# 1 Introduction

The twentieth century has seen great changes in the health of Australians. There has been a 20-year gain in life expectancy at birth, and a dramatic fall in the toll of infectious disease, offset to an extent by an increase in chronic diseases associated with age. Although most Australians enjoy good health today, some groups in the population continue to suffer poor health, in particular Aboriginal and Torres Strait Islander peoples.

This report is the seventh in the series of biennial reports on health in Australia produced by the Australian Institute of Health and Welfare (AIHW). It is broadly structured along the lines of the conceptual framework for health shown in Figure 1.1. This shows health and wellbeing as the outcome of many causes modified by intervention activities that are supported by human and material resources.

This first chapter discusses what health is, what determines it, and the need for good information on the causes and patterns of health and illness in the community. It also includes an overview of the Australian health system. Chapter 2 reports on the health status of Australians and describes the major diseases and conditions that have an impact on their health. It includes results from the Institute's Australian Burden of Disease and Injury Study conducted in 1999. Chapter 3 focuses on the environmental and individual factors that determine health. Chapter 4 discusses the health of particular population groups. Chapter 5 examines the cost of health services, employment in the health industry and the provision and use of health services. Chapter 6 looks at strategies for improving the health of Australians and performance in health service delivery. Chapter 7 outlines requirements for health information for a better understanding of current and emerging health issues. Chapter 8 uses mortality data to document the changes in the disease profile of Australians during the twentieth century.

A wide range of statistical tables is included after chapter 8. These tables include data on population and fertility as well as health-related information. They include indicators that have been agreed for reporting under the National Health Priority Areas initiative of governments, covering cardiovascular health, cancer control, injury prevention and control, mental health, diabetes mellitus and asthma. Many of the tables provide time series information, as well as comparing Australia with other countries. Tables have also been included for some of the figures in the report, for the benefit of readers who may wish to examine the data in more detail.

**Box 1.1: Australia at a glance**

- *19 million people, including about 400,000 Indigenous persons (2% of total)*
- *Average life expectancy at birth 81 years for women, 76 for men*
- *Fertility rate below replacement level but at higher end for developed countries*
- *50,000 years of Aboriginal settlement, 212 of European and other*
- *6th largest land mass in world, almost same as USA (excluding Alaska)*
- *Lowest population density among developed countries – 2 persons per $km^2$*
- *Climate varied but mainly continental and dry*
- *Highly urbanised, most people living in south-east seaboard region*
- *Many cultural backgrounds, 23% of residents born overseas*
- *Christianity main religion (71%), no religion 17%, Buddhism 1.1%, Islam 1.1%*
- *76% of 15–19-year-olds are at school or other educational institution*
- *Per capita income high, gross domestic product (GDP) 8th among 17 OECD countries*
- *Manufacturing main contributor to GDP (13.2%)*
- *Unemployment under 7% in late 1999*
- *Health expenditure 8.3% of GDP in 1997–98*

# 1.1 Health and its determinants

## What is health?

Health has several important aspects, and our notions of it continue to develop. This means it cannot be described simply; it needs a range of measures, and it is still difficult to measure fully.

*The Macquarie Dictionary* describes health as 'the general condition of the body or mind with reference to soundness and vigour' (Macquarie 1997). In 1946 the World Health Organization (WHO) defined health as 'a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity' (WHO 1946).

The WHO description applies to an ideal standard of health and can be seen as a goal as much as a definition. However, it remains widely used and along with the Macquarie version it helps to convey the ideas that:

- health is an important part of wellbeing, of how people feel and function, and also contributes to social and economic wellbeing;
- health is not simply the absence of illness or injury and there are degrees of good health as well as of bad health;

- for example, the better the health, the better a person’s energy, reserves, resilience and capacity to stay that way for a longer life; also, many damaging processes in the body occur long before symptoms arise; and
- health should be seen in a broad social context.

In short, healthy people feel and function well in body and mind and are in condition to keep doing so for as long as possible.

Information on health must try to take account of the many factors that improve or reduce health and wellbeing, the processes and features of disease, and the management of illness and disability. Concepts and measures of health vary with the interests of those using them, such as researchers, clinical health professionals, administrators, social scientists, health economists and policy makers. Biomedical concepts are concerned with the biological processes of health and ill health. Clinical and epidemiological approaches consider mainly causes, disease, disability, death, life expectancy and years of healthy life. The social sciences focus more on social, emotional and material wellbeing as well as the quality of life. Health economists and policy makers are interested in information about the efficient and cost-effective use of limited resources as well as in health outcomes.

Some of these concepts are difficult to measure because they are hard to define clearly or because the measurement is expensive or technically difficult. For these reasons, much of this report relies on traditional or clinical measures such as death, disease, disability, certain risk factors or life expectancy. These measures either are clear-cut or have been developed over many years, and some have arisen from the daily activities of the health system. Concepts such as ‘wellbeing’ and ‘quality of life’ are much more challenging.

## What determines and influences health?

Many things determine and influence health. Ideas about the causes of good health and disease have developed significantly over the past two centuries. Although ill health was linked to industrial and urban living in the nineteenth century, the single-cause germ theory of disease came to dominate health sciences well into the twentieth century. However, in the twentieth century the rise of chronic diseases, such as cardiovascular disease and several cancers, led to a wider ‘multicausal’ view. Research on populations showed the importance of ‘lifestyle’ factors such as diet, physical activity and cigarette smoking. Disease and health came to be seen as the result of the interaction of human biology, lifestyle and environmental factors, modified by health care (Lalonde 1974). As a further step, there has been increasing attention on the health of groups, particularly inequalities between groups. This in turn has been linked to the broad social and economic influences on health and lifestyle.

Figure 1.1 (page 4) shows some current concepts in simplified form. Health, disease and disability can be seen as the result of a complex interplay of many factors described as individual or environmental. These causes and effects can be modified to various degrees by prevention and health promotion or by treatment and rehabilitation. Such interventions are supported by human and material resources, including essential information via research, monitoring and evaluation.

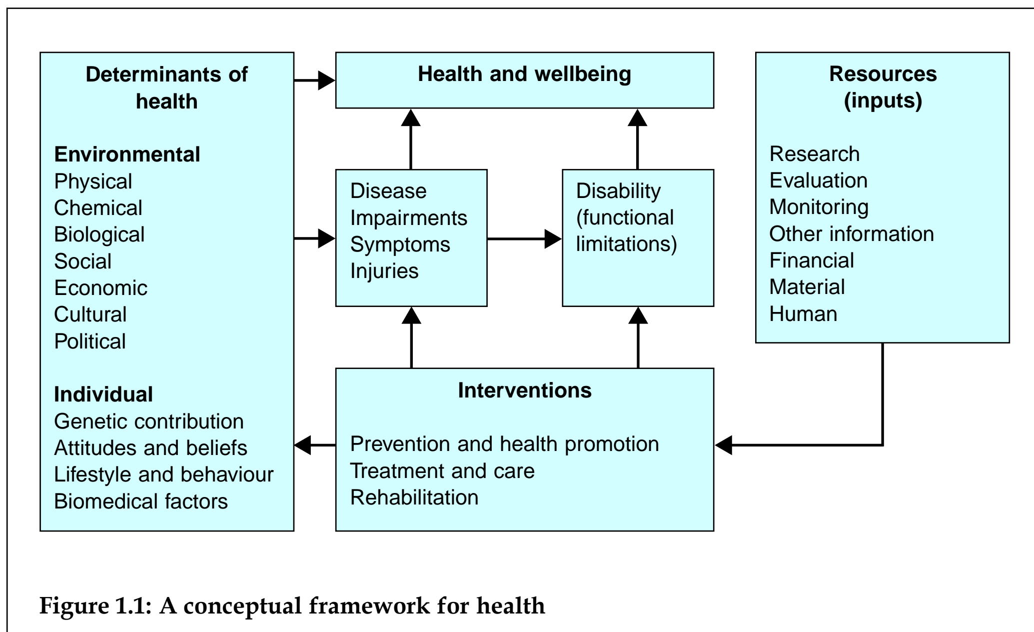


**Figure 1.1: A conceptual framework for health**

'Individual' factors shown in the box at the left of Figure 1.1 are those that can be measured in an individual—although they can also be applied to groups and often, as previously mentioned, reflect environmental influences. The environmental factors can be physical, as in landscape and climate; biological, as in vegetation, the food supply, infectious agents and other animal life; and socioeconomic, as in politics, culture, standards of living and the economy. Environmental factors in turn overlap one another in many ways and are also influenced by the actions of individuals.

The nature and scale of all these influences carry important implications for what and how much can be done to improve health. Broad socioeconomic influences can affect all people to some extent, but they often act to the further disadvantage of groups with lower education and income. The effects include people's health risks, knowledge, attitudes, opportunities and behaviour. In more detail they include:

- the varying exposure of individuals to risks;
- the understanding and attitudes of individuals in relation to prevention, and to ill health and its treatment;
- the willingness and ability of those individuals to look after their own health and also to obtain and follow professional help when needed; and
- the quality of that professional help and the ease of access to it.

These features will also vary according to factors such as age, sex, occupation and location. Other factors include marital status and social support or isolation. Age and sex are the largest single determinants of health but all factors have social and psychological aspects.

## 1.2 Implications for improving health

Despite Australia's generally good health and major improvements over the twentieth century, there is still great scope for further gains. This can be seen from the previous discussion and from information in later chapters of this book:

- large and rapid improvements have already been shown to occur and in some areas seem likely to continue—for example, falling death rates from heart attack and stroke, two of the greatest killers;
- awareness of the numerous biological, behavioural, social and economic factors that increase the risk of ill health that can be prevented or modified, and that are presently at high levels among many individuals and groups;
- the example of some countries that much lower levels of some diseases are possible, suggesting what Australia can aim to achieve, for example in the area of death rates from heart attack and several cancers;
- the relatively poor health (and therefore scope to improve) of those at a socio-economic disadvantage, most notably Aboriginal and Torres Strait Islander peoples;
- growing recognition of the contribution to the burden of disease of morbidity as well as mortality, and the identification of major sources of morbidity such as depression; and
- constant advances in health research and technology, producing better diagnosis and treatment.

Health interventions can occur at many levels. These can range from clinical and preventive attention to individuals through to efforts to improve the physical, social and economic environment for special groups or the community as a whole. As well as seeking to reduce people's exposure to risks, some strategies aim to help individuals develop personal skills to exercise more control over their own health and environments and to make healthy choices.

Given the great range of influences on health, many major improvements require a strong partnership between public health and clinical care and also that the health sector work with other sectors to make the best use of limited resources. This further requires that other sectors take into account the possible health impact of their decisions. Improvements in health technology and an ageing and more health-conscious population have also led to growing demands on health and treatment services. Expectations are also increasing in other areas of people's lives, so there are competing interests both within the health sector and between it and other sectors.

Much of this further gain can be achieved under present social and economic conditions. Improvements have occurred among all the major Australian socioeconomic groups, even though there are continuing large inequalities between them in their levels of health. However, to achieve the full scope of improvement also requires significant social changes such as reducing educational and economic disadvantage. These changes can be seen as one of the great aims of society for reasons that include not only health (in its narrower sense), but also other benefits. They are already the subject of much action; they clearly extend far wider than the activities of the health sector and they require major and sustained effort from many areas of society.

The information on the great potential for improvement and how it might be achieved gives scope for a strategic approach in Australia towards sustainable gains. However, the major issues involved always require value judgments, and often include political processes because of competing interests. Along with limited resources, the situation involves choices, priority setting and trade-offs between the health sector and other sectors, between prevention and treatment services, and between the short term and longer term.

## 1.3 The role of health information

Valid and reliable health information is fundamental to developing effective health policies and programs, for general health-system development and to further the broad research and development effort (WHO 1996). The information needs to cover the patterns and trends of health and illness in Australia, the determinants of health and ill health, population health activities and clinical medical care (including primary health care). It is also required for a range of population groups.

Even where health care is delivered by private rather than by government providers, there are often public policy issues to do with funding (e.g. Medicare) or with managing the relationship between care systems. Health care management uses information about patients and their diagnoses or problems. It is also concerned with the nature of services provided and their cost, quality and effectiveness. Employment and training information supports health labour force planning. There is increasing focus on the interaction of care settings, particularly where different services are accessed by the same patient as part of a complete episode of care. The latter information is less well developed at present.

In the area of public health, information is required for:

- monitoring trends in the health and wellbeing of the community;
- similarly monitoring the determinants of that health and wellbeing;
- helping to determine priorities for public health interventions;
- identifying emerging issues that may require interventions;
- contributing to the design (or redesign) and management of interventions; and
- monitoring the effects of public health interventions.

Analysing disease prevalence and other data to estimate the burden of disease (reported in this edition of *Australia's Health* for the first time) and cost-effectiveness of interventions helps to shape decisions about priorities for interventions and for research, as does information about the equity of distribution of health and access to health services.

Increasing attention is being given to structuring and coordinating health information to support decision making. The National Health Information Agreement, made in 1993 between Commonwealth, State and Territory health agencies, the Australian Bureau of Statistics and the Australian Institute of Health and Welfare, now includes the Health

Insurance Commission. A major product of this agreement is the *National Health Data Dictionary* (AIHW 1999) which is updated annually to provide standards for national health information and to be a guide for health data gathering generally.

The agreement also provides mechanisms for extending the range of information available into areas of high priority. In this regard *The Aboriginal and Torres Strait Islander Health Information Plan…This Time Let's Make It Happen* (AHMAC & AIHW 1998) is an important example of a commitment to use health information to focus attention on important health needs.

The role of health information does not stop at informing decision makers in policy, administrative or service provider roles. Regular wide dissemination of new health information enables people to be informed about the issues behind public debate about health and health services and to make judgments about health and their own wellbeing.

## 1.4 The Australian health system

Individual Australians and families and health care professionals are partners in seeking good health and high-quality treatment. People's decisions about lifestyle, self-care, and seeking and acting on professional help, and their participation in the development of public policy at many levels, all contribute to shaping the Australian health system. Increasingly, detailed information is available to and accessed by individuals, especially via the Internet.

The Australian health system is complex, with many types and providers of services and a range of funding and regulatory mechanisms. Those who provide services include medical practitioners, other health professionals, hospitals, and other government and non-government agencies. Funding is provided by the Commonwealth (Federal) Government, State and Territory Governments, health insurers, individual Australians and a range of other sources.

The Commonwealth's funding includes two national subsidy schemes, Medicare and the Pharmaceutical Benefits Scheme. These schemes cover all Australians and subsidise their payments for medical services and for a high proportion of prescription medications bought from pharmacies. The Commonwealth and State Governments also jointly fund public hospital services so they are provided free of charge to patients. Between them, these three funding provisions aim to give all Australians, regardless of their personal circumstances, access to adequate health care at an affordable cost or no cost. These arrangements have become a central feature of Australia's health system during the last 25 years.

Many patients' first contact with the health system is through a general medical practitioner (GP). Patients can choose their own GP and are reimbursed for all or part of the GP's fee by Medicare, depending on the GP's billing arrangements. *Australia's Health* now reports on reasons for the attendances and actions arising from them. For specialised care, patients can be referred to specialist medical practitioners, other health professionals, hospitals or community-based healthcare organisations. These community-

based services, some of which can also be accessed directly by patients, provide mental health, family planning and other specialised care and treatment, usually funded through Medicare or other government programs.

Australians also visit dentists and other private sector health professionals of their choice. Charges are met by the patients themselves, or with support of private health insurance, which Australians may purchase for these or hospital services.

Patients can access public hospitals through emergency departments, where they may present on their own initiative, or via the ambulance services, or after referral from a medical practitioner. Admitted patients are charged nothing for their treatment, food or accommodation, unless they choose private treatment. Emergency department and outpatient services are free.

Australians may also choose to be 'private patients' in hospital, if they use a private hospital, or choose to be treated as a private patient in a public hospital. Private patients can choose their own doctor, but the hospital's services, which include accommodation and food, must be paid for by the patient, with or without the support of private health insurance, or through other arrangements such as compensation. Medicare subsidises the fees charged by doctors for services provided to private patients in hospitals, and private health insurance funds also contribute towards medical fees for insured patients. No-gap or known-gap arrangements are increasingly being agreed on between hospitals and insurers.

The health service system is regulated in various ways. Private hospitals are licensed by State and Territory Governments. Medical practitioners and other health professionals are registered for practice in each State and Territory. The Commonwealth's regulatory roles include overseeing the safety and quality of pharmaceutical and therapeutic goods and appliances, and regulating the private health insurance industry.

In addition to the services outlined above, the Commonwealth, State and Territory Governments and local governments provide public health services, community health services and ambulance services. Public health services include activities to ensure food quality, immunisation services and other communicable disease control, public health education campaigns, environmental monitoring and control, and screening programs for diseases such as breast cancer.

Essential support to the health service system is given by many other agencies. Research and statistical agencies provide the information needed for prevention, detection, diagnosis, treatment, care and associated policy. Consumer and advocacy groups contribute to public discussion and policy. Professional associations for medical practitioners and other health professionals help set professional standards and clinical guidelines. Universities and hospitals undertake training of undergraduate and postgraduate health professionals. Voluntary agencies contribute in various ways, including raising funds for research, running education and health promotion programs, and coordinating voluntary care.

Although they are not seen as part of the health system, many other government and non-government organisations play a role because of their influence on health. Departments of transport and the environment, the media and the food industry are just a few examples.

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