ESSENCE

Essential Service Standards for Equitable National Cardiovascular Care

for Aboriginal and Torres Strait Islander people

ESSENCE Standards
Updated October 2014
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.

This project was funded by the National Aboriginal and Torres Strait Islander Health Equality Council (NATSIHEC) under a contract with the Office of Aboriginal and Torres Strait Islander Health, Department of Health and Ageing.

Our thanks to the Cardiac Society of Australia and New Zealand (CSANZ) for partnership and leadership within this project and to NATSIHEC members for their support.

Special thanks for the considerable time, commitment and, most of all, expertise, provided by members of the Essential Service Standards for Equitable National Cardiovascular Care for Aboriginal and Torres Strait Islander people (ESSENCE I) Steering Committee (2011-2012):

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The Heart Foundation and the Cardiac Society of Australia and New Zealand have endorsed the 2012 ESSENCE Standards.
INTRODUCTION

The differential in life expectancy experienced by Aboriginal and Torres Strait Islander people compared to non-Indigenous Australians is a national priority. The impact of cardiovascular diseases (CVD) in contributing to this differential is a critical target for closing the gap. After adjusting for age, CVD accounts for over one quarter of the gap in mortality between Aboriginal and Torres Strait Islander and non-Indigenous Australians.\(^1\) Within the Aboriginal and Torres Strait Islander population, CVD is the single biggest killer and contributes 17% of the burden of disease.\(^1\) In particular, national and jurisdictional data highlights a disproportionate burden of disease in young Aboriginal and Torres Strait Islander people.\(^2\)

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.\(^3\) They represent the best available evidence and expert consensus. The 62 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 approach was to build the foundations on which the gap in life expectancy between Aboriginal and Torres Strait Islander people and non-Indigenous counterparts can be reduced.

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 project purposefully focused on the prevention and management of CVD extending across the continuum of care for Aboriginal and Torres Strait Islander people - including primary prevention, risk identification and management in primary care, and the management of disease in specialist, acute care and post-acute care settings.

This was informed by a targeted literature review of existing evidence and service standards; development of a conceptual framework to guide the process of building consensus on essential services; construction of a draft set of standards which were reviewed and validated by external experts; with final refinement of consensus standards by the ESSENCE Steering Committee. Following this structured process, the project defined 22 overarching CVD service standards; with an additional 11 specific to CHD; 6 for CHF; 8 for Stroke; 11 for RHD; and 4 for hypertension respectively.

In 2014, the ESSENCE Standards were reviewed against recent literature to ensure the standards were current.

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STANDARDS FOR IMPROVING CARDIOVASCULAR CARE

PRIMORDIAL PREVENTION

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 (9), Aboriginal and Torres Strait Islander Social Justice Commissioner and Steering Committee for Indigenous Health Equality 2008 (7)

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 (7)

PRIMARY PREVENTION

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 (10), NVDPA 2012 (23), NHF 2007 (24), Harris 2005 (11), RACGP 2005 (12), NVDPA 2009 (21)

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 (30), Aboriginal and Torres Strait Islander Social Justice Commissioner and Steering Committee for Indigenous Health Equality 2008 (7), Consensus-based Standard

ACUTE CARE

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 (31), National Stroke Foundation, 2013b (32), Australian Commission on Safety and Quality in Health Care (33), National Heart Foundation of Australia 2012 (34), The Task Force on the management of ST-segment elevation acute myocardial infarction of the European Society of Cardiology (ESC) 2012 (27), 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 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.

Reference: National Stroke Foundation 2012 (36), NICE 2013b (42), Koblar 2011 (43), NSF 2005 (40), SA Department of Health 2009 (44), Consensus-based Standard

REHABILITATION AND SECONDARY PREVENTION

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 (27), Brewer et al 2013 (46), Department of Health 2012 (35), National Stroke Foundation 2013b (32), National Heart Foundation of Australia 2013 (47), 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 (53), National Heart Foundation of Australia 2013 (47), Yancy et al 2013 (38), NHF 2010 (54), Krum et al 2011 (55)

TERTIARY SERVICES

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 (56), WA Health 2009 (57), Consensus-based Standard

SYSTEMS OF CARE

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.


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 (60)

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 re-admission, 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

PRIMARY PREVENTION

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 (51)

ACUTE CARE

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 (33), Chew et al 2011 (72)

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 thrombolysis for STEMI, and triage to the most appropriate hospital facility.

Reference: ACSQHC 2013 (73), NHF/AHHA 2010 (30), ACS Guidelines Working Group 2006 (13), ACEM (74)

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.

Reference: ACS Guidelines Working Group 2006 (13), ESC 2011 (75), Consensus-based Standard

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.

Reference: ACS Guidelines Working Group 2006 (13)
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.

Reference: SIGN 2013 (76), ACS Guidelines Working Group 2006 (13)

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 (77), The Task Force on the management of ST-segment elevation acute myocardial infarction of the European Society of Cardiology (ESC) 2012 (78), ACS Guidelines Working Group 2006 (13)

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 (73), SIGN 2013 (76), ACS Guidelines Working Group 2006 (13)

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 (75)

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 (13), ESC 2011 (75)

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

Reference: NICE 2013b (42), ACS Guidelines Working Group 2006 (13)
STANDARDS FOR CHRONIC HEART FAILURE

PRIMARY PREVENTION

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 (CHF).

Reference: NHF/CSANZ 2011 (41), 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 (41), Consensus-based Standard

ACUTE CARE

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 (27), Yancy et al 2013 (38), 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 (41), NHMRC/DoHA 2008 (79), Consensus-based Standard

MANAGEMENT AND SECONDARY PREVENTION

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 (41), 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 (27), National Heart Foundation of Australia 2013 (47), NHF 2007 (24), ACS Guidelines Working Group 2006 (13), Queensland Health 2000 (50), SA Department of Health 2011 (48)
STANDARDS FOR STROKE

ACUTE CARE

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.


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 hemicraniectiony.

Reference: NSF 2010 (16), Consensus-based Standard
REHABILITATION

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 stroke-specific expertise, according to patient preference.

STANDARDS FOR RHEUMATIC HEART DISEASE

PRIMARY PREVENTION

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 (4), NACCHO and RACGP 2012 (10), Consensus-based Standard

DIAGNOSIS AND MANAGEMENT OF ACUTE RHEUMATIC FEVER

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 (4), NHF/CSANZ 2006 (45)

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 (4), NHF/CSANZ 2006 (45)

LONG TERM MANAGEMENT AND SECONDARY PREVENTION

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 (4), NHF/CSANZ 2006 (45)*

**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.

*Reference: Carapetis et al. 2012 (4), Remenyi et al. 2013 (92), NHF/CSANZ 2006 (45), Consensus-based Standard*

**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 (4), NHF/CSANZ 2006 (45), 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 (4), Consensus-based Standard*

**SYSTEMS OF CARE**

**V.4.1 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.

*Reference: Carapetis et al. 2012 (4), Remenyi et al. 2013 (92), Couzos and Carapetis 2003 (100), WHO Cardiovascular Diseases Unit 1992 (101), WHO 2004 (95), NHF/CSANZ (45)*
STANDARDS FOR HYPERTENSION

PRIMARY PREVENTION

VI.1.1 Primary prevention - Risk assessment
All Aboriginal and Torres Strait Islander people >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 (10), Lindsay et al 2013 (102), RACGP 2012 (25), RACGP 2005 (12)

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 (103), NHPAC 2006 (19)

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.


REHABILITATION AND SECONDARY PREVENTION

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 (10), NHF 2010 (22), NCGC 2011, Department of Health, Social Services and Public Safety 2011 (28), Queensland Health 2005 (29), Hoy 2005 (60)
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