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Health and health care are important to Australians. They are frequent topics in the media, largely because they reflect our values and expectations and because health affects all of us in our daily lives. The health of Australia's people also has important implications for our national wellbeing and prosperity.

Australia's health 2008 is the eleventh biennial report on the health of Australians. It brings together the latest available national statistics compiled by the Australian Institute of Health and Welfare (AIHW) as a report card to the nation. It is intended to inform discussion and decisions about health and the health system. Target readers of this report include interested members of the public, clinicians, researchers, students, policy makers and government.

This 2008 edition charts the progress of health in the past two decades or more. It describes the health status of Australians as a population; disparities between particular groups of Australians; factors that influence health; specific diseases; health services; expenditure and the workforce; and indicators used to monitor these. Many of the topics covered in this report are more fully treated in separate AIHW publications, all of which are freely available on the AIHW website.

This report contains many important good-news stories such as declining rates of smoking, lower death rates for heart disease and decreasing use of most illicit drugs. But it also describes issues of concern such as increasing levels of diabetes and obesity and the poorer health of Australia's Indigenous peoples and those in lower socioeconomic areas.

The statistics draw on many data sources. Each has strengths and limitations that determine how it can be used and what inferences can be made from the results. The AIHW takes great care to ensure that data used here are correct and that the conclusions drawn are robust. Throughout the report we introduce major data sources by using a box to highlight some of the issues that need to be considered when interpreting results from them.

Box 1.1: Why some statistics appear old

Although this report is issued in 2008, nearly all of the statistics refer to 2006 or earlier. Why is this? First, some data, such as population-based surveys, are collected every 3 or 5 years or even less often. Second, whether collected recently or not, data can often take a year or more before they are fully processed and released to the AIHW. Finally, the AIHW in turn often needs some months to ensure the full quality and accuracy of statistics and their analysis before they are released.

This first chapter begins by discussing what health is and presents a brief picture of Australia today. It shows Australia's international standing in health and its comparative progress over recent decades. It then goes on to describe factors that influence health and the Australian health system. How the performance of the health system is measured is described next, along with recent developments in the national health information arena. It concludes by summarising the structure of the rest of the report and highlights what is different about this edition.

1.1 Understanding health

What is health?

Health is a concept that is often debated and continues to evolve. One view emphasises the presence or absence of disease and of medically measured risk factors. A more widely accepted view includes a wide range of social and economic risk and protective factors along with various aspects of wellbeing. Taking health at its simplest, the World Health Organization (WHO) defines it as a 'state of complete physical, mental and social wellbeing and not merely the absence of disease and infirmity' (WHO 1946). This definition has long encouraged health researchers to broaden their thinking and research to include a more holistic view of health. In this report we intend to convey the ideas that: health is an important part of wellbeing, of how people feel and function, and 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; and health should be seen in a broad social context.

The development of health statistics is influenced by this evolution in thinking. Although the basis of most health statistics is still about ill-health (mortality and diseases), there are now serious efforts in Australia and many other countries to develop statistics on the broader aspects of health. The International Classification of Diseases and Related Health Problems (now in its 10th revision), which is mainly used to measure ill health, is now complemented by the International Classification of Functioning, Disability and Health (adopted in 2001) that provides a tool for measuring levels of functioning and health. Along with these advances, it is now accepted that physical, mental and social wellbeing are inextricably linked to our environment and social values.

A framework

This book is based on the conceptual framework presented in Figure 1.1, which shows that levels of health and wellbeing, including diseases and disability, are influenced by a complex interplay between health determinants, interventions and resources.

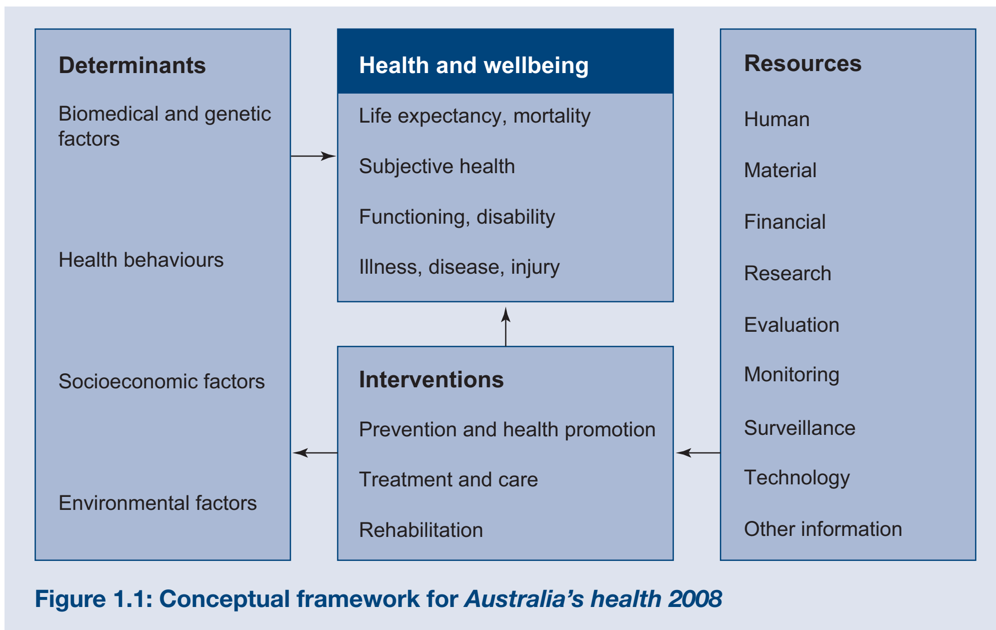


Figure 1.1: Conceptual framework for *Australia's health 2008*

Determinants such as behaviours and genetic makeup influence our chance of being healthy or unhealthy. Based on today's wisdom, some of these determinants lend themselves more readily to modification, such as individuals choosing not to smoke or governments making the roads safe. Others, such as our genetic structure, are not treated as modifiable, at least not at the population level. Interventions such as treatment or rehabilitation depend on the workforce and technology that enable them to be delivered.

Where possible, these aspects of health need to be considered in terms of the features and needs of individuals, population groups and the entire population. Finally, Australia's health can be viewed as a reflection of the performance of both the health system and of society as a whole.

1.2 Australia at a glance

Australia is a vast continent with a relatively small population: 21 million people as at June 2007. The population is highly urbanised, with over 70% living in metropolitan areas and mostly near the coastline.

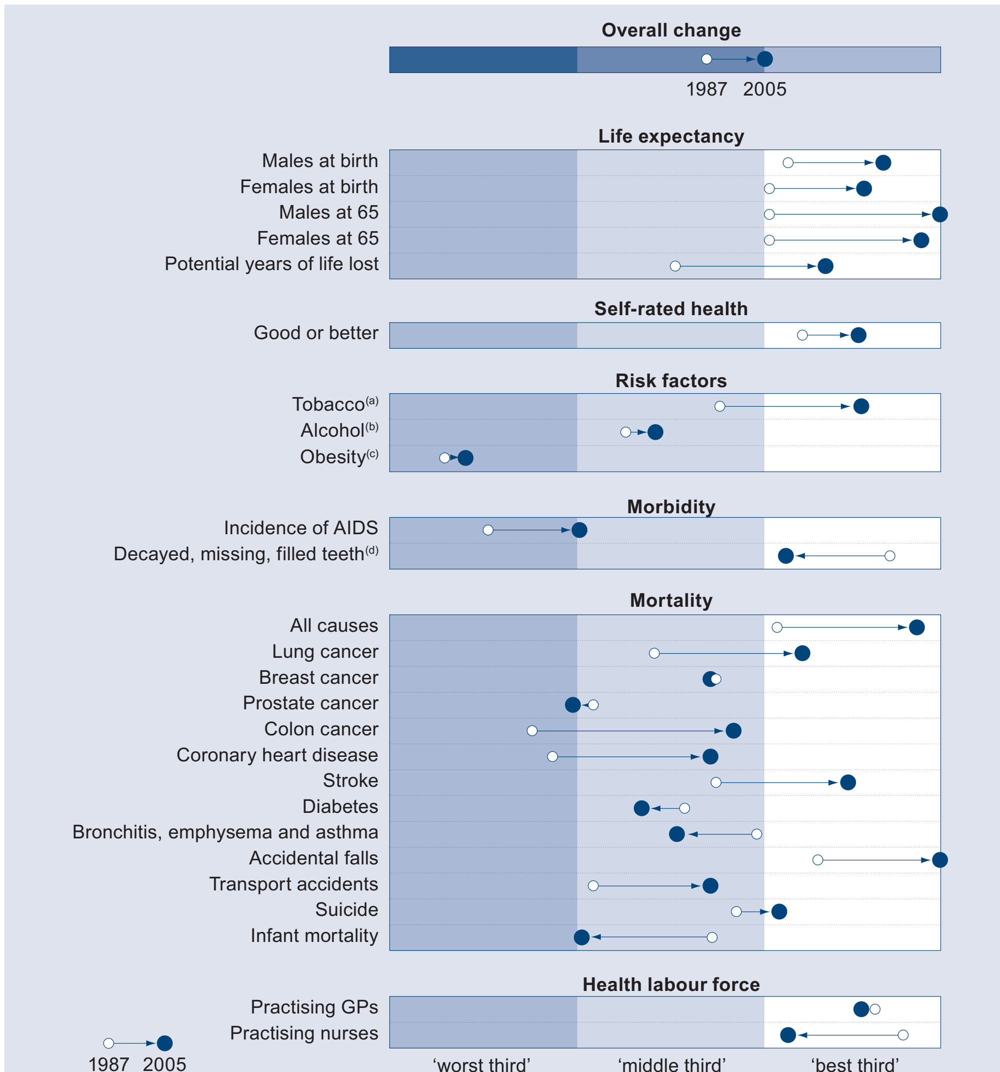
Australia is a nation made up mainly of migrants or their descendants. The proportion of Indigenous people identified in the 2006 Population Census was 2.5%. The countries of origin of Australia's population are diverse; migrants since World War II have come from all regions of the world. The population is also ageing. The median age (the age at which half the population is older and half is younger) of Australians has increased by more than 5 years over the last two decades from 31 years in 1987 to almost 37 years in 2007 (ABS 2007a).

Box 1.2: Australia at a glance

- Population of 21 million at June 2007
- In 2006 there were 517,200 Indigenous Australians (2.5% of the total population)
- Median age of Australians in 2007 was 36.8 years
- Most people living in Australia are born here, 76%. Of those born overseas, about 23% were born in the United Kingdom, 10% in New Zealand, 4% each in China and Vietnam
- Climate is varied but mainly dry; about 80% of the land is either desert or grassland and has minimal rainfall
- Most Australians live along the eastern seaboard and the south-eastern corner of the continent, in major cities
- Australia has a federal system of government with four divisions: Commonwealth, state, territory and local
- For gross domestic product (GDP) per person in 2005, Australia ranked eighth among OECD countries
- Total expenditure on health in Australia in 2005–06 was 9% of GDP
- Unemployment was at 4.3% in October 2007
- Fertility rate was 1.8 births per female in 2005–06, a slight increase from the preceding 5 years.

1.3 Australia compares well

Australia's level of health continues to improve overall. Moreover, in most aspects of health Australia matches or leads other comparable countries (those from the Organisation for Economic Co-operation and Development: OECD). Figure 1.2 shows broadly how Australia ranked in 1987 and 2005 on various measures of health among 30 member countries of the OECD. Where data were available for a substantial number of countries (on average, 25 countries for each indicator), comparisons were made for the years 1987 and 2005. In a few cases data relate to preceding years.



Notes

(a) Daily smokers as a proportion of population aged 15 years and over.

(b) Litres of pure alcohol per capita aged 15 years and over.

(c) Proportion of the population with a Body Mass Index greater than 30.

(d) Average number for 12 year olds.

Source: OECD 2007.

Figure 1.2: Australia's ranking among OECD countries, selected indicators, 1987 and 2005

In 2005, Australia's life expectancy at birth had risen to be one of the highest in the world. Life expectancy at age 65 for males ranked equal first with Japan, and for females it was equal second with France. Between the years compared, Australia's ranking among OECD countries improved markedly for mortality rates from coronary heart diseases, stroke, lung and colon cancer, and transport accidents, and in 2005 we had the lowest death rates from accidental falls in the OECD. Our smoking rates have continued to fall, with the ranking improving from middle third to 'best' third. The ranking for lower alcohol consumption also improved a little. The dental health of our 12 year olds slipped in rank somewhat since 1987, though it remained in the 'best' third.

However, since 1987 our ranking fell in relation to death rates for respiratory diseases, diabetes and, to a lesser extent, prostate cancer. Although there has been a small improvement in Australia's ranking for adult obesity rates since 1987, Australia remains in the 'worst' third of all OECD countries on this measure. However, note that Australia is among a small number of countries that provide bodyweight estimates based on actual measures of people's height and weight rather than self-report. This difference in methods limits data comparability.

Australia's infant mortality rate ranked almost in the 'worst' third of OECD countries in 2005, despite halving between 1985 and 2005.

1.4 Improving health and measuring performance

Many things influence health—as further described in Chapter 4—including preventive and treatment interventions. Living in a country that is socially and economically prosperous is arguably the most important factor in ensuring a good average level of health for a population. A prosperous country can afford to spend more on health care, thereby improving the health of its population. Improving health can lead to improved education and employment which, in turn, lead to economic and social prosperity.

However, these influences are not necessarily experienced to the same degree by some groups. There are differences among groups—such as their education and income levels, their choices about healthy living, and so forth.

Action on broad social risk and protective factors can be seen as the widest and most far-reaching form of 'health intervention'. Such action is among the great aims of society for reasons that include health, in its narrower sense, but which go well beyond it. It follows that this involves much more than the health system. However, that system can do much in its own right. Its activities range from clinical and preventive services and programs through to efforts to help improve the physical, social and economic environment for groups or individuals at special risk.

Given the great range of influences on health, major improvements depend on strong partnerships between components of the system—such as public and private health and clinical care—and require that the health sector works with other sectors to make the best use of available resources. Partnerships are also vital between the health system and others involved in the lives of those using the system, such as family and friends, teachers and employers.

As in other areas of public policy, pursuing the best health for a society needs to involve value judgments and includes political processes with competing interests. Along with limited resources, the challenge requires choices, priority setting and trade-offs between the health sector and other sectors, between prevention and treatment services, between

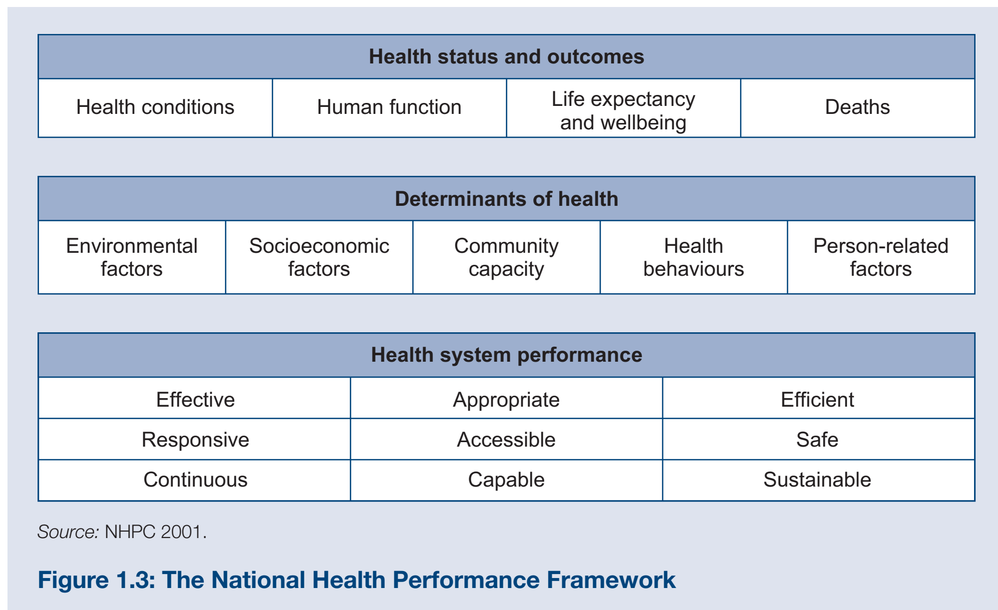
improving health overall and reducing inequalities, and between short-term and longer-term objectives.

National health performance

In 2001, Australia's National Health Performance Committee (NHPC) adopted a conceptual framework specially designed for measuring health system performance. This framework (shown in Figure 1.3 in a shorter form) is consistent with the conceptual framework for this book, and offers a structure for considering the performance of the health system. The framework components include:

- availability and accessibility of services and programs
- appropriateness or relevance of interventions
- effectiveness of interventions in achieving the desired outcome
- responsiveness of the health system to individual or population needs
- the degree to which care is integrated and coordinated.

Chapter 9 describes in more detail the nationally endorsed performance indicators based on this framework and provides commentary on changes since the last NHPC report in 2003.



Source: NHPC 2001.

Figure 1.3: The National Health Performance Framework

1.5 The Australian health system: an outline

The Australian health care environment is complex, with many types of public and private service providers and a variety of funding and regulatory mechanisms.

Those who provide services include a range of medical practitioners, nurses, other health professionals, hospitals, clinics, and government and non-government agencies. Funding is provided by all levels of governments, health insurers and individual Australians. Health

services and funding are covered in depth in chapters 7 and 8, but an overview is provided here to acquaint the reader with major elements of Australia's health system.

Overall coordination of the public health care delivery system is the responsibility of Australian Government and state/territory health ministers. They are supported by the Australian Health Ministers' Advisory Council (AHMAC)—a committee of the heads of the Australian Government, state and territory health authorities. AHMAC advises Australian health ministers on policy, resources and financial issues.

Given the complex funding arrangements and multi-faceted nature of the health system, it is no wonder that the public can find it difficult to understand who is responsible for their services and how to effect change. Figure 1.4 represents the main groups of health services, their funding sources and who has responsibility for their provision. It provides an at-a-glance picture to assist in answering the question, 'who funds and who runs the health system in Australia?' More complete information about service provision and funding is found in chapters 7 and 8.

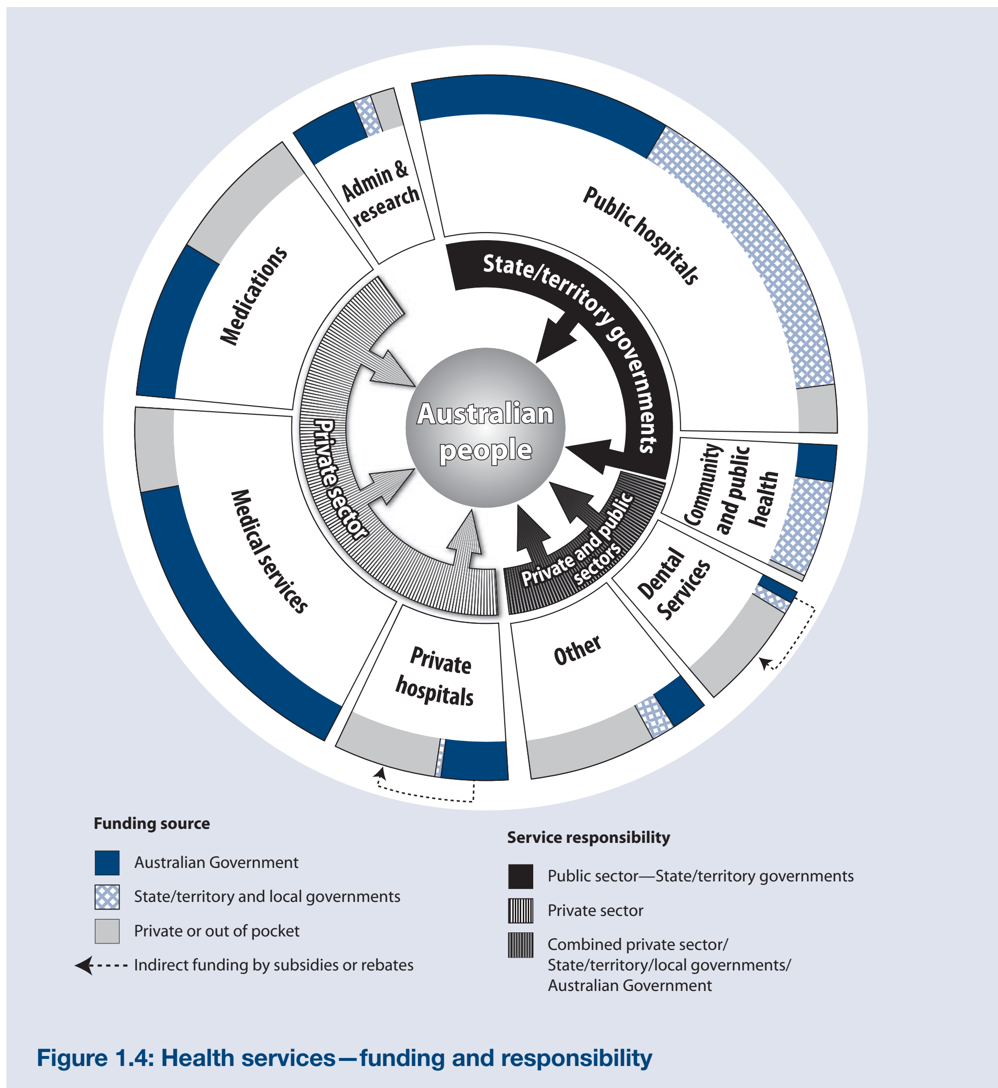


Figure 1.4: Health services—funding and responsibility

Starting with the outer ring, the proportion of different funding sources for each service group is colour coded. Funding is provided by the Australian Government, or state, territory and local governments, as well as private health insurance and out-of-pocket payments by individuals. Where Australian Government funding is provided indirectly in the form of subsidies or rebates, this is indicated by a broken arrow.

The next ring shows the major groups of services that comprise the health system. The size of each service group relates to its total expenditure. *Public hospitals, Private hospitals, Dental services*, and *Medications* are familiar elements of the system. The *Community and public health* group includes community nursing and public health education campaigns, among others. *Medical services* include general practice and specialist care as well as pathology and medical imaging. *Other* includes patient transport and aids, as well as health professionals such as physiotherapists and psychologists. *Administration and research* includes state departments of health and hospital or community health administration, as well as research and its funding. Examples are not exhaustive, and each group of services consists of many types of activities.

The darker arc inside the circle shows whether the service is provided by the private sector, public sector, or both. Examples of private sector providers include individual medical practices and pharmacies. Public sector service provision is the responsibility of state and territory governments, in the case of public hospitals, and a mixture of Australian Government and state, territory and local governments for community and public health services.

Who pays for health services?

Almost 70% of total health expenditure in Australia is funded by government, with the Australian Government contributing two-thirds of this and state, territory and local governments the other third. The Australian Government's major contributions include the two national subsidy schemes, Medicare and the Pharmaceutical Benefits Scheme (PBS). Medicare subsidises payments for services provided by doctors and optometrists and other allied health professionals such as clinical psychologists, and the PBS subsidises payments for a high proportion of prescription medications bought from pharmacies (individuals contribute out-of-pocket payments for these services as well). The Australian Government and state and territory governments also jointly fund public hospital services.

Between them, these government arrangements aim to give all Australians—regardless of their personal circumstances—access to adequate health care at an affordable cost or no cost. These schemes are further subsidised by social welfare arrangements, with larger rebates provided for individuals or families who receive certain income support payments (such as for unemployment or disability). There are also special health-care arrangements for members of the defence forces, and for war veterans and their dependants.

Services and subsidies

Most people's 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. For specialised care, patients can be referred by GPs to specialist medical practitioners, other health professionals, hospitals or community-based health-care organisations. Community-based services—a range of which can also be accessed directly by patients—provide care and treatment for issues such as mental health, alcohol and other drug use, and family planning.

Patients can access public hospitals through emergency departments, where they may present on their own initiative, via the ambulance services, or after referral from a medical practitioner. Public hospital emergency and outpatient services are provided free of charge, as is inpatient treatment for public patients. People admitted to a public hospital can choose to be treated there as either public or private patients, and others can choose to be admitted directly to a private hospital.

Private patients treated in a private hospital can select their treating specialist, but charges then apply for all of the hospital's services (such as accommodation and surgical supplies). Medicare subsidises the fees charged by doctors, and private health insurance contributes towards medical fees and hospital costs.

Australians also visit dentists and other private sector health professionals such as physiotherapists, chiropractors and natural therapists. Costs are usually met by the patients themselves or with the support of private health insurance.

Several state and territory governments and the Australian Government have established free 24-hour telephone-based health advice services in recent years. These are staffed by health professionals who answer queries from callers about health problems, assisted by specialised reference software.

Health insurance

In addition to their coverage by Medicare and the PBS, Australians have a choice of a wide range of private health insurance schemes. As of June 2006, 43.5% of the population was covered by basic private health insurance (PHIAC 2006). Participation in private health insurance membership is encouraged by an Australian Government tax rebate scheme. Hospital insurance schemes cover services in private hospitals as well as those provided in public hospitals for private patients. These are supplemented by additional schemes that cover a wide range of allied health and other professional services, including some alternative/complementary health services.

Other health services

Complementing the services outlined above is the provision of public health preventive services, which include:

- immunisation services and other communicable disease control (including biosecurity)
- public health education campaigns (including health promotion in the areas of nutrition and physical activity)
- activities to ensure food quality
- injury prevention activities
- programs to reduce the use and harmful effects of tobacco, alcohol and illicit drugs
- environmental monitoring and control
- screening programs for diseases such as breast cancer and cervical cancer.

Who regulates health services?

Health services are regulated in various ways. State and territory governments are responsible for licensing or registering private hospitals (including free-standing day hospital facilities), medical practitioners and other health professionals; and each state and territory has legislation relevant to the operation of public hospitals. State and territory governments are also largely responsible for industry regulations, such as the sale and supply of alcohol and tobacco products. The Australian Government's regulatory roles include overseeing the safety and quality of pharmaceutical and therapeutic goods and appliances, managing international quarantine arrangements, ensuring an adequate and safe supply of blood products, and regulating the private health insurance industry. There is also an established role for governments in the regulation of food safety and product labelling.

Other key parts of the system

Health services are supported by many other agencies. Research and statistical agencies provide the information needed for disease prevention, detection, diagnosis, treatment, care and associated policy. Consumer and advocacy groups contribute to public discussion and policy development. Professional associations for health practitioners set professional standards and clinical guidelines. Universities and hospitals train undergraduate and postgraduate health professionals. Voluntary agencies contribute in various ways, including raising funds for research, running educational and health promotion programs, and coordinating voluntary care.

Although they are not seen as strictly part of the health system, many other government and non-government organisations play a role in influencing health. Departments of transport and the environment, liquor licensing authorities and the media are just a few examples.

1.6 National health information

Health information is fundamental to developing evidence on which health policies and programs are based. That information can range from vital research into the nature, causes and mechanisms of disease; through clinical trials and other research into diagnosis and treatments; to the more statistical information derived from surveys or administrative data. In this report 'national health information' refers mainly to the last type of information (although it depends on the other types).

Following the components of Figure 1.1, health information in this context is about:

- assessing the level and distribution of the health of populations
- measuring the level, distribution and influence of determinants
- monitoring and appraising health interventions
- quantifying the inputs to the health system
- furthering knowledge through research and statistics
- evaluating the performance of the health system
- understanding the interrelationships of all of the above.

Increasing attention is being paid to organising health information that supports decision making, and there has been significant progress over the past 15 years in the collection and use of statistical information. The National Health Information Agreement (NHIA)—originally signed in 1993—includes the Australian Government Department of Health and Ageing, state and territory health agencies, the Australian Bureau of Statistics, the AIHW, the Department of Veterans' Affairs and Medicare Australia. The aim of the NHIA is to improve cooperation for the development, collection and exchange of data, and to improve access to uniform health information by community groups, health professionals, and government and non-government organisations. A major product of this agreement is the *National health data dictionary*, which is updated annually to provide standards for national health information and is used as a guide for gathering health data.

Achievements and developments

The vision for national health information in the years ahead is to promote its use to improve the health of populations. Building on the potential of information and communications technology, including e-health, the aim is to improve access to reliable, accurate, and timely information that can form the basis of discussions and decision making.

A strategic work plan for national health information was developed by AHMAC's principal information committee, formerly called the National Health Information Management Principal Committee (NHIMPC). This plan outlines achievements in recent years and the vision for future information development. Achievements include:

- more accurate enumeration of Aboriginal and Torres Strait Islander peoples in the Census and better quality and consistency of Indigenous identification in administrative data sets
- introduction of national minimum data sets for emergency departments and outpatient care and for government health expenditure
- inclusion of a data element into the Admitted Patient Care national minimum data set to assist in the quantification and description of adverse events in Australian hospitals
- the development of an information strategy by the Australian Commission on Safety and Quality in Health Care, outlining the Commission's initial plans for information and data work to support quality and safety improvement
- agreement on a systematic approach to nationwide surveillance of chronic diseases, supported by web-based tools
- work towards a national approach to data linkage and access to de-identified health data and to better accuracy and consistency of geographical data in the future
- the introduction by the AIHW of METeOR, an online metadata repository for national data standards for the health, housing and community services sectors; and the publication of a guide to data development, outlining sound data development practices to support the collection of high-quality data.

More detail on these developments can be found in the NHIMPC strategic plan and in the AIHW's annual report for 2006–07.

The four main priorities identified under the plan are:

- a stronger national approach, including strategic planning and partnerships across the health sector

- using health information to improve clinical care and reduce errors
- better health information for consumers
- better outcomes from targeted investment in health information (NHIMPC 2007).

Governance

The Principal Committee reporting to AHMAC on information plays a key role in ensuring there is central coordination across all governments and related agencies in relation to nationally relevant health information. The Principal Committee oversees subcommittees which negotiate and determine data standards and national initiatives to drive good quality data.

In January 2008, AHMAC agreed to reconstitute its principal information committee to include e-health alongside its existing focus on information management. Reflecting this broader focus, the principal committee has been renamed the National e-Health and Information Principal Committee (NEHIPC). As the e-health agenda plays out in Australia, the current ways of collecting information for the purposes of management, policy and research will be challenged. Work is well underway to examine the potential for harnessing information from new sources as well as the potential impacts on current data pathways.

The need to balance the public health use of information with community concern about personal privacy presents a key challenge for the health information system. Health information collected as a by-product of clinical services has been and will remain a very powerful tool in building improved health in Australia.

1.7 How this report is presented

Although this report follows the framework depicted in Figure 1.1, it is structured somewhat differently from previous editions. The main features of the chapters are described below. Chapters 2–8 include key facts in the beginning to summarise important messages in that chapter. Boxes and figures are used within the chapters to help the reader gain key insights quickly, and 'user friendly' language has been used as much as possible.

Chapter 2 provides an overview of the health status of Australians and answers questions such as 'Which diseases and conditions impose the greatest burden on our population? Is our health improving overall?'

Chapter 3 describes the health of particular population groups and shows that some, especially Aboriginal and Torres Strait Islander peoples, do not share in Australia's generally good health.

Chapter 4 focuses on the determinants of health: biomedical and genetic factors, health behaviours, socioeconomic factors and environmental factors. It discusses why some diseases happen in the first place and which preventable risk factors contribute to them.

Chapter 5 covers the main diseases and injuries seen in Australians and tracks changes in their levels, as well as their impacts on health system use.

Chapter 6 highlights key health issues over the life span, summarising the health of babies, children and young people, working-age people and older people.

Chapter 7 presents extensive information on health services and their use in Australia, including public health services, hospital services, and those from doctors and other health professionals.

Chapter 8 examines health system expenditure and funding, and describes statistics on the health workforce. It outlines some of the complexities of resourcing the health system.

Chapter 9 is a new chapter that brings together the national health performance indicators that appear in detail throughout the report. These indicators were developed for health ministers to monitor the performance of the health system. Results from these indicators are summarised and synthesised in this chapter.

Note that NHPC indicators are discussed in detail in the relevant chapters. For ease of identification they are annotated in italics and parenthesis; for example, '(*NHPC indicator 1.0*)'.

Statistical tables covering a range of topics are included after Chapter 9. Many of the tables provide time series information. Tables have also been included for some of the graphs in the report, for the benefit of readers who may wish to examine the data in more detail.

A list of abbreviations and a glossary are at the end of the report.

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