



Managing cardiovascular disease in Aboriginal and Torres Strait Islander people

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Summary

Cardiovascular diseases are responsible for much of the reduced life expectancy of Aboriginal and Torres Strait Islander people. Modification of cardiovascular risk factors is important, especially as calculators may underestimate the absolute risk of a cardiovascular event. Smoking cessation is a key component of primary and secondary prevention. As cardiovascular disease can begin early in life, screening for risk factors from the age of 18 years is recommended. Drug therapy is similar to that for other patients, but may need to be started sooner, particularly as comorbidities are common. Risk factors do not account for all of the increased mortality, so psychosocial and other factors need to be considered.

Key words: hypertension, preventive medicine.

(*Aust Prescr* 2010;33:72–5)

Introduction

Aboriginal and Torres Strait Islander Australian people born in 2005–2007 are expected to die approximately 11 years earlier

than other Australians.¹ Many factors are responsible for this gap in life expectancy and comprehensive approaches are required to address this inequality. Primary healthcare providers can play an important role, particularly in prevention.

Cardiovascular disease is the leading cause of reduced life expectancy. Between 2002 and 2005 cardiovascular disease accounted for 27% of all Aboriginal and Torres Strait Islander deaths.² There are excess death rates in every age category and across all jurisdictions where reliable data are available. The incidence of cardiovascular events in urban communities is likely to be similar to that in rural and remote communities.³

The specific diseases contributing to these excess deaths are coronary heart disease, cerebrovascular disease, heart failure and hypertension. Rheumatic heart disease contributes a small proportion of the overall mortality, but the rate of rheumatic heart disease in Aboriginal and Torres Strait Islander people is among the highest in the world.

While the management of cardiovascular disease has similarities for all patients, some approaches are specific to Aboriginal and Torres Strait Islander people. Relevant resources and management recommendations are summarised in Table 1 and Box 1.

Table 1

Resources specific for Aboriginal and Torres Strait Islander people

Resource	Source *
Calculator for absolute risk assessment with provision for estimation of risk for Aboriginal and Torres Strait Islander people from age 35 years	www.heartfoundation.org.au
National guide to a preventive health assessment in Aboriginal and Torres Strait Islander peoples, NACCHO and RACGP, NACCHO 2005	www.racgp.org.au
Guidelines for the diagnosis and management of acute rheumatic fever and rheumatic heart disease	www.heartfoundation.org.au
Preferential access to Pharmaceutical Benefits Scheme items for Aboriginal and Torres Strait Islander people, e.g. nicotine replacement therapy	www.pbs.gov.au
Cultural safety training	www.culturalsafetytraining.com.au

NACCHO National Aboriginal Community Controlled Health Organisation

RACGP Royal Australian College of General Practitioners

* See full URLs online with this article at www.australianprescriber.com

Primary prevention

Modifying risk factors with Aboriginal and Torres Strait Islander patients is a key preventive health strategy. They are more likely than other Australians to smoke and to have hypertension, obesity, hyperlipidaemia, diabetes and renal disease.⁴

Absolute risk assessment is important in the prevention of cardiovascular disease.⁵ Modifications have been made to absolute risk assessment tools to facilitate the estimation of risk from age 35 years in Aboriginal and Torres Strait Islander people not already known to be at high risk for cardiovascular disease. It is likely, however, that these tools will still underestimate the risk in this population.⁵ Clinical judgement is therefore required when using absolute risk calculators for Aboriginal and Torres Strait Islander people.

Individual risk assessment every 1–2 years is recommended for Aboriginal and Torres Strait Islander people from 18 years of age. This screening is supported by access to the Aboriginal and Torres Strait Islander Adult Health Check Medicare items.

Screening includes lifestyle assessment and measurement of blood pressure, weight, body mass index, waist circumference and fasting lipid status. Given the high prevalence of diabetes and renal disease and the impact of these diseases on cardiovascular disease risk, routine screening should include dipstick testing for proteinuria and fasting blood glucose, starting from 15–18 years of age.⁶ Screening should also include assessment of pulse and follow-up of irregularities to diagnose and treat atrial fibrillation. Screening provides an ideal opportunity to promote a healthy diet, physical activity, smoking cessation, moderation of alcohol consumption and weight control.⁶

These risk factors do not, however, explain all of the increased burden of cardiovascular disease among Aboriginal and

Torres Strait Islander people. Psychosocial,⁷ socio-economic and *in utero* factors⁸ are likely to contribute substantially to the risk in these communities. The synergistic effect of multiple risk factors also impacts on the differential burden of cardiovascular disease.⁴

Given the multiple morbidities common in their communities, Aboriginal and Torres Strait Islander people are more likely than other Australians to fall within a group defined as at high risk of cardiovascular disease.⁵ Those at high risk will benefit from intensive management including drug therapy.

Secondary prevention

Secondary prevention strategies aim to prevent further deterioration in those who have been diagnosed with cardiovascular disease.⁴ The reduction of risk of a major coronary event or death has been quantified (Box 2).⁴ These benefits are likely to apply to Aboriginal and Torres Strait Islander people.

Smoking cessation

Aboriginal and Torres Strait Islander people are approximately twice as likely to smoke as other Australians. Addressing this risk factor is likely to have a substantial impact on reducing morbidity and premature death rates. In general practice, a brief intervention counselling approach is recommended.⁹ Nicotine replacement therapy is available on the Pharmaceutical Benefits Scheme (PBS) for Aboriginal and Torres Strait Islander patients. The use of other drugs to assist in smoking cessation requires careful consideration of the benefits and risks for the individual patient. There is also evidence in Aboriginal and Torres Strait Islander communities of the efficacy of community-based approaches.⁹

Box 1

Recommended approaches to cardiovascular disease in Aboriginal and Torres Strait Islander people

Screening and prevention

Individual risk assessment every 1–2 years from age 18 years including:⁹

- measurement of blood pressure, weight, body mass index, waist circumference, pulse for atrial fibrillation, fasting lipid and blood glucose, and urine testing for proteinuria
- calculation of absolute cardiovascular risk from age 35 years⁵
- promotion of healthy diet, weight control, physical activity, smoking cessation and moderation of alcohol consumption

Treatment

Early use of antihypertensives⁴ – consider ACE inhibitors or angiotensin receptor antagonists as first-line drugs

Start treatment with cholesterol-lowering drugs when LDL cholesterol remains >2.5 mmol/L after lifestyle modification¹²

Cholesterol-lowering drugs may be prescribed on the Pharmaceutical Benefits Scheme:

- at any lipid level for patients with diabetes
- if total cholesterol >6.5 mmol/L or total cholesterol >5.5 mmol/L and HDL cholesterol <1 mmol/L

ACE angiotensin-converting enzyme

HDL high density lipoprotein

LDL low density lipoprotein

Box 2

Relative reduction in risk of major coronary event or death following secondary prevention activities⁴

- 67% risk reduction for people under 65 years who have never smoked
- 40% risk reduction for people 65 years and over who have never smoked
- 22% risk reduction with ACE inhibitors
- 20% risk reduction with beta blockers
- 20% risk reduction if cholesterol controlled
- 20% risk reduction in people who are physically active
- 19% risk reduction with aspirin
- 14% risk reduction if blood pressure controlled

Nutrition and physical activity

Adoption of traditional dietary and food gathering practices has been shown to reduce risk factors for metabolic syndrome.¹⁰ For most Aboriginal and Torres Strait Islander people this is not possible. There is also often difficulty in accessing affordable, healthy food.⁶ Community-based programs may assist in improving both access to and acceptability of healthy foods. Reduction in alcohol consumption may reduce the risk of cardiovascular disease through its impact on diet, blood pressure and weight.⁵ It may also increase adherence to other risk reduction measures.

Regular physical activity prevents the development of risk factors for cardiovascular disease. When combined with other secondary prevention strategies in cardiac rehabilitation programs it has been shown to reduce cardiovascular mortality.⁴

Pharmacological management

Recommendations for pharmacological management for those at risk or with a past history of cardiovascular disease are similar to those for non-indigenous Australians.¹¹ Aspirin in a dose of 75–150 mg/day reduces the risk of serious vascular events in those who have been diagnosed with cardiovascular disease. For those who are intolerant or allergic to aspirin, clopidogrel is an appropriate alternative.¹¹

In recognition of the risk for Aboriginal and Torres Strait Islander people, cholesterol-lowering drugs are available through the PBS at lower thresholds than for other patients. 'Statin' therapy is recommended for Aboriginal and Torres Strait Islander patients if their low density lipoprotein cholesterol remains above 2.5 mmol/L after lifestyle modification.¹²

Early treatment with antihypertensive medication is recommended for Aboriginal and Torres Strait Islander patients with hypertension.¹³ While the first choice of drug depends on comorbidities and contraindications, in Aboriginal and Torres Strait Islander patients, given the high prevalence of diabetes,

an angiotensin converting enzyme (ACE) inhibitor or an angiotensin II receptor antagonist is recommended.⁴

Polypill formulations including combinations of the recommended pharmaceutical drugs are currently being trialled to evaluate their usefulness as an aid to adherence to the long-term use of multiple drugs. The results of these studies are likely to inform best practice guidelines in the future.

Acute management of symptomatic disease

Health professionals working in Aboriginal and Torres Strait Islander communities need to maintain a high index of suspicion regarding cardiovascular disease. It occurs in people of all ages and in women as well as men. Patients may also overlook or minimise symptoms.

Even where relevant health facilities are available, Aboriginal and Torres Strait Islander patients are less likely to receive cardiovascular procedures including angiography, percutaneous coronary interventions and bypass surgery.⁴ The primary healthcare provider has a key role in recognising the need for procedural intervention and advocating for access to appropriate intervention and to subsequent cardiac rehabilitation.

Primary healthcare approaches

A key to effective primary health care is identification of Aboriginal and Torres Strait Islander patients and awareness of their increased prevalence of cardiovascular disease and related risk factors at a much earlier age. Computerised alerts and practice-based screening can assist in preventive and follow-up activities.

Cultural issues, the history of Aboriginal and Torres Strait Islander people and the overwhelming burden of disease may make lifestyle change and access to appropriate health care a challenge for some Aboriginal and Torres Strait Islander patients. It is important to avoid judgement and blame and to seek to understand the barriers and facilitators for each patient. Cultural safety training may assist healthcare providers in understanding these issues (Table 1). A health professional who understands the barriers for a patient in accessing health care is able to work more effectively with the patient and other health professionals to improve access, rather than assuming that a referral will result in the required health care.

The 'normality' of premature death and multiple morbidity in Aboriginal and Torres Strait Islander communities can result in an acceptance of ill health that at times becomes a barrier to change. If healthcare providers focus on each disease, this can sometimes contribute to the patient's sense that it is 'all too much'. It is critical to work with the patient using an optimistic and holistic approach to identifying changes they are able to make. This is best grounded in a trusting long-term

relationship with a respectful practitioner who is willing to learn from and advocate for their patient.

Community-based approaches

Access to care is a key consideration in the management of cardiovascular disease. Aboriginal and Torres Strait Islander people are disadvantaged by reduced access to medicines, delayed access to acute care facilities and lower rates of intervention once they are admitted to these facilities.⁴

There is a need to address community awareness as well as systemic barriers contributing to premature death from cardiovascular disease. Primary healthcare providers have a key role in improving awareness and access to local services for Aboriginal and Torres Strait Islander people. Community-based programs with a focus on education and empowerment as a means of improving access to integrated health services have been shown to improve health outcomes.¹⁴

Health services controlled by Aboriginal communities also provide expertise and often a range of relevant programs including access to Aboriginal health workers and other allied and specialist healthcare providers. These services may also offer programs addressing psychosocial and other risk factors contributing to the increased burden of cardiovascular disease. Indigenous-specific resources such as information brochures and waiting room posters which address cardiovascular disease and related risk factors may be available from state and territory health departments.

Conclusion

Effective management of cardiovascular disease in Aboriginal and Torres Strait Islander communities has the potential to make a huge difference in health outcomes beyond those of the individual patient. The management tools are the same as, or adaptations of, those used in the general community and are readily accessible to the practitioner with Aboriginal and Torres Strait Islander patients.

Acknowledgement: Dr Alex Brown, Head of the Centre for Indigenous Vascular and Diabetes Research at the Baker IDI, provided valuable editorial input to this paper.

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Conflict of interest: none declared

Self-test questions

The following statements are either true or false (answers on page 95)

1. Lifestyle interventions for cardiovascular disease are ineffective in Aboriginal and Torres Strait Islander people.
2. Screening for cardiovascular risk factors in Aboriginal and Torres Strait Islander people should begin from the age of 18 years.