home-based outreach care and education. Structured cardiac and stroke rehabilitation programs should provide education, information, support physical activity, be an integral component of the long-term, comprehensive care of cardiac patients; and involve the specialist, primary health care practitioners, cardiac rehabilitation team, Aboriginal health worker’s, patient and family.

I.4.4 Rehabilitation and secondary prevention - Lifestyle modification

All individuals who have experienced or are at increased risk of cardiovascular events should receive tailored lifestyle advice and long-term pharmacological and non-pharmacological treatment to reduce their risk according to evidence-based guidelines delivered across primary and specialist services. Priority focus should be on assessment and treatment of smoking and harmful alcohol and other drug consumption; encouraging increased physical activity; healthy nutrition; controlling blood lipid and glucose levels; clotting risk and blood pressure; reducing dietary salt intake; and encouraging weight loss.

III.3.2 Management and secondary prevention - Cardiac rehabilitation

All chronic heart failure patients assessed as New York Heart Association functional class II or higher should be referred to an easily accessible and culturally appropriate, structured multidisciplinary chronic heart failure program at discharge, in accordance with recommendations in evidence-based guidelines. The program should include a multi-disciplinary team approach with specifically-designed physical activity components and tailored action plans for medical review and self-care.

IV.2.2 Rehabilitation - Inpatient stroke rehabilitation

Patients who need ongoing inpatient rehabilitation after completion of their index admission treatment should be treated in a specialist stroke rehabilitation unit or a conventional rehabilitation unit where staff has stroke-specific expertise, according to patient preference.

**Measures:**

The indicator for rehabilitation has 3 measures:

a) Stroke: Rehabilitation therapy within 48 hours of initial assessment

b) Coronary heart disease, chronic heart failure & stroke: Patients referred to an appropriate condition-specific rehabilitation or other secondary prevention program

i. Acute coronary syndrome patients

ii. Chronic heart failure patients

iii. Stroke patients
c) Coronary heart disease, chronic heart failure & stroke: Patients completing an appropriate, condition-specific rehabilitation or other secondary program

i. Acute coronary syndrome patients

ii. Chronic heart failure patients

iii. Stroke patients
**MEASURE 13A: STROKE: REHABILITATION THERAPY WITHIN 48 HOURS OF INITIAL ASSESSMENT**

**Description:** Proportion of patients with a final diagnosis of stroke who commence rehabilitation therapy within 48 hours of initial assessment.

**ESSENCE Standard:** I.4.1: Patient education
IV.2.2: Inpatient stroke rehabilitation

**Relevant Conditions:** Stroke

**Stage of development:** Measure currently collected in part, with further work remaining to ensure full coverage

**Existing indicator set:** Australian Commission on Safety and Quality in Health Care Stroke Clinical Care Standards

**Reporting level:**
- Service *[It is recommended that there be reporting at this level. However, this measure is not currently reported at the service level]*
- Regional Network *[It is recommended that there be reporting at this level. However, this measure is not currently reported at the regional network level]*
- National

**Sector:** Acute

**Computation:** \((\text{Numerator} \div \text{denominator}) \times 100\)

**Numerator:** Proportion of patients with a final diagnosis of stroke who commence rehabilitation therapy within 48 hours of initial assessment.

**Denominator:** Patients with a final diagnosis of stroke who were admitted to hospital. Patients for whom cardiac rehabilitation or other secondary prevention program are contraindicated, and for whom the contraindication is documented are excluded. Contraindications for rehabilitation may include advanced care directives, being on a palliative care pathway, and clinical judgement, subject to discussion with patients, family and carers.

**Disaggregation:** Not yet developed

**Data Source:**
- **Numerator:** National Stroke Audit – Acute Services
- **Denominator:** National Stroke Audit – Acute Services

**Note:** The Australian Commission on Safety and Quality in Health Care have developed a set of draft measurement indicators to assist with the implementation of the draft Stroke Clinical Care Standards. The specification of the indicators aims to support consistent local collection of data.\(^{11}\)

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The ACSQHC Stroke Clinical Care Standards are currently in development. For the most up to date information the Standards, refer to safetyandquality.gov.au
The National Stroke Audit – Acute Services is conducted biennially to provide longitudinal data on clinical performance. The Clinical Audit of hospital care involves the retrospective review of the medical records of consecutive patients admitted to participating hospitals during a defined time frame. Rehabilitation therapy within 48 hours will be a new data item collected in the 2015 audit.
INDICATOR 13: REHABILITATION

MEASURE 13B: CHRONIC HEART DISEASE, CHRONIC HEART FAILURE & STROKE: PATIENTS REFERRED TO AN APPROPRIATE CONDITION-SPECIFIC REHABILITATION OR OTHER SECONDARY PREVENTION PROGRAM

I. ACUTE CORONARY SYNDROME PATIENTS

II. CHRONIC HEART FAILURE PATIENTS

III. STROKE PATIENTS

Description: Proportion of acute coronary syndrome, chronic heart failure and stroke patients with documented referral prior to discharge to an appropriate, condition-specific rehabilitation or secondary prevention program.

ESSENCE Standard: I.4.1: Patient education
I.4.3: Community rehabilitation
I.4.4: Lifestyle modification
III.3.2: Cardiac rehabilitation

Stage of development: i. Measure requires development, but there are existing data sources to inform measure
ii. Measure requires development, but there are existing data sources to inform measure
iii. Measure currently collected in part, with further work remaining to ensure full coverage

Existing indicator set: i. Australian Commission on Safety and Quality in Health Care Acute Coronary Syndromes Clinical Care Standards
ii. Australian Council on Healthcare Standards
iii. -

Reporting level: Service [It is recommended that there be reporting at this level. However, this measure is not currently reported at the service level]
Regional Network [It is recommended that there be reporting at this level. However, this measure is not currently reported at the regional network level]
National

Sector: Primary Health
Acute

Computation: i. (Numerator ÷ denominator) x 100
ii. Yet to be developed, can be informed by Australian Council on Healthcare Standards (14)
iii. (Numerator ÷ denominator) x 100

Numerator: i. Total number of patients with a final diagnosis of acute coronary syndrome (including unspecified angina or acute myocardial infarction) with a documented referral prior to discharge to a cardiac rehabilitation or an alternative secondary prevention program. Patients for whom cardiac rehabilitation or other secondary prevention program are contraindicated, and for whom the contraindication is documented are excluded.
ii. Yet to be developed, can be informed by Australian Council on Healthcare Standards (14)
iii. Total number of patients discharged alive from acute care with a final diagnosis of stroke with a documented referral prior to discharge to a rehabilitation program. Patients for whom rehabilitation is contraindicated, and for whom the contraindication is documented are excluded.
**Denominator:**

i. Total number of patients with a final diagnosis of acute coronary syndrome discharged from hospital. Patients for whom cardiac rehabilitation or other secondary prevention program are contraindicated, and for whom the contraindication is documented are excluded.

ii. Yet to be developed, can be informed by Australian Council on Healthcare Standards (14)

iii. Total number of patients discharged alive from acute care with a final diagnosis of stroke discharged from hospital. Patients for whom rehabilitation is contraindicated, and for whom the contraindication is documented are excluded.

**Disaggregation:**

i. Not yet developed

ii. Yet to be developed, can be informed by Australian Council on Healthcare Standards (14)

iii. Type of rehabilitation program by Indigenous status [refer to notes]

**Data Source:**

ii. **Numerator:** Coronary Angiogram Database of South Australia (CADOSA); Victorian Cardiac Outcomes Registry (VCOR)

**Denominator:** Coronary Angiogram Database of South Australia (CADOSA); Victorian Cardiac Outcomes Registry (VCOR)

ii. n/a

iii. **Numerator:** National Stroke Audit – Acute Services

**Denominator:** National Stroke Audit – Acute Services

**Note:**

i. The Australian Commission on Safety and Quality in Health Care have developed a set of measurement indicators to assist with the implementation of the Acute Coronary Syndromes Clinical Care Standards. The specification of the indicators aims to support consistent local collection of data.(10) There is no established data collection or reporting implementation plan for this indicator.

For more information on this measure as specified in the ACSQHC Acute Coronary Syndrome Clinical Care Standards, refer to safetyandquality.gov.au

There is partial data currently available for South Australia and Victoria.

The Victorian Cardiac Outcomes Registry is a centralised quality assurance project that aims to improve the quality of care provided to patients with cardiovascular disease, and collects data on cardiac procedures performed, clinical profiles of patients, any complications that develop, and the outcomes of these procedures.

The Coronary Angiogram Database of South Australia (CADOSA) collects data on patients who receive an angiogram within South Australia, procedures performed, clinical profile, complications and patient outcomes.

ii. The Australasian Clinical Indicator Report (14), which forms part of the Clinical Indicator Program of the Australian Council of Healthcare Standards, collect data on the measure: ‘CHF - chronic disease management referral that includes rehabilitation’ (14)

For more information on the Clinical Indicator Program, refer to achs.org.au.
iii. The National Stroke Audit – Acute Services is conducted biennially to provide longitudinal data on clinical performance. The Clinical Audit of hospital care involves the retrospective review of the medical records of consecutive patients admitted to participating hospitals during a defined time frame. The most recent Clinical Audit (2013) provided data from 124 hospitals on 26,156 (94%) patients reported to be admitted for acute stroke care. Further information on the National Stroke Audit is available from the National Stroke Foundation.

*Identification of patients by Indigenous status is required to enable this measurement.*
MEASURE 13C: **CORONARY HEART DISEASE, CHRONIC HEART FAILURE & STROKE: PATIENTS COMPLETING AN APPROPRIATE, CONDITION-SPECIFIC REHABILITATION OR OTHER SECONDARY PROGRAM**

I. **ACUTE CORONARY SYNDROME PATIENTS**  
II. **CHRONIC HEART FAILURE PATIENTS**  
III. **STROKE PATIENTS**

**Description:** Proportion of acute coronary syndrome, chronic heart failure & stroke patients with documented completion of an appropriate, condition-specific rehabilitation or an alternative secondary prevention program.

**ESSENCE Standard:**  
I.4.1: Patient education  
I.4.3: Community rehabilitation  
I.4.4: Lifestyle modification  
III.3.2: Cardiac rehabilitation

**Stage of development:** Measure requires data collection development

**Existing indicator set:** -

**Reporting level:**  
Service  
Regional Network  
National

**Sector:**  
Primary Health  
Acute

**This measure requires specification development**
INDICATOR 14: INTEGRATED REGIONAL CLINICAL NETWORK

Rationale:
The implementation of effective health care is best achieved at a regional level where a network of service providers and policy makers are involved in providing a continuum of prevention, management and care to Aboriginal and Torres Strait Islander people at risk of, or with cardiovascular diseases, across the spectrum from community, to primary health and acute care settings.

Relevant ESSENCE Standards:

I.6.4 Systems of care - Standard service elements

All Australians, irrespective of their age, gender, ethnicity, socio-economic status or geographical location, should be covered by an integrated regional clinical network. Regional networks should provide:

- Outreach diagnostic and management clinics.
- 24 hour availability of acute cardiovascular disease/stroke management units and diagnostic advice.
- Referral pathways and clinical guidelines for acute event assessment, diagnostic testing, hospital/tertiary centre transfers, specialist referrals and follow-up care including palliative services.
- A dedicated in-patient cardiac/stroke coordinator.
- Formalised links between acute and primary health care providers and allied health practitioners to implement care co-ordination and transfer of health information.
- Structured cardiac and stroke rehabilitation programs, led and coordinated by a relevant rehabilitation team, and operating in collaboration between these networks, primary care providers and relevant local non-governmental organisations.
- Data collection and reporting systems to monitor and report on the quality of care across the network.
- Integrated information technology, including tele-health services.
- Coordination of retrieval and transportation of patients.
- Standard medication kits, protocols and stock management systems for acute patients at regional and remote centres.
- Improved feedback and reminder systems to support clinicians.
- Service planning and clinical leadership.
- Regular training and competencies for clinical staff.
- Definition of standards for infrastructure.
- Reviews and evaluations of processes, costs and outcomes and modifications to systems as information accrues.
- Formalised support systems for General Practitioners providing rehabilitation care.
- Protocols for use of clearing house clinical standards e.g. Australian Research Centre for Health Innovations.
- Representation from all key parties involved in the continuum of care for Aboriginal and Torres Strait Islander people.
Measures:

The newly developed indicator measures the presence of specific aspects of what should be included in an integrated regional clinical network, and provides a rating against these features.

a) Integrated regional clinical network scorecard
Indicator 14: Integrated Regional Clinical Network

Measure 14A: Integrated Regional Clinical Network Scorecard

Description: Number of elements of an integrated regional clinical network which are met by a regional network

ESSENCE Standard: I.6.4: Standard service elements

Stage of development: Measure requires data collection development

Existing indicator set: -

Reporting level: Regional Network Jurisdictional National

Sector: Regional network

Computation: Numerator / Denominator

Numerator: Elements met:

- Outreach diagnostic and management clinics within 2 hours access by all clients.
- 24 hour availability of acute cardiovascular disease/stroke management units and diagnostic advice.
- Referral pathways and clinical guidelines in place and operational for:
  - acute event assessment;
  - diagnostic testing;
  - hospital/tertiary centre transfers;
  - specialist referrals, and;
  - follow-up care (including palliative services).
- A dedicated in-patient cardiac/stroke coordinator working across all services.
- Documented care coordination plan connecting all acute and primary health care providers and allied health practitioners.
- Structured cardiac and stroke rehabilitation programs, led and coordinated by a relevant rehabilitation team, within 2 hours access for all clients.
- Regional network-wide data collection and reporting systems in place.
- Standard medication kits, protocols and stock management systems for acute patients in place at regional and remote centres.

Denominator: Total number of elements

Disaggregation: Not yet developed

Data Source: n/a

This measure requires specification development
INDICATOR 15: RHD CONTROL PROGRAMME

Rationale:
Rheumatic heart disease control programmes are one of the most effective approaches to reducing the burden of the disease. (15)

Relevant ESSENCE Standards:
V.4 Systems of care - Rheumatic Heart Disease control programmes
A systematic assessment of the burden of acute rheumatic fever/rheumatic heart disease across all Australian jurisdictions should be undertaken and all high incidence areas should be covered by a structured and adequately funded rheumatic heart disease control programme. Each control programme should include target epidemiological surveillance, improved benzathine penicillin G adherence, clinical follow up of people with rheumatic heart disease (including specialist review and echocardiography), health practitioner and community education, and the coordination of care across the continuum.

Measures:
The newly developed indicator measures the presence of specific aspects of what should be included a control programme, and provides a rating against these features.
- a) Rheumatic heart disease control programme scorecard
INDICATOR 15: RHEUMATIC HEART DISEASE CONTROL PROGRAMME

MEASURE 15A: RHEUMATIC HEART DISEASE CONTROL PROGRAMME SCORECARD

Description: Number of elements of a rheumatic heart disease control programme which are met by a jurisdiction

ESSENCE Standard: V.4.1: Rheumatic heart disease control programme

Stage of development: Measure requires data collection development

Existing indicator set: -

Reporting level: Jurisdictional
National

Sector: Regional network

Computation: Numerator / denominator

Numerator: Elements met:

• Ongoing epidemiological surveillance system documented and in place.
• Benzathine penicillin G adherence register
• Documented system for clinical follow-up of people with rheumatic heart disease for echocardiography
• Health practitioner education program documented and in place
• Community education program documented and in place.

Denominator: Total number of elements

Disaggregation: Not yet developed

Data Source: n/a

This measure requires specification development
INDICATOR 16: SURGICAL PROCEDURES REGISTRY

Rationale:
Effective and efficient data collection and reporting through a centralised system is important in understanding the differentials in acute care received and outcomes of care for Aboriginal and Torres Strait Islander people.

Relevant ESSENCE Standards:
I.6.5 Systems of care - Data monitoring and performance of outcomes
All cardiac and stroke service providers and surgical units performing procedures on Aboriginal and Torres Strait Islander patients should collect, collate and submit data reporting patient characteristics, clinical features, interventional procedures (including thrombolysis), intra- and post-operative outcomes, 30 day re-admission, mortality rates and adverse outcomes to a centralised register.

Measures:
The newly developed indicator measures the presence of a registry within a service which records required elements as defined by the ESSENCE standard.

a) Services with a surgical procedures registry
**MEASURE 16A: SERVICES WITH A SURGICAL PROCEDURES REGISTRY**

**Description:** Percentage of cardiac services, stroke services and surgical units which undertake cardiac (including valvular surgery) and stroke surgery which have a centralised register

**ESSENCE Standard:** I.6.5: Data monitoring and performance of outcomes

**Stage of development:** Measure requires data collection development

**Existing indicator set:** -

**Reporting level:** Jurisdictional
National

**Sector:** Regional network

**Computation:** 100 x (Numerator ÷ Denominator)

**Numerator:** Number of cardiac service providers, stroke service providers and surgical units which undertake cardiac and stroke surgery within who have a documented, centralised register which collects, collates and submits data on the following:

- Patient characteristics
- Clinical features
- Interventional procedures (include thrombolysis and percutaneous coronary intervention)
- Intra-operative outcomes
- Post-operative outcomes
- 30 day re-admission
- Mortality rate within 12 months or surgery
- Adverse outcomes within 12 months of surgery

**Denominator:** Total number of cardiac service providers, stroke service providers and surgical units which undertake cardiac and stroke surgery

**Disaggregation:** Not yet developed

**Data Source:** n/a

This measure requires specification development
CARDIOVASCULAR OUTCOMES INDICATOR 1: CARDIOVASCULAR MORTALITY

Rationale:
Cardiovascular disease is the greatest single cause of death for Aboriginal and Torres Strait Islander people. The indicator of cardiovascular mortality reports directly against outcomes in cardiovascular care, and provides a single measure on which assess health system performance.

Measures:
The Cardiovascular Outcome Indicator for life cardiovascular mortality has 1 measure which is currently collected across a range of agencies and reporting structures:

a) Cardiovascular mortality rate
   i. All cardiovascular (I00-I99)
   ii. Coronary heart disease (I20-I25)
   iii. Chronic heart failure (I50)
   iv. Stroke (I60-I69)
   v. Acute rheumatic fever (I00-I02) & rheumatic heart disease (I05-I09)
CARDIOVASCULAR OUTCOMES INDICATOR 1: CARDIOVASCULAR MORTALITY

MEASURE 1A: CARDIOVASCULAR MORTALITY RATE

I. ALL CARDIOVASCULAR (I00-I99)
II. CORONARY HEART DISEASE (I20-I25)
III. CHRONIC HEART FAILURE (I50)
IV. STROKE (I60-I69)
V. ACUTE RHEUMATIC FEVER (I00-I02) & RHEUMATIC HEART DISEASE (I05-I09)

Description:
Mortality rates for Australians by leading causes of death (ICD-10 [I00-I99]), by Indigenous status.

ESSENCE Standard:
All ESSENCE Standards

Stage of development:
Measure currently collected as specified

Existing indicator set:
Aboriginal and Torres Strait Islander Health Performance Framework, National Indigenous Reform Agreement, Overcoming Indigenous Disadvantage

Reporting level:
Jurisdictional
National

Computation:
i. – v. Crude rate: 100,000 x (Numerator ÷ Denominator)
Age-specific rate: 100,000 x (Numerator ÷ Denominator), using 10 year age groups from 5 years to 75 years and over. [Refer to notes]
Age-standardised rate: calculated using the direct method with the 2001 Australian population as at 30 June as the standard. Five year age groups are used from 0-4 to 55 years and over to be consistent with published estimates by the Australian Bureau of Statistics. Age-standardisation should be done in accordance with the National Indigenous Reform Agreement Performance Information Management Group agreed principles for direct age-standardisation.(7)

Numerator:
i. Number of deaths from cardiovascular disease (I00-I99)
ii. Number of deaths from coronary heart disease (I20-I25)
iii. Number of deaths from chronic heart failure (I50)
iv. Number of deaths from stroke (I60-I69)
v. Number of deaths from acute rheumatic fever (I00-I02) and rheumatic heart disease (I05-I09)

Denominator:
i. – v. Total population of all people in relevant population at 30 June

Disaggregation:
i. – v. Crude rate: State/territory (including total) by selected causes of death including total (ICD-10 chapter level and some sub-chapter level) by Indigenous status

Total (selected states/territories) by sex by selected causes of death (ICD-10 chapter level and some sub-chapter level); by Indigenous status

Age-specific rate: State/territory (including total) by selected causes of death including total (ICD-10 chapter level and some sub-chapter level) by Indigenous status
Total (selected states/territories) by sex by selected causes of death (ICD-10 chapter level and some sub-chapter level); by Indigenous status

Age-standardised rate: State/territory (including total) by selected causes of death including total (ICD-10 chapter level and some sub-chapter level) by Indigenous status

Total (selected states/territories) by sex by selected causes of death (ICD-10 chapter level and some sub-chapter level); by Indigenous status

Data Source:

Numerator: Australian Bureau of Statistics Causes of Death Collection

Note:

The ESSENCE Steering Committee recommends that this measure be presented using age-specific rates, however this measure is not currently reported using this computation.

For information on this measure as specified in the Aboriginal and Torres Strait Islander Health Performance Framework, refer to health.gov.au/indigenous-hpf

For measure specifications as outlined in the National Indigenous Reform Agreement, refer to meteor.aihw.gov.au
CARDIOVASCULAR OUTCOME INDICATOR 2: CORONARY HEART DISEASE

Rationale:
Coronary heart disease is the leading cause of cardiovascular mortality, and the prevalence of coronary heart disease in the Aboriginal and Torres Strait Islander population is twice that of non-Indigenous Australians.

Measures:
The Cardiovascular Outcome Indicator for coronary heart disease has 2 measures:

a) Coronary heart disease (I20-I25) hospitalisation rate
b) 12 month mortality following hospitalisation for acute myocardial infarction (I21)
CARDIOVASCULAR OUTCOME INDICATOR 2: CORONARY HEART DISEASE

MEASURE 2A: 
CORONARY HEART DISEASE (I20-I25) HOSPITALISATION RATE

Description: Hospital separation rates for Coronary Heart Disease (I20-I25) for Australians, by Indigenous status

ESSENCE Standard: All overarching standards for improving cardiovascular disease care (I) All standards for coronary heart disease (II)

Stage of development: Measure currently collected as specified

Existing indicator set: Aboriginal and Torres Strait Islander Health Performance Framework

Reporting level: Regional Network [It is recommended that there be reporting at this level. However, this measure is not currently reported at the regional network level] Jurisdictional National

Computation: Crude rate: 1,000 x (Numerator ÷ Denominator).
Age-specific rate: 100,000 x (Numerator ÷ Denominator), using 10 year age groups from 5 years to 75 years and over. [Refer to notes]
Age-standardised rate: calculated using the direct method using five year age groups from 0-4 to 65 years and over (due to availability of Indigenous population estimates for Tas and ACT) and the Australian population as at 30 June 2001 as the standard. Age-standardisation should be done in accordance with the National Indigenous Reform Agreement Performance Information Management Group agreed principles for direct age-standardisation.(7)

Numerator: Number of hospital separations for Coronary Heart Disease (I20-I25) (public and private).

Denominator: Total population of all people.

Disaggregation: Crude rate: State and territory (including national total) by Indigenous status, by principal diagnosis
Age-specific rate: State and territory (including national total) by Indigenous status, by principal diagnosis
Age-standardised rate: State and territory (including national total) by Indigenous status, by principal diagnosis


Note: The ESSENCE Steering Committee recommends that this measure be presented using age-specific rates, however this measure is not currently reported using this computation.

For information on this measure as specified in the Aboriginal and Torres Strait Islander Health Performance Framework, refer to health.gov.au/indigenous-hpf

For measure specifications as outlined in the National Indigenous Reform Agreement, refer to meteor.aihw.gov.au
# Cardiovascular Outcome Indicator 2: Coronary Heart Disease

## Measure 2b: 12 Month Mortality Following Hospitalisation for AMI (I21)

**Description:** 12 month mortality rate for people admitted to hospital with acute coronary syndromes.

**ESSENCE Standard:** All overarching standards for improving cardiovascular disease care (I)  
All standards for coronary heart disease (II)

**Stage of development:** Measure requires development, but there are existing data sources to inform measure.

**Existing indicator set:** Better Cardiac Care for Aboriginal and Torres Strait Islander people.

**Reporting level:**  
Regional Network  
Jurisdictional  
National

**Sector:** Acute  
Primary Health

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### This measure requires specification development

This measure is being investigated by the AIHW as part of the Better Cardiac Care for Aboriginal and Torres Strait Islander people 2014 work. This measure requires data linkage of AIHW National Hospital and Morbidity Database and National Mortality Database. There is currently no data available for this measure.
CARDIOVASCULAR OUTCOME INDICATOR 3: CHRONIC HEART FAILURE

Rationale:
Chronic heart failure is another cardiovascular condition where significant disparities exist for Aboriginal and Torres Strait Islander people.

Measures:
The Cardiovascular Outcome Indicator for chronic heart failure has 1 measure:

a) Chronic heart failure (I50) hospitalisation rate
Cardiovascular Outcome Indicator 3: Chronic Heart Failure

Measure 3a: Chronic Heart Failure (I50) hospitalisation rate

Description: Hospital separation rates for Heart Failure for Australians, by Indigenous status.

ESSENCE Standard: All overarching standards for improving cardiovascular disease care (I) All standards for Chronic heart failure (III)

Stage of development: Measure currently collected as specified

Existing indicator set: Aboriginal and Torres Strait Islander Health Performance Framework

Reporting level: Jurisdictional National

Computation: Crude rate: 1,000 x (Numerator ÷ Denominator).
Age-specific rate: 100,000 x (Numerator ÷ Denominator), using 10 year age groups from 5 years to 75 years and over. [Refer to notes]
Age-standardised rate: calculated using the direct method using five year age groups from 0-4 to 65 years and over (due to availability of Indigenous population estimates for Tas and ACT) and the Australian population as at 30 June 2001 as the standard. Age-standardisation should be done in accordance with the National Indigenous Reform Agreement Performance Information Management Group agreed principles for direct age-standardisation.

Numerator: Number of hospital separations for Heart Failure (I50) (public and private).

Denominator: Total population of all people

Disaggregation: Crude rate: State and territory (including national total) by Indigenous status, by principal diagnosis
Age-specific rate: State and territory (including national total) by Indigenous status, by principal diagnosis
Age-standardised rate: State and territory (including national total) by Indigenous status, by principal diagnosis

Data Source: Numerator: National Hospital Morbidity Database

Note: The ESSENCE Steering Committee recommends that this measure be presented using age-specific rates, however this measure is not currently reported using this computation.

For information on this measure as specified in the Aboriginal and Torres Strait Islander Health Performance Framework, refer to health.gov.au/indigenous-hpf

For measure specifications as outlined in the National Indigenous Reform Agreement, refer to meteor.aihw.gov.au
CARDIOVASCULAR OUTCOME INDICATOR 4: STROKE

Rationale:
The prevalence of cerebrovascular disease in the Aboriginal and Torres Strait Islander population is two times that in non-Indigenous Australians, and Aboriginal and Torres Strait Islander people are hospitalised at a much greater rate for stroke compared to their non-Indigenous counterparts. Disparities also exist in mortality, with the greatest differentials in younger ages.

Measure:
The Cardiovascular Outcome Indicator for stroke has 2 measures:

a) Stroke (I60-I69) hospitalisation rate
b) 12 month mortality following hospitalisation for stroke (I60-I69)
CARDIOVASCULAR OUTCOME INDICATOR 4: STROKE

**MEASURE 4A: STROKE (I60-I69) HOSPITALISATION RATE**

**Description:** Hospital separation rates for Stroke (I60-I69) for Australians, by Indigenous status

**ESSENCE Standard:** All overarching standards for improving cardiovascular disease care (I) All standards for Stroke (IV)

**Stage of development:** Measure currently collected as specified

**Existing indicator set:** Aboriginal and Torres Strait Islander Health Performance Framework

**Reporting level:** Regional network [It is recommended that there be reporting at this level. However, this measure is not currently reported at the regional network level] Jurisdictional National

**Computation:** Crude rate: 1,000 x (Numerator ÷ Denominator). Age-specific rate: 100,000 x (Numerator ÷ Denominator), using 10 year age groups from 5 years to 75 years and over. [Refer to notes] Age-standardised rate: calculated using the direct method using five year age groups from 0-4 to 65 years and over (due to availability of Indigenous population estimates for Tas and ACT) and the Australian population as at 30 June 2001 as the standard. Age-standardisation should be done in accordance with the National Indigenous Reform Agreement Performance Information Management Group agreed principles for direct age-standardisation. (7)

**Numerator:** Number of hospital separations for Stroke (I60-I69) (public and private).

**Denominator:** Total population of all people.

**Disaggregation:** Crude rate: State and territory (including national total) by Indigenous status, by principal diagnosis Age-specific rate: State and territory (including national total) by Indigenous status, by principal diagnosis Age-standardised rate: State and territory (including national total) by Indigenous status, by principal diagnosis

**Data Source:** Numerator: National Hospital Morbidity Database Denominator: Australian Bureau of Statistics Estimates and Projections, Aboriginal and Torres Strait Islander Australians, 2001 to 2026; Australian Bureau of Statistics Population Projections, Australia, 2012 to 2101

**Note:** The ESSENCE Steering Committee recommends that this measure be presented using age-specific rates, however this measure is not currently reported using this computation.

For information on this measure as specified in the Aboriginal and Torres Strait Islander Health Performance Framework, refer to health.gov.au/indigenous-hpf

For measure specifications as outlined in the National Indigenous Reform Agreement, refer to meteor.aihw.gov.au
MEASURE 4B: 12 MONTH MORTALITY FOLLOWING HOSPITALISATION FOR STROKE (I60-I69)

Description: 12 month mortality rate for people admitted to hospital with stroke

ESSENCE Standard: All overarching standards for improving cardiovascular disease care (I) All standards for Stroke (IV)

Stage of development: Measure requires development, but there are existing data sources to inform measure

Existing indicator set: -

Reporting level: Jurisdictional National

Sector: Acute Primary Health

This measure requires specification development
CARDIOVASCULAR OUTCOME INDICATOR 5: RHEUMATIC HEART DISEASE

Rationale:
Acute rheumatic fever and rheumatic heart disease have been largely eradicated in Australia for all but Aboriginal and Torres Strait Islander communities.

Measures:
The Cardiovascular Outcome Indicator for rheumatic heart disease has 3 measures:

a) Acute rheumatic fever (I00-I02) incidence
b) Acute rheumatic fever (I00-I02) recurrences
c) Acute rheumatic fever (I00-I02) & rheumatic heart disease (I05-I09) hospitalisation rate
   i. Acute rheumatic fever (I00-I02) hospitalisation rate
   ii. Rheumatic heart disease (I05-I09) hospitalisation rate
CARDIOVASCULAR OUTCOME INDICATOR 5: RHEUMATIC HEART DISEASE

MEASURE 5A: ACUTE RHEUMATIC FEVER (I00-I02) INCIDENCE

Description: Yearly acute rheumatic fever incidence by episode type, age group and
a) Sex
b) Ethnicity

ESSENCE Standard: All overarching standards for improving cardiovascular disease care (I)
All standards for rheumatic heart disease (V)

Stage of development: Measure currently collected in part, with further work remaining to ensure
full coverage

Existing indicator set: RHDAustralia Acute Rheumatic Fever / Rheumatic Heart Disease Key
Performance Indicators, Aboriginal and Torres Strait Islander Health
Performance Framework

Reporting level: Jurisdictional
National

Computation: In development

Numerator: In development

Denominator: In development

Disaggregation: By episode type, age group and sex
By episode type, age group and ethnicity

Data Source: Numerator: Rheumatic Heart Disease Control Program Data Collection
System
Denominator: Rheumatic Heart Disease Control Program Data Collection
System

Note: Data is only available for Queensland, the Northern Territory, South Australia
and Western Australia.
Acute rheumatic fever and rheumatic heart disease data is already collected
by the Rheumatic Heart Disease Control Programs in Queensland, the
Northern Territory, South Australia and Western Australia.
The Rheumatic Heart Disease Control Program Data Collection System is
establishing mechanisms and infrastructure to enable consistent data
collection across the jurisdictions. The Data Collection System will provide
mandatory reports to the Commonwealth as well as analytical reports to
support the control programs with their performance monitoring measures.

Specific details for the RHDAustralia Key Performance
Indicators are currently in development and will be
available through RHDAustralia.
## CARDIOVASCULAR OUTCOME INDICATOR 5: RHEUMATIC HEART DISEASE

### MEASURE 5B: ACUTE RHEUMATIC FEVER (I00-I02) RECURRENCES

**Description:** Yearly acute rheumatic fever recurrences
- a) Proportion of all acute rheumatic fever episodes
- b) Rate per 100 patient-years for patients prescribed prophylaxis (both oral and benzathine penicillin G)

**ESSENCE Standard:**
- All overarching standards for improving cardiovascular disease care (I)
- All standards for rheumatic heart disease (V)

**Stage of development:** Measure currently collected in part, with further work remaining to ensure full coverage

**Existing indicator set:** RHDAustralia Acute Rheumatic Fever / Rheumatic Heart Disease Key Performance Indicators, Aboriginal and Torres Strait Islander Health Performance Framework

**Reporting level:** Jurisdictional
- National

**Computation:** In development

**Numerator:** In development

**Denominator:** In development

**Disaggregation:** In development

**Data Source:**
- **Numerator:** Rheumatic Heart Disease Control Program Data Collection System
- **Denominator:** Rheumatic Heart Disease Control Program Data Collection System

**Note:**
- Data is only available for Queensland, the Northern Territory, South Australia and Western Australia.
- Acute rheumatic fever and rheumatic heart disease data is already collected by the Rheumatic Heart Disease Control Programs in Queensland, the Northern Territory, South Australia and Western Australia.
- The Rheumatic Heart Disease Control Program Data Collection System is establishing mechanisms and infrastructure to enable consistent data collection across the jurisdictions. The Data Collection System will provide mandatory reports to the Commonwealth as well as analytical reports to support the control programs with their performance monitoring measures. (9)

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Specific details for the RHDAustralia Key Performance Indicators are currently in development and will be available through RHDAustralia.
CARDIOVASCULAR OUTCOME INDICATOR 5: RHEUMATIC HEART DISEASE

MEASURE 5C: ACUTE RHEUMATIC FEVER (I00-I02) & RHEUMATOID HEART DISEASE (I05-I09) HOSPITALISATION RATE

I. ACUTE RHEUMATIC FEVER (I00-I02) HOSPITALISATION RATE

II. RHEUMATIC HEART DISEASE (I05-I09) HOSPITALISATION RATE

Description:

i. Hospital separation rates for acute rheumatic fever (I00-I02) for Australians, by Indigenous status
ii. Hospital separation rates for rheumatic heart disease (I05-I09) for Australians, by Indigenous status

ESSENCE Standard:

All overarching standards for improving cardiovascular disease care (I)
All standards for rheumatic heart disease (V)

Stage of development:

Measure currently collected as specified

Existing indicator set:

Aboriginal and Torres Strait Islander Health Performance Framework

Reporting level:

Regional network [It is recommended that there be reporting at this level. However, this measure is not currently reported at the regional network level]
Jurisdictional
National

Computation:

i. & ii. Crude rate: 1,000 x (Numerator ÷ Denominator).

Age-specific rate: 1,000 x (Numerator ÷ Denominator), using 10 year age groups from 5 years to 75 years and over. [Refer to notes]

Age-standardised rate: calculated using the direct method using five year age groups from 0-4 to 65 years and over (due to availability of Indigenous population estimates for Tas and ACT) and the Australian population as at 30 June 2001 as the standard. Age-standardisation should be done in accordance with the National Indigenous Reform Agreement Performance Information Management Group agreed principles for direct age-standardisation (see Comments section).

Numerator:

i. Number of hospital separations for acute rheumatic fever (I00-I02) (public and private).

ii. Number of hospital separations for rheumatic heart disease (I05-I09) (public and private).

Denominator:

i. & ii. Total population of all people.

Disaggregation:

Crude rate: i&ii. State and territory (including national total) by Indigenous status, by principal diagnosis
Age-specific rate: i&ii. State and territory (including national total) by Indigenous status, by principal diagnosis
Age-standardised rate: i&ii. State and territory (including national total) by Indigenous status, by principal diagnosis
Data Source:  

i. & ii. **Numerator:** National Hospital Morbidity Database  
**Denominator:** Australian Bureau of Statistics Estimates and Projections, Aboriginal and Torres Strait Islander Australians, 2001 to 2026; Australian Bureau of Statistics Population Projections, Australia, 2012 to 2101

Note:  

*The ESSENCE Steering Committee recommends that this measure be presented using age-specific rates, however this measure is not currently reported using this computation.*

For information on this measure as specified in the Aboriginal and Torres Strait Islander Health Performance Framework, refer to [health.gov.au/indigenous-hpf](http://health.gov.au/indigenous-hpf)

For measure specifications as outlined in the National Indigenous Reform Agreement, refer to [meteor.aihw.gov.au](http://meteor.aihw.gov.au)
CARDIOVASCULAR OUTCOME INDICATOR 6: HYPERTENSION

Rationale:

Hypertension is the most common self-reported cardiovascular condition in the Aboriginal and Torres Strait Islander population. Disparities exist across all age groups, with Aboriginal and Torres Strait Islander people having up to 2.8 times higher prevalence in younger populations.

Measures:

The Cardiovascular Outcome Indicator for hypertension has 1 measure:

a) Proportion of population with self-reported/measured hypertension (I10)
# Cardiovascular Outcome Indicator 6: Hypertension

## Measure 6a: Proportion of Population with Self-Reported/Measured Hyper Tension (I10)

**Description:**
Proportion of adults with a self-reported/measured (as part of survey) high blood pressure

**ESSENCE Standard:**
All overarching standards for improving cardiovascular disease care (I)
All standards for hypertension (VI)

**Stage of development:**
Measure currently collected as specified

**Existing indicator set:**
Aboriginal and Torres Strait Islander Health Performance Framework

**Reporting level:**
Regional network [It is recommended that there be reporting at this level. However, this measure is not currently reported at the regional network level]
Jurisdictional
National

**Sector:**
Community health
Primary health

**Computation:**
- Crude rate: $100 \times \left( \frac{\text{Numerator}}{\text{Denominator}} \right)$.
- Age-specific rate: $100 \times \left( \frac{\text{Numerator}}{\text{Denominator}} \right)$, using age groups from 18-24, and 10 year age group for 25 years to 55 years and over.
- Age-standardised rate: calculated using the direct method using five year age groups from 0-4 years to 75 years and over and the Australian population as at 30 June 2001 as the standard. Age-standardisation should be done in accordance with the National Indigenous Reform Agreement Performance Information Management Group agreed principles for direct age-standardisation (see the Comments section below).(7) [Refer to notes]

**Numerator:**
People aged 18 years and over who have a measured (as part of survey) and/or self-report high blood pressure

**Denominator:**
Total populations (Indigenous and non-Indigenous) aged 18 years and over

**Disaggregation:**
- Crude rate: National, state/territory: by Indigenous status
- Remoteness area: by Indigenous status
- Age-specific rate: National, state/territory: by Indigenous status
- Remoteness area: by Indigenous status
- Age-standardised rate: National, state/territory: by Indigenous status
- Remoteness area: by Indigenous status

**Data Source:**
- Numerator: Australian Aboriginal and Torres Strait Islander Health Survey, Australian Health Survey

**Note:**
The ESSENCE Steering Committee recommends that this measure be presented using age-standardised rates, however this measure is not currently reported using this computation.

**For information** on this measure as specified in the Aboriginal and Torres Strait Islander Health Performance Framework, refer to health.gov.au/indigenous-hpf
OVERARCHING STANDARDS FOR IMPROVING CARDIOVASCULAR CARE

I.1.1 Primordial prevention - Socioeconomic determinants
All Aboriginal and Torres Strait Islander Australians should have improved access to all necessary healthful social and environmental resources in their day to day lives, including enhanced access to education, improved living and working conditions, and safe environments. People should be able to live in an environment that encourages and supports healthy lifestyle choices.


I.1.2 Primordial prevention - Comprehensive primary health care
All Australians should have access to comprehensive, adequately resourced, and appropriately supported primary health care services.

Reference: Alma Ata 1978 (20), Aboriginal and Torres Strait Islander Social Justice Commissioner and Steering Committee for Indigenous Health Equality 2008 (18)

I.1.3 Primordial prevention - Improving nutrition
All families should be able to access a standard healthy food basket (or supply) for a cost of less than 25% of their available weekly income.

Reference: Aboriginal and Torres Strait Islander Social Justice Commissioner and Steering Committee for Indigenous Health Equality 2008 (18)

I.2.1 Primary prevention - Identifying and managing risk
All Aboriginal and Torres Strait Islander people aged 15 years and over should be offered cardiovascular risk assessment at least once every year. Risk identification should involve assessment of: BMI, smoking status, blood pressure, blood lipid levels, psychosocial stress (e.g. depression), physical activity, diet, blood glucose level, renal function and urine albumin. All over the age of 35 should be stratified using a validated risk assessment tool.
All people (and the families) who are identified to be at elevated risk should receive appropriate information about their condition(s), lifestyle advice, support and long-term pharmacological and non-pharmacological treatment to reduce their risk according to evidence-based guidelines delivered within the context of an adequately resourced primary care service. The advice should be provided in a culturally appropriate format and disseminated in a manner that encourages, facilitates and supports lifestyle modification.


I.2.2 Primary prevention - Managing risk
When managing risk, priority focus should be on assessment and support for smoking cessation; encouraging increased physical activity; healthy nutrition; controlling blood lipid and glucose levels, and blood pressure.

Reference: NACCHO and RACGP 2012 (21), NVDPA 2012 (34), NHF 2007 (35), Harris 2005 (22), RACGP 2005 (23), NVDPA 2009 (32)
I.2.3 Primary prevention - Supporting smoking cessation
All individuals should have their smoking status assessed, receive smoking cessation advice and be able to access affordable nicotine replacement therapy (or other smoking cessation therapies) and smoking cessation support.


I.2.4 Primary prevention - Access to essential medicines
All people considered eligible for pharmacological therapy to reduce cardiovascular risk should be able to access affordable medications as close as possible to their home or within their primary care clinic.

Reference: NHF/AHHA 2010 (41), Aboriginal and Torres Strait Islander Social Justice Commissioner and Steering Committee for Indigenous Health Equality 2008 (18), Consensus-based Standard

I.3.1 Acute care - Medical transport for streamlined access to the appropriate level of care
All people suffering from acute, time critical, cardiovascular events that require transfer from the point of first medical contact to a higher level facility should be transferred via dedicated medical transportation services whose care and triaging processes are fully integrated with the referring and receiving medical facilities. Coordination and integration of care for acute patients across different health care sectors should be the responsibility of appropriately configured and resourced regional Clinical Networks.

Reference: Jauch et al 2013 (42), National Stroke Foundation, 2013b (43), Australian Commission on Safety and Quality in Health Care (44), National Heart Foundation of Australia 2012 (45), The Task Force on the management of ST-segment elevation acute myocardial infarction of the European Society of Cardiology (ESC) 2012 (38), Consensus-based Standard

I.3.2 Acute care - Ongoing support post-discharge
Before discharge, all patients experiencing ACS, stroke, TIA, heart failure or RHD should have a discharge plan (including tailored action plan) developed in collaboration with their primary care providers (and family/carers), and be informed of necessary follow-up requirements (including device/medication review schedules and rehabilitation), equipment needs, available social and medical supports, other nonpharmaceutical interventions, and the financial impact of their life-long condition. Action plans should be communicated in a tailored, respectful and culturally-appropriate format. Discharge medication should be reviewed and prescribed in concordance with the evidence-based guidelines and patients should receive a 30 day supply of medications upon discharge.


I.3.3 Acute care - Clinical communication and handover
Information about the patient’s diagnosis, treatment, medication and future management plans should reach the patient’s primary care provider(s) and referring hospital (where appropriate) within 48 hours of discharge. The clinical communication must include clear information regarding the patient’s diagnosis, level of cardiovascular disease (if appropriate), routine recall plans and specific information about non-routine care requirements. All patients should attend primary care within 7-10 days of discharge at little or no cost to the patient. All patients without a designated GP or primary care provider should be integrated into a community program for home- or centre-based therapy and education following hospital discharge and be assisted in accessing appropriate primary care services.

Reference: National Stroke Foundation 2012 (47), NICE 2013b (52), Koblar 2011 (53), NSF 2005 (50), SA Department of Health 2009 (54), Consensus-based Standard
I.4.1 Rehabilitation and secondary prevention - Patient education
All patients with CVD and their families/carers (where appropriate) should receive education about their condition, its causes, pharmacological and non-pharmacological treatments, ways to reduce risk and complications and long term management plans in a tailored, respectful and culturally appropriate format. This should happen across the continuum of care, including community awareness, in primary care settings, during hospitalisation and during and/or following contact with specialist services.


I.4.2 Rehabilitation and secondary prevention - Multidisciplinary team care
To reduce complications and avoidable mortality all patients suffering from cardiovascular events should be able to access multidisciplinary specialist and support services. These services should include support for smoking cessation, diabetes care, paediatric, geriatric, palliative care, psychiatry, renal, respiratory specialists, specialised nursing staff and allied health services when appropriate.

Reference: The Task Force for the Diagnosis and Treatment of Acute and Chronic Heart Failure 2012 of the European Society of Cardiology 2012 (38), Brewer et al 2013 (56), Department of Health 2012 (46), National Stroke Foundation 2013b (43), National Heart Foundation of Australia 2013 (57), Consensus-based Standard

I.4.3 Rehabilitation and secondary prevention - Community rehabilitation
All patients who are admitted to hospital with stroke; acute coronary syndromes; diagnosed with angina or heart failure; or have received cardiac revascularisation, surgery (including valvular) or device implantation should receive cardiac rehabilitation within 8 weeks of discharge from hospital, delivered through a hospital based program or through their primary care providers or via home-based outreach care and education. Structured cardiac and stroke rehabilitation programs should provide education, information, support physical activity, be an integral component of the long-term, comprehensive care of cardiac patients; and involve the specialist, primary health care practitioners, cardiac rehabilitation team, AHW’s, patient and family.


I.4.4 Rehabilitation and secondary prevention - Lifestyle modification
All individuals who have experienced or are at increased risk of cardiovascular events should receive tailored lifestyle advice and long-term pharmacological and non-pharmacological treatment to reduce their risk according to evidence-based guidelines delivered across primary and specialist services. Priority focus should be on assessment and treatment of smoking and harmful alcohol and other drug consumption; encouraging increased physical activity; healthy nutrition; controlling blood lipid and glucose levels; clotting risk and blood pressure; reducing dietary salt intake; and encouraging weight loss.


I.4.5 Rehabilitation and secondary prevention - Palliative care
All patients with established CVD with advanced symptoms that are refractory to optimal treatment should be able to access palliative care in their home and/or institutional setting as chosen by the patient and their family/carer. Further, all patients and their carers should receive appropriate information and be involved in discussions on end-of-life issues.

Reference: Holloway et al 2014 (63), National Heart Foundation of Australia 2013 (57), Yancy et al 2013 (48), NHF 2010 (64), Krum et al 2011 (65)
### I.5.1 Tertiary services - Interpreting services

All medical and surgical units that provide services to Aboriginal and Torres Strait Islander patients who do not speak English as their primary language should have access to interpreter services most of the time (including weekends) to support communication and informed decision making by patients and their families.

*Reference: Lawrence et al 2009 (66), WA Health 2009 (67), Consensus-based Standard*

### I.6.1 Systems of care - Transport and referral protocol development

Alongside the availability and use of clinical guidelines, specific local protocols should be developed by local staff across the continuum of care for use with all people with suspected acute cardiovascular events. Local protocols should outline early risk stratification, transfer, immediate treatment and transportation; rapid referrals; 24 hour consultation and advice, access to imaging and other diagnostic tests; and streamlined discharge processes.

*Reference: ACSQHC (44), National Heart Foundation of Australia 2013 (57), Department of Health (46), NSF 2010 (27), Moser et al 2007 (68), SA Department of Health 2009 (54), Department of Health Clinical Network Development Team 2006 (69)*

### I.6.2 Systems of care - Clinical information systems

Reliable clinical information systems should be utilised to schedule visits, follow clinical and laboratory results, document process measures, outcomes and trends, create community health profiles, estimate cost effectiveness, and to assess the need for program modifications.

*Reference: Hoy et al 2005 (70)*

### I.6.3 Systems of care - Health professional education

Health professionals providing care to Aboriginal and Torres Strait Islander people should receive education about prevention and identification of CVD (including acute episodes), treatment of high risk, methods for implementing lifestyle modifications, available diagnostic tools and criteria, clinical pathways and short and long term management strategies.

I.6.4 Systems of care - Standard service elements
All Australians, irrespective of their age, gender, ethnicity, socio-economic status or geographical location, should be covered by an integrated regional clinical network. Regional networks should provide:

- Outreach diagnostic and management clinics.
- 24 hour availability of acute CVD/stroke management units and diagnostic advice.
- Referral pathways and clinical guidelines for acute event assessment, diagnostic testing, hospital/tertiary centre transfers, specialist referrals and follow-up care including palliative services.
- A dedicated in-patient cardiac/stroke coordinator.
- Formalised links between acute and primary health care providers and allied health practitioners to implement care co-ordination and transfer of health information.
- Structured cardiac and stroke rehabilitation programs, led and coordinated by a relevant rehabilitation team, and operating in collaboration between these networks, primary care providers and relevant local NGOs.
- Data collection and reporting systems to monitor and report on the quality of care across the network.
- Integrated information technology, including tele-health services.
- Coordination of retrieval and transportation of patients.
- Standard medication kits, protocols and stock management systems for acute patients at regional and remote centres.
- Improved feedback and reminder systems to support clinicians.
- Service planning and clinical leadership.
- Regular training and competencies for clinical staff.
- Definition of standards for infrastructure.
- Reviews and evaluations of processes, costs and outcomes and modifications to systems as information accrues.
- Formalised support systems for General Practitioners providing rehabilitation care.
- Protocols for use of clearing house clinical standards e.g. Australian Research Centre for Health Innovations.
- Representation from all key parties involved in the continuum of care for Aboriginal and Torres Strait Islander people.


I.6.5 Systems of care - Data monitoring and performance of outcomes
All cardiac and stroke service providers and surgical units performing procedures on Aboriginal and Torres Strait Islander patients should collect, collate and submit data reporting patient characteristics, clinical features, interventional procedures (including thrombolysis), intra- and post-operative outcomes, 30 day readmission, mortality rates and adverse outcomes to a centralised register.


I.6.6 Systems of care – Tailored, respectful, culturally appropriate care
All cardiovascular care provided to Aboriginal and Torres Strait Islander people should be conducted in a manner which is tailored, respectful and culturally appropriate.

Reference: Consensus-based Standard
STANDARDS FOR CORONARY HEART DISEASE

II.1.1 Primary prevention - Early recognition
The annual health check should include review of symptoms which could be due to CVD. All people who have experienced new chest pain or other clinical symptoms potentially due to coronary heart disease (CHD) should have an appropriately directed further physical exam, and an ECG, with referral for additional testing and clinical advice appropriate to the circumstances.

Reference: ESC 2007 (61)

II.2.1 Acute care - Access to care
All people experiencing acute chest pain of possible ischaemic origin should be able to access emergency care that includes focussed clinical history and examination by a competent practitioner (paramedic, nurse, doctor), an ECG and initial treatment within 1 hour of onset of their symptoms. All points of first medical contact should have cardiac defibrillation capability and ALS trained staff. At first hospital contact, this assessment should include a biochemical marker of myocardial necrosis with results available within 30-60 minutes of arrival.

Reference: ACSQHC (44), Chew et al 2011 (82)

II.2.2 Acute care - Early ECG
All emergency medical care facilities should be able to perform a digital 12 lead ECG within 10 minutes of patient arrival and where necessary transmit and receive immediate (<10 minutes) diagnostic support from a hospital or cardiology network to aid risk stratification, rapid initial treatment decisions, particularly regarding thrombosis for STEMI, and triage to the most appropriate hospital facility.

Reference: ACSQHC 2013 (83), NHF/AHHA 2010 (41), ACS Guidelines Working Group 2006 (24), ACEM (84)

II.2.3 Acute care – Immediate, point of care diagnosis and risk stratification for chest pain
Every patient with chest pain who presents to an emergency medical service should be able to have a cardiac Troponin result available within 60 minutes of arrival on a 24/7 basis. If this is not available through an on-site pathology laboratory, point-of-care Troponin testing should be used. Troponin testing should be used as part of a full risk assessment.


II.2.4 Acute care - Reperfusion therapy for STEMI
All patients with a confirmed STEMI should be considered for acute reperfusion by primary PCI or thrombolysis. Patients for whom first medical contact to balloon inflation times (primary PCI) are likely to exceed 90 minutes, should receive thrombolysis (with a 3rd generation, fibrin-specific thrombolytic) within 60 minutes and ideally within 30 minutes of presentation.


II.2.5 Acute care - Early invasive strategy for STEMI (I)
Thrombolysed STEMI patients who fail to show signs of reperfusion within 90 minutes of initiation of therapy should be considered for transfer to a PCI capable facility for rescue PCI, if such a facility and treatment are available within 12 hours of onset of the STEMI.

II.2.6 Acute care - Early invasive strategy for STEMI (II)
All patients receiving thrombolysis for STEMI should be considered for transfer to the nearest hospital capable of diagnostic angiography as soon as possible and certainly during the index admission.

Reference: NICE 2013b (87), The Task Force on the management of ST-segment elevation acute myocardial infarction of the European Society of Cardiology (ESC) 2012 (88), ACS Guidelines Working Group 2006 (24)

II.2.7 Acute care - Early invasive strategy for NSTEACS
All patients experiencing non-ST Elevation ACS (NSTEACS) with intermediate and high risk features should be involved in a discussion about their treatment, which should consider invasive investigations and therapies as soon as possible and certainly within the index admission.

Reference: ACSQHC (83), SIGN 2013 (86), ACS Guidelines Working Group 2006 (24)

II.2.8 Acute care - Cardiac units
All patients diagnosed with an acute coronary syndrome (ACS) with high risk features should be admitted to a cardiac care unit or to a dedicated unit with cardiac monitoring, cardiac defibrillation capability, staff trained in advanced life support, and with ready access to on-site or off-site cardiac team support, including Cardiologists and cardiac-trained nursing staff.

Reference: ESC 2011 (85)

II.2.9 Acute care - Assessment of LV and renal function
All patients experiencing ACS should have their LV function, renal function, urine albumin and HbA1c determined during their index hospital admission. Where echocardiography is not readily available during the index admission, biochemical assessment of LV function (laboratory or POCT) should be considered.

Reference: ACS Guidelines Working Group 2006 (24), ESC 2011 (85)

II.2.10 Acute care - Adjuvant medical therapy
All ACS patients should be considered for and receive appropriate adjuvant medical therapy, including antiplatelet agent(s), β-blocker, angiotensin-converting enzyme (ACE) inhibitor, statin and other therapies according to current evidence-based ACS guidelines.

Reference: NICE 2013b (52), ACS Guidelines Working Group 2006 (24)
III.1.1 Primary prevention - Managing risk
All individuals should be able to have hypertension, diabetes, atrial fibrillation and other common underlying and reversible causes of heart failure identified in their primary care network and management strategies implemented to reduce their risk of developing chronic heart failure.

Reference: NHF/CSANZ 2011 (51), Consensus-based Standard

III.1.2 Primary prevention - Early identification
All people with suspected CHF (shortness of breath, fatigue, oedema) should be able to undergo comprehensive clinical assessment as close to their home as possible. This should include history, physical examination and diagnostic tests such as electrocardiogram, chest x-ray, haematology, serum biochemistry and echocardiogram as described in evidence-based guidelines.

Reference: NHF/CSANZ 2011 (51), Consensus-based Standard

III.2.1 Acute care - Establishment of cause
All patients with acute exacerbations of CHF should undergo urgent investigations including electrocardiography and echocardiography to identify (and if possible, inform measures to correct) the cause of the exacerbation. Patients potentially eligible for revascularisation should undergo urgent subsequent angiography.

Reference: The Task Force for the Diagnosis and Treatment of Acute and Chronic Heart Failure 2012 of the European Society of Cardiology 2012 (38), Yancy et al 2013 (48), Consensus-based Standard

III.2.2 Acute care - Adjuvant medical therapy
All heart failure patients should be considered for and receive appropriate adjuvant medical therapy, including devices [including cardiac-synchronisation therapy, implantable defibrillators], influenza and pneumococcal vaccinations, β-blocker, angiotensin-converting enzyme (ACE) inhibitor and other therapies in accordance with evidence-based guidelines, and receive a 30 day supply of medications at time of discharge.

Reference: NHF/CSANZ 2011 (51), NHMRC/DoHA 2008 (89), Consensus-based Standard

III.3.1 Management and secondary prevention - Specialist care
All patients with CHF admitted to hospital should be referred to a cardiologist or other physician (with expertise in heart failure management) to ascertain underlying causes, and make assessments for device, surgical and transplant interventions as required according to the severity of the patient’s condition.

Reference: NHF/CSANZ 2011 (51), Consensus-based Standard

III.3.2 Management and secondary prevention - Cardiac rehabilitation
All CHF patients assessed as NYHA functional class II or higher should be referred to an easily accessible and culturally appropriate, structured multidisciplinary CHF program at discharge, in accordance with recommendations in evidence-based guidelines. The program should include a multi-disciplinary team approach with specifically-designed physical activity components and tailored action plans for medical review and self-care.

Reference: The Task Force for the Diagnosis and Treatment of Acute and Chronic Heart Failure 2012 of the European Society of Cardiology 2012 (38), National Heart Foundation of Australia 2013 (57), NHF 2007 (35), ACS Guidelines Working Group 2006 (24), Queensland Health 2000 (60), SA Department of Health 2011 (58)
STANDARDS FOR STROKE

IV.1.1 Acute care - Access to care
All people experiencing sudden onset of neurological symptoms should be able to access emergency care within 1 hour of recognition of their symptoms.

Reference: Jauch et al 2013 (42), Victorian Stroke Clinical Network 2013 (75), Consensus-based Standard

IV.1.2 Acute care - Rapid assessment and risk stratification
Every patient with neurological symptoms who presents to a health centre or emergency service should undergo rapid assessment and risk stratification using a validated pre-hospital stroke-screening tool. The referral hospital should receive advance notification of a possible stroke patient and assessment documentation and transportation should be arranged as a matter of priority according to the patient’s defined level of risk. On arrival, the hospital should assess the patient with a validated in-hospital stroke screening tool.


IV.1.3 Acute care - Brain imaging
All patients with suspected stroke should undergo immediate brain imaging to aid assessment for suitability of thrombolysis and other acute management.

Reference: UK Government 2014 (91), Jauch et al 2013 (42), National Stroke Foundation 2013a (12), National Stroke Foundation 2013b (43), NSF 2010 (27)

IV.1.4 Acute care - Stroke units
All patients with suspected stroke should be transported and admitted directly to a specialist Stroke Unit where they exist (or a unit with medical, nursing and allied health expertise in stroke care) within 3 hours of symptom onset for treatment by a multidisciplinary team.


IV.1.5 Acute care - Access to thrombolysis
Ischaemic stroke patients should receive intravenous thrombolysis (if specifically indicated and if CT/MRI excludes haemorrhage) within 4.5 hours of symptom onset in a hospital with staff who are trained in stroke management and delivery and monitoring of patients receiving thrombolytic therapy, have transfer protocols for these patients or have access to tele-health for clinical decision-making and support.


IV.1.6 Acute care – Early invasive strategy
All patients experiencing a stroke with high risk features should be urgently referred to a neurosurgeon for consideration of hemicraniectomy.

Reference: NSF 2010 (27), Consensus-based Standard
IV.2.1 Rehabilitation - Adjuvant medical therapy

All stroke and TIA patients should receive blood pressure lowering therapy unless contraindicated. New blood pressure lowering therapy should commence as soon as is clinically safe. Patients should also be considered for and receive appropriate adjuvant medical therapy, including anti-platelet agent(s), statin and other therapies, as appropriate, and receive a 30 day supply of medications at time of discharge.


IV.2.2 Rehabilitation - Inpatient stroke rehabilitation

Patients who need ongoing inpatient rehabilitation after completion of their index admission treatment should be treated in a specialist stroke rehabilitation unit or a conventional rehabilitation unit where staff has strokespecific expertise, according to patient preference.

**STANDARDS FOR RHEUMATIC HEART DISEASE**

**V.1.1 Primary prevention - Health education and awareness**
All people living and working in high risk communities should receive education about Acute Rheumatic Fever (ARF)/Rheumatic Heart Disease (RHD); its causes; and the need to recognise, diagnose and treat sore throats promptly. In addition, patients with ARF/RHD (and their families) should receive education about the reasons for secondary prophylaxis and the consequences of missing a BPG injection; available services and follow up plans; importance of dental care and the impact of RHD (particularly in women of child-bearing ages).


**V.1.2 Primary prevention - Diagnosing GAS pharyngitis**
All patients in endemic/high risk areas with a sore throat should have access to health practitioners who are adequately trained to recognise potential ARF and able to conduct a point-of-care test or take a throat swab for microbiological assessment. Health practitioners in high-risk areas should have access to resources that enable the swab to be cultured as part of routine primary care services.

Reference: Carapetis et al 2012 (15), NACCHO and RACGP 2012 (21), Consensus-based Standard

**V.2.1 Diagnosis and management of ARF - Hospitalisation**
All patients with suspected ARF should be admitted to hospital for assessment that should include consultation with paediatric, medical and cardiological specialists (as appropriate) and echocardiography, in order to maximise the likelihood of an accurate diagnosis, and to ensure prompt and optimal immediate and long-term treatment.

Reference: Carapetis et al 2012 (15), NHF/CSANZ 2006 (55)

**V.2.2 Diagnosis and management of ARF – Diagnosis and risk stratification**
All patients with suspected or confirmed ARF should undergo echocardiography to confirm or refute the diagnosis of rheumatic carditis and established RHD. Further testing should include: inflammatory markers; ECG; chest X-ray; throat swab for culture for GAS; and anti-streptococcal serology (ASO and anti-DNase B titres).

Reference: Carapetis et al 2012 (15), NHF/CSANZ 2006 (55)

**V.3.1 Long-term management and secondary prevention - Long acting penicillin (BPG)**
All patients with a history of ARF/RHD should receive BPG every 21-28 days for an extended period of time (minimum of 10 years or until age 21, which ever is longer). BPG should be delivered by a patient’s regular primary care provider or outreach community staff, with the support of appropriate protocols, recall and quality use of medicines (QUM) systems.


**V.3.2 Long-term management and secondary prevention - Echocardiography**
All patients with ARF/RHD should undergo serial echocardiographic assessments in the long-term, according to disease severity and evidence-based guidelines.

V.3.3 Long-term management and secondary prevention - Dental care
All patients with ARF/RHD should receive yearly dental reviews and treatment (as required).

Reference: Carapetis et al 2012 (15), NHF/CSANZ 2006 (55)

V.3.4 Long-term management and secondary prevention - Anticoagulation
All patients with AF and/or mechanical prosthetic valves receiving anticoagulation for the prevention of thrombosis should have access to routine and appropriate monitoring of anticoagulation as close to home as possible, including point-of-care monitoring for patients in rural and remote settings.


V.3.5 Long-term management and secondary prevention - Referral to surgical unit
All patients with moderate to severe valvular disease and/or cardiac dysfunction should be referred to a cardiac surgical unit with expertise in performing valve repairs and replacements as early as possible for assessment and consideration of valve interventions. RHD surgical procedures should only be performed in centres that have the necessary volume of cases to develop and maintain technical expertise and structural systems of care (pre- and post-operative) known to improve outcomes. All decisions for cardiothoracic surgical intervention should involve the patient, their family, PHC team and local referring cardiology service providers.

Reference: Carapetis et al 2012 (15), NHF/CSANZ 2006 (55), Consensus-Based Standard

V.3.6 Long-term management and secondary prevention - RHD management and pregnancy
All female patients with a history of ARF and/or established RHD during their child-bearing years should have access to family planning and counselling services, routine primary care and specialist cardiological review. All women with RHD who become pregnant should undergo specialist cardiological assessment (including review of symptom profile and echocardiography) in the first trimester, and their clinical status discussed with specialist obstetric services. Discussions with the patient regarding timing, nature and site of planned delivery should occur before or early in the pregnancy.

Reference: Carapetis et al 2012 (15), Consensus-based Standard

V.4 Systems of care - RHD control programmes
A systematic assessment of the burden of ARF/RHD across all Australian jurisdictions should be undertaken and all high incidence areas should be covered by a structured and adequately funded RHD control programme. Each control programme should include target epidemiological surveillance, improved BPG adherence, clinical follow up of people with RHD (including specialist review and echocardiography), health practitioner and community education, and the coordination of care across the continuum.

**STANDARDS FOR HYPERTENSION**

**VI.1.1 Primary prevention - Risk assessment**
All Aboriginal and Torres Strait Islanders >18 years old should have their blood pressure measured at every visit (at least annually in the absence of hypertension, or 6 monthly in the presence of diabetes or target organ damage). Blood pressure measurement should be considered in the context of an absolute cardiovascular risk assessment.

*Reference: NACCHO and RACGP 2012 (21), Lindsay et al 2013 (112), RACGP 2012 (36), RACGP 2005 (23)*

**VI.1.2 Primary prevention - Awareness**
Communities should be made aware of the need for regular monitoring of blood pressure, in the context of an absolute cardiovascular risk assessment.

*Reference: WHO 2013 (113), NHPAC 2006 (30)*

**VI.1.3 Primary prevention - Early identification**
All people with systolic blood pressure >140 or diastolic blood pressure >90 mm Hg on at least two separate occasions should receive a full clinical assessment in accordance with locally relevant clinical guidelines. This should include identification of all risk factors or secondary causes of hypertension and detection of target-organ damage.


**VI.2 Rehabilitation and secondary prevention - Medication**
All Aboriginal and Torres Strait Islander peoples with hypertension should be considered for immediate antihypertensive therapy. In particular, all individuals should be considered high risk and offered drug therapy if they have (a) high absolute cardiovascular risk (> 15% probability of a cardiovascular event within the next 5 years) (b) existing cardiovascular disease, (c) target organ damage, or (d) diabetes. Structured titration schedules and additional blood pressure-lowering medications should be added to the treatment regime and reviewed regularly in accordance with the evidence-based guidelines.

*Reference: NACCHO and RACGP 2012 (21), NHF 2010 (33), NCGC 2011, Department of Health, Social Services and Public Safety 2011 (39), Queensland Health 2005 (40), Hoy 2005 (70)*
In 2014, the ESSENCE team received funding from the Australian Government Department of Health to develop ESSENCE Measurement Indicators aligned with the ESSENCE Standards.

A literature review to ensure all ESSENCE Standards were still current and appropriate for the Aboriginal and Torres Strait Islander population. This process reviewed all new literature from 2012 to September 2014. There were no significant changes to the ESSENCE Standards, however there have been modification a small number of standards. Reference literature has also been updated for standards.

A second literature review was undertaken to identify and map existing Australian measurement indicators and key performance indicators with relevance to the ESSENCE Standards. A significant number of measurement indicators and key performance indicators were identified through this process, and upon review these were classified into four categories:

- Nationally agreed measurement indicators currently being collected systematically by government
- Key performance targets
- Measurement indicator sets which cover only selected services or locations
- Nationally recommended measurement indicator sets which are in development.

In recognition that an indicator should not be developed for every standard, each ESSENCE Standard was reviewed by the Steering Committee to assess its impact on reducing the population level of cardiovascular disease and reducing the life expectancy gap for Aboriginal and Torres Strait Islander people. This process was informed by the consensus process undertaken when developing the ESSENCE Standards in 2012. As a result “Priority ESSENCE Standards” were identified for this indicators project.
A technical expert group of the Steering Committee met to review the content from the literature review and develop the ESSENCE Measurement Indicator framework and indicators, and consider potential measures. The following criteria were used to develop the indicators:

1. Impact
   - Prioritisation of ESSENCE Standards
   - Relevance of indicators

2. Is there already an indicator/measure?
   - Existing indicator/measure
   - Alignment to ESSENCE Standard

3. Technical soundness
   - Attributable
   - Feasibility
   - Validity
   - Reliability
   - Sensitivity
   - Comparable
   - Perverse incentives

4. Indicator appropriateness:
   - Level of reporting

Detailed technical specifications were drafted. Any existing appropriate measures were used and where an indicator did not have an existing measure, but the associated standard/s prioritised, a measure was developed. This was informed by expert consensus. Consultation was then undertaken with key experts to confirm the approach and discuss specific content.

The draft set of measurement indicators were presented to the full Steering Committee for consideration. Steering Committee members were asked to grade each measure by its:

- alignment to ESSENCE Standards,
- external validity,
- expected impact, and
- plausibility.

The results of the Steering Committee consultation led to further refinement of the measurement indicators.

Consultation was undertaken with a broad range of stakeholders, including national and state and territory governments. A full list of those who contributed to the ESSENCE Measurement Indicators is provided in the acknowledgements.

The consultation was reviewed and incorporated into the final set of the ESSENCE Measurement Indicators as reported in this document, and there was final sign off by the ESSENCE II Steering Committee.
REFERENCES


38. The Task Force for the Diagnosis and Treatment of Acute and Chronic Heart Failure 2012 of the European Society of Cardiology. ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure 2012. The European Society of Cardiology. 2012;33:1787–847.


