National Health Priority Areas Report

Cardiovascular health

A report on heart, stroke and vascular disease

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Executive summary

This report on cardiovascular health is one of a series of biennial reports to Australian Health Ministers on each of the five National Health Priority Areas (NHPAs). It is part of a process that involves various levels of government and draws on advice from non-government sources, with the primary goal of reducing the incidence and impact of heart, stroke and vascular disease in Australia.

Overview of heart, stroke and vascular disease in Australia

Heart, stroke and vascular disease comprises all diseases of the heart and blood vessels including coronary heart disease, stroke, heart failure and peripheral vascular disease, that are caused by a damaged blood supply to the heart, brain and legs. These conditions share a number of major risk factors, which include behavioural risk factors such as tobacco smoking, physical inactivity, poor nutrition and high consumption of alcohol, and physiological risk factors such as high blood pressure, elevated blood lipids, overweight and obesity, and diabetes.

Existing prevention strategies and advances in treatment have contributed to a significant decline in heart, stroke and vascular disease in Australia over the past 30 years. The downward trend in death rates is occurring among both males and females, and is more rapid than falls in mortality overall. This continuing decline suggests that the disease is largely preventable, and that significant further gains could be made using existing knowledge.

However, heart, stroke and vascular disease is still the largest cause of premature death and death overall in Australia, accounting for 42 per cent of all deaths in 1996, and its health and economic burden exceeds that of any other disease. It is a leading cause of morbidity, accounting for 8 per cent of all hospital separations each year and 12.5 per cent of all problems managed by general practitioners. The total direct cost of heart, stroke and vascular disease, estimated at $3,719 million, represented 12 per cent of the total health care costs for all diseases in 1993–94.

Of the cardiovascular conditions, coronary heart disease is the major cause of death in those aged less than 70 years, and stroke is one of the principal causes of serious long-term disability. Since these diseases particularly affect older Australians, their public health impact will increase with the progressive ageing of the population. Currently, Australians aged 65 years or more comprise 12 per cent of the population, but account for about two-thirds of cardiovascular health care costs. It is expected that rising levels of treatment with drugs and other medical interventions will place increasing demand on the health care system over the next several decades. At the same time, there needs to be more emphasis on reducing disability and improving quality of life among older Australians.

Comparison with other countries indicates that there is much room for further improvement in the cardiovascular health of Australians. Internationally, Australia ranks ninth lowest out of 29 Organisation for Economic Cooperation and Development (OECD) countries in age-standardised mortality for all heart, stroke and vascular disease. Even so, these rates are still 61 per cent higher than for Hong Kong (among males) and 65 per cent higher than for France (among females). For coronary heart disease, the major cause of death in Australia, the death rates are approximately five times greater than those in Japan and three times those in France.

Certain groups in the population have significantly higher mortality from heart, stroke and vascular disease than other groups. Indigenous Australians die from heart, stroke and vascular disease at nearly twice the rate of the total population. There are differences in the health profiles of Australians living in urban, rural and remote areas, and in those of differing socio-economic status as well. There is a clear need to reduce the impact of heart, stroke and vascular disease on less advantaged groups.

Progress towards national goals and targets

Under the NHPA initiative, progress towards reducing the health problem is measured by time trends in risk factor prevalence, and morbidity and mortality. This report documents results for a set of 22 indicators for cardiovascular health, and eight risk factor indicators that are relevant to other NHPAs as well as to the health of Australians in general.

There have been positive outcomes in a number of areas for which trend data are available. Death rates for coronary heart disease and stroke, in the total population (including rural and remote areas) have decreased. The prevalence rates for tobacco smoking and high blood pressure have continued to fall. However, there has been little change in recreational physical activity levels over the past 20 years. The prevalence of overweight and obesity continues to rise. In addition, it seems unlikely that current efforts in Indigenous populations will allow a real prospect of achieving nationally agreed targets for mortality, morbidity or risk factors.

Approaches to heart, stroke and vascular disease

Prevention

There is immense potential for prevention to improve the cardiovascular health of Australians. A range of evidence suggests that high levels of heart, stroke and vascular disease can be reduced dramatically, given enough time and effort. Approaches to cardiovascular prevention will have benefits that go considerably beyond cardiovascular health, because the behavioural and physiological risk factors for heart, stroke and vascular disease often also play a large role in the development of other common conditions such as cancer and diabetes.

The great challenge for prevention is to turn this theoretical scope into practice, maintaining the favourable trends in reducing some risk factors and reversing worsening trends in others. Another challenge is to attend to the social, economic and environmental conditions that can influence the level of risk factors, as well as other social and psychological aspects that can affect cardiovascular health.

There are a number of Australian examples of the beginnings of success in health promotion, such as the reduction in tobacco smoking, which have been due to a combination of legislative, educational and economic approaches. However, there are many opportunities to decrease smoking further and to promote physical activity, good nutrition, the reduction of overweight and obesity, and successful management of risk factors. While the health sector should take the lead in preventive actions, it will ensure more lasting effects if it forms long-term partnerships and alliances with other sectors.

Work is in progress at the Commonwealth, State and Territory and regional levels to establish such partnerships, improve the infrastructure for primary prevention and coordinate health promotion activity across major health issues.

Management

The management of patients with heart, stroke and vascular disease aims to reduce mortality and morbidity and improve quality of life. To reduce mortality, strategies should relieve symptoms, reduce complications and identify and treat patients at high risk of further events. Emergency treatment is critical for those suffering acute events such as heart attack or stroke. For those with more stable symptoms, there is a wide range of tests to confirm the diagnosis, guide management and assess prognosis. Options for treatment include drug therapy and a range of other interventions.

Long-term management of heart, stroke and vascular disease involves secondary prevention to modify risk factors and continuing medical treatment to reduce risk factor levels and control symptoms. Rehabilitation is an important part of the long-term management of coronary heart disease and stroke.

Despite continuing advances in the management of heart, stroke and vascular disease, in many areas there is a substantial gap between accepted best practice and usual practice, as reflected in the following points.

- Too few eligible patients with heart attack, unstable angina or stroke receive appropriate drug therapy, despite its demonstrated effectiveness in randomised controlled trials.
- There are currently insufficient stroke units nationwide, and access to a stroke unit is not available to all eligible patients.
- There is wide variation in use of, and techniques employed with, interventions such as cardiac surgery and coronary angioplasty in Australia, with limited access to facilities and specialists causing long waiting times in some States.
- Comprehensive specialist management programs for heart failure have been shown to decrease costly hospital re-admissions, but have been set up in only a few centres. Current funding mechanisms do not facilitate coordinated 'shared' care of patients with heart failure or severe peripheral vascular disease.
- Although cardiac rehabilitation has been shown to have both short and long-term benefits, rates of participation in cardiac rehabilitation programs are less than desirable. There is insufficient current capacity to treat all eligible patients, routine referral is not a standard practice and a proportion of patients who are referred do not attend.
- Stroke rehabilitation services vary greatly between geographical areas, with clustering in some areas and few or no services available in others. While a range of factors improve outcomes of stroke rehabilitation, there is no standardised approach to identifying people who will benefit from rehabilitation.

The development and endorsement of guidelines to encourage evidence-based practice are being continued by the Commonwealth, through the National Health and Medical Research Council, with the involvement of non-government organisations and specialist colleges. It is essential to have an appropriate infrastructure for the regular review, dissemination and implementation of clinical practice guidelines. At present, little is known about the impact of guidelines on use rates, health outcomes or costs.

Research

Both the Commonwealth Government and State/Territory Governments and non-government organisations contribute to research funding for heart, stroke and vascular disease in Australia. However, the major organisations that support grants for cardiovascular research can now provide funding for only about 25 per cent of applications despite ranking most of the projects as worthy of funding. Recent experiences with private industry partnerships highlight opportunities for substantial industry funding from multinational companies to support clinical research.

Special populations

Cardiovascular mortality or disease burdens are higher or more problematic among Indigenous Australians, in remote areas of the country, and among socio-economically disadvantaged groups. There is considerable overlap between these groups and they share some factors that contribute to their greater risk, such as higher rates of smoking and some other risk factors and reduced access to prevention programs and treatment services. For these populations, it is particularly important to tackle the underlying causes of inequalities in health, through intersectoral action and changes in public policy.

Indigenous Australians

Despite the higher levels of mortality and morbidity in the Indigenous population, programs for prevention are fragmented and there are no clearly identified sources of funding for such programs at an appropriate scale.

While there will be gains from improved access to treatment, there is even greater potential from improved primary and secondary prevention. These services should not be seen as competitive and need to be adequately funded under a balanced, comprehensive and coordinated approach.

Rheumatic heart disease represents a significant and entirely preventable cause of morbidity and mortality among Indigenous Australians. Organised primary health care is essential for the control of rheumatic fever.

Remote populations

Access to health services is a problem for most people living in remote areas. Distance is a major factor, with poor roads and unreliable communication systems contributing to the isolation.

The difficulties of recruiting and retaining health professionals in remote areas are generally understood. Professional and geographical isolation, continuing education and overwork, accommodation and transport all have an impact on staff and ultimately on delivery of services.

As well as addressing service delivery issues, there is a need to improve supplies of affordable fresh fruit and vegetables in remote areas. This may require subsidies, reduction of transport costs, grants for upgrade of storage facilities and support for production of locally grown produce.

Socio-economically disadvantaged people

Health inequalities are caused by the interplay of risk factors and social and economic circumstances. Policy initiatives to address health inequalities require coordination across sectors of government, and should aim to:

- improve living and working conditions;
- reduce poverty and unemployment; and
- influence people's health-related attitudes and behaviours, through sensitive interventions that combine education and support with action at other policy levels, and improve access to health and social services according to need.

Monitoring and information management

Monitoring disease trends and differentials and applying technology to improve information management will help to address a number of issues raised in this report.

The National Centre for Monitoring Cardiovascular Disease is developing an integrated information system that will cover major aspects of prevention, management and mortality for individual heart, stroke and vascular diseases, as well as monitoring differences between population groups. There is an urgent need for a national risk factor prevalence survey, which includes taking a blood sample from participants.

More generally, a range of evolving technologies should be explored for their usefulness in improving information management, in the following areas:

- unique patient identifiers to facilitate record linkage;
- further evaluation of portable medical records (health care cards);
- support for increasing the use of computerised clinical records in general practice;
- further development of telemedicine and telehealth, focused on areas of clinical need; and
- use of information technology to facilitate education of health professionals working in remote regions.

Opportunities and future directions

Given the size of the burden it imposes and the extent of knowledge on which to base further endeavours, there is great potential to improve the health of all Australians through changes in cardiovascular health. It is likely that interventions in the cardiovascular area will also have an impact on other major public health problems.

Achieving this potential improvement in cardiovascular health will require new approaches and sometimes new systems to support them. There is still a great challenge to achieve adequate funding, integration of effort and long-term strategic planning. This action will involve governments at all levels, the private sector, and non-government and community organisations.

Governments have a number of broad levers at their disposal to foster better programs and practice and to discourage inappropriate practice. A number of these levers could be employed within the following priority areas for cardiovascular health.

- Establishing a secure long-term **national focus on heart, stroke and vascular disease** from which policies and activities can emanate. National approaches exist for other NHPAs, and major achievements have occurred with other national programs such as HIV control and screening for cervical cancer. A similar multi-disciplinary approach should be established to help coordinate the prevention and guide the management of heart, stroke and vascular disease. There should also be provision for regular review of progress and future opportunities.
- **Coordinating primary prevention** across NHPAs. The primary prevention messages relating to health and lifestyle across the major health issues are virtually the same. National action in these areas will be most effective if there is coordination across different program areas, consistent health messages and adequate funding. The National Public Health Partnership and preliminary work on a National Primary Prevention Strategy should contribute much to this area. Currently, there is no funding infrastructure in place to address coordination issues. However, a number of innovative proposals could be further explored which could draw together processes and principles established under existing arrangements.
- Establishing a **national mechanism for development, review and implementation of best practice guidelines**. The Commonwealth is likely to maintain overall responsibility for developing clinical practice guidelines and also identifying areas of inappropriate practice. However, it should be recognised that many of the issues central to implementing change in practice are service design issues and require the involvement of State and local government and non-government groups to ensure high uptake. A nationally coordinated process to ensure regularly updated, systematic reviews and guidelines are available should be linked to local planning and quality improvement processes for implementation.
- Ensuring that any national focus on heart, stroke and vascular disease includes a **specific focus on stroke**. The area of stroke has received less emphasis and funding than coronary heart disease. Any national program for coordinating the prevention and management of heart, stroke and vascular disease should include a specific focus on stroke, to address additional stroke-related issues across the continuum of care.

- Tackling the underlying causes of **inequalities in health among populations** with worse cardiovascular health than the general population, particularly the Indigenous population, but also remote area and socio-economically disadvantaged groups. A key aim of public policy in the next millennium must be to design cross-sectoral interventions that improve the health of these populations and reduce gaps in health status. Government policy initiatives at all levels need to be examined for their likely impact on the health of disadvantaged populations.
- **Continuing and expanding the activities of the National Centre for Monitoring Cardiovascular Disease**. Regular collections of survey data on risk factors, including lifestyle and biomedical risk factors of public health significance, are needed to help direct and evaluate preventive activities.

Introduction

Background

This report on cardiovascular health is one of a series of biennial reports to Health Ministers on each of the five National Health Priority Areas (NHPAs) — cancer control, injury prevention and control, cardiovascular health, diabetes mellitus and mental health. This report is being released concurrently with reports on diabetes mellitus and mental health. Reports on cancer control and injury prevention and control were released in mid-1998 (DHFS & AIHW 1998a; 1998b).

Although each report covers a group of discrete diseases or conditions and the recommended strategies for action are often specific in nature, the NHPA initiative recognises the role played by broader population health initiatives in realising improvements in the health status of Australians. Public health strategies and programs that target major risk factors such as smoking may benefit several priority areas, for example cardiovascular health and cancer.

This report on cardiovascular health is part of an encompassing NHPA process that involves various levels of government and draws on expert advice from non-government organisations, with this report's primary goal being to reduce the impact of heart, stroke and vascular disease on the Australian population.

The National Health Priority Areas initiative

Current international comparisons of life expectancy indicate that the health of Australians is among the best in the world and should continue to improve with continued concerted efforts across the nation. The NHPA initiative emphasises collaborative action between the Commonwealth Government and State and Territory Governments, the National Health and Medical Research Council (NHMRC), the Australian Institute of Health and Welfare (AIHW), non-government organisations, appropriate experts, clinicians and consumers. It recognises that specific strategies for reducing the burden of illness should be holistic, encompassing the continuum of care from prevention through treatment and management to rehabilitation, and should be underpinned by evidence based on appropriate research.

By targeting specific areas that impose high social and financial costs on Australian society, collaborative action can achieve significant and cost-effective improvements in the health of Australians. The diseases and conditions targeted through the NHPA process were chosen because they are areas where significant gains in the health of Australians can be achieved.

From National Health Goals and Targets to National Health Priority Areas

The World Health Organization (WHO) published the *Global Strategy for Health for All by the Year 2000* in 1981 (WHO 1981). In response to this charter, the *Health for All Australians* report was developed and represented Australia's 'first national attempt to compile goals and targets for improving health and reducing inequalities in health status among population groups' (Health Targets and Implementation Committee 1988). The 20 goals and 65 targets focused on population groups, major causes of sickness and death, and risk factors.

A revised set of targets was published in the *Goals and Targets for Australia's Health in the Year 2000 and Beyond* report (Nutbeam et al 1993). Goals and targets were established in four main areas — reductions in mortality and morbidity;

reductions in health risk factors; improvements in health literacy; and the creation of health-supportive environments. However, this framework was not implemented widely.

The *Better Health Outcomes for Australians* (DHFS 1994a) refined the National Health Goals and Targets program. The focus of goals and targets was shifted to four major areas for action — cancer control, injury prevention and control, cardiovascular health, and mental health. As a corollary to this, Australian Health Ministers also adopted a national health policy which committed the Commonwealth Government and State and Territory Governments to develop health goals and targets in the priority health areas and re-orient the process towards population health.

In 1995, it was recognised that there were a number of fundamental shortcomings of the National Health Goals and Targets process, principally that there were too many indicators (over 140 across the four health priority areas), there was a lack of emphasis on treatment and ongoing management of the disease/condition, and there was no national reporting requirement. In implementing a goals and targets approach, emphasis was placed on measures of health status and reduction of risk factors. However, no nationally agreed strategies were developed to promote the change required to reach the targets set.

This led to the establishment of the current NHPA initiative. Health Ministers agreed at their meeting in July 1996 that a national report on each priority area be prepared every two years, to give an overview of the impact on the health of Australians in these areas, allowing time for major changes in health indicator status to become apparent. These reports would include a statistical analysis of surveillance data and trends for a set of agreed national indicators. It was also agreed that diabetes mellitus should become the fifth NHPA.

The *First Report on National Health Priority Areas 1996* (AIHW & DHFS 1997), a consolidated report on progress in all the priority areas, was presented to Health Ministers in August 1997.

Development of the report

The National Health Priority Committee (NHPC) appointed an Expert Advisory Group to oversee the development of the report, with the assistance of five Working Groups in the areas of:

- cardiac and vascular disease;
- stroke;
- primary prevention;
- Indigenous and remote populations; and
- information management.

The report was developed in consultation with the Commonwealth Government and State and Territory Governments, with the AIHW through its National Centre for Monitoring Cardiovascular Disease and NHPA Monitoring Team, and with a wide range of those active in the field of cardiovascular health, including consumer groups, peak community groups and health care professionals.

Purpose and structure of the report

This report on cardiovascular health builds on the *First Report on National Health Priority Areas 1996* (AIHW & DHFS 1997). The *First Report* provided baseline data and underlying trends in the five NHPAs. This report updates these data and trends as well as reporting on progress and identifying opportunities for further improving the cardiovascular health of Australians.

A concern with the cardiovascular health sections of the *Better Health Outcomes* report (DHFS 1994a) and the *First Report* was a focus on coronary heart disease alone. This report considers coronary heart disease, stroke and vascular disease, and also highlights the need to improve the cardiovascular health of populations at higher risk.

Chapter 1 provides an overview of heart, stroke and vascular disease in Australia, including the current extent and cost of the problem, the main conditions within heart, stroke and vascular disease, the major risk factors for heart, stroke and vascular disease, and long-term trends in heart, stroke and vascular disease over time.

Chapter 2 summarises the current status of NHPA cardiovascular indicators for which data were available for reporting in 1998, including newly developed indicators on stroke.

Chapter 3 discusses primary prevention in Australia and examines the inter-relationships between the many interventions that constitute the primary prevention of heart, stroke and vascular disease. The roles of various groups are considered and examples of primary prevention activities currently in progress around Australia are described.

Chapter 4 comprises discussion of the diagnosis, treatment and management of the major forms of heart, stroke and vascular disease, secondary prevention and rehabilitation, and examples of treatment and rehabilitation programs currently in progress in Australia.

Chapter 5 illustrates the potential for further reductions in heart, stroke and vascular disease if effective preventive and treatment strategies are successfully applied.

Chapter 6 looks at issues in cardiovascular health in the Indigenous population, in Australians living in remote areas, and in those who are socio-economically disadvantaged. These populations should be particular targets for activity.

Activities of the National Centre for Monitoring Cardiovascular Disease, aspects of information management that are likely to affect future progress and the funding and scope of research into heart, stroke and vascular disease in Australia are discussed in Chapter 7.

The report concludes with a consideration of possible strategies for improving cardiovascular health in the Australian context, and proposes a way forward that aims to build on Australia's record in the areas of prevention and management (Chapter 8).