
C Health preface

Health care services in Australia are delivered by a variety of providers in a range of settings. State and Territory governments are responsible for providing public hospital services. Private practitioners who receive funding from the Commonwealth Government through the Medicare Benefits Schedule (box C.1) provide most general practice and specialist medical and surgical services. Local governments provide some community health services in some jurisdictions.

The first three editions of the *Report on Government Services* (1995, 1997 and 1998) concentrated on reporting the performance of public acute care hospitals and their delivery of admitted patient services. Public acute care hospitals comprise 39 per cent of government funding of health services and 27 per cent of total health expenditures. However, such a focus on one part of a much larger system ignores the links between service types. This Report and the 1999 Report include a reporting framework and data for general practitioners (GPs), who are another important health delivery mechanism. Both Reports also examine the interactions between different service mechanisms in dealing with two health management issues: mental health and breast cancer management.

Profile of health services

According to the 1995 National Health Survey, most Australians took action for a health related concern in the two weeks before the survey — 79.9 per cent of females and 70.8 per cent of males. For some people, this constituted taking the day off work or school, or merely taking it easy for a day or so. However, the more common health related actions involved some contact with the Australian health care system. The most common action was taking medication (69 per cent of people), followed by consulting a doctor (23 per cent) and consulting another health care professional (13 per cent). Significantly fewer people visited a hospital either as an admitted or non-admitted patient (only 2.1 per cent and 2.7 per cent respectively) (ABS 1997).

Box C.1 **Some common health terms**

Acute care hospital: a hospital that provides at minimum any medical, surgical, obstetric services, or care for admitted patients, and around-the-clock, comprehensive, qualified nursing services as well as other necessary professional services

Community health services: health services for individuals and groups delivered in a community setting, rather than via hospitals or private facilities

General practice: a medical practice that offers primary, continuing, comprehensive, whole-person care for individuals, families and the community

Medicare: a Commonwealth Government funded program that provides subsidies for private medical and optometrical services. The term 'Medicare' is used to refer to a broad range of Commonwealth Government funded health services, including private medical services (Medicare Benefits Schedule), pharmaceuticals (Pharmaceutical Benefits Scheme) and public hospital funding (Australian Health Care Agreements), which facilitate public hospital services free of charge to individuals.

Pharmaceutical Benefits Scheme: a program that subsidises pharmaceuticals

Public health: the organised social response to protect and promote health and to prevent illness, injury and disability. The starting point for identifying public health issues, problems and priorities, and for designing and implementing interventions, is the population as a whole or population subgroups.

Public hospital: a hospital that provides free treatment and accommodation to eligible admitted persons who elect to be treated as public patients. It also provides free services to non-admitted patients and may provide (and charge for) treatment and accommodation services to private patients.

A complex system has evolved to meet the health care needs of Australians. The health system is considered here to refer to formal activities primarily directed at improving health or reducing the effects of illness and injury. It does not include other social determinants of health, such as the standard of housing, sanitation, water supply or socioeconomic status.

The non-government sector plays a significant role in the health system, delivering general practice and specialist medical and surgical services, dental services, a range of other allied health services (such as optometry, physiotherapy and so on) and private hospital and nursing home services. State and Territory governments deliver services via public hospitals and other public health programs.

Funding the various components of the health care system is a complicated process. The Commonwealth Government funds many of the services provided by the non-government sector (mostly through the Medicare Benefits Schedule and the Pharmaceutical Benefits Scheme) and also provides funding for public hospitals via

the Australian Health Care Agreements with States and Territories. State and Territory governments and local governments also contribute funds, as do private individuals, health insurance funds and other non-government institutions. The following section outlines the contributions that various sectors make to the health care system and notes how the funding is allocated.

Funding and delivery of health care services

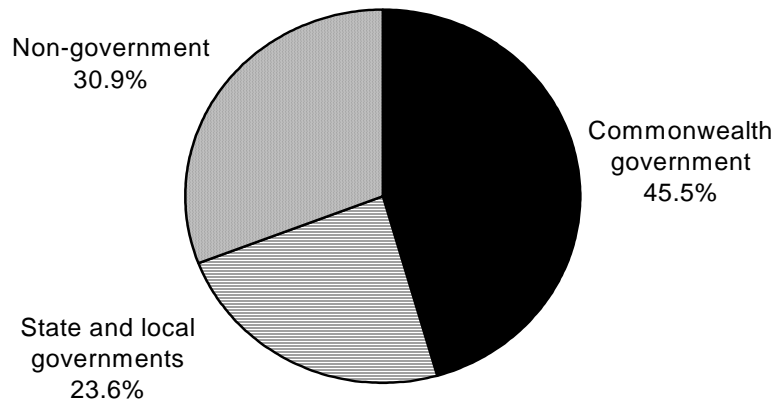
Total expenditure on health care services in Australia was about \$47.2 billion in 1997-98. This was equivalent to 8.4 per cent of gross domestic product (AIHW 1999a). Expenditure on health was greater than the turnover in the petroleum, coal, chemical and associated product manufacturing industry (\$33.3 billion), and in agriculture (\$27.2 billion), and approximately the same as the turnover in the food, beverage and tobacco manufacturing industry (ABS 1999b, 1999c).

The health sector has grown faster than the economy as a whole over the past two decades. Real expenditure on health care services grew by an annual average of 4.1 per cent between 1989-90 and 1997-98. Health care expenditure, when compared to gross domestic product, rose from 7.5 per cent in 1989-90 to 8.4 per cent in 1997-98 (AIHW 1999a).

Governments (at all levels) fund over two-thirds of total expenditure on health care services, with the remainder coming from individuals, health insurance funds, and workers compensation and compulsory motor vehicle third party insurance providers (figure C.1).

The Commonwealth Government accounted for the largest proportion of total health care expenditure in Australia (45.5 per cent) in 1997-98. The Department of Health and Aged Care, originally established to deal with quarantine issues and the health needs of veterans, is largely responsible for funding medical, hospital, pharmaceutical and nursing home services, which are delivered by State and Territory governments and non-government providers (figure C.2).

Figure C.1 **Total health expenditure by source, 1997-98^{a, b, c}**



^a Expenditure by the Commonwealth Government and the non-government sector has been adjusted for tax expenditures. ^b Based on preliminary estimates by the Australian Institute of Health and Welfare and the Australian Bureau of Statistics. ^c Includes expenditure by individuals, health insurance funds, and workers compensation and compulsory motor vehicle third party insurers.

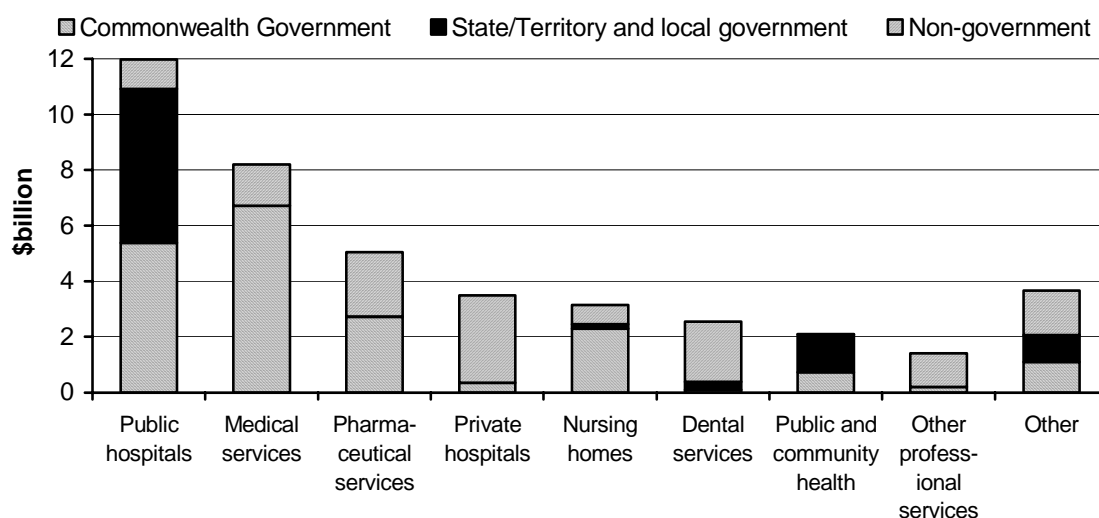
Source: table 4A.58.

State and Territory governments are responsible for delivering a range of health care services, such as:

- hospital services;
- mental health programs;
- home and community care;
- child, adolescent and family health services;
- patient transport (see chapter 10, 'Emergency management');
- health promotion; and
- regulation, inspection, licensing and monitoring of premises, institutions and personnel.

Local governments are generally involved in environmental control and a range of community based and home care services, although the exact nature of their involvement varies across jurisdictions. Non-government expenditure in 1996-97 was largely directed towards private hospitals, pharmaceuticals, dental services, medical and other professional services.

Figure C.2 Total health services recurrent expenditure, 1996-97^a



^a Detailed data on expenditure by service type were not available for 1997-98.

Source: table 4A.59.

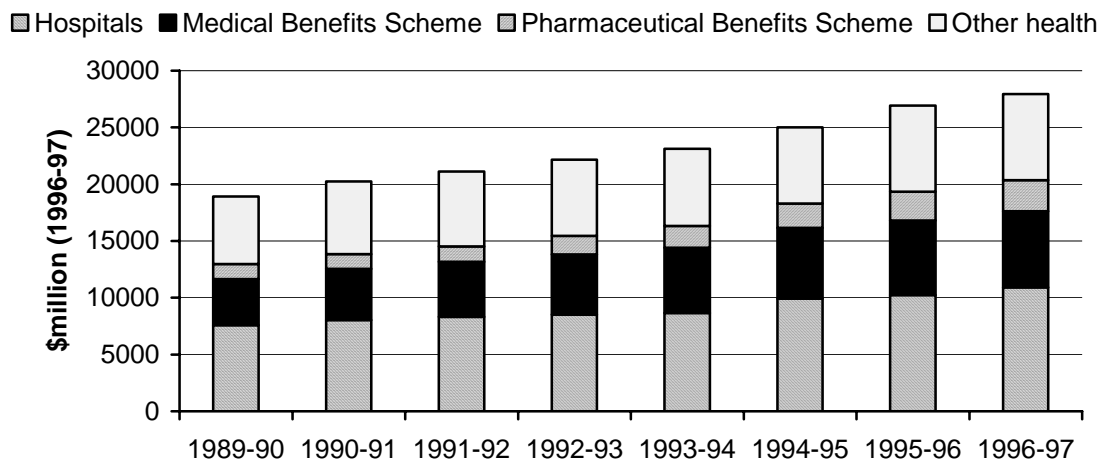
Government funding of health has grown more rapidly than non-government funding. Between 1989-90 and 1997-98, the average annual growth rate in real terms (1996-97 dollars) of Commonwealth Government funding on health care services was 4.9 per cent (figure C.3). State/Territory and local government funding grew by 3.0 per cent annually for the same period (AIHW 1999a). Recurrent expenditure per person increased by an annual average of 3.0 per cent over that period.

Public hospitals comprised the single largest item of recurrent health care expenditure in 1996-97 — nearly \$11 billion, used to fund the treatment of 3.6 million admitted patients and 32 million non-admitted occasions of service. Public hospitals also accounted for the largest share (39.1 per cent) of total government expenditure on health care services in that year, followed by medical services (24.0 per cent), pharmaceutical services (9.8 per cent) and nursing homes (8.8 per cent).¹

The average annual growth rate of government expenditure on public hospitals between 1989-90 and 1996-97 was 5.4 per cent. However, the public hospital share of total government health expenditure fell slightly from 40.1 per cent in 1989-90 to 39.1 per cent in 1996-97.

¹ Nursing home services are discussed in chapter 11, 'Aged care', along with hostels and community-based services.

Figure C.3 Total government recurrent health expenditure, 1996-97 dollars



Source: table 4A.60.

Medical services and pharmaceutical services were the fastest growing areas of government health expenditure. The real average annual growth rate for expenditure on medical services was 7.4 per cent between 1989-90 and 1996-97 and that for pharmaceuticals was 11.1 per cent. The growth in medical and pharmaceutical expenditure reflected an increase in the number of services delivered, partly due to the availability of high-technology equipment for diagnostic procedures. The average number of Medicare services processed rose from 8.5 in 1989-90 to 10.7 per person over this period. There were on average 10.9 Medicare services processed per person in 1998-99. Similarly, increased government expenditure on pharmaceuticals reflected increased use of medications, as well as rising pharmaceutical prices and increases in the availability of new and more expensive pharmaceuticals (figure C3).

The proportion of Commonwealth Government health care expenditure devoted to medical services and pharmaceutical services also rose over the period. Expenditure on medical services increased from 21.5 per cent of the total in 1989-90 to 24.0 per cent in 1996-97, while the share devoted to pharmaceutical services increased from 6.9 per cent to 9.8 per cent over the same period. This strong growth placed pressures on Commonwealth Government health care expenditure that prompted policy changes in 1996-97, involving the restriction of Medicare provider numbers. The Pharmaceutical Benefits Scheme was changed also to encourage the use of generic pharmaceutical brands.

Framework for measuring the performance of the health system

Government involvement in health services is predicated on the desire to improve the health of all Australians (box C.2), and governments use a variety of services in a variety of settings to fulfil this objective.

Box C.2 Overall objectives of the health system

Government involvement in the health system aims to efficiently and effectively protect and restore the health of the community by:

- preventing or detecting illness through the provision of services which can achieve improved health outcomes at relatively low cost; or
- caring for ill people through the use of appropriate intervention services;
- providing appropriate health care services which recognise the cultural differences between people; and
- providing equitable access to these services.

Primary prevention strategies are implemented before the diagnosis of an illness and generally aim to:

- reduce a person's risk of getting a disease or illness by increasing protective factors; and
- delay the onset of illness.

Intervention strategies are implemented after a diagnosis.

Measuring the success of this system is a complex task. Success requires offering the appropriate mix of services (such as prevention and intervention services) by the appropriate mix of service providers (such as hospital based and community based providers), at the appropriate times, and ensuring that all service delivery is efficient and effective. It is difficult to develop a set of indicators that captures all these aspects of performance. There are some broad outcomes of health service delivery (such as life expectancy, mortality rates and cause of death), but these say as much about the income levels of a population, the level of education and the standard of housing, for example, as they do about the performance of the health care system.

The measurement approach adopted in this Report is to break the health system into smaller components and measure their performance. This can be represented diagrammatically (figure C.4). Frameworks of indicators measuring the performance of health service providers across a range of health care issues (represented by the horizontal arrows) are presented for two service delivery mechanisms used in Australia: public acute care hospitals and general practitioners. Data on the former

have been presented in all five Reports on government services. A framework for general practitioners and available data is presented for the second time in this Report.

The appropriate mix of services (prevention versus intervention) and the appropriate mix of service delivery mechanisms (hospital based versus community based) are measured by focusing on a health management issue, such as breast cancer control and mental health services (represented by the vertical arrows). The breast cancer management framework integrates the prevention/early detection and intervention strategies, which should inform the tradeoffs in the allocation of resources between these two strategies. The mental health framework provides information on the interaction and shared care arrangements between community based and hospital based providers in meeting the needs of Australians with a mental illness.

Performance indicator frameworks are discussed in more detail in chapters 4, 5 and 6.

Aggregate health outcomes

It is difficult to isolate the effect that health care services have on the general health of the population. Socioeconomic factors (such as income levels, education standards, employment rates and housing standards) and access to services such as clean water, sewerage and a safe food supply significantly influence overall health outcomes. Life expectancy and mortality rates (both of which are indicators of improvements in the health of Australians) are used in this Report as aggregate measures of health outcomes. However, it is important to remember the limits of these measures, given the effects of other non-health related factors.

There were 127 202 deaths in Australia in 1998. This translated into death rates (standardised for age differences across jurisdictions) of 6.0 per 1000 population. Age-standardised deaths rates fell for males and females between 1991 and 1998 — from 8.9 per 1000 population for males and 5.4 per 1000 population for females in 1991, to 7.6 per 1000 population and 4.7 per 1000 population for females in 1998 (ABS 1999).

The life expectancy of Australians has improved dramatically since the turn of the century. The average life expectancy at birth was 55.2 years for males and 58.8 years for females for 1901–10, and rose steadily until it reached 75.2 for males and 81.1 for females in 1994–96 (figure C.5).

Figure C.4 Australian health system — measurement diagram

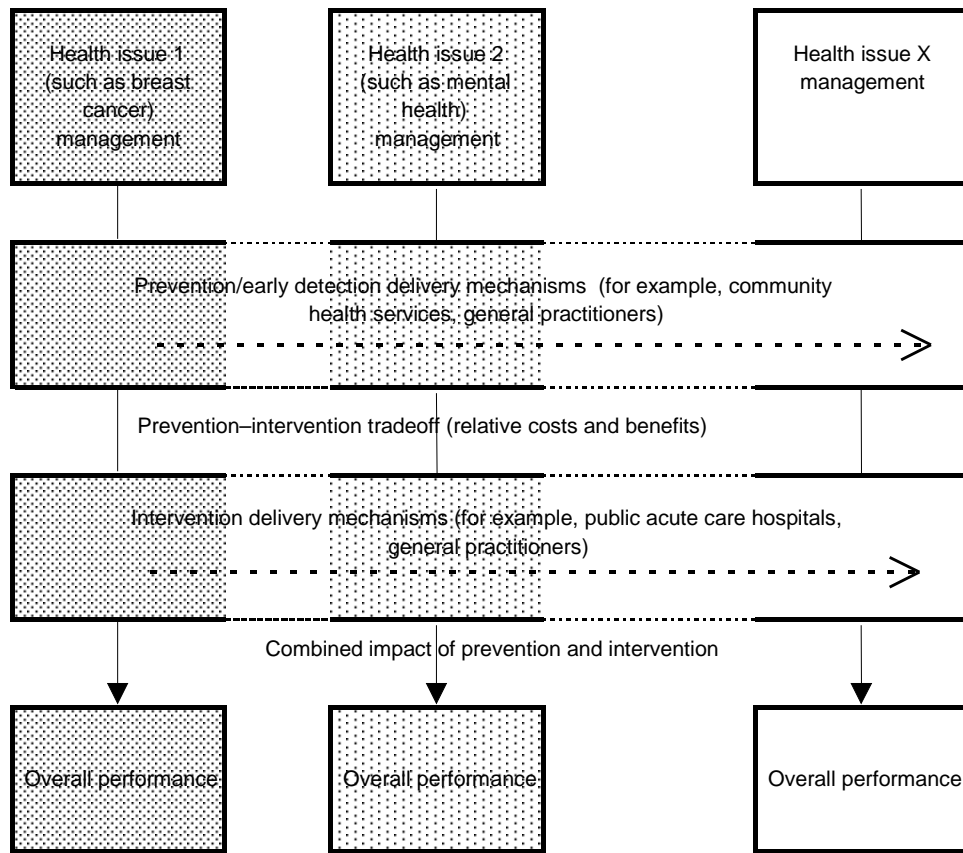
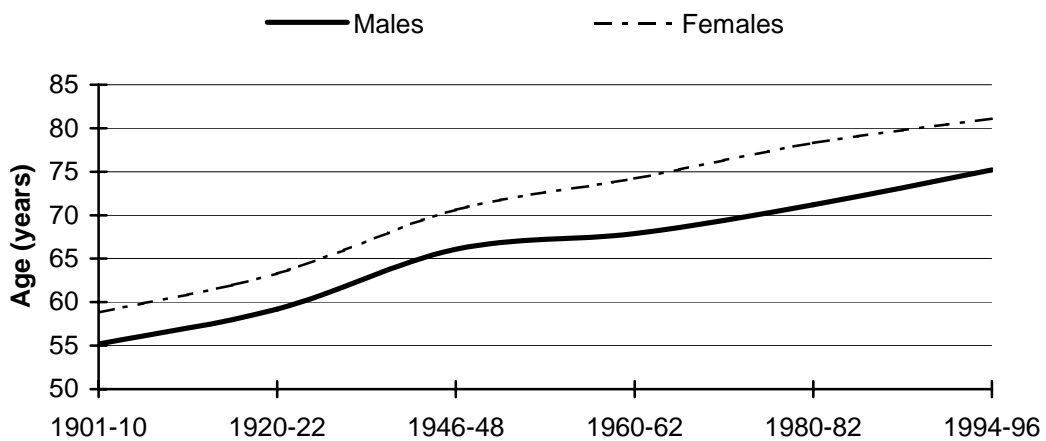


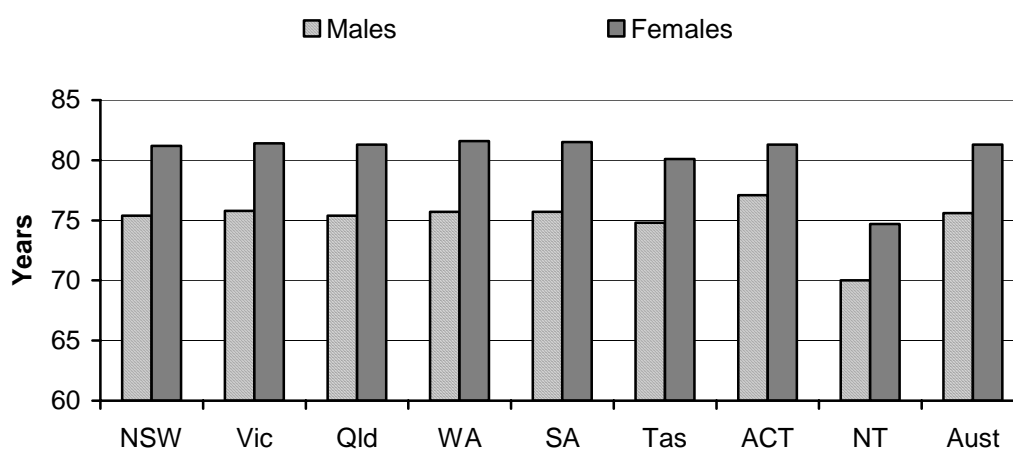
Figure C.5 Average life expectancy at birth



Source: table 4A.64.

Life expectancy at birth varied across jurisdictions in 1997. Average life expectancy for males at birth was 77.1 years in the ACT, in 1997, compared with 70.0 years in the NT (figure C.6). Similarly, the average for females in the ACT was 81.3 years, which was almost seven years longer than that of females in the NT. This difference largely reflects the large number of Aboriginal and Torres Strait Islander people living in the NT compared with other jurisdictions, and the shorter life expectancy for these people generally (ABS 1990a; AIHW 1998a).

Figure C.6 Average life expectancy at birth, by jurisdiction, 1997

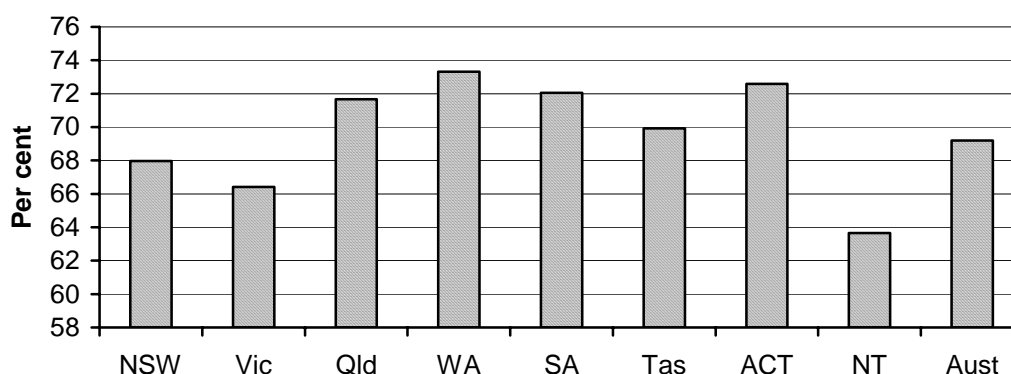


Source: table 4A.65.

The 1995 National Health Survey showed that most Australians considered themselves to be in good health. Fifty-five per cent of people aged 15 years or more reported their overall health as very good or excellent, and a further 28 per cent reported good health. The remaining 17 per cent of the population regarded their health as being fair or poor. Not surprisingly, self assessed health status is strongly related to age. The proportion of the population, according to the survey, reporting very good or excellent health declined with age, while the proportion reporting fair or poor health rose.

Almost 70 per cent of Australians reported experiencing an illness in the two weeks before being interviewed for the 1995 National Health Survey. The most common illnesses were diseases of the respiratory system (such as bronchitis/emphysema, the common cold, hayfever, asthma and coughing or a sore throat). These accounted for 31.1 per cent of the total. Symptoms, signs and ill defined conditions (such as allergies, headaches, heartburn and hangover) accounted for 28.5 per cent (ABS 1997). The proportion of the population reporting a recent illness ranged from 73.3 per cent in WA to 63.7 per cent in the NT (figure C.7).

Figure C.7 Persons reporting a recent illness, 1995^{a, b, c}



^a Illness refers to a medical condition experienced in the two weeks before interview. It may include long term conditions experienced in the period. ^b Data were standardised for age and sex differences across jurisdictions. ^c Estimates relate to predominantly urban areas only.

Source: table 4A.67.

The *Australian Burden of Disease and Injury Study* (AIHW 1999b) provided a comprehensive assessment of the amount of ill-health and disability — the ‘burden of disease’. The leading causes of total disease burden in Australia in 1996, were ischaemic heart disease and stroke, together causing nearly 18 per cent of the total disease burden. Chronic obstructive pulmonary disease and lung cancer (also smoking related diseases) are the third and fifth leading causes of disease burden, accounting for 7.3 per cent of the total. Depression is the fourth leading cause of disease. If the burden attributable to suicide and self inflicted injury is included, then depression rises to third place, accounting for an overall 5 per cent of the total (table C.1).

Table C.1 The leading causes of disease and injury in Australia, 1996

	<i>Per cent of total burden</i>
1. Ischaemic heart disease	12.4
2. Stroke	5.4
3. Chronic obstructive pulmonary disease ^a	3.7
4. Depression	3.7
5. Lung cancer	3.6
6. Dementia	3.5
7. Diabetes mellitus	3.0
8. Colorectal cancer	2.7
9. Asthma	2.6
10. Osteoarthritis	2.2

^a Chronic bronchitis and emphysema.

Source: AIHW (1999b).

Future directions

The key challenges for reporting on the health sector include:

- improving the reporting under the existing frameworks of performance indicators by refining existing indicators and/or introducing new ones for:
 - efficiency;
 - quality of health services; and
 - access and equity for key client groups, such as persons in rural or remote areas.
- developing indicators that assess Aboriginal and Torres Strait Islander peoples' access to mainstream health care services;
- improving knowledge about people's health;
- assessing the appropriateness of health care services; and
- extending the coverage of the Review.

Issues for improving the reporting under the individual frameworks are discussed in detail in the relevant chapters. Improving data on emergency waiting times, for example, is specific to the reporting framework for public acute care hospitals and this is discussed in chapter 4. Similarly, issues specific to breast cancer control and mental illness are discussed in chapter 6. The other four issues are discussed below.

Improving reporting on Aboriginal and Torres Strait Islander peoples' access to mainstream health care services

In May 1997 the Prime Minister requested that the Steering Committee give priority to developing indicators that measured the performance of mainstream services in meeting the needs of Indigenous Australians.

This is an important but difficult task. Most data on health care services are obtained via administrative collections, of which few distinguish between Indigenous and non-Indigenous users. Further, the definition of Indigenous people varies across jurisdictions, as does the approach to self identification.

The health of Indigenous Australians is considerably worse than that of non-Indigenous Australians, and this is an ongoing concern for health policy makers. Their mortality rate, for example, is three times the rate for non-Indigenous Australians. Similarly, life expectancy for Aboriginal males is 17 years less than that for non-Aboriginal men; the gap for females is slightly wider (Deeble *et al.* 1998).

An investigation of health care expenditure on Indigenous and non-Indigenous Australians revealed that expenditure through publicly subsidised programs was \$2235 per person for Aboriginal and Torres Strait Islander peoples in 1995-96, compared with \$1554 for non-Indigenous Australians. Expenditure through mainstream health care services accounted for 89 per cent of the total, with expenditure on Aboriginal Medical Services accounting for the remaining 11 per cent (Deeble *et al.* 1998).

Closer inspection of mainstream health care expenditure data revealed that expenditure on State and Territory government funded services (such as public acute care hospitals and community health services) accounted for almost 80 per cent of government health care expenditure for Indigenous people, compared with around 50 per cent for non-Indigenous Australians (table C.2). This reliance of Indigenous Australians on State and Territory government funded services means that their access to these services is an important issue.

Health care expenditure via the Commonwealth Government Medicare Benefits Schedule and Pharmaceutical Benefits Scheme programs accounted for 6 per cent of the total for Indigenous Australians, compared with more than 35 per cent for other Australians. The lower access by Indigenous people to these programs highlight an important equity issue for the Commonwealth Government. Poor access to these services suggests that alternative services (such as community controlled Indigenous health services and State/Territory funded services) are important substitutes. This highlights the need to understand the pattern of use across the whole sector to properly interpret the access of health services by Indigenous Australians.

Table C.2 Total government expenditure (\$ per person) on health care services for Indigenous Australians via publicly subsidised programs, 1995-96

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
Total local expenditure	na	na	na	na	na	na	na	na	10
Acute care hospitals	1 042	1 095	1 120	1 487	964	868	492	1 607	1 191
• admitted patients	874	806	837	1 147	760	524	361	1 237	924
• non-admitted patients	168	288	283	339	204	343	132	371	267
Mental health institutions	20	na ^a	29	60	55	59	0	0	28
Nursing homes	16	69	41	58	0	98	0	4	33
Community health services	174	31	243	431	301	96	76	669	291
Patient transport	35	50	45	78	15	33	16	316	81
Public health services	15	46	23	21	35	52	5	272	57
Administration and research	32	35	17	19	129	22	70	353	74
<i>Total State and Territory expenditure</i>	<i>1 334</i>	<i>1 326</i>	<i>1 518</i>	<i>2 152</i>	<i>1 500</i>	<i>1 227</i>	<i>659</i>	<i>3 221</i>	<i>1 753</i>
Medicare and Pharmaceutical Benefits Scheme	na	na	na	na	na	na	na	na	128
Aboriginal health units and other Commonwealth programs	na	na	na	na	na	na	na	na	344
Total government expenditure	na	na	na	na	na	na	na	na	2 235

^a Included in acute care hospital expenditure. **na** Not available.

Source: Deeble *et al.* (1998).

All States and Territories have been working towards developing indicators for Indigenous Australians under the auspices of the Australian Health Ministers' Advisory Council. Health ministers endorsed a plan in August 1997 which required all health providers to report against nationally consistent performance indicators and targets for the health of Indigenous people. A list of proposed indicators was approved in March 1998. Suggested indicators monitor all aspects of health of Indigenous Australians. Many aspects are beyond the scope of this Report, although some would provide valuable insights into the performance of particular providers in meeting the needs of Indigenous clients — for example, distance to a hospital that provides admitted patient care, access to hospital care, time required to reach primary health care services, hospital outpatient activity and service deficiencies, and racism in health services. Other proposed indicators cover health outcomes for Indigenous Australians: child immunisation rates, life expectancy, standardised mortality rates, low birthweight infants and main causes of death.

The *National Summary of the 1998 Jurisdictional Reports against the Aboriginal and Torres Strait Islander Health Performance Indicators* was completed in July 1999 (NHIMG 1999). This project represents progress towards improving the understanding of whether government policies and programs are making a significant difference in improving Aboriginal and Torres Strait Islander peoples' health. However, as yet there is no timetable for regular publication of this information.

Population health monitoring

NSW, Queensland and SA monitor population health through statewide health surveys. The NSW Population Health Survey aims to improve knowledge about people's health and the factors that affect health and people's attitudes to health services and policies.² Survey workers conducted telephone interviews during 1998 with approximately 17 000 people from around NSW, covering a wide range of health topics such as:

- physical and emotional health;
- health conditions, such as asthma and diabetes;
- factors that affect health, such as eating habits, smoking, alcohol consumption and physical activity;
- use of health services such as hospitals, emergency departments and general practitioners;
- satisfaction with health services; and
- individual characteristics such as age, occupation and languages spoken at home.

The most recent population health survey in Queensland was conducted in 1998. The aim of the survey was similar to that of the NSW survey. Data were collected on a variety of topics, including general health, behaviours that affect health (for example, alcohol consumption and smoking), satisfaction with hospital services, oral health, home safety and exercise habits.

The survey included residents from private households in both rural and urban areas and was undertaken via telephone. One adult (aged 18 and over) from each private household selected was asked to participate in the survey. In total there were 5594 interviews conducted, achieving a response rate of 72 per cent.

² As at 30 November 1999, results were obtainable from: <http://www.health.nsw.au/public-health/hs97>.

South Australia has conducted regular population health surveys since 1990; the most recent survey was conducted in September 1999. Household surveys have been conducted face to face using the Health Omnibus, and by telephone and postal survey. The variety of survey methods used has enabled a broad range of health and lifestyle behaviours to be monitored. The health areas surveyed include diabetes, immunisation, maternal and child health, mental health, violence and abuse.

The established survey mechanism in South Australia has also been used to identify sources of food poisoning outbreaks. This is done by interviewing control subjects on recent food consumption. Several outbreaks have been contained using this process.

Appropriateness of health care

The term ‘appropriateness’ typically refers to an assessment of the ‘worth, value or utility’ of a service. Common applications in health care include:

- the appropriate sequence of events in treating an individual patient;
- the appropriate level and mix of treatments (for example, the level and mix of separations);
- the appropriate mix of service types (for example, prevention versus intervention); and
- the appropriate mix of service providers (for example, community based services versus hospital based services).

The first of these involves assessing the care provided to an individual patient against a normative standard of care or clinical pathway. Unexplained variations from the clinical pathway are sometimes measured, largely as an indicator of the quality of care provided to the patient. Information on clinical pathways is not yet available on a national basis as a quality of care indicator.

The second interpretation of appropriateness used in this Report relates to care provided by public acute care hospitals. Two indicators, separations per 1000 people and the separation rate for certain procedures, focus on geographic variations to highlight differences that may require further investigation.

The third and fourth interpretations of appropriateness are the focus of chapter 6. The framework of performance indicators for breast cancer management focuses on the tradeoff between the allocation of resources to disease prevention (or early detection in this case) and intervention. The framework for mental illness management, on the other hand, looks at the alternatives in service delivery between

community based and hospital based providers in meeting the needs of Australians with mental illness.

Despite these efforts, the following three factors continue to hinder assessments of the appropriateness of the care provided by Australia's health care system.

- There are no measurable standards of service against which current levels can be assessed for many health services. Proxy standards have been developed for housing, for example, where a three bedroom house is considered the appropriate size for a couple with two or three children; larger (smaller) houses are considered underused (overcrowded). Such standards have not been established for many health care services.
- The Review covers only parts of the whole health care system. It is not possible to capture the entire system, but the coverage could be extended to include substitutions in service delivery between different care modalities. One proposal is to examine the substitution for acute admitted patient services for those delivered in the home ('hospital in the home'). Another option is to report on approaches to surgical procedures such as same day surgery as a substitute also for longer stay acute admitted patient care. The reporting on health management also could be extended to other health issues (such as the remaining National Health Priority Areas — that is, cardiovascular health, diabetes mellitus, asthma and injury prevention and control).
- The links between frameworks are not yet identified. Information is not available, for example, to aid assessments of whether governments should focus more effort on one type of illness prevention/intervention than another. Similarly, data on the performance of individual public acute care hospitals and general practitioners provide little insight into the appropriateness of the current mix of service delivery modes. Ideally, this information would be available.

A robust examination of all aspects of appropriateness of health care would assist in improving overall health outcomes in Australia. The Australian Coordinated Care Trials were developed in response to a Council of Australian Governments' endorsed reform agenda in April 1995. Their aim was to provide better quality of care for people with complex health care needs, by focusing on the appropriateness of the mix of health services. Care coordination presents an opportunity to address inefficiencies in the mix of service-settings currently used in the health system. The *Interim Technical National Evaluation Report* was published in September 1999 (DHAC 1999b). It is expected that this will provide valuable insights into the development of coordinated care. The challenge of understanding the links between services is not confined to the health sector; it is particularly pertinent to the justice sector, for example. The Steering Committee will continue to work towards developing tools to address this challenge in future years.

Extending the coverage of the Review

Last year's Report noted that a longer term goal of the Steering Committee is to include a performance measurement framework for community health services, similar to that for public hospitals and general practice. Community health services provide health promotion and early detection services, assess health problems and provide care. These services are diverse by nature, incorporating a range of service providers (dietitians, community nurses, psychologists and so on). This multidisciplinary approach makes it difficult to define the scope of community health services accurately and to attribute health outcomes to particular providers.

A study was commissioned by the Commonwealth, States and Territories in 1998 to examine the feasibility of developing performance indicators for this sector. The unpublished study noted that:

The validity of performance indicators relies, in part, on homogeneity in the units being measured. ... issues of homogeneity and comparability are significantly more complex and difficult for community health [than for acute health]. ... Reliable data collections present a major challenge (DHAC 1999a).

The Steering Committee has noted that extending the coverage of the Review is a long term goal.

4 Public hospitals

Public hospitals are important providers of government funded health care services in Australia. This chapter reports on the performance of each State and Territory's public hospital system, largely focusing on acute care services.

A profile of public hospital systems is contained in section 4.1. A framework of performance indicators is outlined in section 4.2. Key results are discussed in section 4.3 and future directions in reporting are covered in section 4.4. The interactions of different health service delivery mechanisms are examined for particular health issues in chapter 6. The performance of public hospitals also interacts with that of general practice (chapter 5) and other government services, including aged care (see chapter 11), police (see chapter 7) and emergency management (see chapter 10).

Improvements have been made this year in reporting elective surgery and emergency department waiting times, and providing additional data on unit costs. An initial proxy measure for equity of access is also reported for the first time.

4.1 Profile of public hospital systems

The data presented in this chapter largely relate to acute care services provided to admitted patients (which comprise the bulk of public hospital services). The data also relate to some sub- and non-acute care services because most jurisdictions are unable to identify all acute and non-acute care services separately. 'Mainstreaming' of psychiatric patients into acute hospitals varies across jurisdictions and has also blurred the distinction between acute and non-acute care providers. The level of other non-acute services provided by public acute care hospitals also varies across jurisdictions (some common health terms are in box 4.1).

Box 4.1 **Some common health terms**

Acute care episodes: a phase of treatment in which the principal clinical intent includes performing surgery, relieving symptoms and/or reducing the severity of illness or injury, and performing diagnostic and therapeutic procedures. Most episodes involve a relatively short stay in hospital, although acute care services may also be provided to non-admitted patients.

Acute care hospital: a hospital that provides at least minimum medical, surgical or obstetric services for admitted patient treatment and/or care, and around-the-clock, comprehensive, qualified nursing services as well as other necessary professional services

Admission: the process by which a patient commences an episode of care

Ambulatory care: services provided by an acute care hospital to non-admitted patients

Case mix adjustment: adjustment of data on treated cases to account for the number and type of cases. Cases are sorted into diagnosis related groups (AN-DRGs) which represent a class of patients with similar clinical conditions requiring similar hospital services.

Comorbidity: the simultaneous occurrence of two or more diseases or health problems that affect the care of the patient

Length of stay: the period from admission to separation less leave days. Same day patients are admitted and separated on the same date and have a length of stay of one day.

Public hospital: a hospital that provides free treatment and accommodation to eligible admitted and non-admitted persons who elect to be treated as public patients. It may also provide and charge treatment and accommodation services to private patients.

Separation: the discharge, transfer, death or change in episode of care of a patient admitted to hospital

Sub- and non-acute episodes: clinical services provided to admitted and non-admitted patients, including planned geriatric respite, palliative care, geriatric evaluation and management and services for nursing home-type patients. Clinical services delivered by designated psychiatric or psychogeriatric units, designated rehabilitation units, and mothercraft and dental services are also considered to be non-acute.

A key objective of government is to provide public hospital services to ensure the eligible population has access to cost effective health services, on the basis of clinical need and within clinically appropriate times, regardless of geographical location. These hospitals provide a range of services, including:

- acute care services to admitted patients;
- emergency and outpatient services to non-admitted patients;

-
- mental health services, including services provided to admitted patients by designated psychiatric/psychogeriatric units, as well as community based services;
 - services to sub- and non-acute patients (for example, patients undergoing rehabilitation and long stay nursing home-type patients); and
 - teaching and research activities.

Changes to some variables reduce the comparability of data presented here with data presented in previous Reports. The data for all jurisdictions include varying proportions of some sub- and non-acute separations.

Public hospital expenditure

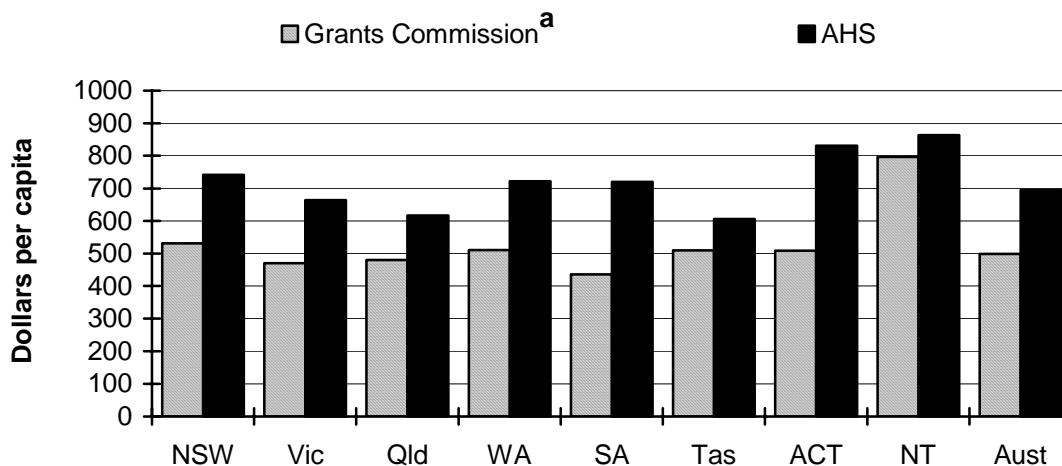
This year, both Commonwealth Grants Commission and Australian Institute of Health and Welfare (AIHW) hospital expenditure data are reported. The Grants Commission hospital expenditure differs from the AIHW data in that it:

- is based on ABS' Government Financial Statistics data that is collected at the State or Territory Government level from Treasuries (rather than directly from hospitals), and thus more closely measures the cost to government (rather than hospital expenditure which may be partly financed by donations or revenue generating activity);
- excludes expenditure on mental health, emergency department and outpatient activity in public acute hospitals (which are categorised as mental health and community health expenditure); and
- does not include expenditure relating to inter-jurisdictional patient flows.

Inter-jurisdictional patient flows most affect the ACT and NT expenditure data. Twenty-five per cent of the patients treated in the ACT's hospitals were NSW residents, while South Australian hospitals accounted for over 3 per cent of the separations of NT residents in 1997-98 (AIHW 1999a).

Recurrent expenditure by public hospitals was \$13 billion in 1997-98, according to AIHW data (table 4A.5): equivalent to \$695 per capita. Across jurisdictions, per capita recurrent expenditure ranged from \$605 in Tasmania to \$851 in the NT (figure 4.1). Government recurrent expenditure for acute and non-acute admitted patient public hospital services was \$9 billion in 1997-98, according to Grants Commission data, after netting out patient fees (table 4A.5). This was equivalent to \$499 per capita. Across jurisdictions, per capita recurrent expenditure (netting-out patient fees) ranged from \$436 in SA to \$796 in the NT (figure 4.1).

Figure 4.1 Recurrent expenditure per person — public hospitals, 1997-98



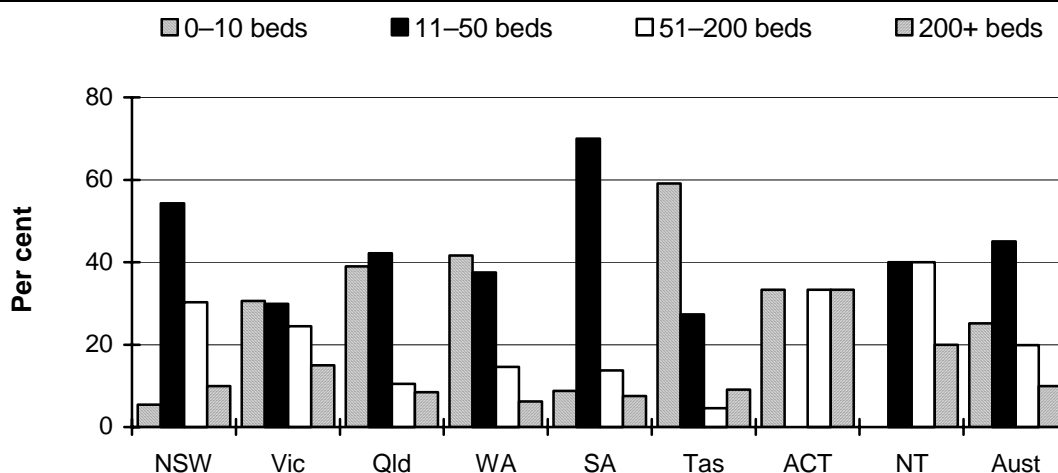
^a Net expenditure has been derived using Commonwealth Grants Commission data which excludes expenditure on non-admitted patient services. Revenue from patient fees has also been deducted.

Source: table 4A.5.

The structure of public hospital systems

Australia has 764 public hospitals (734 public acute care hospitals and 30 public psychiatric hospitals) (table 4A.1). Approximately 70 per cent of public hospitals had up to 50 beds, and only 2.5 per cent had more than 500 beds. There were smaller hospitals across all jurisdictions, particularly in States that cover large geographic areas. Over 75 per cent of hospitals in Queensland and WA had fewer than 50 beds (figure 4.2).

Figure 4.2 Public acute care and psychiatric hospitals, by size, 1997-98^a



^a Changes in the number and distribution of hospitals by size over time can reflect changes in reporting arrangements, rather than in the number of physical buildings or campuses.

Source: table 4A.4.

There were 175 000 full time equivalent staff employed in Australian public acute care and psychiatric hospitals in 1997-98. Nurses comprised 44.7 per cent of staff, while the remainder were salaried medical officers (8.8 per cent), diagnostic and allied health professionals (14.0 per cent), other personal care staff (2.6 per cent), administrative and clerical staff (14.2 per cent), and domestic and other staff (16.7 per cent) (table 4A.3).

Separations

There were over 3.7 million separations from public acute care hospitals in 1997-98, of which 43.3 per cent were same day separations. Public acute hospitals also handled 32.6 million non-admitted occasions of service in that year (table 4A.6).

The six most common types of admitted patient treatment in public hospitals (by Australian National Diagnosis Related Group [AN-DRG]) in 1997-98 (including same day cases) were:

- renal dialysis (10.2 per cent);
- chemotherapy (3.6 per cent);
- vaginal delivery without complications (3.0 per cent);
- other gastroscopy for non-major digestive disease without complications and co-morbidities (2.0 per cent);
- other colonoscopy without complications and co-morbidities (1.4 per cent); and
- abortion with dilatation and curettage, aspiration curettage or hysterectomy (1.0 per cent) (table 4A.7).

Excluding same day separations, the six most common types of public hospital treatment between 1995-96 and 1997-98 are summarised in table 4.1. 'Vaginal delivery without complications' had the highest number of separations in each year between 1995-96 and 1997-98 inclusive. 'Bronchitis/asthma in admitted patients aged 50 years and under without complications', 'heart failure and shock' and 'chronic obstructive airways disease' consistently accounted for the highest numbers of separations.

Table 4.1 Top six AN-DRGs (excluding same day cases) in public hospitals, by volume^a

AN-DRGs	1995-96 separations		1996-97 separations		1997-98 separations	
	no.	% ^b	no.	% ^b	no.	% ^b
Vaginal delivery without complicating diagnosis	109 695	5.0	107 817	5.1	105 106	5.1
Chronic obstructive airways disease	28 485	1.3	33 146	1.6	34 621	1.7
Bronchitis/asthma in admitted patients aged 50 years and under without complications and comorbidities	38 840	1.8	35 369	1.7	31 873	1.5
Heart failure and shock	30 776	1.4	29 892	1.5	29 746	1.4
Cholecystectomy without common bile duct exploration	na	na	22 594	1.1	23 538	1.1
Tonsillectomy and/or adenoidectomy	21 960	1.0	20 112	1.0	20 764	1.0

^a Data for all separations in public hospitals where the episode of care was reported as acute or was not reported. ^b Proportion of total non-same day separations. **na** Not available.

Sources: AIHW (1997a, 1998b, 1999a).

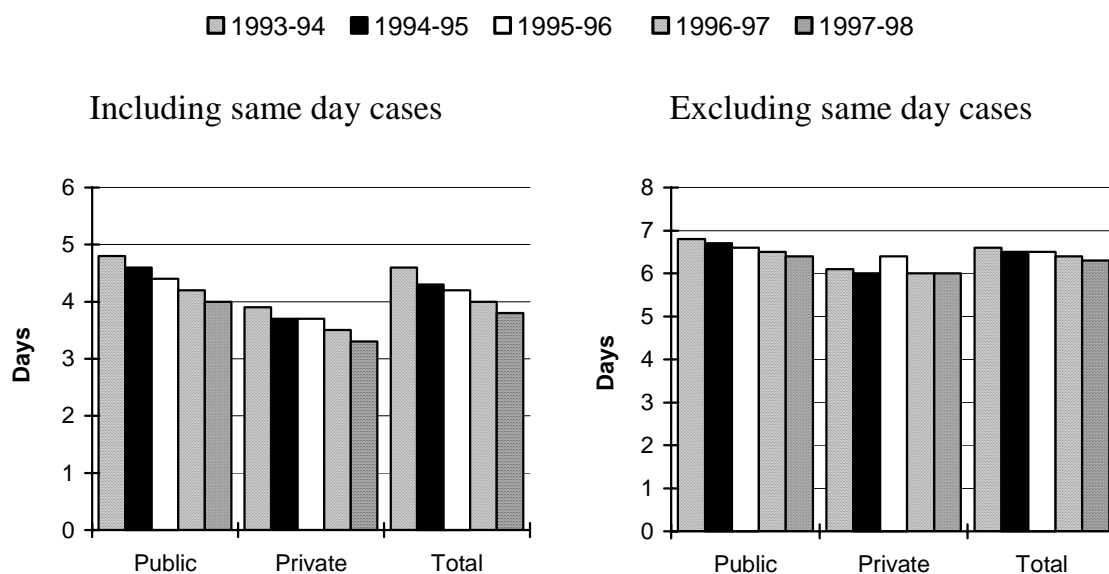
Average length of stay

Including same day cases, the average length of stay in 1997-98 was higher in public acute care hospitals (4.0 days) than in private hospitals (3.3 days). The average length of stay declined for both public acute care and private hospitals between 1993-94 and 1997-98 — down from 4.8 days and 3.9 days respectively. This represented an average annual fall of 4.5 per cent and 0.4 per cent respectively.

Excluding same day cases, the average length of stay in 1997-98 was higher in public acute care hospitals (6.4 days) than in private hospitals (6.0 days). The average length of stay declined for public acute care and private hospitals between 1993-94 and 1997-98 — down from 6.8 days and 6.1 days respectively. This represented an average annual fall of 1.5 per cent and 0.4 per cent respectively (figure 4.3).

The longer average length of stay in public acute care hospitals, compared to private hospitals, reflects the greater complexity of patients treated in public hospitals. The average cost weight for patients treated in private hospitals is 0.96 compared to 1.00 for public hospitals. The higher average cost weight for private compared to public patients in public hospitals is also consistent with public hospitals treating, on average, a more complex mix of patients (AIHW 1999a).

Figure 4.3 Average length of stay in public acute care and private hospitals



a Public acute care hospitals. **b** Private psychiatric and private free-standing day hospital facilities. **c** Public acute care and private hospitals only.

Source: table 4A.19.

4.2 Framework of performance indicators

The primary focus of the framework of performance indicators is on public acute care hospitals (that is, excluding stand-alone psychiatric hospitals) and is based on the shared government objectives for public acute care hospitals (box 4.2).

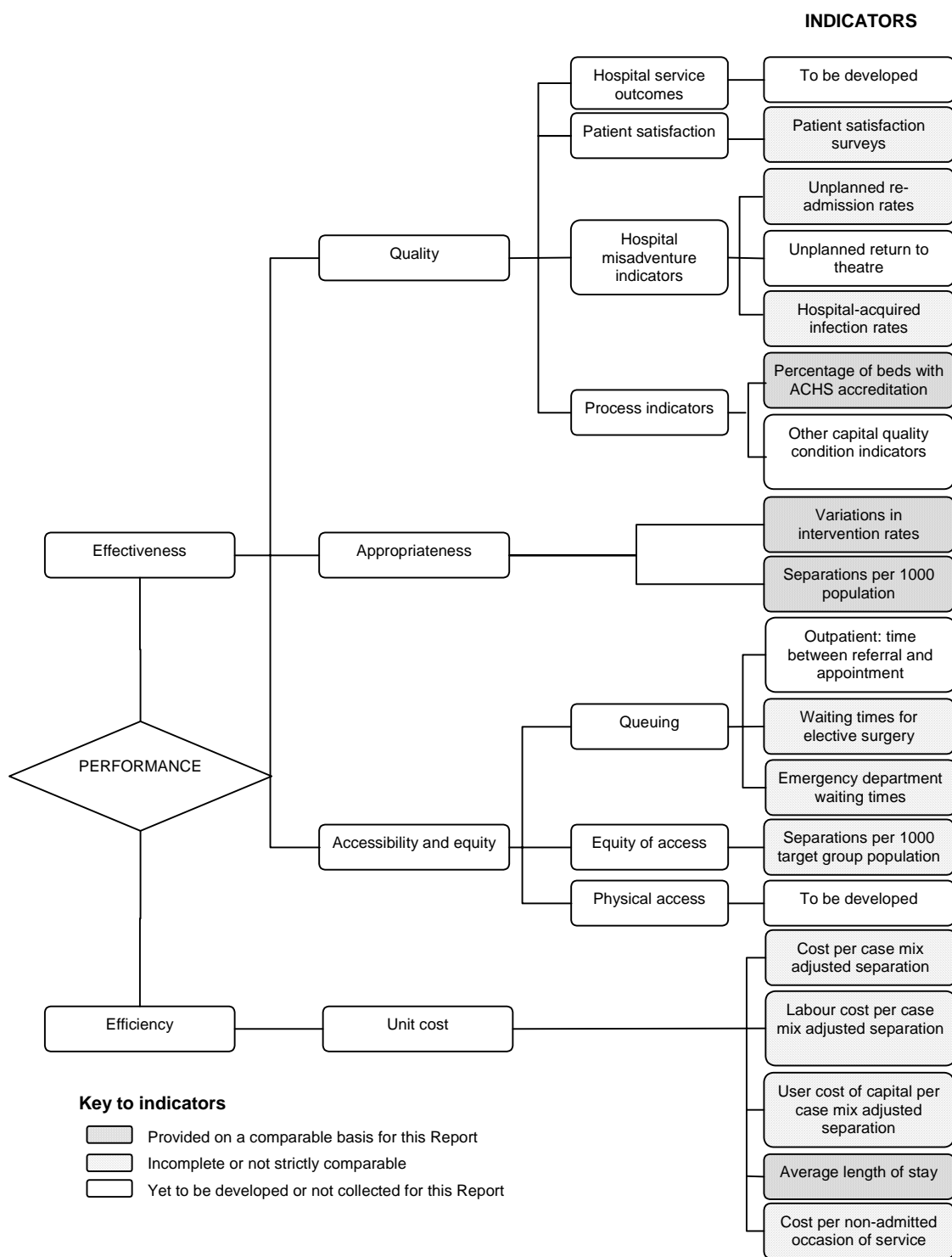
Box 4.2 Objectives for public acute care hospitals

The common government objectives for public acute care hospitals is to provide cost effective acute and specialist services that are:

- safe and of high quality;
- responsive to individual needs;
- accessible and equitable; and
- efficiently delivered.

The framework captures general aspects of the performance of public acute care hospitals in providing health care services (figure 4.4).

Figure 4.4 Performance indicators for public acute care hospitals



The effectiveness of services provided is reflected in terms of quality (as indicated by patient satisfaction, misadventures and accreditation), appropriateness (as indicated by the total separation rate and the rate for certain procedures) and access (emergency department waiting times). Efficiency indicators include the cost per

case mix adjusted separation, average length of stay, and the cost per non-admitted occasion of service.

The number of separations per 1000 persons in target group populations was added to the framework for this Report, following its adoption as an indicator of access for Indigenous people by the Australian Health Ministers' Conference. Some data, albeit imperfect, are available for this indicator this year. In addition, all jurisdictions have provided elective surgery waiting times data for the first time since 1997, although again the data are not yet comparable. All jurisdictions except the NT provided data on emergency department waiting times.

4.3 Key performance indicator results

Different delivery contexts, locations and types of client may affect the effectiveness and efficiency of health services. Appendix A contains detailed statistics and short profiles on each State and Territory, which may assist in interpreting the performance indicators presented in this chapter.

As discussed in section 4.1, public hospitals provide a range of services to admitted patients, some of which may be non-acute services such as rehabilitation and palliative care. The extent to which these non-acute treatments can be identified and excluded from the analysis differs across jurisdictions.

Quality

All Australian governments and the users of health care services are interested in assessing and improving quality of care. The definition of quality in health care is a source of continuing debate. The Institute of Medicine in the United States defines quality as 'the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge' (Lohr and Shroeder 1990). No single indicator can measure quality across all providers. An alternative strategy is to identify and report on *components* of quality of care.

There has been considerable debate and research to develop suitable indicators of the quality of health care, both in Australia and overseas. The Steering Committee reports data on accreditation of public hospital beds, patient satisfaction, and hospital misadventures (unplanned re-admission rates and hospital acquired infection rates) (table 4.2).

The value of clinical indicators, such as hospital misadventures, was evaluated in research projects undertaken in 1998 and 1999 (box 4.3). The Steering Committee acknowledges the limits of the current indicators, particularly given the differences in the scope and measurement of the indicators, and agrees with the project's recommendations for improving these indicators in the future. Until such data are available, the Steering Committee has decided to continue to report collected data on these indicators at the jurisdiction level, on the understanding that doing so is no worse than reporting nothing at all. These indicators are also reported elsewhere, including in the annual reports of the WA and Tasmanian health departments (HDWA 1998, TDCHS 1998).

Table 4.2 Quality of care data provided by jurisdictions, by Report editions

	<i>Patient satisfaction</i>			<i>Unplanned re-admission to hospital</i>			<i>Hospital-acquired infection rates</i>		
	1995	1999	2000	1995	1999	2000	1995	1999	2000
NSW	✓	×	✓	×	×	×	×	×	×
Vic	✓	✓	✓	✓	✓	×	×	×	×
Qld	✓	×	✓	×	×	×	×	×	×
WA	✓	✓	✓	×	✓	✓	×	✓	✓
SA	×	×	×	✓	✓	✓	×	✓	✓
Tas	×	✓	✓	✓	✓	✓	✓	✓	✓
ACT	✓	✓	✓	✓	✓	✓	✓	✓	✓
NT	×	✓	×	✓	✓	✓	✓	✓	✓

Accreditation

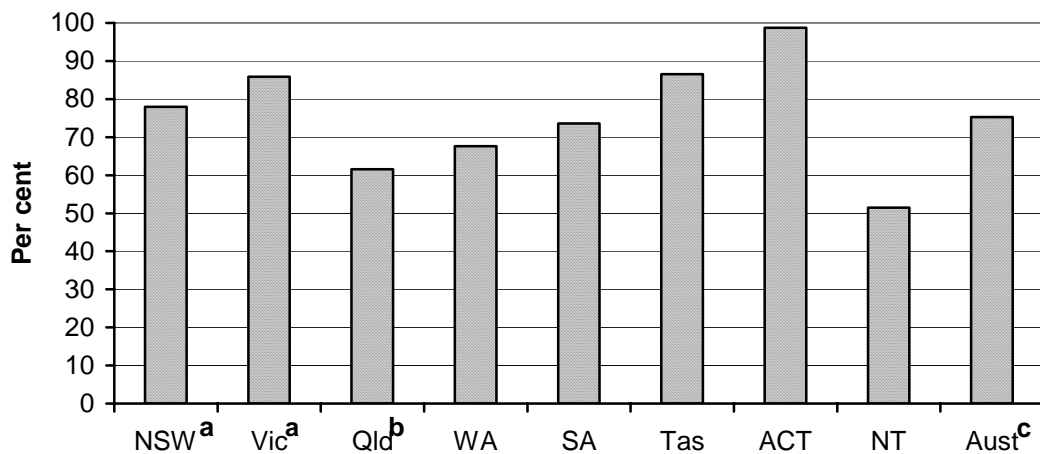
Hospitals may seek accreditation through the Australian Council on Healthcare Standards (ACHS) Evaluation and Quality Improvement Program, ISO 9000 Quality Management System or other equivalent programs. Jurisdictions apply specific criteria to determine which accreditation programs are suitable. The ACHS requires hospitals to demonstrate continual adherence to quality improvement standards to gain and retain accreditation. Although accreditation is not limited to the ACHS process, comparable data on proportions of hospital beds with ACHS accreditation are one of the few nationally available indicators of hospital quality.

Accreditation is an imperfect indicator of quality for several reasons. While it indicates that accredited parties have passed a series of quality tests, it is not possible to draw strong conclusions about the quality of care in those that do not have accreditation. Hospital accreditation is voluntary in all jurisdictions except Victoria, where it will be mandatory from 2000. The costs of preparing a hospital

for accreditation are significant, so a low level of accreditation at the jurisdiction level may reflect a relatively low value placed on achieving accreditation as opposed to poor quality. Also, the cost of accreditation may not rise proportionally with hospital size. This would be consistent with larger hospitals being more active in seeking ACHS accreditation (because it is relatively less costly for them) than actually offering superior care. That said, accreditation provides some information about the proportion of hospital beds in institutions that have been subject to some independent evaluation.

Seventy-five per cent of public hospital beds were in ACHS accredited hospitals at 30 June 1998. Across jurisdictions, the proportion ranged from 51 per cent in the NT to 99 per cent in the ACT (figure 4.5).

Figure 4.5 **Proportion of ACHS accredited public hospital beds, June 1998**

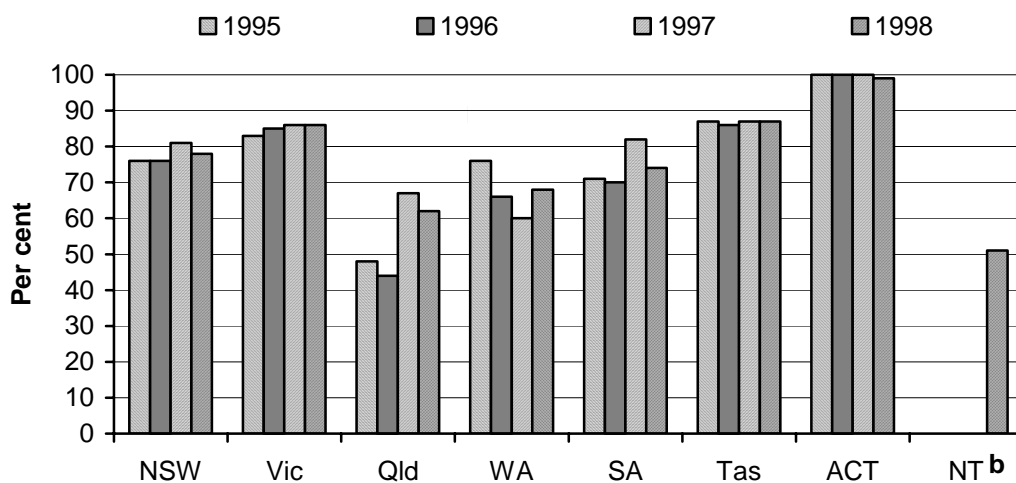


^a Amended data provided by NSW and Victoria and agreed by AIHW. Additional accredited hospitals were identified after publication of *Australian Hospital Statistics 1997-98*. ^b Some Queensland hospitals are pursuing other forms of accreditation and certification. ^c Adjusted to reflect changes in NSW and Victoria's data.

Source: table 4A.2.

The trends in the proportion of public hospitals beds accredited by the ACHS differed among jurisdictions over the four years to 1998 (figure 4.6). The proportion decreased in NSW, Queensland and SA between 1997 and 1998, while all hospitals in the ACT were accredited for the same period. The NT only commenced hospital accreditation in September 1997, and reported that 51 per cent of hospital beds were accredited. The proportion of public hospital beds with ACHS accreditation increased overall in all jurisdictions for which data were available between 1994 and 1998.

Figure 4.6 Proportion of ACHS accredited public hospital beds^a



^a At 30 June for each year. ^b NT commenced accreditation in September 1997.

Source: table 4A.8.

Patient satisfaction results

Agreed definitions across jurisdictions do not yet exist for patient satisfaction. The timing and scope of the patient satisfaction surveys also differ, so it is not possible to compare results across jurisdictions.

Jurisdictions reported the following results.

- In New South Wales, a statewide population health survey was conducted in 1997. More than 24 000 households were contacted, with a response rate of 71 per cent. Of those that responded, 11 per cent of males and 15 per cent of females reported having an overnight stay in hospital in the last 12 months. The standard of admitted patient care received within the previous 12 months was rated either as excellent, very good or good by 90 per cent of both male and female respondents using public hospital services. For 80 per cent of both male and female respondents, emergency department care received a rating of either excellent, very good or good. The percentage of respondents who would prefer to return to the same hospital was 74 per cent for males and 70 per cent for females. The adequacy of information provided on discharge from hospital was rated very adequate or adequate by 79 per cent of both male and female respondents (table 4A.23).
- In Victoria, 96 per cent of respondents to a survey of 9918 admitted patients in 1997 reported being either overall 'very satisfied' or 'fairly satisfied' (as opposed to 'satisfied' or 'not too satisfied') with their hospital. Ninety-six per

cent of respondents would recommend the hospital to their family or friends. Eighty-seven per cent of patients rated the quality of care as either 'excellent' or 'very good', and a further 10 per cent rated it as 'good' (table 4A.30).

- In Queensland, there is no State-based survey, but hospitals use a variety of standard and self developed survey instruments, with various frequencies of administration, depending on the health care setting.
- In Western Australia, State-based patient satisfaction surveys of hospital services were conducted over the past three years, with a standard set of satisfaction indicators being developed. The number of people surveyed steadily increased from 3412 people in 1996-97 to 16 074 in 1998-99. The response rate was 40 per cent in 1998-99. The Patient Evaluation of Hospital Services survey was conducted as a self completion postal questionnaire from April to July 1998. Two measures were used to assess patient satisfaction — an outcome score and an overall indicator of satisfaction. The State outcome score for all admitted patients was 88 out of 100 in 1998-99. The score indicates that most hospital patients perceived their hospital stay as being beneficial to their health. The outcome score was consistent across hospital type, location and function (HDWA 1997-98). The overall indicator of satisfaction for 1998-99 was 83 out of 100, indicating a generally high level of satisfaction with most categories of hospital services. Scores on two of the eight major scales were below the average of 80 (tables 4A.36 and 4A.37).
- In Tasmania, a 1998 patient satisfaction survey of 600 patients was conducted in each of the major hospitals, with a response rate of 66 per cent. Consistent with most hospital satisfaction surveys, patients rated treatment and care provided by public hospitals highly. The results indicated that 93 per cent of respondents advised that they would definitely or probably recommend the hospital to family or friends, while 96 per cent of respondents reported that they were either very satisfied or mostly satisfied that their needs were met during their hospital stay. The Tasmanian Health Department is examining results of the survey in greater depth, including the use of statistical modelling tools to identify key areas of patients' perspectives of hospital care that should be incorporated into service improvement activities. The patient satisfaction survey tool will also be evaluated (table 4A.50).
- In the ACT, there is no Territory-based survey and the results of two hospital based surveys have not yet been released. The Calvary Hospital conducted a satisfaction survey of 1960 public hospital patients in May 1999, with a response rate of 37 per cent. The survey indicated a high degree of satisfaction overall. The Canberra Hospital conducted the Hospital-wide Patient Satisfaction Survey in October 1999, the results of which were still being collated in December 1999. Areas surveyed include admitted patients (excluding mental health),

outpatients and emergency and day surgery areas. The hospital surveyed 10 patients from each ward/unit over an eight week period.

- The NT uses a variety of methods to gain feedback on consumers' experiences with hospital services. These range from the structured patient satisfaction survey tool to community-based interviews with ex-patients.

Unplanned re-admission rates

The unplanned re-admission rate is the total number of unplanned re-admissions for the same condition within 28 days of discharge (during the period under study) divided by the total number of separations (excluding deaths) for the same period. According to the Australian Council on Healthcare Standards, a re-admission occurs through the emergency department and can be defined as:

- an unexpected admission for further treatment of the same condition for which the patient was hospitalised in the previous 28 days;
- an unexpected admission for treatment of a condition related to the one for which the patient was hospitalised in the previous 28 days; and
- an unexpected admission for a complication related to the one for which the patient was hospitalised in the previous 28 days (ACHS 1998).

This definition is applied differently in each jurisdiction, so the reported results are not used to make comparisons across jurisdictions. Care should be taken therefore in interpreting these data.

Jurisdictions reported the following results.

- In WA, the unplanned emergency re-admission rate was 3 per cent for rural non-teaching hospitals and nearly 1 per cent for all public hospitals (table 4A.39).
- In SA, the unplanned emergency re-admission rate was 4 per cent for 24 hospitals in 1998, compared with 4.6 per cent for 30 hospitals in 1997 (table 4A.43; SCRCSSP 1999a).
- In Tasmania, the unplanned emergency re-admission rate was 1 per cent for the three major hospitals in 1997-98 (table 4A.47).
- In the ACT, the unplanned emergency re-admission rate was 3.4 per cent in 1997-98 compared with 2.7 per cent for all hospitals in 1996-97 and 4.2 per cent in 1995-96 (table 4A.51; SCRCSSP 1999a).
- In the NT, the unplanned emergency re-admission rate was 6.3 per cent across five hospitals in 1997-98 (table 4A.55).

Box 4.3 **The Pilot Hospital-wide Clinical Indicators Project**

The Commonwealth Department of Health and Family Services funded the Pilot Hospital-wide Clinical Indicators Project as part of the National Hospital Outcomes Program. The project investigated the link between the selected clinical indicators (used in this Report) and an overall assessment of all aspects of the quality of clinical care, determined by a panel of medical experts. The indicators evaluated were:

- the rate of unplanned hospital re-admission within 28 days of separation;
- the rate of hospital-acquired bacteraemia;
- the rates of post-operative wound infection following clean and contaminated surgery; and
- the rate of unplanned return to an operating room.

The last indicator could not be extracted from available databases easily, so was not included in the project's more detailed analysis.

The project set a high standard for each indicator, requiring them to accurately reflect hospital-wide medical care. The final report concluded that a clinically weak and statistically insignificant relationship existed between the indicators and the overall assessment of quality of care, and therefore that the indicators were unsuited as national performance measures of hospital quality. Thus, the indicators were not validated as measures of *hospital-wide care*.

Questions remain about whether the indicators reflect the quality of a more limited aspects of care — for example, do unplanned re-admissions reflect discharge planning procedures? Do wound infection rates reflect the standards of wound care during and immediately after surgery?

The study recommended that 'there is a strong rationale for individual institutions to continue to monitor these indicators as part of a quality improvement program' (Ibrahim *et al.* 1998, p. xii). The study urged caution in using these indicators for benchmarking purposes, but suggested that the indicators may be useful for identifying outliers or comparing the performance of hospitals with similar patient mix, rather than making close comparisons. The final report concluded that '(a) low incidence of surgical wound infection is highly desirable ... wound infection rates should continue to be monitored Institutions whose rates are very high compared with the average should seek an explanation for this.' (Ibrahim *et al.* 1998, p. 43).

The project identified the lack of appropriate and widely recognised definitions and the absence of structured data collections, as significant shortcomings of the indicators. The final report recommended that future indicators should be ideally constructed from planned collections of clinical data, and clinical data collection within hospitals should be improved.

Sources: Ibrahim *et al.* (1998); pers. comm.; Professor John McNeil, Head, Department of Epidemiology and Preventative Medicine, Monash Medical School.

Hospital-acquired infection rates

Three measures of hospital-acquired infection rates are reported here. 'Rates of post-operative wound infection' are defined for both clean and contaminated surgery. They are derived by dividing the number of patients with evidence of wound infection on or after the fifth post-operative day following clean (or contaminated) surgery, by the number of patients undergoing clean (or contaminated) surgery with a post-operative stay of at least five days. The 'rate of hospital-acquired bacteraemia' is the number of patients who acquired bacteraemia during a hospital stay, divided by the number of separations with a length of stay equal to or greater than two days.

Jurisdictions reported the following results.

- *Rate of post-operative wound infection following clean surgery*
 - WA supplied data for combined post-operative wound infections. The rate was 0.6 per cent for teaching hospitals, 0.4 per cent for metropolitan non-teaching hospitals and 0.4 per cent for rural non-teaching hospitals. The rate for total public hospitals was 0.5 per cent (table 4A.39).
 - In SA, the rate was 2.0 per cent across 11 hospitals in 1998 (table 4A.43).
 - In the ACT, the rate was 1.1 per cent for The Canberra Hospital in 1997-98. The Calvary Hospital will commence reporting on this indicator in 1999-2000 (table 4A.51).
 - In the NT, the rate across all hospitals was 3.1 per cent in 1997-98 (table 4A.55).
- *Rate of post-operative wound infection following contaminated surgery*
 - In SA, the rate was 2.1 per cent for 12 hospitals in 1998 (table 4A.43).
 - In the ACT, the rate was 0.7 per cent for The Canberra Hospital only in 1997-98. The Calvary Hospital will commence reporting on this indicator in 1999-2000 (table 4A.51).
 - In the NT, the rate across all hospitals was 7.8 per cent in 1997-98 (table 4A.55).
- *Rate of hospital-acquired bacteraemia*
 - In WA, the rate was nearly 0.1 per cent for all public hospitals in 1997-98 (table 4A.39).
 - In SA, the rate was 0.3 per cent for 14 hospitals for the calendar year 1998 (table 4A.43).

- In Tasmania, the rate was 0.2 per cent for the three major hospitals in 1997-98 (table 4A.47).
- In the ACT, the rate was 0.6 per cent for The Canberra Hospital in 1997-98 (table 4A.51).
- In the NT, the rate across all hospitals was 0.5 per cent 1997-98 (table 4A.55).

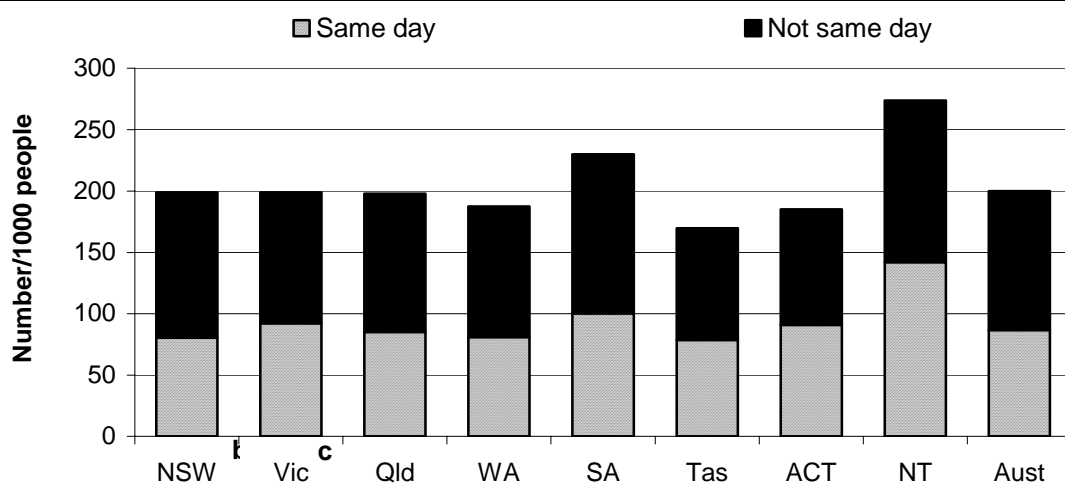
Appropriateness

Two indicators are presented for appropriateness of care provided by public acute care hospitals: the number of separations per 1000 people (also known as the separation rate) and separation rates for certain procedures. However, both indicators are problematic because the appropriate mix/level is unclear (for example, a relatively high level of separations may reflect better access *or* over-servicing). Comparisons are also complicated by different access to substitutable services (for example, private hospitals). Therefore, jurisdictional comparisons are most useful for highlighting differences that may require more detailed analysis.

Total separation rates

There were approximately 3.7 million separations from public acute care hospitals in 1997-98 (table 4A.6). Nationally this translated into nearly 200 separations per 1000 persons, ranging from 169.5 in Tasmania to 273.7 in the NT (figure 4.7).

Figure 4.7 Separations from public acute care hospitals, 1997-98^a

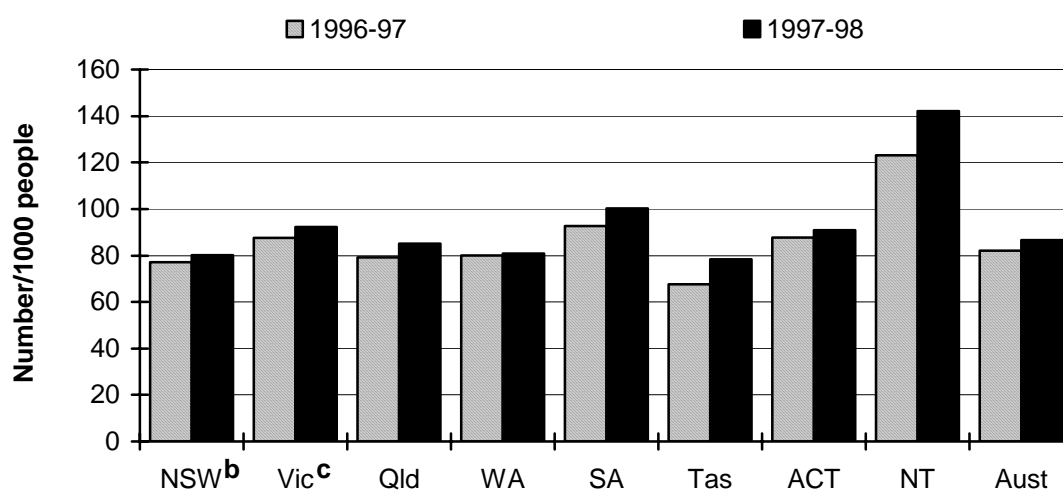


^a Includes psychiatric and sub-acute separations from acute hospitals. ^b Data includes separations from Department of Veterans Affairs hospitals. ^c Victorian data in last year's Report excluded psychiatric and sub-acute separations and should not be compared with that reported this year, which includes all separations.

Source: table 4A.9.

Nationally, 86.5 of a total of 199.9 separations per 1000 persons were same day separations in 1997-98. Tasmania had the overall lowest rate of same day separations (78.4), largely reflecting its low rate of all separations (the proportion of Tasmanian separations that were same day was the same as the national average). The NT had the highest rate of same day separations (142.1). Between 1996-97 and 1997-98, the number of same day separations rose significantly in Tasmania (16.0 per cent) and the NT (15.5 per cent) (figure 4.8).

Figure 4.8 **Same day separations from public acute care hospitals^a**



^a Includes psychiatric and sub-acute separations from acute hospitals. ^b Data includes separations from Department of Veterans Affairs hospitals. ^c Victorian data in last year's Report excluded psychiatric and sub-acute separations and should not be compared with that reported this year, which includes all separations.

Source: table 4A.9.

Separation rates for certain procedures

Separation rates for certain procedures are also used to indicate the appropriateness of hospital care. The data available are for all hospitals and so also reflect the activities of the private health system. The procedures were selected for their frequency and for being elective and discretionary procedures (given the availability of alternative treatments).

Nationally, endoscopy had the highest number of separations — 24.4 per 1000 persons (standardised for age and sex differences across jurisdictions) — among the selected identified procedures in 1997-98 (table 4.3). It was followed by lens insertion and arthroscopy (5.4 and 5.1 separations per 1000 persons respectively). Separation rates for all procedures varied across jurisdictions.

The number of separations per 1000 persons in 1997-98 differed most widely for:

- endoscopy (from 13.3 in the ACT to 26.3 in Queensland);
- arthroscopy (from 3.2 in the NT to 8.4 in SA); and
- myringotomy (from 0.9 in the NT to 3.7 in SA).¹

Some of the selected procedures, such as angioplasty and coronary artery bypass graft, are alternative treatment options for people diagnosed with similar conditions. Statistically significant and material differences in the separation rates for these procedures may highlight variations in treatment methods across jurisdictions. NSW, WA and the ACT recorded statistically significant differences from the average rates for these procedures in all other jurisdictions, whereas there were no significant differences in Victoria, SA, Tasmania and the NT (table 4A.10).

Table 4.3 Separations per 1000 persons, public and private hospitals, by selected procedure, 1997-98^{a, b, c}

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
<i>A relatively high rate may indicate more appropriate care^d</i>									
Angioplasty	0.93	1.06	0.59	0.92	0.88	0.85	0.64	0.53	0.89
Coronary artery bypass	1.00	0.93	0.85	0.68	0.74	0.76	0.82	0.64	0.89
Hip replacement	0.99	1.14	0.91	1.05	1.17	1.41	1.34	0.66	1.05
Lens insertion	5.55	5.19	6.78	4.93	3.86	3.63	2.34	4.65	5.38
<i>A relatively high rate may indicate over reliance on procedures^d</i>									
Hysterectomy	1.67	1.65	1.83	1.78	2.10	2.10	1.78	0.94	1.75
Tonsillectomy ^e	1.74	2.15	1.89	1.67	2.73	1.50	1.56	0.55	1.91
Myringotomy ^e	1.76	2.48	1.96	2.07	3.68	1.88	1.54	0.88	2.14
Caesarean section	2.72	2.78	3.27	3.06	3.20	2.99	2.38	2.58	2.90
<i>Implications of a high or low rate are unclear^d</i>									
Appendicectomy	1.38	1.50	1.48	1.59	1.32	1.38	1.40	1.00	1.44
Cholecystectomy	2.33	2.20	2.30	1.80	2.32	2.05	1.86	1.24	2.22
Arthroscopy	4.62	5.43	4.13	5.39	8.37	4.70	4.93	3.20	5.10
Endoscopy	24.91	25.59	26.31	21.87	20.92	22.04	13.33	13.67	24.39

^a Rates standardised for age and sex of the Australian population at 30 June 1991. ^b Excludes private hospitals in the NT and private free-standing day facilities in the ACT. Some private free-standing day facilities in Tasmania are also excluded. ^c Table 4A.10 provides data on the statistical significance of differences between jurisdictions. ^d Caution should be taken in interpreting the differences in the separation rates of the selected procedures. Variations in rates may be attributed to variations in the prevalence of the conditions being treated, or differences in clinical practice between States and Territories. Higher/lower rates are not associated necessarily with inappropriate care. ^e Separation rates for these procedures may reflect the performance of general practice at the primary care level (see chapter 5).

Source: table 4A.10.

¹ Endoscopy enables internal examinations to be carried out using a fine tube; arthroscopy is a technique for the diagnosis and treatment of knee problems; myringotomy is a surgical procedure where short tubes (grommets) are inserted in the ear to ventilate the middle ear.

Accessibility and equity

Waiting times for elective surgery

The proportion of elective surgery patients waiting longer than the accepted standards is one nationally recognised indicator of access to public acute care hospitals (HDWA 1998). Waiting time data is also collected for internal management purposes by hospitals. Elective surgery admissions account for an average of 16 per cent of all acute admissions across jurisdictions for which data is available, but the proportion varies significantly (table 4.4).

The *Report on Government Service Provision 1997* contained 1994 data on elective surgery waiting times for public acute care hospitals for all States and Territories. The AIHW has compiled but not released data for 1995-96 and 1996-97. The delay in release is partly a result of concerns relating to inconsistent data definitions and collection processes (AIHW 1999b).

Under the 1993-98 Medicare Agreements, all States and Territories agreed to report elective surgery waiting times from 1995-96. States and Territories started from different points, and while some States implemented reporting systems in 1995-96, other States were able to report against definitions which were not necessarily consistent. All States agreed to report against the same definitions by 1997-98. Elective surgery waiting time data provided by the States and Territories for the three years 1995-96 to 1997-98 have been published in the Commonwealth Department of Health and Family Services (Aged Care) Annual Reports in the following year (ie 1996-97 to 1998-99).

All States and Territories have also now provided the AIHW with detailed 1997-98 data for validation, but this process had not been completed in time for the data to be included in this year's Report.

As was the case last year, this Report includes elective surgery data that have been provided directly to the Review or the Commonwealth by States and Territories. There are three generally accepted urgency categories for elective surgery:

- category 1 where admission is desirable within 30 days;
- category 2 where admission is desirable within 90 days; and
- category 3 where admission in the future is acceptable (see Table 4A.68 for complete definitions).

Category 1 and category 2 patients waiting longer than desirable are usually described as 'overdue', while category 3 patients waiting longer than a year are

subject to an 'extended wait' (AIHW 1999c). For simplicity, the term 'extended wait' will also be used here to describe 'overdue' patients. There is no specified or agreed desirable wait for category 3 patients, so the term 'extended wait' is used for patients waiting for longer than 12 months as per Medicare Agreement targets.

Elective surgery waiting times are difficult to measure objectively and the data can be complex to interpret. There are two widely accepted measures of waiting times: the proportion of patients on waiting lists with extended waits (at a census date), and the proportion of patients admitted after extended waits (based on throughput data). Both present conceptual and data issues.

From a patient's perspective the relevant question is, 'If I need surgery, what is the likelihood that I will have to wait longer than is considered desirable?' To develop strictly comparable data to answer this question, clinical judgements about need for surgery, and allocations by surgeons into the three categories of urgency, would need to be consistent across jurisdictions. Current data collections assume there is some standardisation across Australia in how these ratings are allocated, but the definitions remain relatively broad (Clover *et al.* 1998). As a result, systemic differences in clinical practices across jurisdictions, as well as the performance of hospital systems, may affect reported results.

In addition, a conceptual issue is how reported results are affected by differences in the proportion of patients that were recorded as emergency admissions, rather than from waiting lists. The available data focused on those patients subject to extended waits, as a proportion of those waiting (for census data) or as a proportion of those admitted (for throughput data). Clinical decisions on whether to admit a patient for surgery as an emergency patient or as a patient for elective surgery (albeit with no wait), affects the denominator of the indicator, and may vary systemically across jurisdictions (table 4.4).

Another data issue is how differences in the recording of waiting times affect the comparability of reported results. This is a particular issue when recording waiting times for patients who experience a change in their clinical condition, leading to a review of their urgency category. From 1999-2000, all jurisdictions will record waiting times as the period in the most recent urgency category, and in any previous more urgent categories. This was the method used for NSW and Queensland in 1997-98. Other jurisdictions used slightly different methods that would have decreased the reported waiting time for some patients in WA, SA and the NT, and increased it for Victoria and Tasmania. The two ACT hospitals used different methods so there was no way of assessing the likely net effect. It was not possible to assess the significance of these definitional differences, in part because the number of patients whose category was revised was not recorded. Comparisons across

jurisdictions may also be affected by differences in the scope of the collections (including the proportion of hospitals and elective admissions covered).

The proportion of patients waiting for elective surgery at public hospitals subject to extended waits, for each urgency category, is reported in table 4.4. This indicator needs to be interpreted carefully. It indicates the proportion of those patients waiting on that date, who have been waiting an extended time. Thus it captures, in the numerator and denominator, those patients who may never be admitted (for a variety of reasons, see below). However, generally it will overstate the likelihood of extended wait, because those waiting an extended time (the numerator) are more likely to be recorded on any census date, than those who are treated in a timely manner (and thus understate the denominator) (Don *et al.* 1987).

An alternative indicator based on admissions data — the proportion of patients admitted with extended waits — also has some shortcomings. Not counted are those patients who waited an extended time but were not admitted as a waiting list patient to a public hospital because they became emergency cases, decided to be treated in a private hospital, or died (Nicholl 1988). In addition, some patients waiting may not be admitted because their condition improved sufficiently to make treatment unnecessary, or they declined treatment for other reasons (Lee *et al.* 1987).

NSW, WA, SA, the ACT and the NT provided data on patients on waiting lists by clinical speciality for 1997-98. Queensland and Tasmania provided data only for all clinical specialities aggregated (see attachment 4A).

Victoria uses a significantly different definition to calculate the number of elective surgery patients on waiting lists. It classes patients waiting for elective surgery as booked patients and waiting list patients. Booked patients have been given a definite admission date (within six weeks) and unbooked patients are still waiting for a date. Patients who have been booked longer than six weeks are reclassified as waiting list patients. Victoria also publishes the number of elective surgery patients waiting longer than desirable. Time waiting includes time on the waiting list and/or the booking list. Data for Victoria were available in aggregate only.

- At 30 June 1998, 189 category 1 patients were on the waiting list for elective surgery but no category 1 patients were overdue for surgery.
- There were over 1800 category 2 patients overdue for surgery, comprising 28 per cent of the 6364 category 2 patients on the waiting list.
- There were over 22 000 patients on the category 3 waiting list (table 4A.31).

Table 4.4 Proportion of elective surgery patients with extended waits

<i>Urgency category^a</i>	<i>Unit</i>	<i>NSW</i>	<i>Vic^b</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>
<i>Proportion of patients on waiting lists with extended waits, 30 June 1998</i>									
1 – Admit ≤ 30 days	%	14		1	16	15	33	35	38
2 – Admit ≤ 90 days	%	9		11	22	13	47	45	34
3 – Non-urgent ^c	%	6		29	11	8	35	23	14
<i>Proportion of patients admitted from waiting lists with extended waits, 1997-98</i>									
1 – Admit ≤ 30 days	%	14	np	5	10	10	15	np	10
2 – Admit ≤ 90 days	%	10	np	15	12	10	35	np	18
3 – Non-urgent ^c	%	5	np	9	9	3	13	np	3
<i>Waiting list admissions, 1997-98</i>									
Number	no.	232 916	na	114 691	22 357	36 239	14 523	9 288	na
As a proportion of acute admissions	%	19	na	17	7	10	19	na	na
<i>Data coverage^d</i>									
Coverage of elective admissions	%	100	na	95	68	73	88	100	na
Number of hospitals	no.	na	23	33	5	7	3	2	na

^a The categories are defined in the text above. ^b Data not included; see text below. ^c There is no specified or agreed desirable maximum wait for category 3 patients, so the data relate to patients waiting longer than 12 months as per Medicare Agreement targets. ^d Not all hospitals that undertook elective surgery provided data. **na** Not available. **np** These data were not available for inclusion in the Commonwealth Department of Health and Aged Care Annual Report and were not requested for this Report from the relevant agency early enough to allow it to be included.

Sources: tables 4A.26; 4A.31; 4A.34; 4A.35; 4A.46; 4A.48; 4A.54; 4A.56; derived from DHAC (1999b); State and Territory governments (unpublished).

Elective surgery waiting time data provide some information on access, but public acute care hospital services are provided on the basis of clinical need and elective surgery is only one aspect of the care they provide. Therefore, assessment of access would not be based on the waiting lists for elective surgery solely because these do not capture the needs of patients requiring services for acute and chronic medical conditions (Hall 1999).

Emergency department waiting times

This indicator measures the proportion of patients seen from presentation to the emergency department to commencement of service by a treating medical officer or nurse, within the time limits set according to the urgency of treatment required (AIHW 1999c). A 1997 study recommended two emergency department waiting time indicators for national reporting (Whitby *et al.* 1997). One of these indicators relates waiting times to the urgency of treatment required (triage category):

- proportion of triage category 1 patients (those needing resuscitation) seen immediately;
- proportion of triage category 2 (emergency) patients seen within 10 minutes;
- proportion of triage category 3 (urgent) patients seen within 30 minutes;
- proportion of triage category 4 (semi-urgent) patients seen within 60 minutes; and
- proportion of triage category 5 (non-urgent) patients seen within 120 minutes.

Data for all jurisdictions are presented in table 4.5. There are nationally agreed definitions, but as with the elective surgery data, differences in how the data are collected may exist, and great care should be taken in interpreting these data. Data issues to be investigated include any differences in when the elapsed time commences (for example, when the patient arrives at the triage desk, or when a triage category is allocated) and the precision with which the time treatment starts is recorded. Other issues arise with the use of benchmarks. For example, a patient in triage category 2 who waits 11 minutes is recorded the same as one waiting 18 minutes, even though the later event may be of much greater concern. There are also some differences in the periods for which data were collected. Consequently, the reported results are not used to make comparisons across jurisdictions.

Table 4.5 Emergency department waiting time to service delivery, 1997-98 (percentage of patients seen within triage category)^a

<i>Triage category</i>	<i>NSW^{b, c}</i>	<i>Vic</i>	<i>Qld^d</i>	<i>WA^e</i>	<i>SA</i>	<i>Tas</i>	<i>ACT^f</i>	<i>NT</i>
1 – Resuscitation	96	100	95	89	95	94	100	na
2 – Emergency	76	81	64	70	63	76	83	na
3 – Urgent	63	75	60	68	58	67	71	na
4 – Semi-urgent	68	na	68	69	61	77	63	na
5 – Non-urgent	89	na	88	88	93	96	81	na
<i>Data coverage</i>								
Estimated proportion of emergency visits	79	na	61	na	55	96	70	na
Number of hospitals.	51	19	20	na	6	3	2	na

^a Nationally agreed definitions exist but differences in how data are collected may exist and care should be taken in interpreting these data. ^b Excludes non-emergency visits, that is, planned visits, privately referred non-admitted patients, pre-arranged admissions (non-medical), patients in transit and dead on arrival are not classified as triage 1. ^c 1998-99 data. ^d January to June 1999 data for hospitals with an emergency department role delineation of 4 or greater. ^e Derived from teaching hospital emergency department systems. One hospital has a real time reporting system and it reported seeing 100 per cent of triage category 1 patient within the specified time. The other hospitals estimated the time when information was logged after the event. ^f The period reported for the Calvary Hospital was July 1997 to June 1998 and, for The Canberra Hospital, the period was January to June 1998. **na** Not available.

Sources: tables 4A.23; 4A.28; 4A.33; 4A.41; 4A.44; 4A.49; 4A.52; State and Territory governments (unpublished).

Separations by target group

Access to hospital services is one measure of the effectiveness of the health sector. Without appropriate access to hospital services, the consequences of any injury or illness are more likely to result in either permanent disability or premature death.

Data on separation rates for Indigenous people and all people by State and Territory for all hospitals (both public and private) are presented in table 4.6. The variation in the number of Indigenous separations per 1000 Indigenous population could be due to one of two factors.

First, the completeness of the data varies between States and Territories. Some Indigenous people may not be identified in the morbidity data collections and/or the total population. Some jurisdictions have only recently begun collecting data on Indigenous status (table 4.6). A 1999 study found the proportion of people living in a hospital's catchment area was a major factor associated with the accuracy of recording of Indigenous status. More accurate records were collected by hospitals with more Indigenous people in their primary catchment area. The completeness of identification of Indigenous people ranged from 55 per cent to 100 per cent results across the 12 hospitals participating in the study (ABS & AIHW 1999). The Aboriginal and Torres Strait Islander Health and Welfare Unit is working with Health Departments and hospitals to improve the completeness of data about Indigenous status and all jurisdictions will be assessing the completeness of their hospital data collections by the end of 2001 (ABS & AIHW 1999).

Second, the true hospitalisation rates for Indigenous persons may vary across jurisdictions. But given the shortcomings of the data, it is likely differences may, in part, reflect variations in the completeness of the data, rather than access to services.

Table 4.6 **Indicative estimates of separations per 1000 persons from all hospitals, by reported Indigenous status, 1997-98** ^{a, b, c}

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
Indigenous people	398	367	543	785	703	139	392	904	540
Total population	277	293	311	283	313	268	266	341	291
Year of first collection of Indigenous data ^d	1979	1986	1993	1984	1981	1997	1976	1981	..

^a Includes same day procedures and repeat admissions for services such as dialysis ^b There are no estimates of the completeness of identification of Indigenous patients for most jurisdictions. ^c Rates age-standardised for the Australian population at 30 June 1991. ^d Less established data collections may be incomplete.

Sources: AIHW (1999a); ABS & AIHW (1999).

Overall, on an age-standardised basis, 540 separations for Indigenous patients (including same day procedures and repeat admissions) were reported per 1000 Indigenous population in Australia. This was markedly higher than the corresponding overall population figure of 291 per 1000 (table 4.6). Indigenous data for private hospitals were not available for Victoria or the NT. Even without private separations data, the NT reported the highest rate of Indigenous separations (904 per 1000). WA and SA reported the next highest rates (785 and 703 per 1000 respectively), ahead of Queensland and NSW (543 and 398 per 1000 respectively).

The ratios of hospital separations of Indigenous males and females, for selected diseases, were markedly higher than those for the whole population, in all age groups over 34 years. The most striking difference in separation ratios between Indigenous people and the remaining population was for diabetes. In WA, SA and the NT, Indigenous women were between 10 and 18 times more likely to have been hospitalised for diabetes than other women in the same jurisdictions. Similarly, Indigenous men were between three and 13 times more likely to have been hospitalised for diabetes than other men in the same jurisdictions. Hospital separation ratios for tympanoplasty were very high for the NT (10.8 for males and 15.6 for females), and quite high for SA (3.7 for males and 3.8 for females) (table 4.7).

Efficiency

Care should be taken when comparing the available indicators of efficiency across jurisdictions. Differences in counting rules, treatment of various expenditure items (for example, superannuation), and allocation of overhead costs have the potential to hinder comparisons across jurisdictions. Differences in the scope of services being measured may also reduce the comparability of efficiency measures, particularly where counts of services to sub-acute and non-acute patients are included with counts of services to acute care patients. Further, there are differences in the extent to which jurisdictions include psychiatric services provided in public acute care hospitals (box 4.4).

Three approaches to measuring the efficiency of public hospital acute care services are used in this Report. One is the level of expenditure per unit of output (the unit cost). An alternative indicator is the average length of stay, because costs are correlated with the length of stay at aggregate levels of reporting.

This year, the Report uses two sources of data for both unit cost indicators and average length of stay. The two sources are the AIHW's *Australian Hospital Statistics* (AHS) and the Commonwealth Department of Health and Aged Care's *National Hospital Cost Data Collection* (NHCDC). Both data sources have strengths and weaknesses which are discussed in box 4.4.

Table 4.7 Hospital separation ratios for selected causes, by sex and jurisdiction (age standardised)^a

<i>Disease/sex</i>	<i>NSW^b</i>	<i>Vic^b</i>	<i>Qld^{b, c, d}</i>	<i>Qld^{b, c, e}</i>	<i>WA</i>	<i>SA</i>	<i>Tas^b</i>	<i>ACT^b</i>	<i>NT</i>
Acute myocardial infarction									
Male	1.6	na	3.2	1.4	2.2	2.0	np+	*	1.8
Female	2.2	na	3.9	2.3	2.6	3.6	np+	*	1.3
Injury and poisoning									
Male	1.4	1.8	4.3	1.3	3.4	2.5	np+	1.0	2.3
Female	1.5	2.1	6.7	1.5	4.3	3.1	np+	1.2	2.9
Respiratory diseases									
Male	2.4	2.1	5.7	1.4	4.7	2.8	np+	*	3.5
Female	2.8	2.8	6.1	1.3	5.4	2.6	np+	*	5.5
Diabetes									
Male	4.2	na	13.2	5.6	12.6	7.3	np+	6.6	3.2
Female		na	18.2	10.5	10.4	10.6	np+	2.6	17.5
Tympanoplasty									
Male	0.7	na	1.1	0.5	np	3.7	np+	0.0	10.8
Female	2.1	na	1.5	0.0	np	3.8	np+	0.0	15.6

^a Ratios of Aboriginal and Torres Strait Islander to non-Aboriginal and Torres Strait Islander public hospital separations. Data are for 1996-97 in NSW; 1997-98 in Victoria; 1995-96 and 1996-97 in Queensland; 1996-97 in WA; 1997-98 in SA, 1996-97 in the ACT, 1997 in the NT (where it is unknown whether the data are for public and private hospitals or public hospitals only). Ratios for NSW, Vic, WA, SA and the NT are based on direct standardisation, and those for Queensland and the ACT are based on indirect standardisation. ^b The Australian Bureau of Statistics regards the mortality and hospitalisation data from these jurisdictions to be under reported for Aboriginal and Torres Strait peoples, and unable to be meaningfully interpreted at this time. ^c Queensland separation ratios were calculated using data from the Deed of Grant in Trust (DOGIT) communities. The Torres Strait Islander ratios were calculated using the Torres statistical local area data (20 per cent of the population are not Aboriginal or Torres Strait Islander). ^d Data for Aboriginal people. ^e Data for Torres Strait Islander people. **na** Not available. **np** Data not provided because of poor data quality. **np+** Jurisdiction is seeking to improve data quality. * Numbers are too small for reporting.

Source: NHIMG (1999).

The Review's approach is to report the full costs of a service where they are available. Where the full costs of a service cannot be measured accurately, the Review seeks to report estimated costs that are comparable. Where differences in comparability remain, the Review seeks to document the nature of those differences.

The Review has identified a range of financial reporting issues that have also affected the accuracy and comparability of unit costs for acute care services. These include the treatment of:

- payroll tax;
- superannuation;
- depreciation; and
- the user cost of capital.

Box 4.4 Differences in the methods of deriving unit costs

The three methods of deriving unit costs presented in this Report each have a number of strengths and weaknesses for cost comparisons. All are intended to measure the costs incurred at the hospital level, except the cost to government where hospitals have their own revenues (for example, patient fees) or receive donations.

1. *Australian Hospitals Statistics* (AHS) estimated the cost of *admitted patient* separations in public acute hospitals, adjusted for acute case mix. All separations and expenditure for institutions that primarily provide non-acute services are excluded, but non-acute admitted patients in primarily acute hospitals are included. This method:

- has a more clearly based criteria for inclusion of institutions;
- includes more complete coverage of acute hospitals and expenditure;
- publishes data 12 months after the end of the reference year (compared to 16 months for the NHCDC); and
- is reconcilable to each hospital's audited financial statements.

2. Victoria argued that it has more non-acute, sub-acute and psychiatric separations delivered in its public acute care hospitals than some jurisdictions, and has excluded these separations, and the associated expenditure. Thus it is able to more accurately show costs per case mix adjusted *acute* separation, distinguished from other services. Victoria was able to do this because its expenditure data are extracted from a detailed financial reporting system which requires hospitals to distinguish between expenditure on these different types of services, and to reconcile the expenditure with that reported in their audited annual reports to the Victorian Parliament.

3. The primary role of the annual *National Hospital Cost Data Collection* (NHCDC) is to derive the cost weights for *acute* separations (by AN-DRG), while a stated secondary role is to produce comparative data across jurisdictions. It collects data from a sample of hospitals. This method of deriving comparative data:

- only includes acute admitted patient separations and related costs;
- excludes research and teaching expenditure;
- includes depreciation (albeit imperfectly); and
- provides greater incentives for the participating sample of hospitals to refine their allocation of costs between different cost components, as well as between acute and sub-acute services, and between acute DRGs. This is because the data are based on the management accounting or costing systems of the respective hospitals, which in turn receive feedback useful for internal management purposes. Nearly 29 per cent of hospitals participated in the 1997-98 study, compared to 19 per cent in the previous year.

The selected hospitals are those that volunteer to participate in this exercise. Consequently, the representativeness of the sample of hospitals could vary across jurisdictions. The proportion participating is indicated in table 4.8.

Sources: Pearse (1999); AIHW (1999a).

A number of bodies, including the Steering Committee, have been seeking to improve the comparability of cost data. Last year, work by the Steering Committee identified Tasmanian public hospitals as the only government acute care service providers to include payroll tax in their costs. The Tasmanian Department of Human and Health Services then adjusted their cost estimates to exclude this cost element. This adjustment has subsequently been adopted in the AIHW's estimates of public acute care costs. The superannuation expense for 1997-98 for the NT was estimated using the average for other jurisdictions. Research by the Steering Committee suggested that this may understate the expense for the NT (SCRCSSP 1998b).

Another possible source of differences in cost is variation in the use of salary packaging. This may allow hospitals to lower their wage bills (and thus State or Territory Government expenditure) while maintaining their staffs' after-tax income. No data were available for reporting on the effect of salary packaging and any variation in its use across jurisdictions.

Depreciation and the user cost of capital associated with buildings and equipment are included with estimates of unit costs for the first time this year (figure 4.10). A number of issues remain to further improve the quality of these estimates. The inclusion of these capital costs improves the accuracy of the unit costs of acute care services.

Recurrent costs per case mix adjusted separation

The recurrent cost per case mix adjusted separation is an indicator of hospitals' cost performance for acute care services. This indicator measures the average cost of providing care for an admitted patient, adjusted for the relative complexity of the mix of patients' clinical conditions and of the hospital services provided (AIHW 1999a).

As noted above, there are three sources of comparative data on cost per case mix adjusted separation. The AIHW's estimates of the cost per case mix adjusted separation has been reported in *Australian Hospital Statistics* (AIHW 1999a), previous editions of this Report and the reports of the National Health Ministers Benchmarking Working Group (NHMBWG 1999).

The AIHW method is based on unit record data for all admitted patient separations and aggregated financial data for their associated costs, from selected public acute care hospitals (AIHW 1999a). Expenditure associated with non-admitted patient care is estimated and excluded. The AIHW has continued to work with the health sector to refine the scope of the services that are included in these cost estimates.

The AIHW collects data from all hospitals, but then excludes institutions that are psychiatric hospitals, drug and alcohol services, rehabilitation, dental, mothercraft hospitals, hospices and hospitals that satisfy the NSW definition of community non-acute hospitals. The 1997-98 data exclude hospitals that account for 3.5 per cent of total separations across Australia, although the proportion of separations excluded varies across jurisdictions (table 4.8). This has led to some concerns about the comparability of these data when used to assess efficiency.

Table 4.8 Coverage of data collections (per cent)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Share of separations excluded in AHS	5.9	1.9	3.0	1.3	4.8	7.7	1.2	na	3.5
Share of hospitals sampled in NHCDC	29.9	36.1	27.2	15.6	28.6	23.1	100.0	80.0	28.6
Share of separations sampled in NHCDC	58.5	73.0	63.9	50.6	59.7	93.5	100.0	94.1	64.4

na Not available.

Sources: AIHW (1999a); DHAC (1999a).

Refinements to the basis of excluding institutions mean that the public hospitals included in the AIHW's calculation of the recurrent cost estimates for 1997-98 differ from those reported for 1996-97. They are also different from those reported in *Australian Hospital Statistics 1995-96* (AIHW 1998a) and in the *Report on Government Services 1999* (SCRCSSP 1999a). Such refinements have meant that comparisons over time of recurrent cost per case mix adjusted separation should be treated with caution.

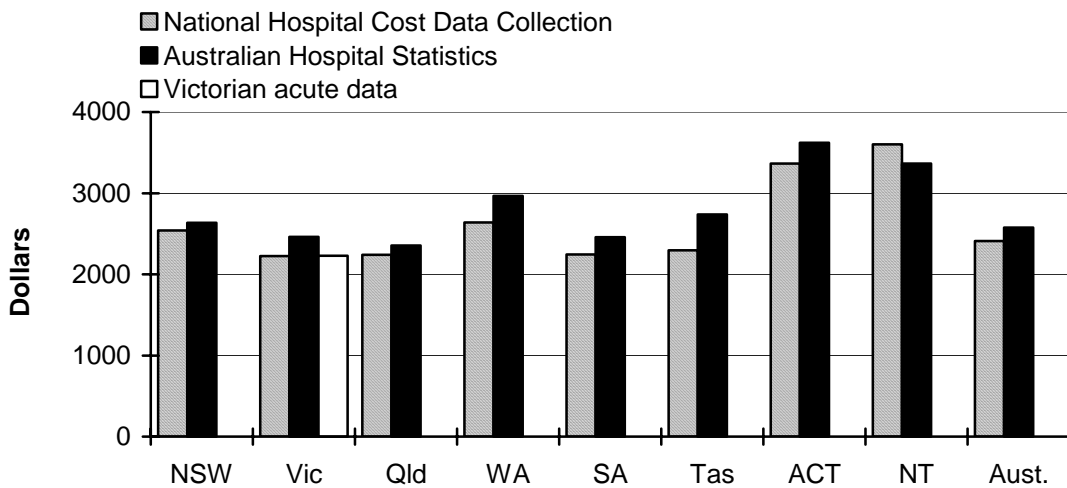
The National Hospital Cost Data Collection (NHCDC) is an alternative source of data available by State and Territory. Data have been collected annually since 1996-97, primarily to develop the cost weights used to adjust output by Australian National Diagnosis Related Group (AN-DRG). Nearly 30 per cent of Australia's hospitals submitted data on their acute admitted patient activity for the 1997-98 collection, representing about 64 per cent of separations nationally. The level of participation was similar for most jurisdictions. Fewer hospitals were involved from WA (only 16 per cent of hospitals, accounting for 51 per cent of separations) and more from the ACT and NT (100 per cent and 80 per cent of hospitals accounting for 100 per cent and 94 per cent of separations respectively).

The main weakness of the NHCDC as a source of unit cost data is that it is based on only a sample of hospitals, which may change yearly, and tends to be biased towards the larger hospitals with more sophisticated cost allocation systems. However, it does have the advantage of giving an opportunity to better distinguish

between acute and sub-acute services, and to match expenditure for those services. Indeed, the aim of the NHCDC is to identify costs for individual DRGs for that sample of hospitals.

According to the AHS data, Queensland had the lowest recurrent cost per case mix adjusted separation (\$2354) in 1997-98 and the ACT the highest (\$3623) (figure 4.9). The average for Australia was \$2572 in 1997-98. The estimated cost per case mix adjusted *acute* separation for Victoria, based on an adjustment of the AIHW's method, was \$2227. (This is 10.6 per cent lower than the estimate given in the *Australian Hospital Statistics 1997-98*, which includes more non-acute services and associated expenditure.) According to the NHCDC data, Victoria had the lowest cost (\$2226) and NT the highest (\$3603). The national average was \$2412.

Figure 4.9 **Costs per case mix adjusted separation in public hospitals, 1997-98^{a, b, c}**



^a *Australian Hospital Statistics 1997-98* (AHS) data exclude psychiatric hospitals, drug and alcohol services, mothercraft hospitals, dental hospitals, hospices, rehabilitation facilities, and multipurpose services where these are reported separately from acute care hospitals. Hospitals satisfying the NSW definition of community non-acute hospitals have also been excluded ^b *National Hospital Cost Data Collection 1997-98* (NHCDC) and Victorian acute data exclude psychiatric and sub-acute separations and related expenditure reported by acute care hospitals. In contrast, AHS data include psychiatric and sub-acute services delivered in included acute care hospitals. ^c AHS and Victorian acute data exclude depreciation and user cost of capital (this is included in figure 4.10). NHCDC data exclude teaching and research expenditure, and the user cost of capital.

Source: table 4A.17.

The Victorian Department of Human Services has expressed concerns about the comparability of the *Australian Hospital Statistics'* estimated cost per case mix adjusted separation for Victoria with that of other jurisdictions (box 4.4). It has pointed out that costs, published in *Australian Hospital Statistics*, only exclude data for those psychiatric hospitals and rehabilitation services that are administered separately from public acute hospitals. In Victoria, however, most of these services

are now administered by metropolitan health care networks or, in rural areas, by public acute hospitals. These services would have been excluded if they had been delivered in the same way as some other jurisdictions.

In particular, a large number of mental health patients are now treated in Victorian public acute hospitals, as a consequence of the reforms to mainstream mental health services (see chapter 6). Equivalent psychiatric services are delivered in psychiatric hospitals in other jurisdictions, and are thus excluded from their data. However, because these are stand-alone and separately reporting institutions, their activity could be more readily excluded from the *Australian Hospital Statistics*' unit cost estimates. As a result, the mix of patients in those estimates may include more non-acute patients than some jurisdictions. Consequently, Victoria has provided revised data that exclude approximately 47 000 separations (and their associated costs) that were previously included in the data published in *Australian Hospital Statistics*.

The AIHW's data on the estimated labour cost per case mix adjusted separation are contained in the attachment tables.

Including capital costs

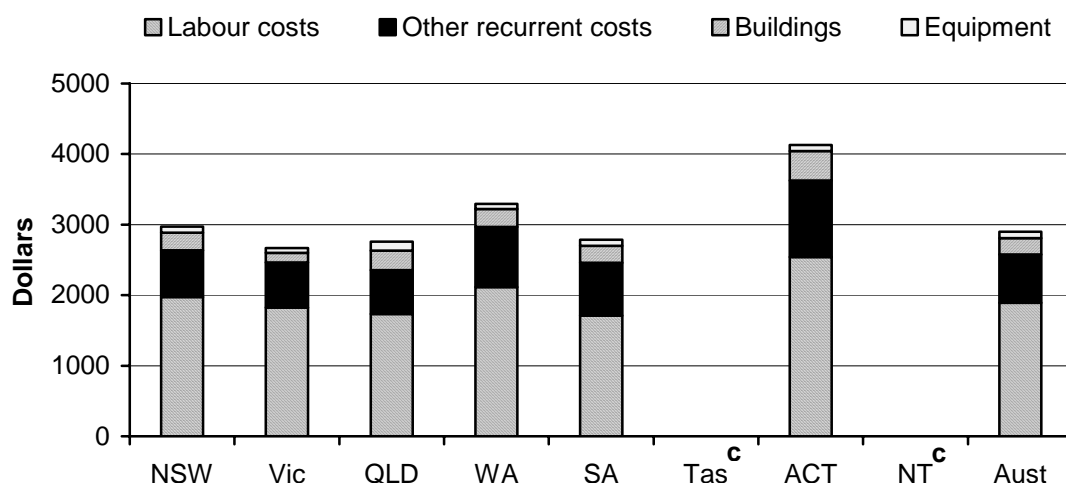
The AHS and NHCDC both exclude some costs. Neither includes the user cost of capital, and the NHCDC only partially includes depreciation (Pearse 1999). Depreciation is defined as the cost of consuming an asset's services and is measured by the reduction in value of an asset over the financial year. The user cost of capital is the opportunity cost of the capital and is equivalent to the return foregone from not using the funds to deliver other government services or to retire debt.

Recurrent costs should exclude interest payments if they are to be added to the user cost of capital to derive full costs. Interest payments have not been excluded in the analysis here. However, data separately reported on interest expenses showed that they varied from effectively zero for NSW, Victoria, ACT and NT, to 2 per cent of recurrent expenditure for WA. This issue will be addressed further in future Reports.

The estimated total unit cost of acute care services are reported for the first time. Total costs per case mix adjusted separation is defined to be the recurrent cost per case mix adjusted separation (based on AHS data) plus the capital costs (the depreciation and the user cost of capital of buildings and equipment) per acute care separation. Queensland did not provide estimates for depreciation and the user cost of capital. Tasmania was unable to provide these estimates because of changes to its financial reporting systems. The NT is still operating on a cash expenditure basis and was not able to identify its depreciation or asset values. From the remaining

jurisdictions, Victoria had the lowest total cost per case mix adjusted separation at \$2668 and the ACT had the highest total cost per separation at \$4128 (figure 4.10).

Figure 4.10 Total cost per case mix adjusted separation, 1997-98^{a, b, c}



^a Other recurrent costs and labour costs for all jurisdictions are based on the data reported in *Australian Hospital Statistics*. ^b NSW and Victoria provided estimates of the depreciation and asset values associated with acute care admitted patients. Other jurisdictions provided total depreciation and asset values for public hospitals. The capital costs attributable to acute admitted patients were then estimated using their inpatient fractions in table 4A.18. ^c Depreciation and asset values data were not available.

Sources: tables 4A.17 and 4A.18.

Average length of stay by jurisdiction

The average length of stay has a significant effect on the costs of treatment for admitted hospital patients. In particular, differences across jurisdictions in the proportions of same day separations for some AN-DRGs can affect costs. The data in this section relates to all public acute hospital separations (including psychiatric and sub-acute) except where noted.

The average length of stay for all patients in acute hospitals varies across jurisdictions. NSW reported the longest average length of stay for public hospital treatment in 1997-98 (4.4 days).² The NT reported the shortest average length of stay (3.6 days) (figure 4.11).

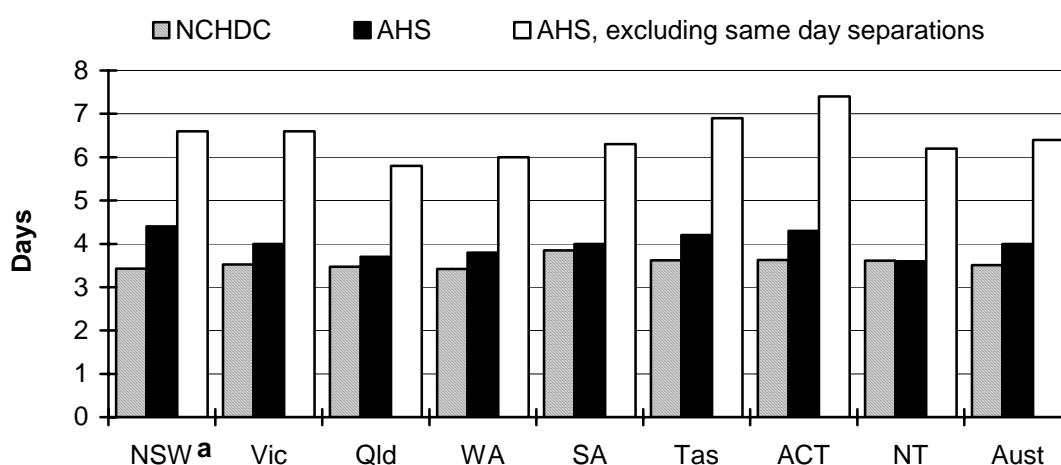
Across all jurisdictions, there was a decrease in the average length of stay between 1996-97 and 1997-98, with Tasmania experiencing the greatest fall (17.6 per cent).

² These data include non-acute hospitals. NSW estimates that the average length of stay was 3.9 days in the hospitals included in the AIHW's cost per case mix adjusted separation estimates reported in figures 4.8 and 4.9.

As with the comparison of public and private hospitals, one caveat of these comparisons is the relative case mix of patients treated in the different States and Territories. Public acute care hospitals in the NT have an average case mix weight of 0.76 for acute patients compared to NSW public hospitals with 1.02.

The average length of stay for acute patients in the hospitals reporting to the NCHDC also varied across jurisdictions, from 3.42 days for WA, to 3.85 days for SA (figure 4.11). Excluding same day procedures, the ACT reported the longest average length of stay for all patients (7.4 days) and Queensland reported the shortest average (5.8 days) (figure 4.11).

Figure 4.11 Average length of stay in public acute care hospitals, 1997-98



^a Including a Department of Veterans Affairs hospital.

Source: table 4A.20.

Against the overall trend, the average length of stay between 1994-95 and 1997-98 rose for three of the five most common procedures, and fell for ‘cholecystectomy without common duct exploration’ and ‘vaginal delivery without complications’. However, between 1996-97 and 1997-98, the average length of stay reverted to trend and decreased for most procedures. Only ‘bronchitis and asthma in persons aged 50 years and younger without complications’ recorded a longer average length of stay in 1997-98 (2.3 days) than in the previous year (2.2 days) (table 4.9).

Table 4.9 Average length of stay in public hospitals for the five AN-DRGs with the highest number of separations (days)^{a, b}

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
Vaginal delivery without complications									
1994-95	3.5	3.8	3.4	3.7	3.6	3.9	3.4	3.7	3.6
1995-96	3.2	3.4	3.7	3.3	3.5	3.6	3.6	3.5	3.5
1996-97	3.3	3.5	3.2	3.5	3.4	3.3	3.0	3.6	3.4
1997-98	3.3	3.4	3.0	3.5	3.2	4.0	3.0	3.9	3.3
Chronic obstructive airways disease									
1994-95	7.2	5.8	6.6	6.5	6.8	7.6	7.2	5.7	6.7
1995-96	7.9	6.9	6.1	6.3	6.3	7.5	5.7	6.5	6.5
1996-97	8.5	7.1	7.8	8.3	7.6	9.7	10.2	6.5	8.0
1997-98	8.0	6.8	7.5	7.8	7.1	8.4	8.9	7.6	7.6
Bronchitis and asthma in persons aged 50 years and younger without complications									
1994-95	2.1	1.9	2.2	2.2	2.1	2.1	2.4	2.5	2.1
1995-96	2.3	2.1	2.5	2.1	2.2	2.1	1.9	2.1	2.1
1996-97	2.3	2.0	2.3	2.3	2.3	2.3	2.4	2.7	2.2
1997-98	2.3	2.1	2.3	2.3	2.4	2.2	2.6	2.9	2.3
Heart failure and shock									
1994-95	7.3	6.6	6.4	6.3	6.6	7.1	8.0	6.4	6.8
1995-96	7.2	6.8	5.9	6.2	6.0	7.6	6.3	6.2	6.5
1996-97	8.4	7.6	7.6	8.2	7.3	9.2	9.1	6.9	8.0
1997-98	8.0	7.2	7.2	7.5	7.3	9.3	10.1	8.0	7.6
Cholecystectomy without common duct exploration									
1994-95	3.6	3.3	2.9	3.3	3.9	3.3	3.7	3.8	3.4
1995-96	3.2	3.0	3.3	2.5	2.7	3.2	2.9	3.3	2.9
1996-97	3.9	3.4	2.9	4.0	3.5	3.7	3.9	4.5	3.6
1997-98	3.5	3.3	2.7	3.8	3.1	2.8	3.6	4.7	3.3

^a Excludes same day cases. ^b Separations for which the type of episode of care was reported as either 'acute' or 'not reported'.

Sources: table 4A.21; SCRCSSP (1997, 1998a).

Cost per non-admitted occasion of service

The cost per non-admitted occasion of service is the proportion of expenditure allocated to patients who were not admitted, divided by the total number of non-admitted patient occasions of service. Jurisdictions reported the following results.

- In SA, data for the cost per non-admitted occasion of service were derived from a sample of 15 hospitals. For metropolitan teaching hospitals, the cost per non-admitted occasion of service was \$189 for emergency services and \$124 for outpatient services, and for metropolitan non-teaching hospitals it was \$135 and \$66 respectively in 1997-98. For nonmetropolitan non-teaching hospitals, the cost was \$76 for emergency services and \$50 for outpatient services (table 4A.45).

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- In the ACT, the cost per non-admitted occasion of service was \$144 for emergency services and \$63 for outpatient services for metropolitan teaching hospitals for 1997-98 (table 4A.53).

Victoria collects data on the basis of cost per encounter (which includes the clinic visit and all ancillary services provided within a 30-day period either side of the clinic visit). The average cost per encounter was \$109 (based on cost data from nine major hospitals) in 1997-98. This compared with an average cost per encounter of \$104 in 1996-97 (based on cost data from seven major hospitals) (table 4A.32).

4.4 Future directions in performance reporting

The key challenges for improving reporting on public acute care hospitals include:

- reporting on Aboriginal and Torres Strait Islander peoples' access to mainstream health services;
- improving the measurement of unit costs;
- filling gaps in reporting; and
- extending the coverage of the Review.

Aboriginal and Torres Strait Islander peoples' access to mainstream health services

In May 1997, the Prime Minister requested that the Steering Committee give priority to developing indicators that measured the performance of mainstream services in meeting the needs of Indigenous Australians. This is an important task, but large gaps remain. This is particularly true with health where the ABS noted 'the completeness with which Indigenous people are recorded is likely to vary from collection to collection and place to place and is often unknown' (ABS & AIHW 1999, p. 161). There also remain some variations in definitions of Indigenous persons.

The Health Ministers' Advisory Council approved a list of proposed indicators in March 1998. The national summary of the 1998 jurisdictional reports against the Aboriginal and Torres Strait Islander health performance indicators was finalised in July 1999. Work is progressing to increase the availability and coverage of nationally consistent data on the provision of services to Indigenous clients in future reports. Queensland Health has already endorsed the use of these performance indicators.

WA has developed an accessibility index which provides a measure of the ability of Indigenous people and of people living in different regions of the State to access hospital services. The goal of equity of access according to need is realised when the index has the value of one. The trend for Indigenous people compared to that for non-Indigenous people has fluctuated around unity between 1993 and 1996. The level of access for Indigenous people living in rural areas in 1996 was greater than for non-Indigenous people, but in metropolitan areas it was less (table 4A.38).

The comparison of the index of access between people living in metropolitan and rural areas suggests that rural residents have slightly better access to health services than that of their counterparts in the city. However, this measure does not allow for other social costs such as separation from families or distance travelled to receive hospital care (table 4A.38).

Filling other gaps in reporting

There has been considerable developmental work on non-financial hospital performance indicators over the past decade, both in Australia and overseas. In England the National Health Service has adopted a set of clinical performance indicators. However, in Australia little additional performance information is systematically and regularly published to assist comparisons across States and Territories or across hospitals.

The Victorian Department of Human Services has commissioned a major project to identify a concise set of clinical hospital indicators that apply at various levels across the acute sector. A timeline for implementation of the indicators will be determined in 2000 (DHS 1999).

Quality of care

Future Reports will continue to focus on the following two components of quality:

- client satisfaction with services; and
- patient safety monitoring.

Client satisfaction

Client satisfaction surveys have been used to report on the quality of services. They emphasise the relationship between the patient as consumer and the health service provider. Patient surveys can provide useful information about the acceptability of care delivery, reports of experiences with the processes of care, as well as health

status and quality of life. (Boyce *et al.* 1997, p.30) However, certain groups of people have difficulty expressing their views using conventional questionnaires. Eliciting the views of such people remains a challenge for researchers and policy makers (Draper and Hill 1995, p. 71). Efforts have been made recently to broaden the survey instruments used to collect feedback from consumers. Some suggestions include:

- conducting interviews rather than asking people to complete pre-coded questionnaires; and
- using discussion groups to develop questionnaires.

The Consumer Focus Collaboration (which involves consumers, professional groups, Commonwealth, States and Territories) has identified national priorities for this work and has overseen a number of initiatives that have aimed to identify good practice in consumer feedback and participation.

This year, information on patient satisfaction is reported for NSW, Victoria, Queensland, WA, Tasmania and the ACT. A study on quality and outcome indicators has shown that indicators of aggregate satisfaction generally reveal high levels of satisfaction with care provided in public acute care hospitals. However, these data offer few insights for policy makers and hospitals on areas requiring improvement.

Following reporting of a statewide survey in Victoria in 1997, the Department of Human Services commissioned additional work to derive composite indexes of satisfaction on specific aspects of hospital care, including access and discharge processes, provision of general and treatment information, and complaints mechanisms. A system for regular monitoring and reporting patient feedback will be progressively introduced during 2000, following consultation with networks and hospitals. This will enable valid indexes of care in Victorian public hospitals to be regularly 'reported and benchmarked' (DHS 1999).

Some information on client perceptions of health care is also available via complaints systems. All States and Territories have independent health complaints bodies that investigate and conciliate complaints and recommend improvements to health care services. Complaints information is reported to parliaments annually, but differences in data definitions currently prevent comparisons across jurisdictions.

Two indicators relating to the management of patient complaints will be piloted in Victoria in 1999-2000. The first is an indicator of the effectiveness of complaints management, based on those complaints that are resolved at the local level, and those that are externally referred for investigation and conciliation. The second

indicator relates to the provision of data to the Office of the Health Services Commissioner.

Patient safety monitoring

Identifying 'adverse events' and developing ways to prevent them is another strategy for improving the quality of care provided in public acute care hospitals and for reducing costs. The task is complicated by the difficulties in determining or attributing the risk associated with the individual medical or surgical procedures, and the risk attributable to the individual patient characteristics or disease status.

An adverse event can be broadly defined as 'an injury or complication which resulted in disability or prolongation of hospital stay, and was caused by the health care received rather than by the disease from which the patient suffered. The adverse event either occurred during the hospital admission, or during an earlier contact with health care services, and was responsible for all or part of the hospital admission' (Wilson *et al.* 1999).

The *Quality in Australian Health Care* study (Wilson *et al.* 1995) examined over 14 000 patient records in 1992 and estimated that 16.6 per cent of admissions were associated with an adverse event. The Commonwealth Department of Health and Aged Care commissioned a review by Thomas *et al.* 1999 of Harvard University that compared results of the *Quality in Australian Health Care Study* and the *Utah-Colorado Medical Practice Study* on adverse events. Preliminary results from this review suggest that when attempts were made to adopt the US definitions and methods an estimated 10.6 per cent of Australian admissions in 1992 may have been associated with an adverse event (Thomas *et al.* 1999). However, measuring adverse events is complicated by differing definitions and medical record practices, and the extent to which data is based on clinical judgements (McNeil 1999, unpublished). The results of the Thomas *et al.* study are currently being peer reviewed and consequently may be revised. Publication is expected during 2000.

Data from the Wilson study were further analysed to develop a better understanding of the causes of the adverse events identified, and to assist in developing prevention strategies (Wilson *et al.* 1999). The major categories of human error, accounting for over 70 per cent of adverse events, were:

- failures in technical performance;
- failure to decide and/or act on available information;
- failure to investigate or consult; and
- a lack of care or failure to attend.

It is generally agreed that potential benefits (avoidance of costs) associated with adverse events are significant. The above study concluded that human error is the dominant cause of adverse events. It emphasised the need for designing safer systems of care which protect the patient from the inevitability of human error. The final report of the Taskforce on Quality in Australian Health Care (1996) estimated that the cost of preventable adverse events was more than \$800 million per year.³

There has been work to improve the measurement and monitoring of patient safety by both governments and individual hospitals. However, a timetable remains to be indicated for the implementation of a national patient safety monitoring scheme that would provide data for reporting at the jurisdictional level. Over the past decade:

- various national bodies have been established to examine quality in the health care system—for example, the Taskforce on Quality in Australian Health Care in 1995, and the National Expert Advisory Group on Safety and Quality in Australian Health Care in 1997;
- working groups have been established by individual jurisdictions;
- individual hospitals and jurisdictions have trialed various incident (or near misses) monitoring and reporting systems. SA, some Victorian networks and the NT have implemented the Australian Incident Monitoring System (AIMS). Queensland is trialing this system in one metropolitan teaching hospital, and both major public hospitals in the ACT will trial AIMS in 2000. Other hospitals and jurisdictions are using a range of other systems;
- the various patient safety monitoring and reporting systems were reviewed by Professor John McNeil in June 1999 for the Commonwealth Department of Health and Aged Care. He argued that none of the existing monitoring schemes are capable of providing quantitative data with epidemiological rigour, or of providing valid national performance indicators for patient safety monitoring. He recommended that governments introduce several different approaches to measurement, including monitoring indicators of sentinel events, outcomes of key procedures, and selected clinical processes (McNeil 1999, unpublished).
- the establishment of the Australian Council for Safety and Quality in Health Care was endorsed by Health Ministers in August 1999. The Chair and membership of the Council has been announced and it will meet in early 2000. The Council's specific tasks and timetable are currently being developed. This will include consideration of what role it may take in relation to data support and analysis to underpin agreed national directions for safety and quality improvement.

³ The cost was derived by multiplying the estimated number of bed days due to preventable adverse events by the average bed day cost.

Non-admitted patient classification

Several States are working on systems for improved reporting of non-admitted patients by classification. National agreement on definitions, as has been achieved for acute admitted patients with AN-DRGs, will be needed before comparable reporting can commence.

The Victorian Department of Human Services has developed a system for measuring outputs (and funding) non-admitted patient services. The activities of outpatient departments are classified into 45 categories grouped under nine headings: medical; surgical; dental; orthopaedic; psychiatric related; obstetric and gynaecology; paediatrics; emergency medicine; and allied health. The categories relate to major areas of clinical practice and achieve levels of resource homogeneity similar to those for AN-DRGs. A patient encounter can incorporate the clinic visit and associated ancillary services (pharmacy, pathology and radiology) provided to the patient 30 days either side of the visit. The 30 day window was chosen to capture the majority of services for a particular visit, and to enable a reasonable and practical period for reporting and funding. The Victorian Ambulatory Classification System (VACS) was implemented for 1999-2000, with the cost weights for the study being determined on the basis of a three year, rolling average cost.

The Queensland Ambulatory Casemix Classification System (QACS) for public hospitals is based on a costing study commissioned in 1996, which achieved a variance reduction of 30 per cent. Since implementation in 1996-97, some minor modifications have been made. The system has 64 clinic types which are amalgamated into seven broad areas for Commonwealth reporting purposes. The system incorporates new, repeat and age split variables. The counting unit is occasions of service. Where ancillary services, such as pathology, radiology, and pharmacy occur within a 14-day window, either side of the occasion of service, the case mix ancillary payment is bundled into the individual clinic visit payment. The system is now well established among Queensland facilities for which payment modelling is carried out.

The South Australian Health Commission (now part of the SA Department of Human Services) undertook a costing study, in conjunction with the then Commonwealth Department of Health and Family Services, in 30 hospitals in Australia, of which 15 were in South Australia. Cost, diagnosis, utilisation and demographic data were collected on approximately 250 000 patient encounters. The intent was to develop a non-admitted patient classification system from first principles and in the process, to test the Commonwealth Developmental Ambulatory Care Classification System (DACCS). The explanatory powers of a range of variables collected in the study were tested to develop resource

homogeneous categories which were clinically meaningful. The resulting classification system has 11 emergency department categories based on triage score and disposition and 79 outpatient classes based on areas of clinical practice. A patient encounter can incorporate the clinic visit and associated ancillary services (pharmacy, pathology and radiology) provided to the patient 14 days either side of the visit.

The South Australian ambulatory classification system was implemented in metropolitan hospitals in 1989-99 and across all South Australian public hospitals in 1999-2000. The data have been used for a number of subsequent analyses, including the development of national service weights for application in the National Hospitals Cost Data Collection.

4.5 Jurisdictions' comments

Jurisdictions' comments on this chapter are contained at the end of chapter 6.

4A Public hospitals — attachment

Definitions for the indicators and descriptors in this attachment are in section 4A.5. Unsourced information was obtained from Commonwealth, State or Territory governments.

The data contained in this attachment may be subject to revision. The web page version of the Report contains the most up-to-date data where changes have occurred. This attachment can be found at www.pc.gov.au/service/gsp/2000/attach4A.pdf. Users without Internet access can contact the Secretariat (details inside front cover of the Report).

4A.1 All jurisdictions' data — public acute care hospitals

Descriptors

Table 4A.1 Hospitals, by hospital sector and type (number)^a

		NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Public acute care hospitals	1996-97	212	120	183	87	80	14	3	5	704
	1997-98	212	146	182	88	79	19	3	5	734
Public psychiatric hospitals ^b	1996-97	8	2	8	3	1	1	0	0	23
	1997-98	9	1	8	8	1	3	0	0	30
Total public hospitals	1996-97	220	122	191	90	81	15	3	5	727
	1997-98	221	147	190	96	80	22	3	5	764
Private free-standing day hospitals	1996-97	81	22	21	9	12	3	5	0	153
	1997-98	84	30	26	12	14	3	6	0	175
Private other ^c	1996-97	87	101	50	27	41	10	2	1	319
	1997-98	89	97	51	26	40	11	2	1	317
Total private hospitals	1996-97	168	123	71	36	53	13	7	1	472
	1997-98	173	127	77	38	54	14	8	1	492

(Continued on next page)

Table 4A.1 (Continued)

		NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Total hospitals	1996-97	388	245	262	126	134	28	10	6	1 199
	1997-98	394	274	267	134	134	36	11	6	1 256

^a The number of hospitals reported can be affected by administrative and/or reporting arrangements and is not necessarily a measure of the number of physical hospital buildings or campuses. In particular, the Victorian data reflect the outcome of amalgamations of hospital campuses into larger management units, such as metropolitan health care networks and regional health services. The data for 1996-97 reflect the number of amalgamated units for which combined financial data were reported. Data for 1997-98 reflect the number of campuses for which separate activity data were reported. In Tasmania, there is no substantial variation in the actual number of facilities between 1996-97 and 1997-98. Two hospitals which were separately identified in 1997-98 were consolidated with another hospital in 1996-97. In addition, three other facilities were not reported in 1996-97 but were in 1997-98. ^b Includes public psychiatric and alcohol and drug hospitals ^c Includes private acute and private psychiatric hospitals.

Sources: AIHW (1999a); ABS *Private Hospitals Australia* (cat. no. 4390.0); verbal communication with Victorian Department of Human Services; SCRCSSP (1999a).

Table 4A.2 Available beds and accreditation status, by hospital sector^{a, b, c}

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust	
Beds available in public acute care hospitals (no)										
1996-97	19 279	12 076	9 887	4 849	4 744	1 214	784	577	53 411	
1997-98	18 497	11 961 ^e	9 898	4 810	4 694	1 087	768	577	52 606	
Beds available in public psychiatric hospitals (no.) ^d										
1996-97	1 426	58	994	328	506	114	..	..	3 426
1997-98	1 208	53	911	453	504	na	..	..	3 129
Beds accredited (%)										
1997	81	86	67	60	82	87	100	0	72	
1998	78 ^e	86 ^e	62	68	74	87	99	51	75 ^g	
Total beds available in public hospitals (no.)										
1996-97	20 705	12 134	10 881	5 177	5 250	1 328	784	577	56 836	
1997-98	19 705	12 014 ^e	10 809	5 263	5 198	1 078	768	577	55 735	
Beds available in private other (no.) ^f										
1996-97	6 377	6 158	5 021	2 263	2 366	781	na	na	22 966	
1997-98	6 476	6 133	5 008	2 409	2 269	796	na	na	23 091	
Beds accredited (%)										
1996-97	94	72	82	64	77	0	na	na	78	
1997-98	92	91	86	78	82	69	na	na	87	
Total beds available in all hospitals (no.)										
1996-97	27 608	18 292	15 902	7 440	7 616	2 109	784	577	79 829	
1997-98	26 181	18 470	15 817	7 672	7 467	1 874	768	577	78 826	

^a Where average available beds for the year were not available, bed numbers at 30 June were used. ^b Accreditation status at 30 June. Data for NSW, Qld, WA, SA, Tasmania and the NT for 1997 are supplied by the respective jurisdiction. ^c Excludes private free-standing day hospital facilities. ^d Includes public psychiatric and alcohol and drug hospitals. ^e This figure is not the same in AIHW, *Australian Hospital Statistics 1997-98*. Data supplied by NSW and Victoria. ^f Includes private acute and private psychiatric hospitals. Data for SA include the NT and data for NSW include the ACT. ^g Data adjusted to reflect the change in accreditation status for NSW and Victoria. **na** Not available. **..** Not applicable.

Sources: AIHW (1998a, 1999a); ABS, *Private Hospitals Australia* (cat. no. 4390.0); SCRCSSP (1999a).

Table 4A.3 Average full time equivalent staff (numbers)^a

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA^b</i>	<i>SA^c</i>	<i>Tas^d</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
Salaried medical officers									
1996-97	5 157	3 454	2 430	948	1 414	327	262	220	14 210
1997-98	5 392	3 511	2 774	1 400	1 512	304	284	210	15 387
Total nurses									
1996-97	28 471	17 211	13 973	6 252	7 248	1 903	1 365	967	77 390
1997-98	28 517	16 714	14 246	7 598	7 371	1 520	1 329	944	78 239
Other personal care staff									
1996-97	1 930	1 929	995	144	277	18	32	65	5 389
1997-98	1 722	1 405	786	484	..	26	33	88	4 544
Diagnostic and allied health professionals									
1996-97	8 475	6 042	3 441	1 556	1 831	447	422	147	22 360
1997-98	8 193	5 993	3 611	2 262	1 739	361	440	149	22 748
Administrative and clerical staff									
1996-97	7 890	6 333	4 012	2 406	2 512	512	466	288	24 418
1997-98	7 307	6 383	4 290	3 031	2 601	513	466	303	24 894
Domestic and other staff									
1996-97	11 356	5 613	6 264	3 415	2 369	1 037	317	555	30 927
1997-98	10 674	5 192	6 089	3 289	2 451	716	288	513	29 212
Total staff									
1996-97	63 278	40 582	31 116	14 721	15 650	4 244	2 863	2 242	174 695
1997-98	61 805	39 198	31 796	18 064	15 674	3 440	2 840	2 207	175 024

^a Where average FTE staff numbers were not available, staff numbers at 30 June were used.

^b Other personal care staff for WA excludes staff on retention who do not work regular hours.

^c SA 'Other personal care staff' are included in 'Diagnostic and health professionals' and 'Domestic' and 'other staff'. ^d For Tasmania staff numbers were only available for the three major hospitals which account for 93 per cent of total separations. Staff numbers for the remaining 19 hospitals were not available. .. Not applicable.

Sources: AIHW (1998a, 1999a).

Table 4A.4 Public acute and psychiatric hospitals and available beds, by hospital size, 1997-98 (number)^a

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
Hospital size ^b									
0-10 beds	12	45	74	40	7	13	1	0	192
11-50 beds	120	44	80	36	56	6	0	2	344
51-100 beds	34	26	11	8	7	0	0	1	87
101-200 beds	33	10	9	6	4	1	1	1	65
201-500 beds	15	18	13	4	4	2	0	1	57
501+ beds	7	4	3	2	2	0	1	0	19
Total	221	147	190	96	80	22	3	5	764

(Continued on next page)

Table 4A.4 (Continued)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Available beds									
0–10 beds	70	137	201	248	46	47	10	..	759
11–50 beds	3 196	1 106	2 074	889	1 556	113	..	50	8 984
51–100 beds	2 495	1 828	872	553	483	..	..	60	6 291
101–200 beds	4 794	1 363	1 313	998	593	135	167	170	9 533
201–500 beds	4 706	5 364	4 012	1 151	1 376	783	..	297	17 689
501+ beds	4 444	2 539	2 337	1 424	1 144	..	591	..	12 479
Total	19 705	12 337	10 809	5 263	5 198	1 078	768	577	55 735

^a The number of hospitals can be affected by administrative and reporting arrangements and is not necessarily a measure of the number of physical hospital buildings or campuses. ^b Size is based on the number of available beds. .. Not applicable.

Source: AIHW (1999a).

Table 4A.5 Recurrent expenditure on public acute care and psychiatric hospitals (\$m)

	NSW	Vic	Qld	WA ^a	SA	Tas ^b	ACT	NT ^c	Aust
<i>AIHW Australian Hospital Statistics data</i>									
<i>1996-97</i>									
Public hospitals									
Salary and wages	2 805	1 952	1 329	737	609	177	136	95	7 840
Non-salary expend. ^d	1 618	952	675	407	374	118	119	57	4 321
Total expend.	4 424	2 904	2 004	1 143	983	295	255	152	12 161
Private hospitals ^e	906 ^f	875	629	299	265 ^g	114	na	na	3 087
All hospitals	5 330	3 779	2 633	1 442	1 248	409	255	152	15 248
<i>1997-98</i>									
Public hospitals									
Salary and wages	2 932	2 041	1 404	816	634	167	140	108	8 242
Non-salary expend. ^d	1 770	1 052	729	506	436	119	115	56	4 783
Total expend.	4 702	3 093	2 133	1 321	1 070	286	256	164	13 026
Private hospitals ^e	950 ^f	928	653	316	267 ^g	117	na	na	3 232
All hospitals	5 652	4 021	2 786	1 637	1 337	403	256	164	16 258
<i>Expenditure per capita excluding depreciation^h</i>									
1996-97	709	634	595	642	666	623	826	821	660
1997-98	742	665	619	723	721	605	822	851	695

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Table 4A.5 (Continued)

	NSW	Vic	Qld	WA ^a	SA	Tas ^b	ACT	NT ^c	Aust
<i>Commonwealth Grants Commission data</i>									
<i>Expenditure per capita — (gross)</i>									
1997-98	567	511	500	540	471	537	533	818	532
Patient fees	36	41	20	28	36	27	24	22	33
Net of patient fees	531	470	480	511	436	510	509	796	499

^a WA superannuation data for 1997-98 vary considerably from 1996-97 due to data based on cash rather than accrual accounting. ^b Tasmanian hospitals pay payroll tax. ^c Hospitals in the NT do not contribute to superannuation. ^d Excludes depreciation. ^e Includes private acute and psychiatric hospitals. ^f Includes data for the ACT. ^g Includes data for the NT. ^h Based on ABS estimated resident population at 30 December 1996 and 30 June 1998 respectively

Sources: ABS, *Private Hospitals Australia* (Cat. no. 4390.0); AIHW (1999a); SCRCSSP (1999a); CGC (1999).

Table 4A.6 Separations from public acute care hospitals ('000)

	NSW ^a	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Total separations									
1996-97	1 227	898 ^b	646	345	325	76	56	48	3 622
1997-98	1 261	927	684	343	342	80	57	52	3 748
Same-day separations									
1996-97	484	403 ^b	269	144	137	32	27	23	1 520
1997-98	509	430	294	148	149	37	28	27	1 622
Non-admitted occasions of service									
1996-97	12 000	6 881	6 859	2 737	2 271	570	393	319	32 031
1997-98	12 458	6 757	7 029	2 819	2 360	475 ^c	398	309	32 605

^a Includes the Department of Veterans' Affairs hospital. ^b These figures are different from those reported in table 4A.5 of the 1999 Report. The total of 882 000 separations (including 391 000 same day separations) in that report was the base figure used to calculate case mix adjusted separations in 1996-97. The figures in this table include all separations. ^c Data for Tasmania were available for the three major hospitals.

Sources: SCRCSSP (1999a); AIHW (1999a).

Table 4A.7 Ten AN-DRGs with the highest number of separations from public hospitals, 1997-98^{a, b}

AN-DRG	Description	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
572	Admit for renal dialysis	109 104	237 57	799 37	771 26	622 9	245 10	812 1	1 741
		238							
780	Chemotherapy	41 351	36 737	21 326	14 166	11 771	4 108	3 468	135
674	Vaginal delivery without complicating diagnosis	41 731	25 415	20 007	9 117	7 464	2 063	1 917	1 532

(Continued on next page)

Table 4A.7 (Continued)

AN-DRG	Description	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
332	Other gastroscopy for non-major digestive disease without complications and co-morbidities	24 884	17 611	12 136	8 351	6 838	1 733	1 250	702
335	Other colonoscopy without complications and co-morbidities	16 793	10 468	8 901	6 240	4 726	1 221	1 001	408
683	Abortion with D&C, aspiration curettage or hysterotomy	10 623	10 687	3 846	3 010	7 051	929	444	1 295
686	Other antenatal admission with moderate or no complicating diagnosis	12 052	9 946	7 953	3 065	2 945	857	373	628
187	Bronchitis and asthma age <50 without complications and co-morbidities	13 503	7 291	6 851	4 208	4 516	434	355	358
177	Chronic obstructive airways disease	14 844	7 949	6 397	3 262	3 466	709	345	449
484	Other skin, subcutaneous tissue and breast procedures	10 377	7 781	9 559	3 345	3 682	749	525	190

^a Separations in public hospitals where the episode of care was reported as acute, or was not reported.

^b Includes same day separations.

Source: AIHW (1999a).

Effectiveness

Quality

Table 4A.8 Beds in public hospitals accredited by the ACHS (per cent)^a

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
1994	80	na	25	59	80	69	99	0	na
1995	76	83	48	76	71	87	100	0	na
1996	76	85	44	66	70	86	100	0	na
1997 ^b	81	86	67	60	82	87	100	0	72
1998	78 ^c	86 ^c	62	68	74	87	99	51	75 ^d

^a At 30 June. ^b Data for NSW, Qld, WA, SA, Tasmania and the NT are not the same in AIHW, *Australian Hospital Statistics 1996-97* and were supplied by the respective jurisdiction. ^c Data for NSW and Victoria are not the same in AIHW, *Australian Hospital Statistics 1997-98* and were supplied by that jurisdiction. ^d This figure is adjusted to reflect the change in the data for NSW and Victoria. **na** Not available.

Sources: SCRCSSP (1999); AIHW (1998a, 1999a); State and Territory governments (unpublished).

Appropriateness

Table 4A.9 **Separations from public acute care hospitals (number per 1000 people)^a**

	<i>Unit</i>	<i>NSW^a</i>	<i>Vic^b</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
Same day separations										
1996-97	no.	77.2	87.5	79.2	80.1	92.6	67.6	87.7	123.1	82.1
1997-98	no.	80.3	92.3	85.1	80.8	100.2	78.4	90.9	142.1	86.5
Annual growth	%	4.0	5.4	7.4	0.9	8.2	16.0	3.7	15.5	5.4
Non-same day separations										
1996-97	no.	118.4	107.5	111.0	111.8	127.1	92.9	94.2	133.8	113.5
1997-98	no.	118.6	106.6	112.8	106.5	129.8	91.1	94.2	131.6	113.4
Annual growth	%	0.1	-0.8	1.7	-4.7	2.2	-2.0	0.0	-1.6	-0.1
Total separations										
1996-97	no.	195.6	195.0	190.2	191.9	219.6	160.5	181.8	256.8	195.5
1997-98	no.	198.8	198.9	197.9	187.3	230.0	169.5	185.1	273.7	199.9

^a Includes separations from the Department of Veterans' Affairs hospitals. ^b The figures for 1996-97 are different from those reported in table 4A.9 of the 1999 Report. The total of 192.5 separations (including 85.3 same day separations) per 1000 people, in that report, was derived from the base figure used to calculate case mix adjusted separations.

Source: AIHW (1998a, 1999a).

Table 4A.10 Separations for certain procedures, all hospitals, 1997-98 (per 1000 people)

Procedure	Unit	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Angioplasty										
Separations ^d	no.	6 385	5 274	2 046	1 630	1 483	443	164	68	17 496
Separations within State of residence	%	95	99	99	100	99	99	1	0	
Separation rate ^e		0.93	1.06	0.59	0.92	0.88	0.85	0.64	0.53	0.89
Separation rate for other States ^e		0.87	0.83	0.95	0.89	0.89	0.89	0.89	0.89	
Difference, State/Territory and national rate	%	7.7	27.1	-38.5	3.9	-1.3	-4.7	-28.4	-40.8	
Significance of difference		**	**	**	-	-	-	**	**	
Appendectomy										
Separations ^d	no.	8 298	6 676	5 000	2 852	1 851	625	446	209	25 959
Separations within State of residence	%	98	99	99	99	98	99	96	97	
Separation rate ^e		1.38	1.50	1.48	1.59	1.32	1.38	1.40	1.00	1.44
Separation rate for other States ^e		1.47	1.42	1.43	1.42	1.45	1.44	1.44	1.45	
Difference, State/Territory and national rate	%	-6.1	5.7	3.2	11.8	-9.0	-4.3	-2.9	-31.0	
Significance of difference		**	**	-	**	**	-	-	**	
Arthroscopy										
Separations ^d	no.	29 656	25 535	14 250	9 834	12 670	2 219	1 524	588	96 291
Separations within State of residence	%	96	98	99	100	100	98	90	66	
Separation rate ^e		4.62	5.43	4.13	5.39	8.37	4.70	4.93	3.20	5.10
Separation rate for other States ^e		5.34	4.99	5.31	5.07	4.81	5.11	5.10	5.11	
Difference, State/Territory and national rate	%	-13.6	9.0	-22.4	6.3	73.9	-7.9	-3.3	-37.5	
Significance of difference		**	**	**	**	**	**	-	**	

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Table 4A.10 (Continued)

Procedure	Unit	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Caesarean section										
Separations ^d	no.	16 262	12 419	10 730	5 398	4 325	1 219	758	561	51 675
Separations within State of residence	%	97	100	99	100	100	100	98	97	
Separation rate ^e		2.72	2.78	3.27	3.06	3.20	2.99	2.38	2.58	2.90
Separation rate for other States ^e		3.00	2.95	2.82	2.89	2.88	2.90	2.91	2.91	
Difference, State/Territory and national rate	%	-9.3	-5.7	16.1	6.0	11.0	3.1	-18.4	-11.2	
Significance of difference		**	**	**	**	**	-	**	**	
Cholecystectomy										
Separations ^d	no.	15 512	10 731	8 030	3 271	3 745	1 008	543	191	43 034
Separations within State of residence	%	97	99	99	100	100	98	97	86	
Separation rate ^e		2.33	2.20	2.30	1.80	2.32	2.05	1.86	1.24	2.22
Separation rate for other States ^e		2.16	2.22	2.20	2.26	2.21	2.22	2.22	2.23	
Difference, State/Territory and national rate	%	8.2	-1.0	4.4	-20.4	4.8	-7.7	-16.5	-44.3	
Significance of difference		**	-	**	**	**	**	**	**	
Coronary artery bypass graft										
Separations ^d	no.	6 855	4 625	2 911	1 166	1 268	394	197	70	17 487
Separations within State of residence	%	95	99	99	99	99	96	20	0	
Separation rate ^e		1.00	0.93	0.85	0.68	0.74	0.76	0.82	0.64	0.89
Separation rate for other States ^e		0.84	0.88	0.90	0.91	0.91	0.90	0.90	0.89	
Difference, State/Territory and national rate	%	20.1	4.9	-6.2	-25.8	-18.5	-15.5	-8.4	-27.9	
Significance of difference		**	**	**	**	**	**	-	**	

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Table 4A.10 (Continued)

Procedure	Unit	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aus ^f
Endoscopy										
Separations ^d	no.	168 476	126 678	92 493	39 671	34 923	11 288	3 766	1 895	479 222
Separations within State of residence	%	98	99	99	100	100	99	95	91	
Separation rate ^e		24.91	25.59	26.31	21.87	20.92	22.04	13.33	13.67	24.39
Separation rate for other States ^e		24.12	23.99	23.98	24.65	24.71	24.45	24.56	24.47	
Difference, State/Territory and national rate	%	3.3	6.7	9.7	-11.3	-15.3	-9.9	-45.7	-44.1	
Significance of difference		**	**	**	**	**	**	**	**	
Hip replacement										
Separations ^d	no.	7 094	5 965	3 207	1 841	2 164	767	313	49	21 402
Separations within State of residence	%	95	98	99	100	100	99	92	53	
Separation rate ^e		0.99	1.14	0.91	1.05	1.17	1.41	1.34	0.66	1.05
Separation rate for other States ^e		1.08	1.02	1.08	1.05	1.04	1.04	1.05	1.05	
Difference, State/Territory and national rate	%	-8.4	12.3	-15.7	-0.6	12.4	35.7	27.7	-37.5	
Significance of difference		**	**	**	-	**	**	**	**	
Hysterectomy										
Separations ^d	no.	11 253	8 217	6 557	3 385	3 410	1 050	610	163	34 650
Separations within State of residence	%	96	100	99	100	100	99	91	91	
Separation rate ^e		1.67	1.65	1.83	1.78	2.10	2.10	1.87	0.94	1.75
Separation rate for other States ^e		1.79	1.78	1.73	1.74	1.71	1.74	1.74	1.75	
Difference, State/Territory and national rate	%	-6.7	-7.0	5.6	2.0	22.7	21.1	7.4	-46.3	
Significance of difference		**	**	**	-	**	**	-	**	

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Table 4A.10 (Continued)

Procedure	Unit	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust ^f
Knee replacement										
Separations ^d	no.	6 432	3 595	3 138	1 449	1 750	459	252	19	17 094
Separations within State of residence	%	95	99	99	100	100	98	94	53	
Separation rate ^e		0.92	0.71	0.92	0.85	0.98	0.85	1.12	0.18	0.86
Separation rate for other States ^e		0.83	0.92	0.85	0.87	0.85	0.86	0.86	0.87	
Difference, State/Territory and national rate	%	11.2	-22.8	7.9	-1.6	15.1	-1.1	30.4	-79.1	
Significance of difference		**	**	**	-	**	-	**	**	
Lens insertion										
Separations ^d	no.	40 201	27 434	23 858	8 577	7 405	2 054	711	329	110 576
Separations within State of residence	%	98	99	98	100	100	99	93	88	
Separation rate ^e		5.55	5.19	6.78	4.93	3.86	3.63	3.24	4.65	5.38
Separation rate for other States ^e		5.29	5.45	5.09	5.42	5.54	5.43	5.41	5.38	
Difference, State/Territory and national rate	%	4.9	-4.8	33.1	-9.2	-30.3	-33.1	-40.1	-13.6	
Significance of difference		**	**	**	**	**	**	**	**	
Myringotomy										
Separations ^d	no.	10 678	10 807	6 547	3 642	4 962	867	459	201	38 165
Separations within State of residence	%	96	99	99	100	100	99	98	89	
Separation rate ^e		1.76	2.48	1.96	2.07	3.68	1.88	1.54	0.88	2.14
Separation rate for other States ^e		2.33	2.03	2.18	2.15	2.01	2.15	2.15	2.15	
Difference, State/Territory and national rate	%	-24.4	22.5	-10.1	-3.7	83.0	-12.2	-28.3	-59.2	
Significance of difference		**	**	**	*	**	**	**	**	

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Table 4A.10 (Continued)

Procedure	Unit	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust ^f
Prostatectomy										
Separations ^d	no.	8 453	7 296	3 364	1 770	2 159	764	354	43	24 203
Separations within State of residence	%	94	98	99	100	99	100	96	70	
Separation rate ^e		1.21	1.43	0.98	1.04	1.20	1.42	1.57	0.55	1.22
Separation rate for other States ^e		1.22	1.15	1.27	1.24	1.22	1.21	1.21	1.22	
Difference, State/Territory and national rate	%	-0.7	24.6	-22.8	-16.0	-1.4	16.9	28.9	-54.9	
Significance of difference		-	**	**	**	-	**	**	**	
Tonsillectomy										
Separations ^d	no.	10 306	9 245	6 319	2 947	3 665	679	484	119	33 765
Separations within State of residence	%	97	99	99	100	100	99	98	70	
Separation rate ^e		1.74	2.15	1.89	1.67	2.73	1.50	1.56	0.55	1.91
Separation rate for other States ^e		2.00	1.84	1.92	1.94	1.84	1.92	1.92	1.93	
Difference, State/Territory and national rate	%	-12.9	16.8	-1.3	-14.0	48.2	-22.1	-18.5	-71.7	
Significance of difference		**	**	-	**	**	**	**	**	

^a Procedures are defined using ICD-9-CM codes in appendix 6. Procedures include National Health Minister's Benchmarking Working Group sentinel procedures and additional procedures requested by States and Territories. ^b Excludes private hospitals in the NT, private free-standing day hospital facilities in the ACT, and some private free-standing day hospital facilities in Tasmania. ^c Includes *Other Territories*. ^d Excludes multiple procedures during the same separation within the same sentinel group ^e Rate per 1000 population was directly age- and sex-standardised to the Australian population at 30 June 1991. - Not significant. * Significant at 5 per cent. ** Significant at 1 per cent.

Source: AIHW (1999a).

Table 4A.11 Separation rate for certain procedures, all hospitals^{a, b}

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
Angioplasty									
1996-97	0.67	0.90	0.47	0.77	0.87	0.81	0.47	0.54	0.73
1997-98	0.93	1.06	0.59	0.92	0.88	0.85	0.64	0.53	0.89
Appendicectomy									
1996-97	1.39	1.53	1.38	1.50	1.34	1.55	1.17	0.85	1.43
1997-98	1.38	1.50	1.48	1.59	1.32	1.38	1.40	1.00	1.44
Arthroscopy ^c									
1997-98	4.62	5.43	4.13	5.39	8.37	4.70	4.93	3.20	5.10
Caesarean section									
1996-97	2.65	2.72	3.05	2.70	3.19	3.03	2.54	2.42	2.79
1997-98	2.72	2.78	3.27	3.06	3.20	2.99	2.38	2.58	2.90
Cholecystectomy									
1996-97	2.24	2.19	2.22	1.78	2.42	2.09	2.09	1.39	2.18
1997-98	2.33	2.20	2.30	1.80	2.32	2.05	1.86	1.24	2.22
Coronary artery bypass graft									
1996-97	1.03	0.90	0.90	0.53	0.88	0.78	0.79	0.53	0.91
1997-98	1.00	0.93	0.85	0.68	0.74	0.76	0.82	0.64	0.89
Endoscopy									
1996-97	25.15	25.27	25.14	20.60	19.99	22.17	13.38	13.64	24.00
1997-98	24.91	25.59	26.31	21.87	20.92	22.04	13.33	13.67	24.39
Hip replacement									
1996-97	0.94	1.09	0.87	1.02	1.09	1.36	1.21	0.38	1.00
1997-98	0.99	1.14	0.91	1.05	1.17	1.41	1.34	0.66	1.05
Hysterectomy									
1996-97	1.76	1.82	1.81	1.84	2.26	2.31	1.94	1.17	1.84
1997-98	1.67	1.65	1.83	1.78	2.10	2.10	1.87	0.94	1.75
Knee replacement ^c									
1997-98	0.92	0.71	0.92	0.85	0.98	0.85	1.12	0.18	0.86
Lens insertion									
1996-97	5.10	4.91	6.23	4.94	3.84	3.79	2.45	4.30	5.05
1997-98	5.55	5.19	6.78	4.93	3.86	3.63	3.24	4.65	5.38
Myringotomy ^c									
1997-98	1.76	2.48	1.96	2.07	3.68	1.88	1.54	0.88	2.14
Prostatectomy ^c									
1997-98	1.21	1.43	0.98	1.04	1.20	1.42	1.57	0.55	1.22
Tonsillectomy									
1996-97	1.60	2.16	1.87	1.81	2.49	1.32	1.65	0.48	1.86
1997-98	1.74	2.15	1.89	1.67	2.73	1.50	1.56	0.55	1.91

^a Rate per 1000 population was directly age- and sex-standardised to the Australian population at 30 June 1991. ^b Excludes private hospitals in the NT, private free-standing day facilities in the ACT and some private free-standing day hospital facilities in Tasmania. ^c Data for 1996-97 were not published.

Source: AIHW (1998a, 1999a).

Accessibility and equity

Table 4A.12 Hospital separation ratios for Indigenous peoples, for all causes by sex (age standardised) ^{a, b}

	NSW	Vic	Qld ^c Aboriginal	Qld ^c Torres Strait Islander	WA	SA	Tas	ACT	NT
Male	2.2	1.7	3.1	1.1	2.5	1.9	na	0.8	2.1
Female	2.0	2.0	3.1	1.3	2.9	2.7	na	0.8	2.2

^a The ratios of Aboriginal and Torres Strait Islander to non-Aboriginal and Torres Strait Islander public hospital separations. Data are for 1996-97 in NSW; 1997-98 in Victoria; 1995-96 and 1996-97 in Queensland; 1996-97 in WA; 1997-98 in SA, 1996-97 in the ACT, 1997 in the NT (for the NT, it is unknown whether the data are for public and private hospitals or public hospitals only). Ratios for NSW, Vic, WA, SA and the NT were based on direct standardisation, and those for Queensland and the ACT are based on indirect standardisation. ^b The ABS regards the mortality and hospitalisation data from NSW, Victoria, Queensland, Tasmania and the ACT to be under-reported for Aboriginal and Torres Strait peoples, and therefore they are unable to be interpreted meaningfully at this time. ^c Queensland separation ratios were calculated using data from the Deed of Grant in Trust (DOGIT) communities. The Torres Strait Islander ratios were calculated using the Torres Statistical Local Area data (20 per cent of the population are not Aboriginal and Torres Strait Islander.) **na** Not available because Tasmania is seeking to improve data quality.

Source: NHIMG (1999).

Table 4A.13 Hospital separation ratios for Indigenous peoples, for selected causes, by sex (age standardised) ^{a, b}

	NSW	Vic	Qld ^c	Qld ^c	WA	SA	Tas ^d	ACT	NT
<i>Acute myocardial infarction</i>									
Male	1.6	na	3.2	1.4	2.2	2.0	na	na	1.8
Female	2.2	na	3.9	2.3	2.6	3.6	na	na	1.3
<i>Injury and poisoning</i>									
Male	1.4	1.8	4.3	1.3	3.4	2.5	na	1.0	2.3
Female	1.5	2.1	6.7	1.5	4.3	3.1	na	1.2	2.9
<i>Respiratory diseases</i>									
Male	2.4	2.1	5.7	1.4	4.7	2.8	na	na	3.5
Female	2.8	2.8	6.1	1.3	5.4	2.6	na	na	5.5
<i>Diabetes</i>									
Male	4.2	na	13.2	5.6	12.6	7.3	na	6.6	3.2
Female	6.9	na	18.2	10.5	10.4	10.6	na	2.6	17.5
<i>Tympanoplasty</i>									
Male	0.7	na	1.1	0.5	na	3.7	na	0.0	10.8
Female	2.1	na	1.5	0.0	na	3.8	na	0.0	15.6

^a The ratios of Aboriginal and Torres Strait Islander to non-Aboriginal and Torres Strait Islander public hospital separations. Data are for 1996-97 in NSW; 1997-98 in Victoria; 1995-96 and 1996-97 in Queensland; 1996-97 in WA; 1997-98 in SA, 1996-97 in the ACT, 1997 in the NT (for the NT, it is unknown whether the data are for public and private hospitals or public hospitals only). Ratios for NSW, Vic, WA, SA and the NT were based on direct standardisation, and those for Queensland and the ACT are based on indirect standardisation. ^b The ABS regards the mortality and hospitalisation data from NSW, Victoria, Queensland, Tasmania and the ACT to be under-reported for Aboriginal and Torres Strait peoples, and therefore they are unable to be interpreted meaningfully at this time. ^c Queensland separation ratios were calculated using data from the Deed of Grant in Trust (DOGIT) communities. The Torres Strait Islander ratios were calculated using the Torres Statistical Local Area data (20 per cent of the population are not Aboriginal and Torres Strait Islander.) **na** Not available because Tasmania is seeking to improve data quality.

Source: NHIMG (1999).

Table 4A.14 Separations, by reported Indigenous status and hospital sector, 1997-98

<i>Indigenous status</i>	NSW	Vic ^a	Qld	WA ^b	SA	Tas	ACT ^b	NT	Aust
Public hospitals									
Aboriginal but not Torres Strait Islander origin	26 861	38	32 512	1 447	10 661	659	38	30 209	102 425
Torres Strait Islander but not Aboriginal origin	325	0	6,369	5	19	257	0	119	7 094
Aboriginal and Torres Strait Islander origin	439	0	432	0	25	27	0	343	1 266
Aboriginal or Torres Strait Islander origin, not further specified	0	6 489	0	30 047	0	0	574	0	37 110
Not Aboriginal or Torres Strait Islander origin	1 245 172	922 320	603 460	314 840	328 266	72 441	56 522	21 665	3 564 686
Not reported	0	0	42 572	24	7 811	7 005	41	64	57 517
Total	1 272 797	928 847	685 345	346 363	346 782	80 389	57 175	52 400	3 770 098
Private hospitals									
Aboriginal but not Torres Strait Islander origin	1,593	na	221	0	212	4	7	na	2,037
Torres Strait Islander but not Aboriginal origin	245	na	97	1	6	6	0	na	355
Aboriginal and Torres Strait Islander origin	743	na	89	0	3	0	0	na	835
Aboriginal or Torres Strait Islander origin, not further specified	0	na	0	335	0	0	5	na	340
Not Aboriginal or Torres Strait Islander origin	541,770	na	274,122	160,022	138,408	29,934	17,494	na	1,161,750
Not reported	0	484,201	113,549	0	8,791	21,053	65	na	627,659
Total	544,351	484,201	388,078	160,358	147,420	50,997	17,571	na	1,792,976

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Table 4A.14 (Continued)

<i>Indigenous status</i>	NSW	Vic ^a	Qld	WA ^b	SA	Tas	ACT ^b	NT	Aust
All hospitals									
Aboriginal but not Torres Strait Islander origin	28 454	38	32 733	1 447	10 873	663	45	30 209	104 462
Torres Strait Islander but not Aboriginal origin	570	0	6 466	6	25	263	0	119	7 449
Aboriginal and Torres Strait Islander origin	1 182	0	521	0	28	27	0	343	2 101
Aboriginal or Torres Strait Islander origin, not further specified	0	6 489	0	30 382	0	0	579	0	37 450
Not Aboriginal or Torres Strait Islander origin	1 786 942	922 320	877 582	474 862	466 674	102 375	74 016	21 665	4 726 436
Not reported	0	484 201	156 121	24	16 602	28 058	106	64	685 176
Total	1 817 148	1 413 048	1 073 423	506 721	494 202	131 386	74 746	52 400	5 563 074
Separations for Aboriginal or Torres Strait Islanders per 1000 Aboriginal or Torres Strait Islander population ^d	398	367	543	785	703	139	392	904	540

^a Victorian public hospitals reported Indigenous status using only the Aboriginal or Torres Strait Islander origin, not further specified and the Not Aboriginal or Torres Strait Islander origin categories. Indigenous status data were not available for the private hospitals in Victoria. ^b WA and the ACT reported Indigenous status using a mixture of the detailed Indigenous status categories (*Aboriginal but not Torres Strait Islander origin*, *Torres Strait Islander origin* and *not Aboriginal origin* and *Aboriginal and Torres Strait Islander origin*) and the category *Aboriginal or Torres Strait Islander origin*, not further specified. ^c Public hospitals only in the NT. ^d The rates were directly age-standardised to the Australian population at 30 June 1991. For details, see appendix 3. Indigenous population data are included in appendix 4. **na** Not available.

Source: AIHW (1999a).

Efficiency

Table 4A.15 **Cost per case mix adjusted separation, selected public acute hospitals, 1996-97 (revised)^a**

	Unit	NSW	Vic ^b	Qld	WA	SA	Tas ^c	ACT	NT	Aust ^d
Separations for included hospitals										
Total separations ^e	'000	1 169	844	646	344	324	76	56	48	3 552
Average cost weight ^f		1.04	1.00	0.98	0.97	1.02	1.03	0.97	0.80	1.02
Acute case mix adjusted separations ^g	'000	1 221	843	637	334	331	78	55	38	3 622
Total recurrent expenditure	\$m	3 912	2 439	1 871	1 091	917	284	254	152	11 327
Inpatient fraction ^h		0.77	0.74	0.79	0.80	0.81	0.73	0.77	0.77	0.77
Public patient bed day proportion ⁱ	%	0.78	0.77	0.89	0.86	0.82	0.83	0.85	0.95	0.83
Unqualified neonates	'000	58	38	32	15	13	4	2	1	163
Separations for excluded hospitals ^{a, e}										
Number of separations	'000	65	62	2	4	1	1	0	0	135
Proportion of separations	%	5.6	6.8	0.3	1.2	0.3	1.3	0	0	3.8
Recurrent cost per case mix adjusted separation										
Non-medical labour costs										
Nursing	\$	705	632	685	679	650	714	863	898	690
Diagnostic/allied health	\$	187	168	170	199	163	182	277	160	182
Administrative	\$	167	167	150	218	177	150	253	166	173
Other staff	\$	220	201	254	333	156	250	168	285	229
Superannuation ^j	\$	113	94	128	116	115	144	277	116	116
Total non-medical labour costs	\$	1 392	1 263	1 387	1 545	1 261	1 440	1 838	1 625	1 390
Other recurrent costs										
Domestic services	\$	49	61	72	111	66	66	108	88	66
Repairs/maintenance	\$	53	50	53	115	100	49	94	28	63
Medical supplies	\$	158	131	179	196	156	219	279	108	162
Drug supplies	\$	113	102	129	116	106	92	143	171	115
Food supplies	\$	49	30	24	30	21	30	48	32	35
Administration	\$	93	105	131	83	142	161	270	290	114
Other	\$	151	69	16	133	36	224	225	330	100
Total other recurrent costs	\$	666	548	605	784	626	842	1 167	1 047	656
Total non-medical costs	\$	2 058	1 811	1 992	2 329	1 887	2 281	3 005	2 672	2 046

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Table 4A.15 (Continued)

	<i>Unit</i>	<i>NSW</i>	<i>Vic^b</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas^c</i>	<i>ACT</i>	<i>NT</i>	<i>Aust^d</i>
Medical labour costs										
Public patients										
– Salaried/sessional staff	\$	258	279	265	223	219	251	345	381	265
– VMO payments	\$	155	59	57	122	128	65	237	100	107
Private patients ^k	\$	115	102	41	57	75	63	103	25	78
Total medical labour costs	\$	528	440	363	402	422	379	685	506	450
Total recurrent costs per case mix adjusted separation	\$	2 586	2 252	2 354	2 731	2 309	2 527	3 689	3 179	2 496

^a Excludes psychiatric hospitals, drug and alcohol services, mothers' and babies' facilities, dental hospitals and same day facilities. ^b In addition to excluding some institutions, Victoria also excludes data from its psychiatric, rehabilitation, palliative care and non-acute units within the selected hospitals in line with the method used for SCRCSSP (1999). These data do not match the data in SCRCSSP (1999) because a number of minor errors have been corrected. Errors occurred in both the data published by the AIHW and the method used by Victoria for SCRCSSP (1999) ^c Only Tasmanian public hospitals are liable for payroll tax, which is 6.6 per cent of payroll, including superannuation. To improve comparability, payroll tax (estimated by the Tasmanian Department of Health and Human Services to be \$133 per case mix adjusted separation) was subtracted from the cost per case mix adjusted separation estimate supplied by the AIHW (\$2660). Only the total has been affected, because it was not possible to adjust the components to remove the effect of payroll tax. ^d Australian total based on data for Victoria and Tasmania as published in *Australian Hospital Statistics* (AIHW 1998a). ^e Includes same day separations and excludes unqualified neonates. ^f Average cost weight based on acute and unspecified separations only (excluding unqualified neonates) using the 1996-97 revised AN-DRG version 3.1 cost weights. ^g Equals total multiplied by separations average cost weight. ^h Inpatient fractions were estimated using the HASAC method for one hospital in NSW, 14 in Queensland, nine in SA and all hospitals in the NT and the ACT. ⁱ Eligible public patient bed days as a proportion of total patient bed days, excluding unqualified neonates. ^j Superannuation for WA and the NT was estimated using the average of the other jurisdictions. ^k Equals (salary/sessional plus VMO payments) multiplied by (1 minus the public patient proportion). Estimated for all private, compensable and ineligible patients.

Sources: AIHW (1998a); NHMBWG (1999).

Table 4A.16 Indicative estimate of capital costs per case mix adjusted separation, for public acute care hospitals, 1996-97(revised)^{a, b}

	<i>Unit</i>	<i>NSW</i>	<i>Vic</i>	<i>Qld^c</i>	<i>WA</i>	<i>SA^d</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust.</i>
Buildings										
Depreciated replace. value	\$m	2 668	2 153	1 421	2 161	764	193	297	na	9 657
Opportunity cost ^e	\$m	213	172	114	173	61	15	24	na	772
Depreciation	\$m	71	57	68	94	42	4	6	na	342
Acute case mix adjusted separations	'000	1 221	843	637	334	254	78	55	38	3 422
Inpatient fraction ^f		..	0.743	..	0.796	0.808	0.716	0.773	0.767	0.771
Capital cost per separation	\$	233	202	286	636	328	174	422	na	251
Equipment										
Depreciated replace. value	\$m	402	417	248	321	143	38	21	na	925
Opportunity cost ^e	\$m	32	33	20	26	11	3	2	na	74
Depreciation	\$m	68	118	49	31	33	6	6	na	144
Acute case mix adjusted separations	'000	1 221	843	637	334	254	78	55	38	1 942
Inpatient fraction ^f		..	0.743	0.787	0.796	0.808	0.716	0.773	0.767	0.771
Equip. capital costs	\$	82	133	85	136	140	83	112	na	87
Capital cost per case mix adjusted separation										
Total capital costs	\$	315	335	371	772	468	257	534	na	338

^a Capital values at 30 June 1998. ^b Where possible, these data relate to acute care facilities only. Mental health facilities, aged care nursing homes and hostels, community health centres and other capital assets were separately identified or estimated. ^c Revised SCRGSP(1999). ^d Asset values based on Condition Based Assessment valuation method. ^e Calculated at 8 per cent of depreciated replacement value ^f NSW and Queensland provided, for some of their assets, asset values for non-acute services, so an IFRAC was not applicable **na** Not available. **..** Not applicable.

Sources: AIHW (1998a); State and Territory governments (unpublished).

Table 4A.17 Cost per case mix adjusted separation, selected public acute hospitals, 1997-98^a

	Unit	NSW	Vic	Vic ^b	Qld	WA	SA	Tas ^c	ACT	NT ^d	Aust
Separations from included hospitals											
Total separations ^e	'000	1202	911	864	665	341	331	75	57	52	3 635
Average cost weight ^f		1.02	1.02	1.00	0.98	0.96	0.99	0.98	0.97	0.76	1.00
Case mix adjusted separations ^g	'000	1 231	929	868	654	326	329	73	55	40	3 637
Total recurrent expenditure	\$m	4 211	2 992	1873	1 940	1 268	961	253	254	170	12 050
Inpatient fraction ^h		0.74	0.74	na	0.78	0.74	0.82	0.76	0.77	0.78	0.75
Public patient bed day proportion ⁱ		0.78	0.85	0.84	0.9	0.85	0.85	0.81	0.88	0.95	0.84
Unqualified neonates	'000	56	37	na	32	16	13	3	3	2	163
Separations from excluded hospitals^{a, e}											
Number of separations	'000	71	18	na	20	4	16	6	1	0	129
Proportion of all separations		5.9	1.9	na	3	1.3	4.8	7.7	1.2	na	3.5
Expenditure for excl. hospitals	\$m	491	101	na	193	53	109	22	2	na	950
Inpatient fraction for excl. hospitals		0.78	0.45	na	0.71	0.76	0.96	1.00	1.00	na	0.75
Unadjusted cost per separation	\$	5 430	2 608	na	6 908	9 158	6 541	3 772	2 523	na	5 551

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Table 4A.17 (Continued)

	Unit	NSW	Vic	Vic ^b	Qld	WA	SA	Tas ^c	ACT	NT ^d	Aust
Recurrent cost per case mix adjusted separation											
Non-medical labour costs											
Nursing	\$	698	670	552	674	748	645	720	876	875	691
Diagnostic/allied health	\$	187	229	168	176	223	163	187	293	203	199
Administrative	\$	172	184	158	160	247	183	186	265	216	183
Other staff	\$	226	199	234	218	270	134	233	154	433	215
Superannuation ^j	\$	148	102	84	131	143	112	160	268	131	131
Total non-medical labour costs	\$	1 431	1 384	1 196	1 359	1 631	1 237	1 486	1 856	1 858	1 419
Other recurrent costs											
Domestic services	\$	52	62	55	77	84	74	61	100	165	66
Repairs/maintenance	\$	60	61	51	54	72	113	68	94	66	65
Medical supplies	\$	178	177	175	197	213	165	281	298	142	186
Drug supplies	\$	121	115	111	133	127	116	116	166	199	123
Food supplies	\$	35	37	19	23	26	21	30	44	32	31
Administration	\$	111	122	96	121	161	166	75	178	215	126
Other	\$	107	64	94	14	168	94	169	202	205	88
Total other recurrent costs	\$	664	638	603	619	851	749	800	1 082	1 024	685
Total non-medical labour costs	\$	2 095	2 022	1 799	1 978	2 482	1 986	2 286	2 938	2 882	2 104

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Table 4A.17 (Continued)

	Unit	NSW	Vic	Vic ^b	Qld	WA	SA	Tas ^c	ACT	NT ^d	Aust
Medical labour costs											
Public patients											
– Salaried/sessional staff	\$	262	304	283	279	282	259	273	350	382	280
– VMO payments	\$	161	70	76	60	130	140	96	250	74	114
Private patients (est.) ^k	\$	119	66	69	37	72	73	84	85	25	77
Total medical labour costs	\$	542	440	428	376	484	472	453	685	481	471
Cost per case mix adjusted separation											
Total recurrent costs^l	\$	2 637	2 462	2 227	2 354	2 966	2 458	2 739	3 623	3 363	2 575
National Hospital Cost Data Collection 1997-98 data											
Cost per case mix adjusted separation ^m	\$	2 539	2 226	..	2 239	2 639	2 243	2 295	3 365	3 603	2 412

^a States and Territories have excluded psychiatric hospitals, drug and alcohol services, mothercraft hospitals, dental hospitals, hospices, rehabilitation, facilities and multi-purpose services from this table. Hospitals satisfying the NSW definition of community non-acute hospitals have also been excluded for all jurisdictions. ^b Adjusted data, submitted by the Victorian Department of Human Services, exclude 47 000 psychiatric and sub-acute separations (and their associated costs). These data were included in the data published in *Australian Hospital Statistics 1997-98*. ^c Tasmania is the only jurisdiction with a significant payroll tax burden. As a result, payroll tax has been estimated at 6.7 per cent of salary plus superannuation and removed from the above. Consequently, the data do not balance with table 3.8 in *Australian Hospital Statistics* (1999). ^d These figures should be interpreted with the consideration of cost disabilities associated with hospital service delivery in the NT (see chapter 2, AIHW 1999a). ^e From the National Hospital Morbidity Database, including same day separations and excluding unqualified neonates. ^f Average cost weight from the National Hospital Morbidity cost weights (DHAC unpublished). ^g Case mix adjusted separations are the product of total separations and average cost weight. ^h Inpatient fractions have been estimated using the HASAC method for 15 selected and three excluded hospitals in Queensland, 10 excluded hospitals in NSW, one included and one excluded hospital in the ACT, four included and one excluded hospitals in WA, eight selected and three excluded hospitals in SA, and one network of 19 hospitals in Tasmania. ⁱ Eligible public patient days as a proportion of total patient days, excluding unqualified neonates. ^j In the NT, the major superannuation scheme is funded by Treasury hospitals make no contribution. The superannuation for this jurisdiction was estimated using the average of the other States and Territories. Consequently, the above data do not balance with table 3.8 in AIHW (1999a). ^k Estimated private patient medical costs calculated as the sum of the salary/sessional and VMO payments, divided by the number of public patient days, multiplied by the number of private patient days. This is an estimate of the medical costs for all non-public patients, including private, compensable and ineligible. ^l Excludes depreciation. ^m Includes depreciation. Excludes psychiatric and sub-acute separations and related expenditure reported by acute care hospitals. Excludes teaching and research expenditure. ^{na} Not available. ^{..} Not applicable.

Sources: AIHW (1999a); Victorian Government acute care data; DHAC (1999a).

Table 4A.18 Indicative estimate of capital costs per case mix adjusted separation for public acute care hospitals, 1997-98^{a, b}

		<i>Unit</i>	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA^c</i>	<i>SA^d</i>	<i>Tas^{e, f}</i>	<i>ACT</i>	<i>NT</i>	<i>Aust^f</i>
Buildings											
Depreciated replace. value	\$m	2 751	1 132	1 254	1 279	726	na	298	na	7 442	
Opportunity cost ^g	\$m	220	91	100	78	58	na	24	na	570	
Depreciation	\$m	86	29	82	28	38	na	6	na	276	
Acute case mix adjust. sep.	'000	1 231	868	654	326	329	73	55	40	3 463	
Inpatient fraction ^h		..	..	..	0.74	0.82	0.76	0.77	0.78	0.95
Capital cost per separation	\$	249	138	279	240	239	na	418	na	233	
Equipment											
Depreciated replace. Value	\$m	415	230	260	191	109	na	20	na	1 248	
Opportunity cost ^g	\$m	33	18	21	15	9	na	2	na	100	
Depreciation	\$m	73	41	62	21	27	na	5	na	223	
Acute case mix adjust. sep.	'000	1 231	868	654	326	329	73	55	40	3 463	
Inpatient fraction ^h		..	..	..	0.74	0.82	0.76	0.77	0.78	0.95
Capital cost per separation	\$	86	68	127	83	89	na	87	na	89	
Capital cost per case mix adjusted separation											
Total capital costs	\$	335	206	405	322	328	na	505	na	322	

^a Capital values at 30 June 1998. ^b Where possible, these data relate to acute care facilities only: mental health facilities, aged care nursing homes and hostels, community health centres and other capital assets were separately identified or estimated. ^c WA submitted asset values for all health services for 1997-98 and both health service and public hospital assets for 1998-99. The ratio of public hospital assets (depreciation) in 1998-99 to total health service assets (depreciation) in 1998-99 was applied to 1997-98 health service estimates to derive estimates for 1997-98 public hospital assets (depreciation). Interest payments of \$25 million were deducted from building user cost of capital to avoid double-counting. ^d Asset values are based on the Condition Based Assessment valuation method. ^e Tasmania was not able to report for 1997-98 due to changes in its reporting systems. ^f IFRAC for Australia is calculated as an average of all submitted jurisdiction rates. NSW, Victorian and Queensland rates were assumed to equal one. ^g Calculated at 8 per cent of depreciated replacement value. ^h NSW, Victoria and Queensland provided separate estimates of asset values for acute and non-acute services and so did not require the application of an IFRAC. **na** Not available. **..** Not applicable.

Sources: AIHW (1998a); State and Territory governments (unpublished).

Table 4A.19 Average length of stay in public acute care and private hospitals (days)

	<i>Including same day cases</i>			<i>Excluding same day cases</i>		
	<i>Public^a</i>	<i>Private^b</i>	<i>Total^c</i>	<i>Public^a</i>	<i>Private^b</i>	<i>Total^c</i>
1993-94 ^{d, e}	4.8	3.9	4.6	6.8	6.1	6.6
1994-95 ^{d, e}	4.6	3.7	4.3	6.7	6.0	6.5
1995-96 ^f	4.4	3.7	4.2	6.6	6.4	6.5
1996-97	4.2	3.5	4.0	6.5	6.0	6.4
1997-98	4.0	3.3	3.8	6.4	6.0	6.3

^a Includes the Department of Veterans' Affairs hospitals. ^b Includes private psychiatric hospitals and private free-standing facilities. ^c Excludes public psychiatric hospitals. ^d Victorian private hospital data are incomplete. Includes about 81 per cent of 1993-94 separations and 98 per cent of 1994-95 separations. ^e Data for 1993-94 have been updated since published in *Australian Hospital Statistics 1996-97*, reflecting exclusion of some non-hospital NSW facilities. ^f Statistical separations were introduced in 1995-96 and resulted in an increase in separations reported for that and subsequent years compared with the number in previous years.

Source: AIHW (1999a).

Table 4A.20 Average length of stay in public acute care hospitals, 1997-98 (days)

	<i>NSW^a</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
Including same day separations	4.4	4.0	3.7	3.8	4.0	4.2	4.3	3.6	4.0
Excluding same day separations	6.6	6.6	5.8	6.0	6.3	6.9	7.4	6.2	6.4
<i>NCHDC data</i>									
Including same day separations	3.4	3.5	3.5	3.4	3.9	3.6	3.6	3.6	3.5

^a Includes the Department of Veterans' Affairs hospital.

Source: AIHW (1999a); DHAC (1999a).

Table 4A.21 Average length of stay in public hospitals for the 10 AN-DRGs with the highest number of separations, 1997-98 (days)^{a, b}

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
Vaginal delivery without complicating diagnosis									
Public	3.29	3.40	2.95	3.45	3.22	4.00	2.97	3.88	3.28
Private	5.15	5.34	5.20	5.14	4.98	4.29	5.43	na	5.16
Total	3.62	3.88	3.54	3.94	3.67	4.12	3.60	3.88	3.71
Chronic obstructive airways disease									
Public	7.96	6.75	7.52	7.82	7.09	8.41	8.94	7.63	7.56
Private	11.06	9.95	10.45	10.77	9.24	9.74	11.31	na	10.34
Total	8.27	7.43	8.30	8.50	7.50	8.80	9.41	7.63	8.06
Bronchitis and asthma in persons aged 50 years and younger without complications									
Public	2.27	2.08	2.30	2.28	2.36	2.17	2.60	2.86	2.26
Private	2.62	2.99	3.00	2.15	4.11	2.08	5.67	na	2.91
Total	2.28	2.15	2.40	2.27	2.49	2.15	2.63	2.86	2.31
Heart failure & shock									
Public	8.01	7.17	7.23	7.46	7.34	9.32	10.06	8.01	7.61
Private	10.67	9.52	9.95	10.21	9.39	9.06	12.76	na	9.87
Total	8.30	7.78	7.96	7.93	7.77	9.23	10.41	8.01	8.05
Cholecystectomy without common bile duct exploration									
Public	3.46	3.31	2.65	3.80	3.07	2.82	3.56	4.72	3.27
Private	3.11	3.62	3.27	3.68	3.48	3.33	3.35	na	3.35
Total	3.33	3.42	2.91	3.75	3.22	3.09	3.47	4.72	3.30
Tonsillectomy and/or adenoidectomy									
Public	1.53	1.26	1.19	1.40	1.40	1.34	1.46	1.34	1.35
Private	1.21	1.32	1.09	1.20	1.33	1.30	1.19	na	1.23
Total	1.39	1.28	1.14	1.30	1.37	1.32	1.36	1.34	1.30
Inguinal and Femoral hernia procedures in persons older than 9 years									
Public	2.66	2.13	1.80	2.44	2.50	2.05	2.32	2.20	2.32
Private	2.56	2.35	2.02	2.55	2.80	2.32	2.19	na	2.41
Total	2.61	2.24	1.92	2.50	2.65	2.23	2.24	2.20	2.36
Major affective disorders									
Public	16.94	16.11	13.24	19.89	15.27	13.19	16.85	13.52	15.93
Private	23.83	19.41	18.04	17.08	18.07	15.98	16.30	na	19.11
Total	18.12	17.33	14.74	19.09	16.20	13.95	16.77	13.52	16.85
Caesarean delivery without complicating diagnosis									
Public	5.40	5.26	4.66	5.28	5.38	5.57	5.37	6.10	5.22
Private	7.01	7.17	6.73	7.46	6.67	6.31	7.58	na	6.98
Total	5.85	5.93	5.54	6.15	5.86	5.97	6.21	6.10	5.84
Knee procedures									
Public	2.89	2.38	2.21	2.11	2.17	2.74	2.13	3.88	2.42
Private	1.82	1.90	1.97	1.93	1.96	1.67	1.49	na	1.89
Total	2.07	2.03	2.04	1.97	2.02	1.88	1.69	3.88	2.03

^a Excludes same day cases. ^b Separations for which the type of episode of care was reported as either 'acute' or 'not reported'. **na** Not available.

Source: AIHW (1999a).

Table 4A.22 Treatment of assets by health agencies

Revaluation method ^b	Land	Buildings	Other assets	Frequency of revaluations	Land, buildings	Other assets	Useful asset lives ^{f, g}	Buildings	Plant & med. equip. ^h	IT equip.	Office equip. ⁱ	Vehicles	Intellect. property	Threshold	Buildings	IT equip.	Other assets	Capitalisation levels	SA	Tas	ACT ^e	NT ^a
	na	na	na	2 yrs	2 yrs	0-7 yrs	25yrs	3-7 yrs	na	na	na	na	na	all	500	2 000			deprival	deprival	market	..
	market	DRC	DRC	every 5 yrs	every 5 yrs	every 5 yrs	40 yrs	8-10 yrs	5 yrs	na	10-20 yrs	na	na	5 000	5 000	5 000	5 000	1 000	market	DRC	DRC	..
	market	DRC	..	every 5 yrs	every 5 yrs	every 5 yrs	40 yrs	5-10 yrs	4 yrs	10 yrs	na	na	na	1 000	1 000	1 000	1 000	5 000	deprival	deprival
	every 5 yrs	every 5 yrs	..	every 5 yrs	every 5 yrs	every 5 yrs	40 yrs	5-10 yrs	4 yrs	10 yrs	na	na	na	1 000	1 000	1 000	1 000	5 000	deprival	deprival	DRC	DRC
	every 5 yrs	every 5 yrs	..	every 5 yrs	every 5 yrs	every 5 yrs	40 yrs	5-10 yrs	4 yrs	10 yrs	na	na	na	1 000	1 000	1 000	1 000	5 000	every year	every year	1 or 5 yrs	1 or 5 yrs
	every 5 yrs	every 5 yrs	..	every 5 yrs	every 5 yrs	every 5 yrs	40 yrs	5-10 yrs	4 yrs	10 yrs	na	na	na	1 000	1 000	1 000	1 000	5 000	every year	every year	1 or 5 yrs	1 or 5 yrs
	20 yrs	8 or 10 yrs	5-10 yrs	20 yrs	20 yrs	20 yrs	20 yrs	8 or 10 yrs	5-10 yrs	10-20 yrs	10-20 yrs	5 yrs	na	na	na	na	na	na	60 yrs	40-50 yrs	20-56 yrs	..
	8-10 yrs	5-10 yrs	4 yrs	8 or 10 yrs	8 or 10 yrs	8 or 10 yrs	5-10 yrs	5-10 yrs	10-15 yrs	5 yrs	10-15 yrs	5 yrs	na	na	na	na	na	na	7, 25 yrs	5-16 yrs	10 yrs	..
	na	na	na	5-10 yrs	5-10 yrs	5-10 yrs	4 yrs	10-20 yrs	10 yrs	na	10-15 yrs	5 yrs	na	na	na	na	na	na	3 yrs	na	4 yrs	..
	na	na	na	10-20 yrs	10-20 yrs	10-20 yrs	na	10-20 yrs	10 yrs	na	10-15 yrs	5 yrs	na	na	na	na	na	na	10-15 yrs	5-10 yrs	5 yrs	..
	na	na	na	na	5 yrs	5 yrs	na	5 yrs	na	na	3 yrs	7 yrs	na	na	na	na	na	na	3 yrs	5 yrs	7 yrs	..
	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	10 yrs	..
	all	500	2 000	5 000	5 000	5 000	5 000	5 000	5 000	5 000	5 000	5 000	5 000	5 000	5 000	5 000	5 000	5 000	5 000	5 000	5 000	5 000

^a Northern Territory services currently report on a cash basis. ^b DRC is the depreciated replacement cost; Market value is the current (net) value market selling price or exchange value; and Deprival value may be either the DRC of an asset of a similar service potential or the stream of its future economic benefits. ^c Queensland's recognition threshold for revaluation is \$200 000 for land, \$1 000 000 for buildings and \$50 000 for plant and equipment. ^d WA employs a declining balance rate of depreciation. Other jurisdictions employ a straight line. ^e Land and buildings above \$1 million are revalued every year, otherwise they are revalued every five years. Asset capitalisation thresholds are \$5000 for The Canberra Hospital and \$1000 for Calvary Hospital. ^f Estimated as (1/depreciation rate). ^g Asset lives for some assets have been grouped with other classifications. For some jurisdictions IT equip. includes software. ^h Electro-medical and laboratory equipment in SA had seven-year asset lives, other plant and equipment had 25 year asset lives. ⁱ Includes office furniture and fittings. ^{na} Not available. .. Not applicable.

Sources: Department annual reports and AIHW.

4A.2 Single jurisdiction data — public acute care hospitals

The jurisdiction-specific data presented below are not comparable.

New South Wales

Table 4A.23 Patient satisfaction: NSW Population Health Survey, 1997^a

	<i>Unit</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>
Sample details				
Households contacted	no.	na	na	24 737
Completed interviews	no.	na	na	17 543
Response rate	%	..	..	71
Population estimates for persons aged 16 and over	million	2.40	2.48	4.87
Percentage of respondents reporting overnight hospital admission in the past 12 months	%	11	15	na
Respondents' rating of inpatient care				
Excellent, very good or good	%	90	90	na
Fair	%	7	7	na
Poor	%	3	3	na
Respondents who would return to the same hospital				
Prefer same hospital	%	74	70	na
Prefer different hospital	%	13	17	na
Depends on condition/reason for going	%	13	14	na
Adequacy of information given at discharge				
Very adequate, adequate	%	79	79	na
Inadequate	%	2	2	na
Very inadequate	%	0	1	na
No information given	%	18	18	na
Percentage of respondents reporting at least one emergency department admission in previous 12 months	%	16	12	na
Respondents' rating of emergency department care				
Excellent, very good or good	%	80	80	na
Fair	%	12	12	na
Poor	%	9	8	na
Respondents who would return to the same emergency department				
Prefer same emergency department	%	69	72	na
Prefer different emergency department	%	17	17	na
Depends on condition/reason for going	%	14	11	na

(Continued on next page)

Table 4A.23 (Continued)

	<i>Unit</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>
Respondents who had difficulties in obtaining health care when needed				
Don't need health care	%	3	3	na
No difficulties	%	88	86	na
Difficulties experienced	%	9	11	na

^a The survey was conducted throughout the State of NSW by the NSW Department of Health. Detailed information is available on <http://www.health.nsw.au/public-health/hs97>.

Table 4A.24 **Emergency department waiting times to service delivery: share of patients seen within triage benchmarks, 1998-99**

<i>Triage category</i>	<i>Per cent</i>
1 – Resuscitation	95.5
2 – Emergency	75.9
3 – Urgent	63.0
4 – Semi-urgent	67.5
5 – Non-urgent	89.2

Table 4A.25 **Cost per non-admitted patient occasions of service, 1997-98^a**

<i>Hospital type</i>	<i>Emergency services</i>		<i>Outpatient services</i>	
	<i>Cost</i>	<i>Occasions of service</i>	<i>Cost</i>	<i>Occasions of service</i>
	\$	no.	\$	no.
Metropolitan teaching				
Principal referral	136	475 732	103	2 102 737
Paediatric specialist	99	68 285	151	188 412
Ungrouped acute	103	76 374	52	463 074
Total	128	620 391	98	2 754 223
Metropolitan non-teaching				
Major metropolitan	89	340 485	69	638 665
Non-metropolitan teaching	na	na	na	na
Non-metropolitan non-teaching				
Major non-metropolitan	137	187 690	79	190 487
District group 1	119	249 246	56	228 110
District group 2	103	203 675	89	223 098
Community acute	na	na	105	184 713
Total	119	640 611	81	826 408
All acute hospitals	116	1 601	92	4 219 296

^a Excludes primary and community based occasions of service (average \$86), and rehabilitation and extended care occasions of service (average \$112). District hospitals include some metropolitan hospitals but are dominated by non-metropolitan hospitals. Occasions of service exclude diagnostic occasions of service which totalled 1 040 444 for emergency departments and 1 451 378 for outpatients. **na** Not available.

Source: NSW Health (1999) NSW Hospital Comparison Data Book.

Table 4A.26 Elective surgery waiting times: patients overdue by speciality^a

Elective waiting time category	Unit		Cardio-thoracic	ENT	General	Gynaecology	Neuro-surgery	Ophthalmology	Orthopaedic	Plastic	Urology	Vascular	Other	Total
	no.	%												
Category 1														
Patients on waiting list	no.		3 026	5 070	29 172	16 908	2 027	3 512	9 483	3 826	8 371	2 815	3 468	87 678
Patients overdue	no.		510	913	3 789	2 152	217	379	1 675	835	1 599	296	210	12 575
Patients overdue	%		16.9	18.0	13.0	12.7	10.7	10.8	17.7	21.8	19.1	10.5	6.1	14.3
Category 2														
Patients on waiting list	no.		435	2 276	10 997	6 818	272	2 399	3 543	1 110	3 070	603	893	32 416
Patients overdue	no.		32	363	809	591	3	146	419	80	293	28	12	2 776
Patients overdue	%		7.4	15.9	7.4	8.7	1.1	6.1	11.8	7.2	9.5	4.6	1.3	8.6
Category 3														
Patients on waiting list	no.		1 805	10 348	25 714	16 884	1 115	11 686	15 161	3 144	7 050	1 572	1 880	96 359
Patients overdue	no.		3	1 207	743	166	6	834	1 949	103	357	144	14	5 526
Patients overdue	%		0.2	11.7	2.9	1.0	0.5	7.1	12.9	3.3	5.1	9.2	0.7	5.7

^a At 30 June 1998

Table 4A.27 Proportion of patients seen, by emergency department waiting time to admission, 1998-99 (per cent)^a

<i>Time elapsed (hours)^b</i>	<i>Principal referral</i>	<i>Paediatric specialist</i>	<i>Major metropolitan</i>	<i>Major non-metropolitan</i>	<i>District group 1</i>	<i>District group 2</i>	<i>Ungroup acute</i>	<i>Total</i>
0 – 4	24.8	46.2	36.1	65.7	70.1	69.4	43.9	40.3
4 – 8	42.5	37.1	42.5	28.8	23.1	27.4	42.7	38.0
8 – 12	15.7	9.3	11.7	3.5	3.5	2.5	8.5	11.0
12 – 24	13.5	6.6	8.2	1.7	2.9	0.7	3.9	8.6
24+	3.6	0.8	1.6	0.3	0.4	0.1	1.2	2.1

a Includes patients admitted to general ward, intensive care unit or via operating suite only. **b** Measured from the time of arrival to the time of actual departure from the emergency department.

Victoria

Table 4A.28 **Proportion of emergency patients seen, by triage benchmarks for emergency department waiting times to service delivery, 1997-98^a**

<i>Triage category</i>	<i>Per cent</i>
1 —Resuscitation	100
2 —Emergency	81
3 —Urgent	75
4 —Semi urgent	na
5 —Non-urgent	na

^a Based on a survey of the 20 largest hospitals. **na** Not available.

Table 4A.29 **Proportion of emergency patients seen, by emergency department waiting times to admission 1997-98^a**

<i>Actual number of blocked admissions</i>	<i>Per cent</i>
8 852	na

^a Proxy data only. **na** Not available.

Table 4A.30 **Patient satisfaction, July–September 1997^a**

	<i>Per cent</i>
Overall satisfaction with hospital	
Patients very satisfied	76
Patients fairly satisfied	20
Total patients satisfied	97
Patients not too satisfied	2
Patients not satisfied at all	1
Total patients not satisfied	3
Patients who would recommend the hospital to family and friends	96
Patient perceptions of quality of care	
Excellent	55
Very good	32
Good	10
Fair	2
Poor	1

^a Based on a survey of 9918 inpatients.

Source: Quint and Fergusson (1997).

Table 4A.31 Proportion of elective surgery patients waiting longer than desirable^a

	<i>Unit</i>	<i>Category 1</i>	<i>Category 2</i>	<i>Category 3^b</i>
Patients on waiting list	no.	189	6 364	22 626
Overdue patients	no.	0	1 807	na
Proportion overdue	%	0	28	na

^a At 30 June 1998 ^b There is no specified or agreed desirable wait for category 3. **na** Not available.

Table 4A.32 Cost per non-admitted occasion of service (\$) ^a

	<i>1995-96^b</i>	<i>1996-97^c</i>	<i>1997-98^d</i>
Average cost per encounter	105	104	109

^a An encounter includes the clinic visit and all ancillary services (imaging, pathology and pharmacy) provided within a 30-day period either side of the clinic visit. ^b Based on six months activity and cost data from eight hospitals. ^c Based on 12 months activity and cost data from seven major teaching hospitals. ^d Based on 12 months activity and cost data from nine major hospitals.

Source: SCRCSSP (1999); jurisdiction's own data.

Queensland

Table 4A.33 Proportion of patients seen, by triage benchmarks for emergency department waiting times to service delivery, 1999^a

<i>Triage category</i>	<i>Per cent</i>
1 – Resuscitation	95
2 – Emergency	64
3 – Urgent	60
4 – Semi-urgent	68
5 – Non-urgent	88

^a January to June.

Table 4A.34 Proportion of elective surgery patients waiting longer than desirable^{a, b}

	<i>Per cent</i>
Category 1	0.9
Category 2	10.6
Category 3	28.8

^a At 30 June ^b The data cover 33 public hospitals and represents approximately 95 per cent of elective surgery undertaken in public hospitals.

Source: Surgical access team; Queensland Health (1999).

Western Australia

Table 4A.35 Patients overdue for elective surgery, by speciality^a

	Cardio- thoracic	ENT	General	Gynaecology	Neuro- surgery	Ophthalmology	Orthopaedic	Plastic	Urology	Vascular	Other	Total
Category 1												
Patients on the waiting list	no. 62	31	208	43	29	58	90	89	126	65	44	845
Patients overdue	no. 3	7	24	7	6	11	29	20	24	5	3	139
Patients overdue	% 4.8	22.6	11.5	16.3	20.7	19.0	32.2	22.5	19.0	7.7	6.8	16.4
Category 2												
Patients on the waiting list	no. 112	25	55	16	19	20	47	71	33	14	7	319
Patients overdue	no. 1	7	14	2	0	5	18	13	5	3	1	69
Patients overdue	% 8.3	28.0	25.5	12.5	0.0	25.0	38.3	18.3	15.2	21.4	14.3	21.6
Category 3												
Patients on the waiting list	no. 1	23	65	140	9	49	87	18	96	6	3	497
Patients overdue	no. 0	6	13	0	0	8	18	6	4	0	0	55
Patients overdue	% 0.0	26.1	20.0	0.0	0.0	16.3	20.7	33.3	4.2	0.0	0.0	11.1

^a At 31 December 1998.

Source: Waiting list database, health information centre, HDWA.

Table 4A.36 Patient satisfaction: outcome score and overall indicator of satisfaction across hospital categories, 1998-99 (per cent)^{a, b, c}

<i>Hospital group</i>	<i>Outcome score</i>	<i>Overall indicator of satisfaction</i>
All metropolitan tertiary	86.9 (86.1–87.7)	80.9 (80.3–81.5) *
All other metropolitan	87.4 (86.4–88.3)	82.4 (81.7–83.1)
Large regional rural	89.0 (87.7–90.3)	84.0 (83.0–85.0)+
All other rural	89.1 (88.3–89.9)++	85.5 (85.9–86.0)++
State-wide	88.0 (87.5–88.4)	83.0 (82.7–83.4)

^a The survey sample was 16 074 people with a response rate of 40 per cent. ^b The indicator of satisfaction is the mean score out of 100, representing patient assessment of relevant categories of hospital service. Hospitals are grouped according to function and size. ^c Figures in parentheses are lower and upper 95 per cent confidence intervals. * Significantly lower than all other hospital types. A one way ANOVA was conducted on the data to determine statistically significant differences between groups. + Significantly higher than metropolitan tertiary hospitals.

Table 4A.37 Patient satisfaction: State mean scale scores for all admitted patients with overall indicator of satisfaction and outcome score, 1998-99 (per cent)^a

<i>Major scales^a</i>	<i>Mean scale score^b</i>
Special needs of patient met	90.0
Patient rated outcome of hospital stay	88.0
Availability of hospital staff when needed	86.0
Patient rating of hospital food and physical surroundings	86.0
Patient treated with consideration and privacy respected	85.7
Patient rating of continuity of care	83.1
Overall indicator of satisfaction	83.9
Being able to get access to hospital services	82.3
Feeling informed about condition and treatment	76.9
Being involved in decisions about care and treatment	76.0

^a The survey sample was 16 074 people with a response rate of 40 per cent. ^b Many of the major scales also have subscales. For a fuller explanation of the method, contact the Health Department of WA, Epidemiology and Analytical Services Branch.

Table 4A.38 Accessibility index variations, by Indigenous status and region

	1992	1993	1993	1994	1995
Indigenous/non-Indigenous ratio					
Metropolitan	0.80	0.88	1.07	0.94	0.83
Country	0.96	0.81	0.90	0.87	1.03
Country/metropolitan ratio					
State	1.10	1.04	1.08	1.05	1.04

Source: Health Department of WA (1999).

Table 4A.39 Quality of care indicators, 1997-98^a

	<i>Per cent</i>
Post-operative wound infection	
Metropolitan teaching hospitals ^b	0.626
Metropolitan non-teaching hospitals	0.380
Non-metropolitan non-teaching hospitals	0.443
Total public hospitals	0.538
Hospital-acquired bacteraemia	
Metropolitan teaching hospitals	0.102
Metropolitan non-teaching hospitals	0.000
Non-metropolitan non-teaching hospitals	0.014
Total public hospitals	0.062
Emergency re-admission ^c	
Metropolitan teaching hospitals	0.000
Metropolitan non-teaching hospitals	0.000
Non-metropolitan non-teaching hospitals	2.998
Total public hospitals	0.906

^a The number of hospitals/health services in the sample differed for each indicator. The sample sizes for the rate of post-operative wound infection (clean) were metropolitan teaching (2), metropolitan non-teaching (6) and non-metropolitan non-teaching (12); for post-operative wound infection (contaminated) were metropolitan non-teaching (6), and non-metropolitan non-teaching (7); for hospital-acquired bacteraemia were metropolitan teaching (5), metropolitan non-teaching (5) and non-metropolitan non-teaching (32); and for emergency re-admission were metropolitan teaching (4), metropolitan non-teaching (7) and non-metropolitan non-teaching (29). ^b It is not possible to differentiate between clean and contaminated wounds. ^c Rate of unplanned hospital re-admissions within 28 days of separation for the same condition.

Source: Hospital morbidity data system, health information centre, Health Department of WA.

Table 4A.40 Hospital misadventures among admitted patients as a proportion of total separations, 1997-98

<i>Hospital type</i>	<i>Per cent</i>
Teaching	0.118
Metropolitan non-teaching	0.099
Rural non-teaching	0.085
Total public hospitals	0.106

Source: Hospital morbidity data system, health information centre, Health Department of WA.

Table 4A.41 Emergency department waiting times to service delivery: share of emergency patients seen within triage benchmarks, 1997-98^a

<i>Triage category</i>	<i>Per cent</i>
1 – Resuscitation	89
2 – Emergency	70
3 – Urgent	68
4 – Semi urgent	69
5 – Non-urgent	88

^a Data are derived from teaching hospitals' emergency departments which currently do not operate real time information systems with one exception. For these hospitals, time is estimated when information is logged after the event. The one hospital that has a real time reporting system reports triage category 1 to be 100 per cent seen within the specified time.

Table 4A.42 Cost per non-admitted patient occasion of service, 1996-97 dollars^a

	1994-95	1995-96	1996-97	1997-98
Tertiary hospitals	88	91	98	105
Secondary metropolitan	65	74	84	74
Secondary non-metropolitan	63	69	76	84
All hospitals	78	83	90	96

^a Actual average cost per occasion of service used equals total operating cost of service multiplied by OFRAC divided by the number of occasions of service. (OFRAC is the 1995-96 non-admitted patient expenditure fraction.)

Source: Health Department of WA (1999).

South Australia

Table 4A.43 Quality of care indicators, all hospitals, 1998

	<i>Per cent^a</i>
Hospital-acquired infection rates	
Post-operative wound (clean) ^b	2.0 (0.9–4.1)
Post-operative wound (contaminated) ^c	2.1 (1.1–3.9)
Hospital-acquired bacteraemia ^d	0.33 (0.21–0.49)
Emergency re-admission ^e	4.0 (2.9–5.5)

^a The figures in parentheses are 95 per cent confidence intervals. ^b Data from 11 hospitals. ^c Data from 12 hospitals. ^d Data from 14 hospitals. ^e Data from 24 hospitals.

Table 4A.44 Emergency department waiting times to service delivery: share of emergency patients seen within triage benchmarks, 1997-98

<i>Triage category</i>	<i>Per cent</i>
1 – Resuscitation	94.9
2 – Emergency	63.3
3 – Urgent	58.4
4 – Semi urgent	61.1
5 – Non-urgent	92.6

Table 4A.45 Cost per non-admitted patient occasion of service, 1997-98 (dollars)

<i>Hospital type^a</i>	<i>Emergency</i>	<i>Outpatient</i>
Metropolitan teaching	189	124
Metropolitan non-teaching	135	66
Non-metropolitan teaching	na	na
Non-metropolitan non-teaching	76	50

^a Data derived from a sample of 15 hospitals participating in the Coopers and Lybrand outpatient study. Costs includes ancillary services such as radiology, pathology and other diagnostics. **na** Not available.

Table 4A.46 Elective surgery waiting times: patients overdue by specialty, as at 30 June 1998a, b

	Cardio- thoracic	ENT	General	Gynae- cology	Neuro- surgery	Ophthal- mology	Ortho- paedic	Plastic	Urology	Vascu- lar	Other	Total
Category 1												
Patients on the waiting list	no. 8	33	108	47	16	16	37	37	43	14	0	359
Patients overdue	no. 2	11	9	5	2	4	9	3	6	2	0	53
Patients overdue	% 25.0	33.3	8.3	10.6	12.5	25.0	24.3	8.1	14.0	14.3	na	14.8
Category 2												
Patients on the waiting list	no. 107	171	247	153	15	58	180	131	112	12	1	1187
Patients overdue	no. 55	35	14	6	3	2	23	17	3	0	0	158
Patients overdue	% 51.4	20.5	5.7	3.9	20.0	3.4	12.8	13.0	2.7	0.0	0.0	13.3
Category 3												
Patients on the waiting list	no. 30	848	985	452	23	547	2007	718	292	44	2	5948
Patients overdue	no. 4	89	26	6	0	11	159	154	12	2	0	463
Patients overdue	% 13.3	10.5	2.6	1.3	0.0	2.0	7.9	21.4	4.1	4.5	0.0	7.8

a At 30 June. b Percentages based on small numbers are unreliable. na Not available.

Tasmania

Table 4A.47 **Quality of care indicators, all hospitals, 1997-98**

	<i>Per cent</i>
Unplanned re-admission rate	1.00
Hospital-acquired bacteraemia	0.20

Table 4A.48 **Proportion of elective surgery patients waiting longer than desirable 1998, (per cent)^a**

	<i>Category 1</i>	<i>Category 2</i>	<i>Category 3</i>
Proportion overdue	32.7	46.8	34.5

^a At 30 June.

Table 4A.49 **Emergency department waiting times to service delivery: share of emergency patients seen within triage benchmarks, 1997-98^a**

<i>Triage category</i>	<i>Per cent</i>
1 – Resuscitation	94
2 – Emergency	76
3 – Urgent	67
4 – Semi urgent	77
5 – Non-urgent	96

Table 4A.50 **Patient satisfaction: selected results, 1998 (per cent)^a**

<i>Criteria</i>	<i>Excellent</i>	<i>Very good</i>	<i>Good</i>	<i>Fair</i>	<i>Poor</i>	<i>Not applicable</i>
Care treatment and communication						
Considerations of needs	40	39	13	6	2	0
Coordination of care	41	34	15	6	3	1
Ease of getting information	33	38	19	6	3	1
Instructions	37	35	16	5	5	2
Informing family and friends	31	38	18	5	2	6
Staff						
Doctors: skills	41	29	14	5	5	6
Doctors: information and communication	37	30	13	9	7	4
Doctors: coordination	37	26	16	7	5	9
Nurses: skills	52	30	14	3	1	0

(Continued on next page)

Table 4A.50 (Continued)

<i>Criteria</i>	<i>Excellent</i>	<i>Very good</i>	<i>Good</i>	<i>Fair</i>	<i>Poor</i>	<i>Not applicable</i>
Nurses: information and communication	42	32	15	6	2	3
Housekeeping staff	36	37	16	3	2	6
Comfort/Meals						
Privacy	28	34	22	11	2	3
Condition of room	35	37	20	6	1	1
Restful atmosphere	17	32	23	18	9	1
Supplies and furnishings	32	36	21	8	1	2
Quality of food	17	29	27	15	7	5
Overall patient satisfaction that needs were met			<i>Very satisfied</i>	<i>Mostly satisfied</i>	<i>Mildly satisfied</i>	<i>Quite dissatisfied</i>
			65	31	2	2
Patients would recommend hospital to family and friends			<i>Definitely yes</i>	<i>Probably yes</i>	<i>Probably no</i>	<i>Definitely no</i>
			69	24	5	2

^a The survey size was 600 patients among each of the major hospitals. The response rate was 66 per cent.

Australian Capital Territory

Table 4A.51 Quality of care indicators, all hospitals, 1997-98^a

	<i>Per cent</i>
Hospital acquired infection rates ^b	
Post-operative wound (clean)	1.14
Post-operative wound (contaminated)	0.66
Hospital-acquired bacteraemia	0.57
Unplanned re-admissions ^{c, d}	3.42

^a Period is 1 June 1997 to 31 May 1998. ^b Data are for the Canberra Hospital only. The Calvary Hospital commenced reporting to these indicators in 1999-2000 ^c Rate of unplanned re-admissions within 28 days of separation for the same condition. ^d Data are for both the Canberra Hospital and the Calvary Hospital.

Table 4A.52 Emergency department waiting times to service delivery: share of patients seen within triage benchmarks, 1998-99^a

<i>Triage category</i>	<i>Per cent</i>
1 – Resuscitation	100
2 – Emergency	83
3 – Urgent	71
4 – Semi-urgent	63
5 – Non-urgent	81

^a Data for 1 July 1997 to 30 June 1998 are for Calvary Hospital. and data for 1 January to 30 June 1998 are for the Canberra Hospital.

Table 4A.53 Cost per non-admitted occasion of service, 1997-98 (dollars)^a

<i>Hospital type</i>	<i>Emergency</i>	<i>Outpatient</i>
Metropolitan teaching	143.6	62.8

^a Data relate to the Canberra Hospital and the Calvary Hospital and are based on the funding provided to hospitals in 1997-98 for non-admitted patient services.

Table 4A.54 Patients overdue for elective surgery by speciality^a

	Unit	Cardio-thoracic	ENT	General	Gynaecology	Neurosurgery	Ophthalmology	Orthopaedic	Plastic	Urology	Vascular	Other	Total
Category 1													
Patients on the waiting list	no.	3	7	24	15	0	0	17	10	24	9	0	109
Patients overdue	no.	0	2	3	5	0	0	9	3	16	0	0	38
Patients overdue	%	0.0	28.6	12.5	33.3	0.0	0.0	52.9	30.0	66.7	0.0	0.0	34.9
Category 2													
Patients on the waiting list	no.	14	90	335	322	75	16	511	84	194	18	1	1 660
Patients overdue	no.	7	3	151	97	29	3	288	38	119	7	0	742
Patients overdue	%	50.0	3.3	45.1	30.1	38.7	18.8	56.4	45.2	61.3	38.9	0.0	44.7
Category 3													
Patients on the waiting list	no.	23	497	372	375	7	336	262	178	170	157	0	2 378
Patients overdue	no.	0	29	148	35	1	8	92	82	87	60	0	542
Patients overdue	%	0.0	5.8	39.8	9.3	14.3	2.4	35.0	46.1	51.2	38.2	0.0	22.8

^a At 30 June 1998.

Northern Territory

Table 4A.55 Quality of care indicators, 1997-98^{a, b}

	<i>per cent</i>
Emergency re-admission rate	6.30
Hospital-acquired infection rates	
Post-operative wound (clean)	3.11
Post-operative wound (contaminated)	7.78
Hospital-acquired bacteraemia	0.53

^a Data relates to Royal Darwin Hospital, Alice Springs Hospital, Gove District Hospital, Tennant Creek Hospital and Katherine Hospital. ^b Data are representative of the total number of patients who are re-admitted to hospital within 28 days.

Table 4A.56 Patients overdue for elective surgery by specialty^a

	<i>Unit</i>	<i>General</i>	<i>Gynae- cology</i>	<i>Ophthal- mology</i>	<i>Ortho- paedic</i>	<i>Plastic</i>	<i>Urol- ogy</i>	<i>Otolary- gology</i>	<i>Other</i>
<i>Category 1^b</i>									
Patients on the waiting list	no.	22	39	2	14	0	1	6	4
Patients overdue	no.	7	12	2	9	0	1	2	0
Patients overdue	%	32	32	100	64	0	100	33	0
<i>Category 2^{c, d}</i>									
Patients on the waiting list	no.	130	69	12	58	6	1	54	0
Patients overdue	no.	34	15	4	27	5	1	28	0
Patients overdue	%	26	22	33	47	83	100	52	0
<i>Category 3</i>									
Patients on the waiting list	no.	280	87	104	114	8	14	224	38
Patients overdue	no.	30	10	11	21	4	1	26	15
Patients overdue	%	11	12	11	18	50	7	12	40

^a At 30 June 1998. Data cover 100 per cent of elective surgery admissions. ^b Very early admission is desirable for a condition that has the potential to deteriorate quickly, to the point that it may become an emergency. Admission within 30 days is desirable. ^c Admission within 90 days is acceptable for a condition which is causing some pain, dysfunction or disability but which is not likely to deteriorate or become an emergency. ^d For patients reassigned from category 1 to category 2, the total time waited relates to the time waiting as a category 2 patient only.

4A.3 All jurisdictions' data — health preface

Table 4A.57 **Total health services expenditure, current prices, by source of funds (\$ million)**

	<i>Commonwealth Government^a</i>	<i>State and local governments</i>	<i>Total government</i>	<i>Non-government^a</i>	<i>Total expenditure</i>
1989-90	12 164	7 513	19 677	9 122	28 800
1990-91	13 200	7 958	21 158	10 112	31 270
1991-92	14 167	8 138	22 305	10 783	33 087
1992-93	15 291 ^c	8 202	23 494	11 499	34 993
1993-94	16 683 ^c	7 868	24 550	12 237	36 787
1994-95	17 551	8 460	26 010	12 957	38 967
1995-96	19 033	9 260	28 293	13 490	41 783
1996-97	19 818	9 959	29 777	14 503	44 279
1997-98 ^b	21 488	11 159	32 647	14 620	47 267

^a Expenditure by the Commonwealth Government and the non-government sector has been adjusted for tax expenditures. ^b Based on preliminary Australian Institute of Health and Welfare and Australian Bureau of Statistics estimates. ^c Data obtained by verbal communication with AIHW.

Source: AIHW (1999d).

Table 4A.58 **Government and non-government share of total health services expenditure (per cent)**

	<i>Commonwealth Government^a</i>	<i>State and local governments</i>	<i>Total government</i>	<i>Non-government^a</i>	<i>Total expenditure</i>
1989-90	42.2	26.1	68.3	31.7	100.0
1990-91	42.2	25.5	67.7	32.3	100.0
1991-92	42.8	24.6	67.4	32.6	100.0
1992-93	43.7	23.4	67.1	32.9	100.0
1993-94	45.3	21.4	66.7	33.3	100.0
1994-95	45.0	21.7	66.7	33.3	100.0
1995-96	45.6	22.2	67.7	32.3	100.0
1996-97	44.8	22.5	67.2	32.8	100.0
1997-98 ^b	45.5	23.6	69.1	30.9	100.0

^a Expenditure by the Commonwealth Government and the non-government sector has been adjusted for tax expenditures. ^b Based on preliminary Australian Institute of Health and Welfare and Australian Bureau of Statistics estimates.

Source: AIHW (1999d).

Table 4A.59 Total health services recurrent expenditure, 1996-97 (\$ million)

	<i>Commonwealth Government</i>	<i>Other governments</i>	<i>Private</i>	<i>Total</i>
Public hospitals	5 379	5 541	1 053	11 973
Medical services	6 713	0	1 485	8 198
Pharmaceutical services	2 718	11	2 327	5 056
Private hospitals	354	0	3 139	3 493
Nursing homes	2 298	156	695	3 149
Dental services ^a	97	297	2 157	2 551
Other professional services	203	0	1 204	1 407
Public and community health ^a	728	1 365	4	2 097
Other	1 108	961	1 603	3 672
Total	19 598	8 331	13 667	41 596

^a Includes expenditure that was previously classified as 'other non-institutional' as well as expenditure on community and public health services.

Source: AIHW (1999b).

Table 4A.60 Government recurrent health expenditure by area of expenditure (\$ million)^a

	<i>Recognised public hospitals</i>	<i>Medicare Benefits Schedule</i>	<i>Pharmaceutical Benefits Scheme</i>	<i>Other health expenditure</i>	<i>Total health expenditure</i>
1989-90	7 323	3 934	1 266	5 752	18 275
1990-91	7 777	4 384	1 247	6 189	19 597
1991-92	8 205	4 781	1 319	6 521	20 826
1992-93	8 432	5 241	1 601	6 666	21 940
1993-94	8 590	5 700	1 888	6 757	22 935
1994-95	9 682 ^b	6 086	2 086	6 574	24 428
1995-96	10 105	6 497	2 515	7 481	26 598
1996-97	10 920	6 713	2 729	7 567	27 929

^a At current prices. ^b Revisions have been made to estimates of recurrent health expenditure in *Health Expenditure Bulletin* no. 15.

Source: AIHW (1999b).

Table 4A.61 Government recurrent health expenditure 1996-97 (1996-97 \$ million)^a

	<i>Public hospitals</i>	<i>Medicare Benefits Schedule</i>	<i>Pharmaceutical Benefits Scheme</i>	<i>Other health expenditure</i>	<i>Total health expenditure</i>
1989-90	7 579	4 071	1 310	5 953	18 913
1990-91	8 031	4 527	1 288	6 391	20 236
1991-92	8 321	4 849	1 338	6 613	21 121
1992-93	8 523	5 297	1 618	6 738	22 176

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Table 4A.61 (Continued)

	<i>Public hospitals</i>	<i>Medicare Benefits Schedule</i>	<i>Pharmaceutical Benefits Scheme</i>	<i>Other health expenditure</i>	<i>Total health expenditure</i>
1993-94	8 663	5 748	1 904	6 814	23 130
1994-95	9 917	6 234	2 137	6 733	25 020
1995-96	10 230	6 577	2 546	7 573	26 926
1996-97	10 920	6 713	2 729	7 567	27 929

^a Deflated using GDP(E) deflators.

Source: AIHW (1999b).

Table 4A.62 **Government recurrent health expenditure per person (1996-97 dollars)^a**

	<i>Public hospitals</i>	<i>Medicare Benefits Schedule</i>	<i>Pharmaceutical Benefits Scheme</i>	<i>Other health expenditure</i>	<i>Total health expenditure</i>
1989-90	443.6	238.3	76.7	348.4	1107.0
1990-91	463.2	261.1	74.3	368.6	1167.3
1991-92	475.6	277.2	76.5	378.0	1207.3
1992-93	482.4	299.8	91.6	381.4	1255.2
1993-94	485.2	322.0	106.6	381.7	1295.5
1994-95	548.7	344.9	118.2	372.6	1384.5
1995-96	558.7	359.2	139.0	413.6	1470.5
1996-97	589.5	362.4	147.3	408.5	1507.7

^a Deflated using GDP(E) deflators.

Sources: table 4A.65, ABS, *Estimated Resident Population by Age* (cat. no. 3201.0); AIHW (1998b).

Table 4A.63 **Health status**

	1990	1991	1992	1993	1994	1995	1996	1997
Life expectancy (years)								
Males	73.9	74.4	74.5	75.0	75.0	75.0	75.2	75.6
Females	80.1	80.4	80.4	80.9	80.9	80.8	81.1	81.3
Mortality								
Total no. of deaths ('000)	120.1	119.1	123.7	121.6	126.7	125.1	128.7	129.4
Standardised death rate (per 1000 population)	7.2	6.9	6.9	6.6	6.7	6.5	6.4	6.2
Infant mortality rate (per 1000 live births)	8.2	7.1	7.0	6.1	5.9	5.7	5.8	5.3

Source: ABS, *Social Trends 1999* (cat. no. 4102.0).

Table 4A.64 Average life expectancy at birth (years)

	1901–10	1920–22	194–48	1960–62	1980–82	1994–96
Males	55.2	59.2	66.1	67.9	71.2	75.2
Females	58.8	63.3	70.6	74.2	78.3	81.1

Source: SCRCSSP (1999a).

Table 4A.65 Average life expectancy at birth, by jurisdiction (years)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
1996									
Males	75.0	75.6	75.1	75.4	75.3	74.1	76.6	69.2	75.2
Females	80.9	81.2	80.9	81.3	81.3	80.0	81.6	75.0	81.1
1997									
Males	75.4	75.8	75.4	75.7	75.7	74.8	77.1	70.0	75.6
Females	81.2	81.4	81.3	81.6	81.5	80.1	81.3	74.7	81.3

Sources: ABS, *Social Trends 1999* (cat. no. 4102.0); SCRCSSP (1999a).

Table 4A.66 Infant mortality rate (per 1000 live births)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
1991	7.2	6.5	7.6	7.2	5.5	9.0	7.6	14.2	7.1
1992	7.4	5.6	7.9	7.0	6.1	6.6	6.3	15.5	7.0
1993	6.2	5.4	7.0	5.9	5.2	5.9	4.3	15.3	6.1
1994	6.1	5.3	6.3	5.5	5.1	6.7	5.4	10.2	5.9
1995	5.5	5.1	6.4	5.1	6.1	5.5	5.9	11.7	5.7
1996	5.6	5.1	6.4	6.2	5.1	4.5	6.2	12.4	5.7
1997	5.2	4.9	5.8	5.3	4.7	6.5	3.8	12.5	5.3

Sources: ABS, *Social Trends 1999* (cat. no. 4102.0); AIHW (1998b).

Table 4A.67 Persons reporting a recent illness, 1995 (million)^{a, b}

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Persons reporting a recent illness	4.15	2.99	2.34	1.27	1.06	0.33	0.22	0.09	12.49
Persons reporting no recent illness	1.96	1.51	0.92	0.46	0.41	0.14	0.08	0.05	5.56
Total persons	6.12	4.50	3.27	1.73	1.47	0.47	0.30	0.14	18.06

^a Illness refers to a medical condition experienced in the two weeks before interview. It may include long term conditions experienced in the period. ^b Data are standardised for age and sex differences across jurisdictions. ^c Estimates relate to predominantly urban areas only.

Source: ABS, *National Health Survey: Summary of Results Australia* (cat. no. 4364.0).

**Table 4A.68 Causes of death: age-standardised death rates, 1997
(per 100 000 population)**

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
Selected cancers									
Male lung cancer	51	53	54	51	52	56	30	61	52
Female lung cancer	18	20	20	20	18	23	22	41	19
Female breast cancer	24	27	22	24	24	19	25	20	24
Prostate cancer	30	31	29	27	28	34	18	33	29
Skin cancer	7	5	7	6	5	4	6	1	6
Heart disease, stroke and diabetes									
Male ischaemic heart disease	184	175	195	162	185	198	182	194	182
Female ischaemic heart disease	106	98	106	85	98	101	80	134	101
Diabetes mellitus	9	18	14	15	15	14	13	37	14
Stroke	59	52	56	52	57	62	63	96	56
Accidents and suicide									
Motor vehicle traffic accidents ^c	9	10	12	12	10	7	6	25	10
Male 15 – 24 years ^b	24	28	35	38	26	**	**	**	29
Female 15 – 24 years ^b	9	8	17	12	10	**	**	**	10
Suicide ^a	15	14	16	14	13	11	13	22	15
Male 15–24 years ^b	31	30	37	25	29	**	**	**	31
Female 15–24 years ^b	7	5	9	7	7	**	**	**	7
AIDS related	2	2	1	1	1	**	**	2	2

^a Morbidity and disability estimates for NT relate to mainly urban areas only. ^b Data for Tasmania, the NT and the ACT are not available because numbers are too low for reliable estimates. ** Data suppressed as a result of unacceptably high sampling variability.

Source: ABS, *Social Trends 1999* (cat. no. 4102.0).

4A.4 Definitions

Table 4A.69 Terms

<i>Term</i>	<i>Definition</i>
Aboriginal concept of health	'Not just the physical well being of an individual, but ... the social, emotional and cultural well being of the whole community in which each individual is able to achieve their full potential as a human being thereby bringing about the total well being of their community. It is a whole of life view and includes the cyclical concept of life-death-life'. (NACCHO 1997).
Aboriginal concept of community control	'A process which allows the local Aboriginal community to be involved in its affairs in accordance with whatever protocols or procedures are determined by the Community'. (NACCHO 1997)
Accessibility index	A measure of the equity to hospital access, primarily for Indigenous people

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Table 4A.69 (Continued)

<i>Term</i>	<i>Definition</i>
Acute care episode	Involves clinical services provided to patients, including performing surgery, relieving symptoms and/or reducing the severity of illness or injury, and performing diagnostic and therapeutic procedures. Most episodes involve a relatively short stay in hospital, although acute care services may also be provided to non-admitted patients.
Acute care hospital	A hospital that provides at least minimum medical, surgical or obstetric services for admitted patient treatment and/or care, and around-the-clock, comprehensive, qualified nursing services as well as other necessary professional services
Admission	The process by which an admitted patient commences an episode of care
Ambulatory services	Services provided by an acute care hospital to non-admitted patients
Average length of stay	Equal to the arithmetic mean of the length of stay for all patient episodes. Estimated by dividing total occupied bed days by total episodes.
Bulk billed services	Unreferred attendances for which the medical practitioner billed the Commonwealth Government directly
Case mix adjustment	Adjustment of data on cases treated to account for the number and type of cases. Cases are sorted into diagnosis related groups which represent a class of patients with similar clinical conditions requiring similar hospital services.
Case weight	The relative costliness of a particular AN-DRG, determined so that the average case weight for all AN-DRGs is 1.00
Co-morbidity	The simultaneous occurrence of two or more diseases or health problems
Community health services	Health services for individuals and groups delivered in a community setting, rather than via hospitals or private facilities
Emergency department waiting times to service delivery	The time elapsed for each patient from presentation to the emergency department to commencement of service by a treating medical officer or nurse (National Health Data Dictionary Version 8)
Emergency department waiting times to admission	The time elapsed for each patient from presentation to the emergency department to admission to hospital (National Health Data Dictionary Version 8)
General practice	A medical practice that offers primary, continuing, comprehensive whole-person care for individuals, families and the community
Inpatient fraction (IFRAC)	The ratio of inpatient costs to total hospital costs
Length of stay	The period from admission to separation less any days spent away from the hospital (leave days)
Medicare	A program funded by the Commonwealth Government that provides subsidies for prescribed medicines, private medical and optometrical services. It also provides grants to State and Territory governments which contribute to the costs of providing access to public acute care hospitals and other health services.
Non-acute episode of care	Involves clinical services provided to admitted and non-admitted patients, including planned geriatric respite, palliative care, geriatric evaluation and management and services for nursing home type patients. Clinical services delivery by designated psychiatric or psychogeriatric units, designated rehabilitation units, and mothercraft and dental services are also considered non-acute.

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Table 4A.69 (Continued)

<i>Term</i>	<i>Definition</i>
Non-admitted patient occasion of service	Occurs when a patient attends a unit of a hospital to receive an examination, consultation, treatment or other service but is not admitted
Opportunity cost	Opportunity cost is the return forgone on the next best investment. Calculated as 8 per cent of depreciated replacement value of buildings, equipment and land.
Overdue patient	One whose wait has exceeded the time that has been determined as clinically desirable in relation to the urgency category to which they have been assigned
Primary care	Essential health care based on practical, scientifically sound and socially acceptable methods made universally accessible to individuals and families in the community
Private patient medical costs (estimated)	The sum of salary/sessional and Visiting Medical Officer (VMO) payments divided by the number of public patient days multiplied by the number of private patient days
Public hospital	A hospital that provides free treatment and accommodation to eligible admitted persons who elect to be treated as public patients. It also provides free services to non-admitted patients and may provide (and charge for) treatment and accommodation services to private patients.
Real expenditure	Actual expenditure adjusted for changes in prices, using the GDP(E) price deflator and expressed in terms of final year prices
Same day patients	A patient whose admission date is the same as the separation date
Sentinel procedures	Procedures that are the most common surgical operations, during a given period of time, provided by acute care hospitals
Separation	The discharge, transfer or death of a patient admitted to hospital
Triage category	The urgency of the patient's need for medical and nursing care Category 1 — resuscitation: immediate (within seconds). Category 2 — emergency: within 10 minutes. Category 3 — urgent: within 30 minutes. Category 4 — semi-urgent: within 60 minutes. Category 5 — non-urgent patients: within 120 minutes.
Unplanned re-admission	An unplanned re-admission occurs when a patient is re-admitted through the accident and emergency department of a hospital
Unreferred attendances	GP services, emergency attendances after hours, other prolonged attendances, group therapy and acupuncture
Urgency category for elective surgery	Category 1 patients — admission within 30 days is desirable for a condition that has the potential to deteriorate quickly to the point that it may become an emergency. Category 2 patients — admission desirable within 90 days for a condition causing some pain, dysfunction or disability but which is not likely to deteriorate quickly or become an emergency. Category 3 patients — admission at sometime in the future acceptable for a condition causing minimal or no pain, dysfunction or disability, which is unlikely to deteriorate quickly and which does not have the potential to become an emergency.

Table 4A.70 Indicators

<i>Indicator</i>	<i>Definition</i>
Average length of stay	The average of the lengths of stay for a group of admitted patients in a hospital or group of hospitals
Condition of capital	Ratio of depreciated replacement value to total replacement value
Cost per case mix adjusted separation	[Recurrent expenditure * inpatient fraction/total number of case mix adjusted separations] + estimated private patient medical costs
Cost per non-admitted occasion of service	Recurrent expenditure * (1–inpatient fraction)/total number of non-admitted occasions of service
Emergency department waiting times to service delivery	The time elapsed for each patient from presentation to the emergency department to commencement of service by a treating medical officer or nurse (National Health Data Dictionary Version 8)
Mortality rate	The number of deaths per 100 000 people
Labour cost per case mix adjusted separations	[(Salary and wages)*(inpatient fraction) + visiting medical officer payments]/total number of case mix adjusted separations
Percentage of facilities accredited with the Australian Council on Healthcare Standards	The ratio of accredited beds to all hospital beds in the jurisdiction
Rate of unplanned hospital re-admissions within 28 days of separation	The total number of unplanned re-admissions for the same condition within 28 days of discharge, during the time period under study, divided by the total number of separations for the same time period
Rate of hospital-acquired bacteraemia	Number of separated patients who acquired bacteraemia during a hospital stay/number of separations with a length of stay equal to or greater than two days
Rate of post-operative wound infection	Number of patients who had evidence of wound infection on or after the fifth post-operative day following clean (contaminated) surgery/ number of patients who underwent clean (contaminated) surgery with a post-operative length of stay equal to or greater than five days
Separations per 1000 population	The rates of hospital separations per 1000 population
Waiting times for elective surgery	The time elapsed for a patient on the elective surgery waiting list, from the date they were added to the waiting list, for a procedure to a designated census date
User cost of capital per case mix adjusted separation	(Depreciation + opportunity cost)/case mix adjusted separations
Waiting times for elective surgery	The time elapsed for a patient on the elective surgery waiting list from the date they were added to the waiting list, for a procedure to a designated census date

5 General practice

General practice plays a major role in the delivery of health services, and it is an essential part of endeavours to improve health outcomes in the wider health care system in Australia. General practitioners (GPs) are at the interface of primary health care and other parts of the health system.¹

Descriptive information about services that are provided in general practice is contained in section 5.1. Policy developments in general practice are discussed in section 5.2, a framework of performance indicators is presented in section 5.3, and key results are discussed in section 5.4. Future directions for reporting are covered in section 5.5. The chapter concludes with jurisdiction comments.

General practice is now discussed in this chapter (whereas last year it was included in a broader health delivery mechanisms chapter). Improvements in data collection have enabled new data on appropriateness, quality, access and equity and unit cost to be reported for the first time in the general practice framework. Two new performance indicators have been added to the framework: ‘notification of selected childhood diseases’ under outcomes, and ‘the proportion of practices registered for accreditation’ under quality.

5.1 Profile of general practice

General practice is an integral part of the Australian health system. For most Australians, general practice is the first point of contact with the health care system. GPs are central to patient management for the health care system, through their care of individual patients, referrals to consultants, allied health professionals and community health services, and referrals for hospital admission. They fulfil a broad range of medical functions, such as diagnosing and treating illness (both chronic and acute) and providing care from preventative through to palliative. GPs play a central role in managing the care of their patients by providing continuity of care and acting as a gatekeeper for other health care services (DHFS 1996). They may also be involved in teaching and research.

¹ Some data sources use the term nonspecialist medical practitioners instead of GPs.

The pivotal role of GPs in providing continuity of care of patients with chronic conditions has been recently highlighted in the Interim National Evaluation Summary of the Australian Coordinated Care Trial (DHAC 1999f). Some common terms relating to general practice are defined in box 5.1.

Box 5.1 Some common health terms

Consultations: the different types of services provided by GPs (also called encounters).

Divisions of general practice: local networks of GPs operating within a defined geographic area.

Full time workload equivalent: a method for calculating the number of medical practitioners based on the number of claims processed by Medicare in a given period.

General practice: the organisational structure in which one or more GPs provide and supervise health care for a 'population' of patients. This definition includes medical practitioners who work with one specific population such as women's health and Indigenous health.

General practitioner: a doctor who provides primary, continuing, comprehensive whole-person care for individuals, families and the community. For the purpose of this report, all non-specialist medical practitioners are included under this definition.

Primary care: essential health care based on practical, scientifically sound and socially acceptable methods made universally accessible to individuals and families in the community.

Problems managed: the descriptions of any disease, complaint or ill-defined condition managed by the GP at a consultation or encounter.

Reasons for consultation: the expressed demand of the patient for care as perceived and recorded by the GP.

Recognised general practitioner: a vocationally registered GP, a Fellow of the Royal Australian College of General Practitioners or equivalent, or a GP registrar in a training placement.

Unreferred attendances: GP services, emergency attendances after hours, other prolonged attendances, group therapy and acupuncture. All attendances for specialist services are excluded as these must be 'referred' to receive Medicare reimbursement.

Vocational registration: a formal training program that promotes quality in general practice. Vocationally registered GPs are registered separately from other nonspecialist practitioners for Medicare purposes, and receive higher Medicare benefits for services.

Source: (DHFS 1996).

The services provided by GPs comprise the largest source of primary health care in Australia. Primary health care generally refers to non-institutional health care

services. It is often the first point of contact for people seeking health advice, assistance with a health problem and/or support for living with chronic illness or disability. Other examples of primary health care include:

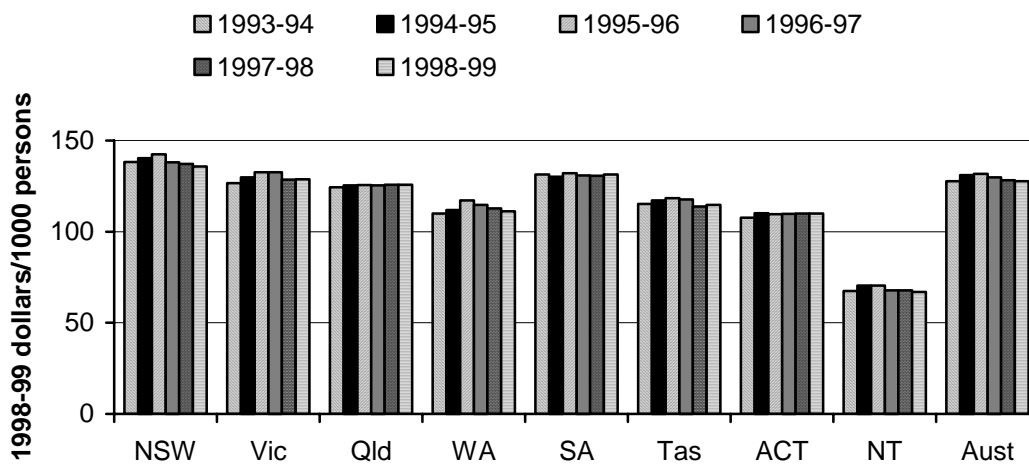
- services provided by pharmacists in community pharmacies;
- services provided by community health centres;
- services provided by alternative/complementary health practitioners;
- therapy and treatment services such as counselling, allied health services and community nursing in non-institutional settings or in the home; and
- preventative strategies such as health promotion, early identification, early prevention and information services delivered by a range of service providers.

Most GPs are private practitioners whose services are largely funded by the Commonwealth Government through the Medicare Benefits Schedule. The volume and mix of patient services determines the total cost of GP services funded under Medicare.

State and Territory governments also provide limited funding for GP health care services (for example, doctors are employed to provide visiting medical and other primary health care services in rural and remote areas). State and Territory governments are also responsible for registering and licensing GPs in their jurisdiction. For example, the Tasmanian Government has formed partnerships with some rural local governments to provide incentive payments to attract GPs, recruited through River Medical Service, to rural areas. A recently agreed Rural Doctors Agreement also provides payments to GPs for community primary care services, travel costs to distant localities, ongoing education and for professional development.

Consulting a GP was the second most common health related action of Australians in 1995, after use of medications (ABS 1997). In 1998-99, people consulted a general practitioner on average 5.4 times per head of population (DHAC 1999d). The cost to the Commonwealth Government for all unreferral attendances or consultations to GPs was approximately \$2.4 billion in 1998-99. This equated to expenditure of \$128 per 1000 population in 1998-99, compared to \$128 in 1993-94 and \$132 in 1995-96 (figure 5.1). Approximately 79 per cent of all unreferral attendances provided by GPs in 1998-99 were bulk billed. Patients who are privately billed may pay a co-payment, depending on whether the GP charges more than the Medicare Benefits Schedule rebate. Unreferral attendances accounted for 35.9 per cent of all medical services funded under Medicare (DHAC 1999d).

Figure 5.1 Commonwealth Government real expenditure on unreferral consultations



Source: table 5A.29.

The total number of GPs billing Medicare in Australia has steadily increased since the introduction of Medicare in 1984, from 16 948 to 24 176 in 1998-99 (DHAC 1999a). The average annual growth rate since 1984-85 has been 2.6 per cent. The total number of full time workload equivalent, GPs increased by 2178 throughout Australia between 1991-92 and 1998-99. This represented an average annual growth rate of 2.1 per cent.

Australia has limited data collections on the activities of GPs. Medicare statistics have been the sole source of routinely collected national data. The deficiency in national health information on general practice was highlighted in the 1995 National Health Information Development Plan, which identified the need to develop and collect standardised information on primary and other non-institutional health care encounters (*Britt et al.*). In response, the Australian Institute of Health and Welfare and the University of Sydney cooperated on the Bettering the Evaluation and Care of Health (BEACH) study (box 5.2).

Data from the first summary report, covering the period April 1998 to March 1999, indicate that the most common reasons patients gave for visiting a GP were to obtain a prescription (8.2 per 100 consultations), receive treatment for coughs (6.2 per 100 consultations) or to receive a cardiac check-up (5.2 per 100 consultations) (table 5A.8). The main problems managed were hypertension (8.3 per 100 consultations), upper respiratory tract infection (6.8 per 100 consultations) and immunisation (5.2 per 100 consultations) (table 5.1).

Box 5.2 Bettering the evaluation and care of health: the BEACH study of GP activity

The BEACH study began in April 1998 and the first summary report was released in October 1999. The study will provide a continuing source of data to describe GP activity and inform improvements in primary health care service provision.

The BEACH program has three primary aims:

- to provide reliable and valid data about GP–patient encounters;
- to establish an ongoing database for GP–patient encounter information; and
- to assess patient risk factors and health states and their effect on health service activity.

A random sample of 1000 recognised GPs from across Australia was selected. Each provided information on 100 consecutive encounters or consultations. Data were collected on GP characteristics, patient characteristics, patient reasons for the encounter, and problems managed. Data were also collected on whether the problem was work related, what management action was taken (such as drugs prescribed, counselling, referral to a specialist and admission to a hospital), and population risk factors (such as smoking status, alcohol consumption and exercise level).

Source: Britt et al. (1999).

Table 5.1 Top 10 health problems managed by GPs, April 1998 to March 1999

<i>Problem^a</i>	<i>Number</i>	<i>% of total problems</i>	<i>Rate per 100 encounters^b</i>
Hypertension*	8 042	5.71	8.30
Upper respiratory infection, acute	6 623	4.70	6.83
Immunisation, all*	5 025	3.57	5.19
Depression*	3 367	2.39	3.47
Acute bronchitis/bronchiolitis	3 185	2.26	3.29
Asthma	3 079	2.19	3.18
Back complaint*	2 816	2.00	2.91
Diabetes – unspecified*	2 473	1.76	2.55
Lipid disorder	2 393	1.70	2.47
Osteoarthritis*	2 118	1.50	2.19

^a Problem is classified along individual International Classification of Primary Care (ICPC) unless denoted by an *, which indicates a grouping of multiple individual ICPC problems under a broader heading. ^b More than one problem can be managed per encounter or consultation.

Source: table 5A.10.

5.2 Policy developments in general practice

There have been a number of initiatives by the Commonwealth and State and Territory governments to improve the effectiveness of service delivery in general practice. Consistent with international developments, the Commonwealth Government and the Royal Australian College of General Practitioners sought to define, measure and improve general practice with the introduction of vocational registration in 1989. The basic goal of vocational registration was to raise the standards of care in general practice, and to establish general practice as a speciality in its own right. The following strategies were employed:

- registration of GPs for Medicare purposes separately from other nonspecialist practitioners;
- provision of higher Medicare benefits for services provided by vocationally registered GPs;
- restriction of new registrations to GPs with formal qualifications; and
- mandatory and ongoing participation in quality assurance and continuing education to maintain registration.

The General Practice Strategy was developed jointly by the Australian Medical Association, the Royal Australian College of General Practitioners (RACGP) and the Commonwealth Government in 1991. It provided a framework which sought to enable general practice to improve the quality of care for patients. Among the initiatives of the strategy was the establishment of the Divisions and Project Grants Program. The main aim of this program was to improve health outcomes for patients by encouraging GPs to work more closely together, and to establish links with other health professionals to improve the quality of health service delivery at the local level. As part of the Divisions and Projects Grants Program, Divisions of General Practice were established in 1992-93. These divisions are local networks of GPs operating within a defined geographic area. In 1999, 123 divisions were established throughout Australia, each serving a median population of 160 000 (a range of 40 000 to 490 000) per division.

The Rural Incentives Program is another initiative which was initially funded by the Commonwealth Government under the General Practice Strategy. The aim of the program is to encourage the recruitment and relocation of GPs to rural and remote areas. It consists of a number of components designed to secure short term and long term changes in the rural GP workforce. The Rural Incentives Program is now managed at the State level through Rural Workforce Agencies.

In 1998, the General Practice Strategy Review Group recommended that a Practice Incentive Program replace the Better Practice Program which had been established

in 1994. The aim of the Better Practice Program was to recognise and remunerate those GPs who provide comprehensive, quality care and who were working towards acquiring the Royal Australian College of General Practitioners entry standards for general practice. As part of the Practice Incentives Program, the Commonwealth Department of Health and Aged Care implemented a targeted incentives program in 1998. This program includes the General Practice Immunisation Incentives and the Quality Prescribing Incentive. The former program provides payments to encourage GPs to obtain high immunisation coverage levels for children in their care, and the latter program assists GPs to keep abreast of information on the quality use of medicines. Further targeted incentive programs are being developed.

In November 1999, the Council of the RACGP announced support for a major initiative to tackle the acute shortage of GPs in rural Australia. The Council has commissioned a feasibility study to explore the provision of a further 100 training places for registrars in rural Australia. The proposed new training places would be additional to the current annual 400 places. The feasibility study will address the need to ensure that trainees remain in rural areas for a reasonable number of years. It will also address the issue of lifestyle, which has been a major contributing factor to GPs moving away from rural practice (RACGP 1999).

State and Territory governments have developed different ways of encouraging and incorporating the involvement of GPs in policy and decision making. In 1999, NSW Health released a General Practice Discussion Paper which explored ways in which the State and general practice could work together in a more coherent and integrated manner. The General Practitioner Advisory Committee (GPAC) — a peak body to coordinate and improve consultation between NSW Health and GPs — has broad representation, including rural and urban divisions and academic departments of general practice. It advises on issues relating to NSW health policy or practice that would improve coordination of primary care and other levels of care for the NSW community. GPs are also represented on various policy and practice committees across NSW Health.

In Victoria, a General Practice Unit has been established to improve the links between GPs, divisions of general practice and the Department of Human Services. GP input into State health policy is encouraged, and GP representatives from GP divisions in Victoria are reimbursed for their time in making this contribution. Initiatives are also underway through the Victorian Divisions of General Practice to establish a statewide database of GPs' contact information. It is anticipated that this will improve the transfer of information between hospitals and GPs.

In Queensland, a General Practitioner Advisory Committee (GPAC) was established in 1998 to address similar issues. Membership includes the State and Commonwealth Governments, peak GP organisations, academic departments of

general practice and consumers. The committee is focussing on delivering improved health service delivery by addressing a number of issues. The focus of these issues is on integration, workforce, information management/technology, public health, chronic and complex care, standards training and clinical guidelines.

In Tasmania, the Health Department has established a General Practice Liaison Unit in the Community Health and Rural Division. In the ACT, the Department of Health and Community Care links with general practitioners mainly through the ACT Division of General Practice.

In the NT, a General Practice Forum meets every two months to provide a framework within which GPs and Territory Health Services can jointly address strategic planning and policy issues related to the delivery of health services. Both NT Divisions of General Practice are represented, as well as the Royal Australian College of General Practitioners (RACGP), the NT Remote Workforce Agency and the Australian Medical Association. There are also staff dedicated to GP issues in the Aboriginal and Community Health Policy Division of Territory Health Services. The Royal Darwin Hospital has established a GP liaison position (shared by two local GPs) to facilitate communication between hospital personnel and general practitioners. Important barriers to good practice are being identified, and strategies are being implemented.

5.3 Framework of performance indicators

The framework of performance indicators is based on the shared government objective for general practice, which reflects the primary care role of GPs (box 5.3).

Box 5.3 Governments' objectives for general practice

General practice aims to promote the health of Australians by:

- acting as a main point of entry to the health care system;
 - providing health care which promotes changes in lifestyle behaviour and prevents possible illness;
 - coordinating and integrating health care services on behalf of clients; and
 - providing continuity of care,
- in an equitable and efficient manner.

The performance indicator framework aims to inform analysis of the effectiveness and efficiency of policies targetted at the primary health care services of general

practice (figure 5.2). The framework is based on research conducted in Australia and the United Kingdom to develop performance indicators for primary care aspects of general practice services. The framework will change over time as better indicators are developed and as the focus and objectives for general practice change.

Effectiveness indicators relate to four broad categories: outcomes, appropriateness, quality, and access and equity. The outcome indicators focus on disease prevention — that is, immunisation coverage, notification of selected childhood diseases (which is a new indicator) and cervical cancer screening rates.

The level of immunisation coverage has been included in the framework because GPs see 93 per cent of children in the age group of 0–6 years seven times per year on average (DHAC 1999c). General practitioners are encouraged through the Practice Incentive Program to obtain high immunisation coverage levels. The aim of the program is to ensure that for 90 per cent of GPs, 90 per cent of the children attending their practice are fully immunised (DHAC 1999c). They are in an ideal position to monitor the immunisation status of all children in their care but are not solely responsible, given the varying roles of other providers.

Similarly, the notification rate of selected childhood diseases (measles, whooping cough and *Haemophilus influenzae* type B) has been included because the activities of GPs can influence the level of these diseases. The debilitating effects of these diseases can be long term or even life threatening. The complications from measles, for example, can be very dangerous, and pneumonia occurs in one in 25 cases. Approximately one child in every 2000 who contracts measles will develop inflammation of the brain. More deaths in Australia have been caused by measles in the past 15 years than by diphtheria, whooping cough, tetanus and polio combined (DHAC 1999c). As part of the Immunise Australia Seven Point Plan, Australia has embarked on a strategy to eliminate measles.

The appropriateness indicators focus on four aspects: acute illness management; chronic illness management; gatekeeping to secondary care; and prescription and diagnosis. Acute illness management is measured by standardised hospital separation rates for some short term illnesses for which hospital admission is generally avoidable: severe ear/nose/throat infection, cellulitis, kidney/urinary tract infection and gastroenteritis. Separation rates significantly greater than the average for these illnesses may demonstrate issues of primary care delivery that need to be further explored.

Two indicators measure GP performance in chronic illness management: prescribing rates for mental illness (though benchmark rates have yet to be defined) and standardised hospital separation rates for some chronic illnesses. The prescribing rates for mental illness have been included in the framework because of

concerns over the reliance of GPs on anti-depressants and benzodiazepines in the treatment of mental disorders. Major programs, such as the Pharmaceutical Education Program (Commonwealth Department of Human Services and Health, 1995) are aimed at promoting alternative management approaches to anxiety and depression (RACGP 1999c). The National Health System in the UK also has recommended, as part of the “high level performance indicators” that the “volume of “benzodiazepines” be used as an indicator of effective delivery of services by GPs for mental disorders.

People suffering asthma, diabetes and epilepsy sometimes require hospitalisation for acute episodes of illness, but ongoing management of these chronic conditions is a prime responsibility of GPs. High levels of separations for these conditions may indicate the need for improvement in GP management of these patients, and self management.

Standardised separation rates for conditions often not requiring hospitalisation - for example, myringotomy (insertion of grommets) and tonsillectomy - are indicators of the GP’s role as the gatekeeper to secondary care services. High separation rates for myringotomy and tonsillectomy may indicate inappropriate care by GPs, because conditions requiring these treatments often can be managed at the primary care level. Data on both this indicator is being reported for the first time this year.

Per person benefits paid by the Commonwealth Government for pharmaceuticals, pathology tests and diagnostic imaging, ordered by GPs, are indicators of the appropriateness of prescribing and diagnosis. High levels of benefits for pharmaceuticals may indicate inappropriate prescribing habits and over reliance on this method of treatment by GPs. Similarly, high levels of benefits for pathology tests and diagnostic imaging may also indicate inappropriate use of high technology equipment, used in the care of patients by GPs. Data on both these indicators is being reported for the first time this year.

The quality of general practice services is reflected by the proportion of full time workload equivalent GPs with vocational registration, patient satisfaction and the proportion of practices with electronic information management systems. A new indicator of quality in this year’s report is the proportion of practices that are registered for accreditation.

Vocational registration of GPs has been included as a quality indicator because it establishes the framework within which other quality initiatives have occurred in general practice. It defines general practice as a distinct discipline within medicine, and emphasises the importance of formal training and the development of professional accountability through mandatory improvement (DHFS 1996). Data on this indicator is being reported for the first time this year.

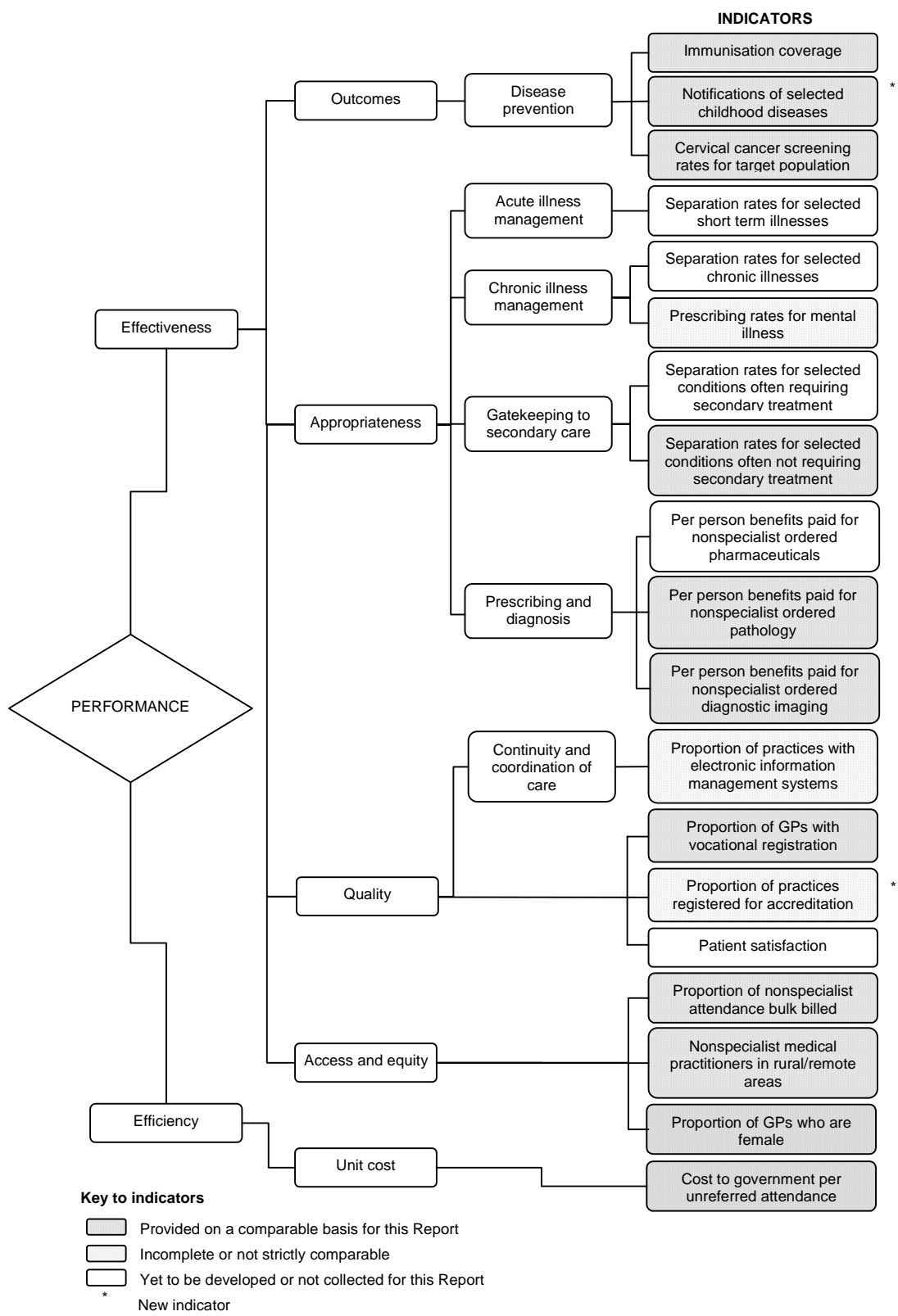
Levels of practice accreditation are also a measure of quality practice. The accreditation of practices has two major components: first, setting acceptable minimum standards for general practice and, second, establishing an effective and objective process for assessing practices against these standards.

The proportion of practices with electronic information management systems is included as a quality indicator because information management/technology is recognised as useful tool for helping GPs maintain the high quality of care provided to patients. The use of clinical software and the interchange of data between GPs and organisations (such as divisions of general practice, pathology laboratories and hospitals) are examples (DHAC 1999e). Electronic information management systems also support current directions and reforms in health care which focus on an integrated and evidence based health system. Under the Practice Incentives Program, a payment is made to those practices where the majority of GPs prescribe electronically, and/or where the practice has either an Internet connection or an email account. Data on this indicator is being reported for the first time this year.

Access and equity are measured by the proportion of nonspecialist attendances that are bulk billed (thereby alleviating any financial barriers to access GPs); the proportion of full time workload equivalent, GPs in rural/remote areas, and the proportion of full time workload equivalent GPs who are female. Data on the latter two indicators is being reported for the first time this year.

The cost to government of unreferral attendances is the only suggested efficiency indicator for GP services at this stage. Data on this indicator is being presented for the first time this year.

Figure 5.2 Performance indicators for general practice



5.4 Key performance indicator results

Different delivery contexts, locations and types of client may affect the effectiveness and efficiency of health services. Appendix A contains detailed statistics and short profiles on each State and Territory, which may assist in interpreting the performance indicators presented in this chapter.

Outcomes

Disease prevention — immunisation

The level of immunisation coverage of children is the first outcome indicator of the performance of GPs in providing primary care. Child immunisation services are delivered by many providers, such as individual GPs and group practices, community health centres, local government councils and hospitals. The Australian Childhood Immunisation Register's estimates of immunisations by individual GPs in 1997-98 range from 84 per cent in Tasmania to slightly less than 1 per cent in the NT. In Queensland, group general practices were the major service providers, with 82 per cent of valid immunisation episodes. Community health centres were the major service provider for the NT (98.5 per cent) (table 5.2).

Table 5.2 **Proportion of valid episodes by immunising provider, 1997-98 (per cent)^a**

<i>Provider type</i>	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
GPs	81.3	45.1	82.1	57.7	67.3	84.1	30.1	0.9	65.7
Public hospital	3.9	0.3	4.3	6.0	6.6	0.1	1.0	1.3	3.1
Private hospital	0.3	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1
Aboriginal health service	0.3	1.3	1.0	0.6	0.3	0.0	0.1	0.8	0.7
Community health centre	7.0	0.6	4.1	24.0	6.8	0.1	0.8	98.5	8.6
Local government	7.2	52.7	9.2	8.3	17.5	15.8	0.0	0.0	19.6
State health department	0.0	0.0	0.2	4.8	0.1	0.0	68.0	0.0	2.1
Flying doctor service	0.0	0.0	0.5	0.00	0.2	0.0	0.0	0.0	0.1

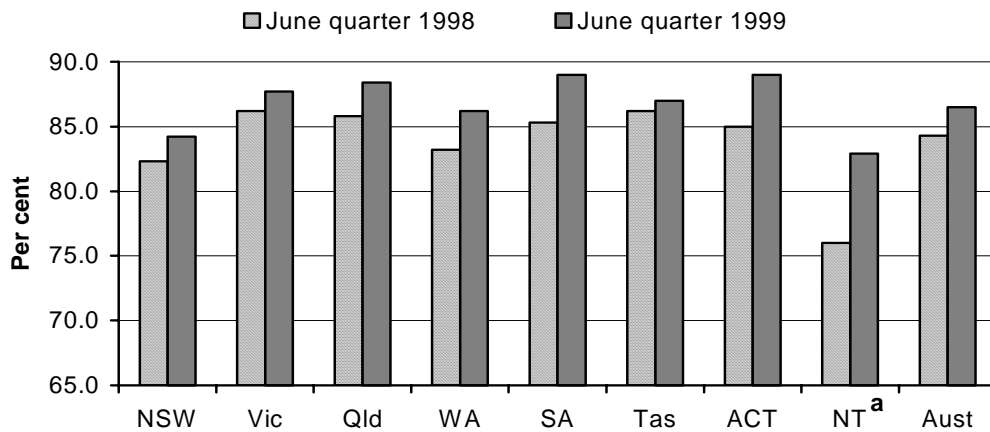
^a A valid episode is a vaccine administered to a child by a recognised immunisation provider. (Generally an encounter includes a number of episodes.)

Source: table 5A.11.

Nearly 87 per cent of Australian children turning 12 months of age in the quarter ending 30 June 1999 were fully immunised against all diseases (diphtheria/tetanus/whooping cough, polio and *Haemophilus influenzae* type b).

Across jurisdictions, the NT recorded the lowest proportion (83 per cent), while SA and the ACT recorded the highest (89 per cent) (figure 5.3).

Figure 5.3 Proportion of children turning 12 months of age who were fully immunised



^a The NT Government data showed that immunisation coverage was 89 per cent in June 1999.

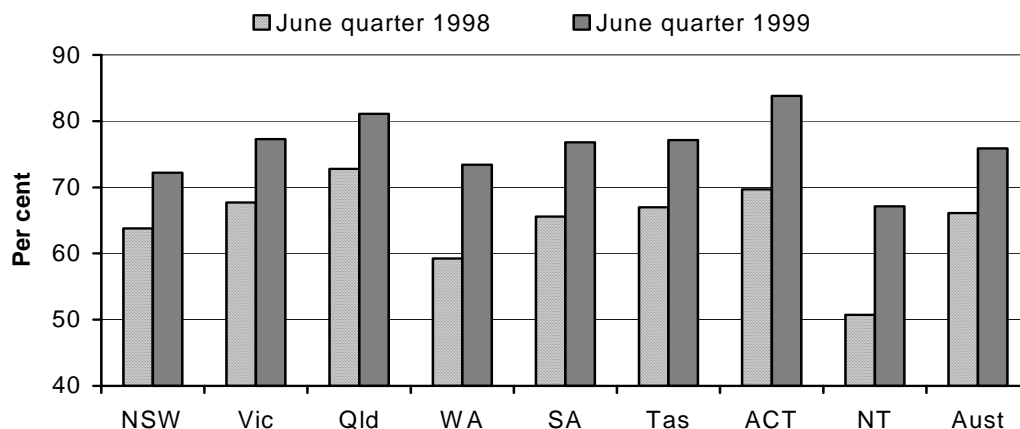
Source: table 5A.12.

Nearly 76 per cent of children turning 24 months of age during the quarter ending 30 June 1999 were assessed as being fully immunised (figure 5.4). Across jurisdictions, the NT recorded the lowest proportion (67 per cent), while the ACT and Queensland recorded the highest (84 per cent and 81 per cent respectively). However, the overall proportions may appear relatively low. This was partly due to poor identification of children on immunisation encounter forms. Fully immunised children in this age group are those who have been vaccinated against diphtheria/tetanus/whooping cough, polio, *Haemophilus influenzae* type b and measles/mumps/rubella.

Disease prevention — notifications of selected childhood diseases

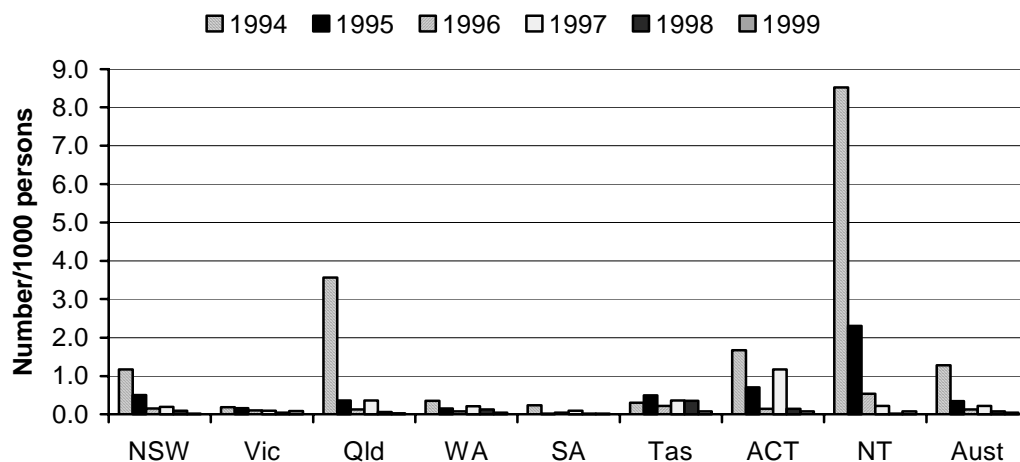
The Immunise Australia Seven Point Plan has resulted in a large fall in the number of notifications of measles. There were nearly 5000 cases of measles in Australia in 1994, but only 166 in 1999, which represents an average annual decrease of 49 per cent. The most severe outbreaks of the disease in 1994 occurred in Queensland (2483 cases) and NSW (1504 cases) which accounted for 51 per cent and 31 per cent of all cases respectively (table 5A.16). Across Australia, the rate per 1000 persons 0 to 14 years of age fell from 1.3 in 1994 to zero in 1999. In Queensland, rate fell from 3.6 in 1994 to zero in 1999. The fall was similar in the NT, from 8.5 in 1994 to 0.1 in 1999 (figure 5.5).

Figure 5.4 Proportion of children turning 24 months of age who were fully immunised



Source: table 5A.13.

Figure 5.5 Notifications of measles, (per 1000 persons) aged 0–14 years



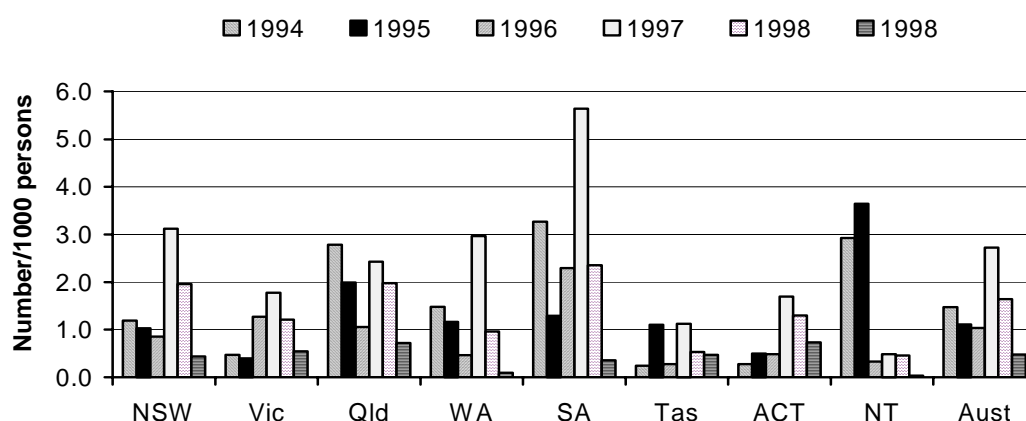
Source: table 5A.16.

From 1994 to 1999 in Australia, the number of notifications of whooping cough (pertussis) decreased at an average annual rate of 19.8 per cent. A severe outbreak of the disease in 1997 represented an increase of 165 per cent from the number of cases reported in 1996. The outbreak was most severe in NSW, which accounted for 38 per cent of all cases (table 5A.14). As a result of the increased incidence of the disease, the then Commonwealth Department of Health and Family Services decided to encourage the immunisation of all children against the disease.

Across Australia, the number of cases per 1000 persons 0 to 14 years of age fell from 1.5 in 1994 to 0.5 in 1999. In SA, it fell from 3.3 in 1994 to 0.4 in 1999. The fall was similar in the NT, from 2.9 in 1994 to zero in 1999 (figure 5.5).

Haemophilus influenzae type b has a similar history from 1994 to 1999. There has been a steady decline in the notification rate for the disease across Australia during that period. From 168 in 1994, the number of cases fell to 24 in 1999. This represents an average annual decrease of 32 per cent (table 5A.15).

Figure 5.6 Notifications of whooping cough, (per 1000 persons) aged 0–14 years



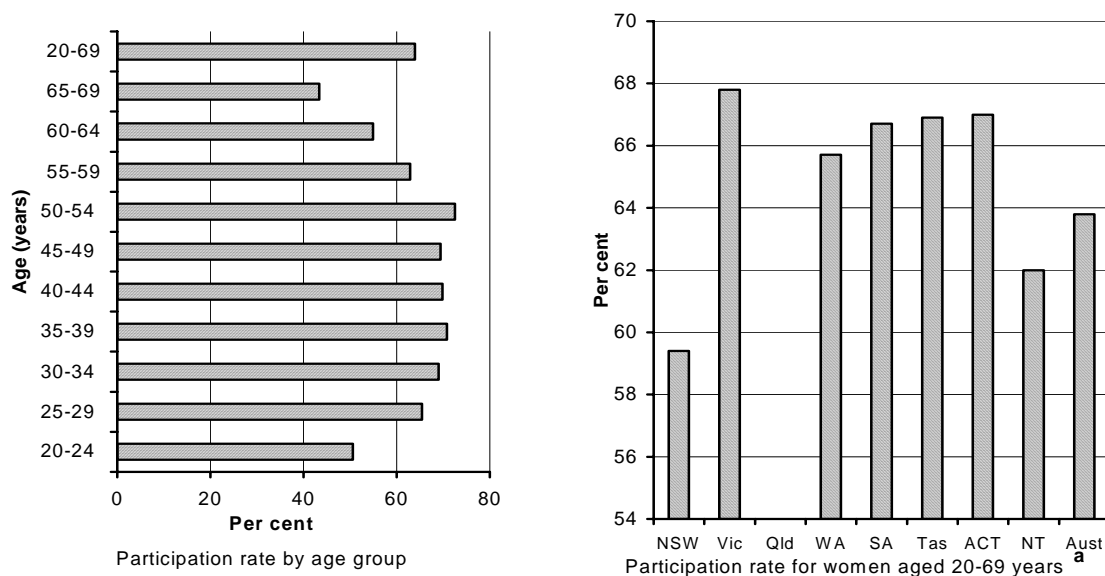
Source: table 5A.14.

Disease prevention — cervical cancer screening

The third outcome indicator for primary care services provided by GPs is the screening rate for cervical cancer. Like child immunisation, cervical cancer screening tests (that is, pap smears) are offered by a range of health care providers: GPs, gynaecologists, family planning clinics and hospital outpatient clinics.

Cervical cancer screening is targeted at women aged 20–69 years. Nationally, around 64 per cent of females in the target group were screened for cervical cancer between January 1997 and December 1998 (figure 5.7). The participation rate was highest for women aged 50–54 years (72.5 per cent) and lowest for women aged 65–69 years (43.4 per cent). Across jurisdictions, the participation rate of women aged 20–69 years was highest in Victoria (67.8 per cent) and lowest in NSW (59.4 per cent).

Figure 5.7 Participation rates of women in cervical cancer screening programs, 1997 and 1998



^a Rates are expressed per 100 000 women and are age standardised to the Australian 1991 population. Queensland Health Pap Smear Register began operations in February 1999; no data is available for this report. The ACT register contains only women with an ACT address.

Source: 5A.17

Appropriateness

Chronic illness management — prescribing rates for mental illness

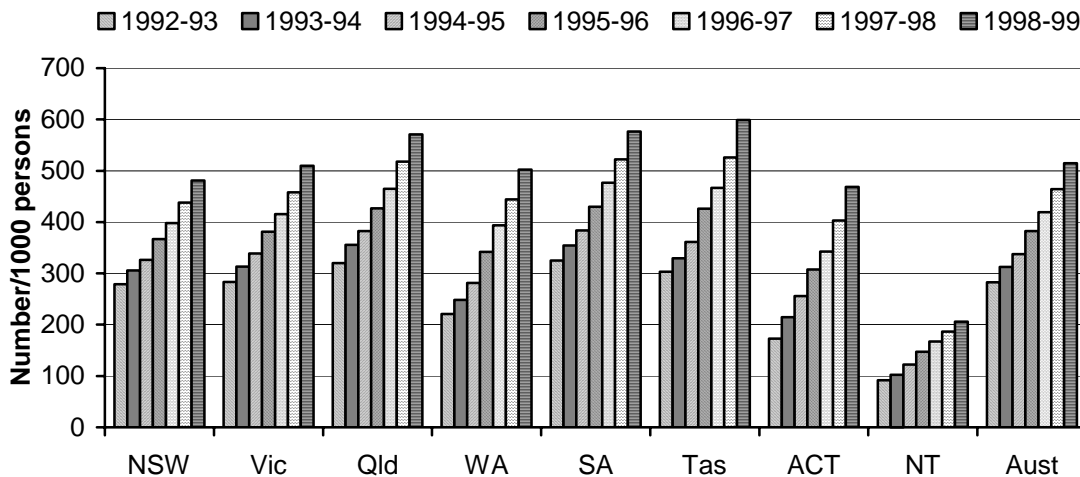
The GP prescribing rates of antidepressants and anxiolytics to manage the two mental health problems, depression and anxiety disorders, are reported for the first time this year. It is anticipated that more rigorous methods of defining this indicator and reporting accordingly will be developed for future Reports.

The prescribing rate for antidepressants across Australia in 1998-99 was 514 per 1000 persons aged 15 years and over. However, the rate differed across jurisdictions. The highest rates in the particular age category were in Tasmania and SA (599 and 577 per 1000 persons respectively). The lowest rate was in the NT (206 per 1000 persons) (figure 5.8).

The average annual growth rate between 1992-93 and 1998-99 in the number of GP ordered scripts for anti-depressants, ordered by GPs, per 1000 people aged 15 years and over was 10.5 per cent across Australia. The highest growth rate was in the

ACT and the NT (both 18.1 per cent), followed by WA (14.7 per cent). The lowest annual growth rate for this period was in NSW and SA (9.5 per cent and 10.0 per cent respectively) (table 5A.18).

Figure 5.8 Number of GP ordered scripts for anti-depressants, per 1000 persons aged 15 years and over

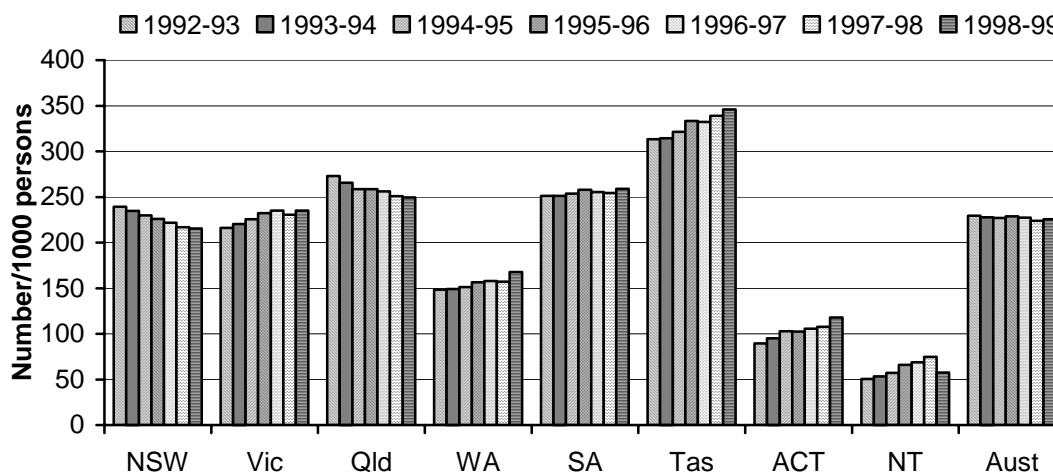


Source: table 5A.18.

The GP rate of prescribing anxiolytics across Australia in 1998-99 was 226 per 1000 persons aged 15 years and over. However, the rate differed across jurisdictions. The highest rates in the particular age category were in Tasmania and SA (346 and 259 per 1000 persons respectively). The lowest rate was in the NT (57 per 1000 persons) (figure 5.9).

Across Australia, the number of GP ordered scripts for anxiolytics per 1000 people aged 15 years and over was relatively uniform between 1992-93 and 1998-99. The trend was different for jurisdictions with the ACT experiencing an average annual growth rate of 4.7 per cent. This rate was followed in the NT and WA (2.1 per cent and 2.0 per cent respectively). Both New South Wales and Queensland experienced negative growth during this period (-1.7 per cent and -1.5 per cent annually) (table 5A.19).

Figure 5.9 **Number of GP ordered scripts for anxiolytics, per 1000 persons aged 15 years and over**



Source: table 5A.19.

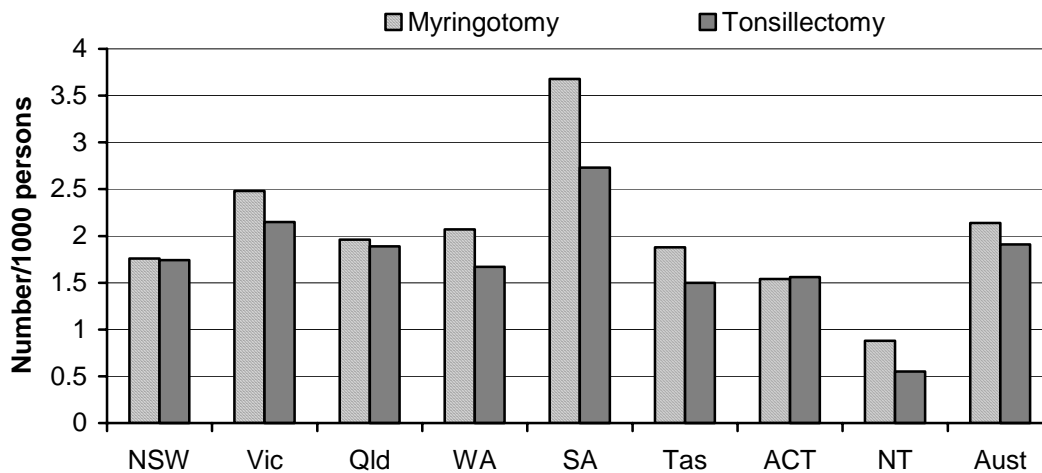
Gatekeeping to secondary care

Age and sex standardised separation rates for selected conditions often not requiring secondary treatment — myringotomy (insertion of grommets) for the treatment of acute otitis media in children and tonsillectomy (removal of tonsils) — are also indicators of the GP's role as the gatekeeper to secondary services. High separation rates may indicate that patients are not receiving appropriate care by GPs, because the conditions can often be managed at the primary care level, without recourse to surgical procedures.

The separation rate for myringotomy in 1997-98 was 2.14 per 1000 people across Australia. SA had the highest separation rate (3.68 per 1000 people), followed by Victoria (2.48 per 1000 people). The lowest separation rate was in the NT (0.88 per 1000 people) (figure 5.10).

The separation rate for tonsillectomy in 1997-98 was 1.91 per 1000 people across Australia. The highest separation rate was in SA (2.73 per 1000 people), followed by Victoria (2.15 per 1000 people). The lowest separation rate was in the NT (0.55 per 1000 people) (figure 5.10).

Figure 5.10 Separation rates for selected conditions often not requiring secondary treatment, 1997-98



Source: table 4A.10 in Chapter 4, 'Public hospitals'.

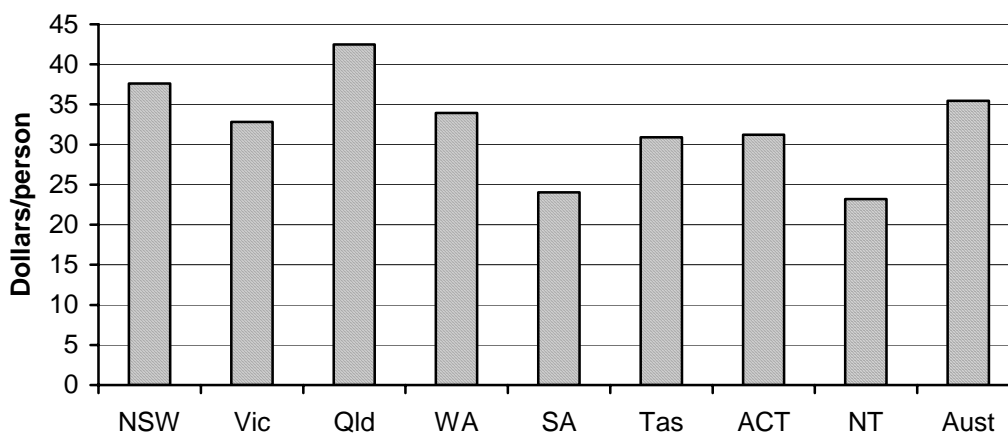
Prescribing and diagnosis

Per person benefits paid for GP ordered pathology tests are used to report on the prescribing and diagnosis patterns of GPs. Differences across jurisdictions in the levels of benefits paid for pathology tests and diagnostic imaging ordered by GPs may indicate inappropriate use of these services in diagnosis and treatment.

Across Australia, benefits paid for GP ordered pathology tests across were \$35 per person in 1998-1999 (table 5A.20). Queensland reported the highest level of per person benefits paid (\$43), followed by NSW and WA (\$38 and \$34 respectively). The lowest benefits paid were reported in the NT and SA (\$23 and \$24 respectively) (figure 5.11).

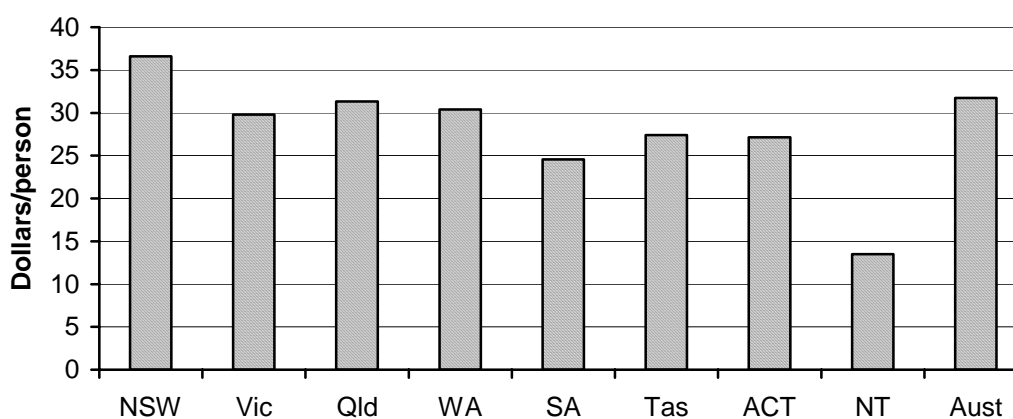
Across Australia, benefits paid for GP ordered diagnostic imaging were \$32 per person in 1998-1999 (table 5A.27). NSW recorded the highest level of per person benefits paid (\$36), followed by Queensland (\$31). Both Victoria and WA recorded per person benefits of \$30. The NT reported the lowest benefits paid (\$13) (figure 5.12).

Figure 5.11 **Benefits paid for pathology test referrals ordered by GPs, 1998-99**



Source: table 5A.20.

Figure 5.12 **Benefits paid for diagnostic imaging referrals ordered by GPs, 1998-99**



Source: table 5A.20.

Quality

Three indicators of the quality of health care delivered by GPs are: the proportion of practices with electronic information management systems; the proportion of full time workload equivalent GPs with vocational registration; and the proportion of practices that are registered for accreditation.

The proportion of practices with electronic information/management systems is a quality indicator which helps to identify the capacity for efficient handling of patient information. Data on a jurisdictional basis was not available. National data from the Practice Incentives Program are available and are reported here. The proportion of practices nationally that prescribed electronically was 59 per cent, and the proportion that had an Internet connection or an email account (modem), was 76 per cent. The highest proportions of practices with electronic prescribing and practices with a modem were in large rural cities (71 per cent and 84 per cent respectively) (table 5.3).

Table 5.3 Proportion of practices under the Practice Incentives Program with electronic information or management systems, November 1999 (per cent)

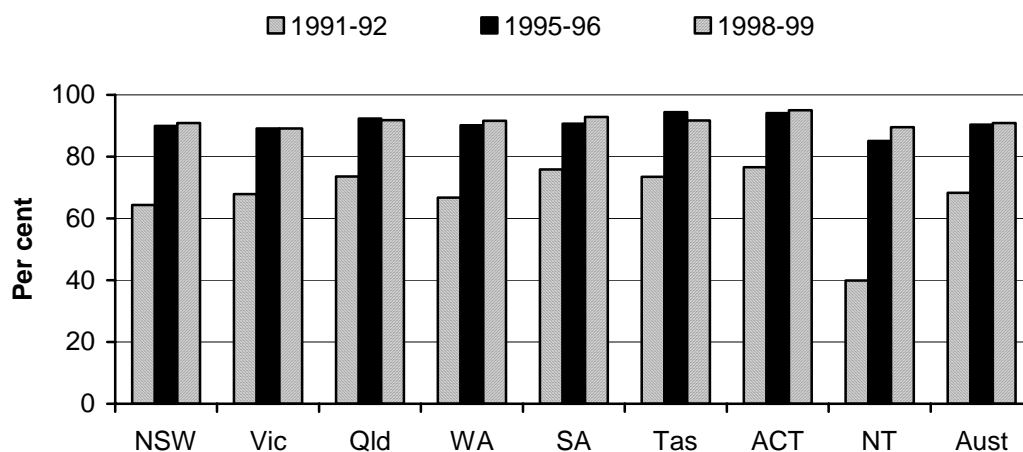
	<i>Electronic prescribing</i>	<i>Electronic connectivity</i>
Capital city	56	73
Other major metropolitan	63	77
Large rural city	71	84
Small rural city	66	81
Other rural area	68	83
Large remote centre	57	82
Other remote area	47	78
Total	59	76

Source: table 5A.22.

The proportion of full time workload equivalent GPs with vocational registration indicates the standard of appropriate training of GPs and their ability to deliver services of high quality (figure 5.13). The ACT had the highest proportion of full time workload equivalent GPs with vocational registration (95 per cent) in 1998-99. The proportion of GPs across Australia with vocational registration steadily rose from approximately 68 per cent in 1991-92 to 91 per cent in 1998-99 — an average annual growth rate of 4.2 per cent (table 5A.21).

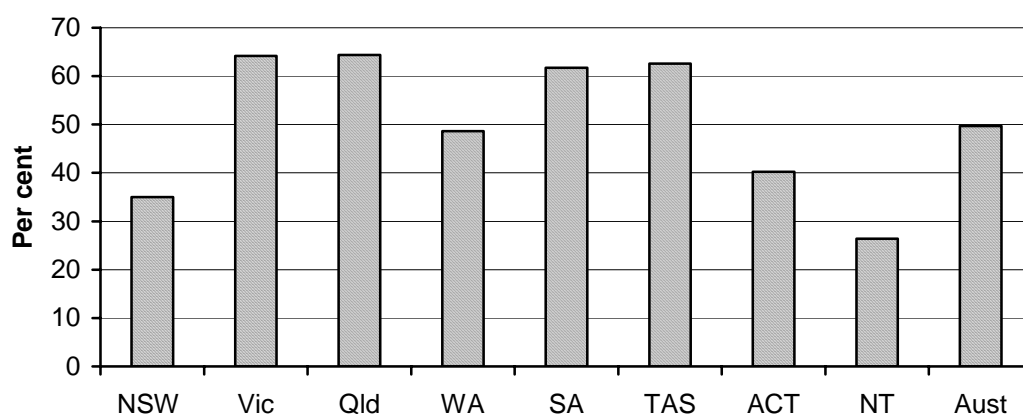
Accreditation in general practice is a systematic way to help identify quality in general practice and to provide GPs with a framework for improving their practices over time. At the end of October 1999, 2944 practices throughout Australia were registered for accreditation with Australian General Practice Accreditation Limited. This represents nearly half of all practices. Victoria and Queensland had the highest rates of registration for accreditation (both slightly more than 64 per cent) and the NT had the lowest rate of 26 per cent (figure 5.14).

Figure 5.13 Proportion of full time workload equivalent GPs with vocational registration



Source: table 5A.21.

Figure 5.14 Proportion of practices registered for accreditation, October 1999



Source: table 5A.23.

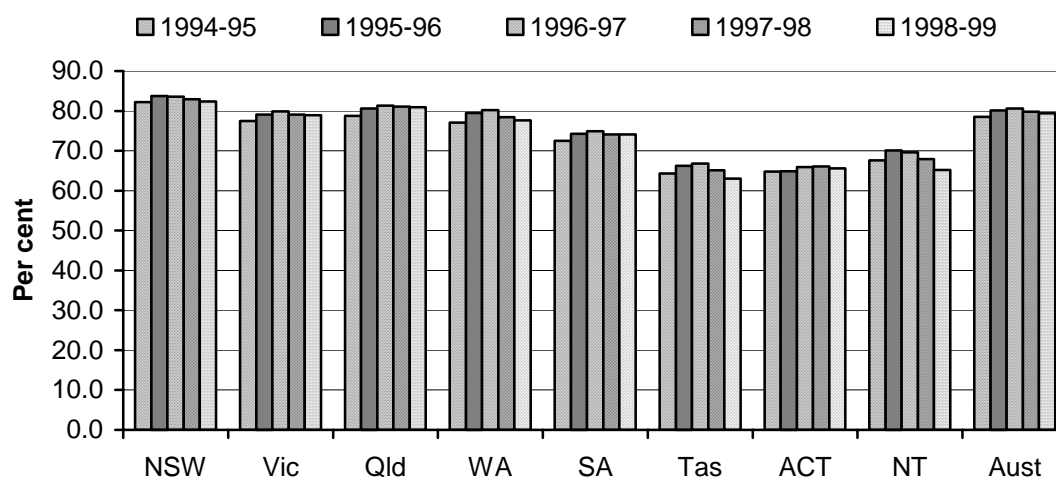
Access and equity

Three indicators are used to measure access and equity in service delivery by GPs: the proportion of total nonspecialist unreferral attendances that are bulk billed, the number of full-time workload equivalent, GPs in rural/remote areas; and the proportion of full time workload equivalent GPs who are female.

The first indicates the affordability of GP services. Under Medicare, clients may pay the GP's consultation fee and seek reimbursement from the Commonwealth Government, or the GP may bill the Government directly and thereby reduce out-of-pocket costs for patients. A high proportion of bulk billed services indicates a greater level of affordability. Visits to GPs are classed as unreferral attendances under Medicare, and these are further disaggregated into services provided by vocationally registered GPs and those provided by other medical practitioners who are not vocationally registered.

Seventy nine per cent of unreferral attendances were bulk billed across Australia in 1998-99. Bulk billing across Australia fell by 0.4 per cent in 1998-99 from the previous year's level (table 5A.25). These services were provided by both vocationally registered GPs and GPs who are not vocationally registered. Across jurisdictions NSW had the highest proportion of bulk billed services (82.4 per cent), and Tasmania had the lowest (63.0 per cent) (figure 5.15).

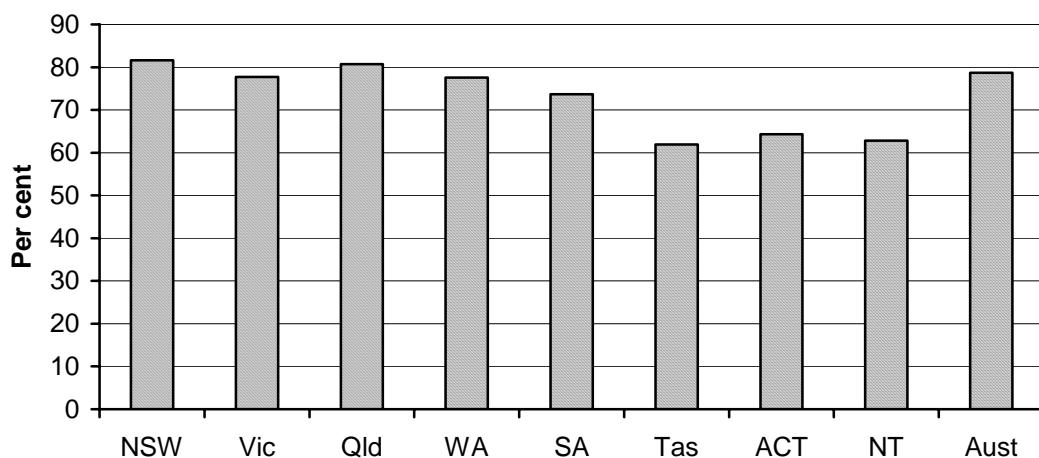
Figure 5.15 Proportion of unreferral attendances provided by GPs that were bulk billed



Source: table 5A.25.

Unreferral attendances provided by recognised GPs accounted for 88 per cent of total unreferral attendances in 1998-99 (DHAC 1999d) of which nearly 79 per cent were bulk billed. Across jurisdictions NSW had the highest proportion of bulk billed unreferral attendances that were provided by recognised GPs (81.6 per cent) and Tasmania had the lowest (61.9 per cent) (figure 5.16).

Figure 5.16 Proportion of bulk billed attendances provided by recognised GPs, 1998-99



Source: table 5A.24.

Another important access issue is the ability of people in nonmetropolitan areas to access primary health care services provided by GPs. The Commonwealth Government has introduced initiatives — such as the General Practice Rural Incentives Program — and medical support agencies to develop strategies for the recruitment and retention of GPs in rural and remote areas across Australia.

Many rural GPs provide a wide range of services, both in their own practices and in the public hospital system, including consultations, anaesthetics, obstetrics, psychiatric triage, emergency medicine, and relatively complex procedures and operations in response to trauma. However, the comparatively low number of rural GPs per head of population means that they are often stretched in responding to their community's physical and mental health care needs.

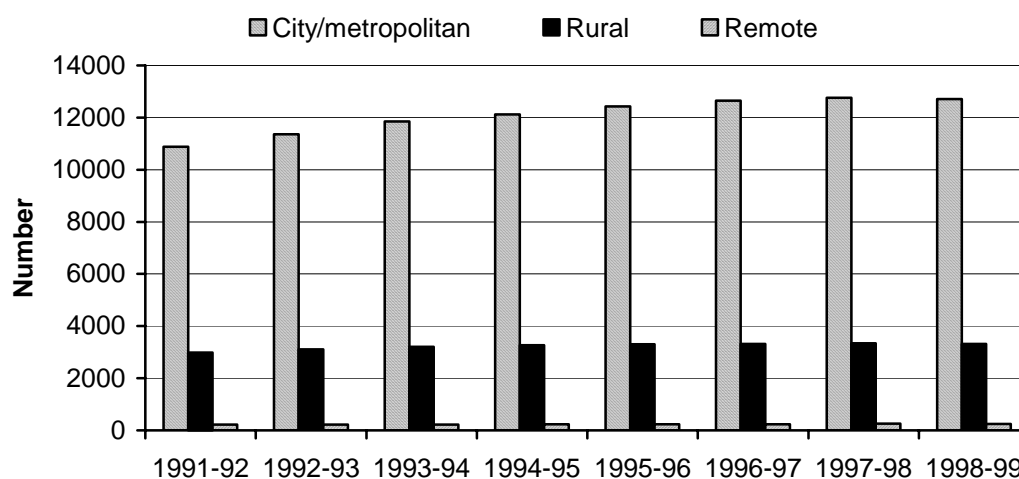
The number of full time workload equivalent, GPs increased from 14 090 in 1991-92 to 16 268 in 1998-99 — an average annual growth rate of 2.1 per cent. The highest average annual growth rate growth occurred in the numbers working in large rural centres (2.4 per cent) and capital cities (2.2 per cent). By contrast, the average annual growth rates in remote centres and other remote areas were 0.6 per cent and 1.8 per cent respectively (table 5A.27).

The distribution of full time workload equivalent, GPs was available for this Report broken down by geographic location on a national basis. Data at the jurisdictional level was unavailable. Seventy eight per cent of full time workload equivalent, non specialist medical practitioners worked in metropolitan (capital cities and other metropolitan areas). Seventy two per cent of the population resided in those areas in

1996 (the most recent year for which the geographic distribution of both the population and GPs was available) (figure 5.17 and table A.6 in appendix A). Twenty two per cent worked in non-metropolitan areas where 28 per cent of the population resided.

Seventy per cent (or 11 428) of full time workload equivalent, GPs worked in capital cities and 8 per cent worked in other metropolitan areas in 1998-99. A further 20 per cent worked in rural centres and areas, and less than 1 per cent worked in each of the remote centres and other remote areas.

Figure 5.17 Full time workload equivalent GPs, by region^a

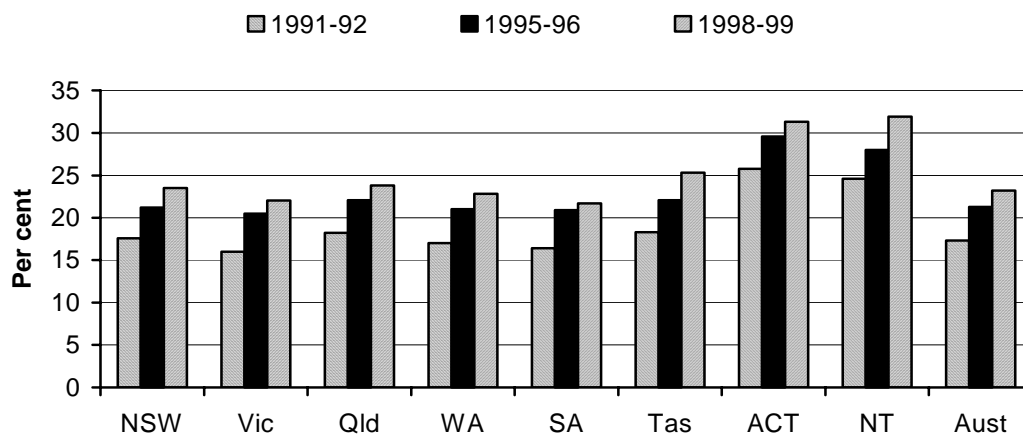


^a City/metropolitan includes capital cities and other major metropolitan cities. Rural includes large rural cities, small rural cities and other rural areas. Remote includes large remote centres and other remote areas.

Source: table 5A.27.

The final access indicator relates to the proportion of full time workload equivalent GPs who are female. This measure of access recognises the fact that some female patients may be uncomfortable discussing health matters with a male GP. The proportion of female GPs in 1998-99 was highest in the NT and the ACT (32 per cent and 31 per cent respectively), and lowest in Victoria and SA (22 per cent) (figure 5.18). The number of female full time workload equivalent GPs billing Medicare rose by 1328 between 1991-92 and 1998-99. This represented an average annual growth rate of 6.4 per cent (table 5A.26).

Figure 5.18 Females as a proportion of all full time workload equivalent GPs, by jurisdiction



Source: table 5A.26.

Efficiency

Unit cost

It is an objective of the Review to report comparable estimates of costs. Comparability is maximised when the full range of costs to government is counted on a comparable basis. Where the full costs cannot be counted, comparability is achieved by estimating costs on a consistent basis.

The cost to government of total unreferral attendances by GPs per 1000 population is the only suggested efficiency indicator for GP services at this stage. Nationally, the annual cost per 1000 population in 1998-99 was \$128 — highest in NSW and SA (\$135 and \$131 respectively) and lowest in the NT (\$67). Between 1993-94 and 1998-99, the real cost to government per 1000 population has not changed (figure 5.1).

5.5 Future directions

The key challenges for improving reporting on general practice and primary care include:

- reporting on Aboriginal and Torres Strait Islander peoples' access to mainstream health services; and
- filling gaps in reporting.

Aboriginal and Torres Strait Islander peoples' access to mainstream services

In May 1997 the Prime Minister requested that the Steering Committee give priority to developing indicators that measured the performance of mainstream services in meeting the needs of Indigenous Australians. This is an important task, but large gaps remain. The availability and coverage of nationally consistent data on the provision of services to Indigenous clients will increase in future Reports.

Filling gaps in reporting

Appropriateness

There are a number of gaps remaining in the reporting framework. These include measurement of acute illness management (separation rates for selected short term illnesses), chronic illness management (separation rates for selected chronic illnesses), prescribing and diagnosis (per person benefits for pharmaceuticals) and quality (patient satisfaction). It is the objective of the Review to improve the reporting of these indicators in the future

Quality

Accreditation in general practice is a systematic way to help identify quality in general practice and to provide GPs with a framework to improve their practices over time. The current accreditation standards are subject to change with the next revision process due in mid 2000. A consultant has been engaged by Australian General Practice Accreditation Limited to research the process of re-accreditation, and the report is due in early 2000. More information should be available for the 2001 Report.

Patient satisfaction is another indicator of the quality of GP services. Definitional problems surrounding this indicator still exist (box 5.4). No routinely collected data are available at the present, but patients' complaints about medical practice could be used as a proxy measure of dissatisfaction. It is anticipated that progress will be made in this area to enable reporting in the future.

Box 5.4 Measuring satisfaction in general practice

A report prepared by Hill and Draper (1995) for the Consumers' Health Forum explored the strengths and weaknesses of a range of consumer feedback mechanisms in general practice. A number of projects funded by the General Practice Evaluation Program sought to develop consumer satisfaction surveys that could be used as a surrogate measure of quality. The fact that most of these surveys found a high level of satisfaction caused some concern within the consumer group, not because consumers were generally not satisfied with general practice, but because this result meant that the mechanism could not contribute to an ongoing quality improvement process.

As Hill and Draper note, while satisfaction is an important issue, it is more important to discover what troubles consumers and what causes dissatisfaction. They quote research showing that even small expressions of dissatisfaction translate into important factors affecting behaviour related to health care.

Some practical suggestions for improving satisfaction surveys included:

- asking about experiences rather than seeking judgments;
- conducting interviews rather than asking people to complete pre-coded questionnaires; and
- using discussion groups to develop questionnaires.

Finally it was recommended that feedback from surveys should not be seen as a substitute for involvement by consumers in the planning and evaluation of service delivery.

While the quality movement is some way from the development of criteria for such a complex process, preliminary work has been undertaken to clarify and document consumer values and experiences.

Source: Hill and Draper (1995).

5.6 Jurisdictions' comments

Jurisdictions' comments on this chapter are contained at the end of chapter 6.

5A General practice — attachment

Definitions for the indicators and descriptors in this attachment are in section 5A.2. Unsourced information was obtained from Commonwealth, State or Territory Governments.

The data contained in this attachment may be subject to revision. The web page version of the Report contains the most up-to-date data where changes have occurred. This attachment can be found at www.pc.gov.au/service/gsp/2000/attach5A.pdf. Users without Internet access can contact the Secretariat (details inside front cover of the Report).

5A.1 All jurisdictions' data — general practice

Descriptors

Table 5A.1 **GPs billing Medicare, by jurisdiction and type of practitioner, 1998-99 (number)**

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
General practitioners	6 409	4 457	3 270	1 756	1 636	524	180	347	18 579
Other medical practitioners	1 620	1 460	1 286	571	384	131	79	66	5 597
Specialists	6 285	4 660	2 949	1 473	1 640	365	99	303	17 774
Total	14 314	10 577	7 505	3 800	3 660	1 020	358	716	41 950

Source: DHAC (1999a).

Table 5A.2 **Full time workload equivalent GPs billing Medicare, by jurisdiction (number)**

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
1991-92	5 219	3 432	2 475	1 136	1 213	341	201	73	14 090
1992-93	5 388	3 618	2 605	1 201	1 244	352	215	76	14 697
1993-94	5 573	3 764	2 741	1 254	1 289	362	219	77	15 279

(Continued on next page)

Table 5A.2 (Continued)

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
1994-95	5 680	3 871	2 818	1 301	1 278	370	223	87	15 629
1995-96	5 790	3 959	2 884	1 368	1 292	368	225	85	15 971
1996-97	5 787	4 060	2 992	1 381	1 298	372	225	86	16 200
1997-98	5 867	4 003	3 076	1 402	1 318	361	235	90	16 353
1998-99	5 755	4 034	3 101	1 392	1 318	357	226	87	16 268

Source: DHAC (1999 — GP Branch unpublished).

Table 5A.3 Proportion of all GPs who observed the schedule fee for unreferral attendances (per cent)

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
1990-91	81.2	71.5	78.8	75.0	75.0	70.1	61.2	62.0	76.7
1991-92	82.6	76.2	79.6	77.8	77.5	71.9	63.8	63.9	79.1
1992-93	84.2	79.4	81.7	80.2	78.9	74.1	65.2	65.2	81.2
1993-94	85.6	81.9	83.3	82.1	80.3	74.7	67.6	66.8	82.9
1994-95	85.9	82.7	84.0	82.3	80.1	74.5	67.8	68.6	83.4
1995-96	86.7	83.8	85.1	83.8	81.0	75.7	67.5	70.9	84.4
1996-97	86.5	84.3	85.4	84.1	81.1	76.3	68.4	71.0	84.5
1997-98	85.5	83.4	84.8	82.2	80.0	74.0	68.3	69.1	83.5
1998-99	85.2	83.1	84.7	81.3	79.6	72.4	68.1	66.7	83.2

Source: DHAC (1999a).

Table 5A.4 Benefits paid for GP psychiatric service referrals (dollars per person)

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
Sep 1998	2.04	2.71	1.87	2.24	2.75	1.64	1.46	0.35	2.21
Dec 1998	1.83	2.49	1.77	1.21	2.67	1.65	1.26	0.32	1.96
Mar 1999	1.83	2.32	1.74	1.09	2.37	1.47	1.18	0.34	1.87
Jun 1999	1.99	2.60	1.82	1.17	2.67	1.70	1.27	0.41	2.05

Source: Health Insurance Commission (unpublished — 9 November 1999).

Table 5A.5 Benefits paid for GP initial specialist referrals (dollars per person)

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
Sep 1998	4.97	4.14	3.14	3.23	4.21	3.51	3.60	1.36	4.10
Dec 1998	4.61	3.74	3.00	3.24	4.10	3.29	3.44	1.50	3.84
Mar 1999	4.70	3.72	3.08	3.09	3.94	3.07	3.44	1.46	3.85
Jun 1999	4.94	4.06	3.03	3.31	4.20	3.31	3.54	1.65	4.05

Source: Health Insurance Commission (unpublished — 9 November 1999).

Table 5A.6 Benefits paid for GP subsequent specialist referrals (dollars per person)

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
Sep 1998	4.92	4.93	3.39	3.05	5.10	3.85	3.45	1.31	4.39
Dec 1998	4.78	4.78	3.36	3.20	5.17	3.78	3.60	1.38	4.32
Mar 1999	4.57	4.53	3.25	2.92	4.71	3.37	3.33	1.33	4.08
June 1999	4.89	4.99	3.30	3.19	5.12	3.64	3.58	1.41	4.38

Source: Health Insurance Commission (unpublished — 9 November 1999).

Table 5A.7 BEACH Survey Report: patient characteristics^a

<i>Patients</i>	<i>Sample size (n)</i>	<i>Rate per 100 encounters^b</i>
Number of patients	96 901	
Gender		
Males	39 873	41.14
Females	57 042	58.86
Missing gender	1 474	na
Age		
<1 year	2 238	2.3
1–4 years	5 075	5.21
5–14 years	6 992	7.18
15–24 years	9 477	9.73
25–44 years	25 178	25.84
45–64 years	23 744	24.37
65–74 years	12 280	12.6
>75 years	12 465	12.79
Missing age	1 022	na
Ethnicity/Aboriginality		
Non-English speaking background	13 195	13.77
Aboriginal	1 006	1.02
Torres Strait Islander	102	0.1
Aboriginal/Torres Strait Islander	38	0.04
Status		
New to practice	9 409	9.69
Seen previously	87 674	90.31
Status missing	1 312	na

^a Survey period was April 1998 to March 1999. ^b Encounters define the different types of services provided by the participating GPs during the course of their recording period. **na** Not available.

Source: Britt et al., (1999).

Table 5A.8 BEACH Survey Report: top 30 reasons for encounter^{a, b}

<i>Reasons given for encounter^c</i>	<i>Sample size (n)</i>	<i>% of total reasons for encounters</i>	<i>Rate per 100 encounters</i>
Prescription all*	7 946.1	5.61	8.20
Cough	6 019.0	4.25	6.21
Cardiac check-up*	4 986.0	3.52	5.15
Immunisation all*	4 742.2	3.35	4.89
Throat symptom/complaint	3 696.2	2.61	3.81
Back complaint*	3 461.1	2.44	3.57
Rash*	3 357.4	2.37	3.46
General check-up*	3 032.0	2.14	3.13
Upper respiratory infection, acute	2 794.5	1.97	2.88
Hypertension*	2 231.3	1.57	2.30
Abdominal pain*	2 174.4	1.53	2.24
Depression*	2 047.2	1.44	2.11
Pain, ear/earache	1 881.7	1.33	1.94
Headache	1 875.5	1.32	1.94
Test results*	1 874.1	1.32	1.93
Fever	1 767.5	1.25	1.82
Female genital check-up*	1 651.9	1.17	1.70
Weakness/tiredness general	1 515.5	1.07	1.56
Diarrhoea	1 354.6	0.96	1.40
Asthma	1 327.1	0.94	1.37
Sneezing/nasal congestion	1 307.0	0.92	1.35
Pain, chest NOS	1 268.9	0.90	1.31
Knee symptom/complaint	1 199.9	0.85	1.24
Skin symptom/complaint	1 192.3	0.84	1.23
Foot and toe symptom/complaint	1 161.7	0.82	1.20
Sleep disturbance	1 148.6	0.81	1.19
Pre/post natal*	1 148.5	0.81	1.19
Neck symptom/complaint	1 140.9	0.80	1.18
Anxiety*	1 092.5	0.77	1.13
Swelling*	1 079.5	0.76	1.11
<i>Subtotal</i>	<i>71 475</i>	<i>50.42</i>	
Total problems	141 766	100.00	146.30

^a Survey period was April 1998 to March 1999. ^b This reflects the patients' expressed demand for care as perceived and recorded by the GP (maximum of three per encounter). ^c The problem label is the individual International Classification of Primary Care (ICPC) rubric label unless denoted by *, which indicates a grouping of multiple ICPC rubrics under the same problem (concept) label.

Source: Britt et al., (1999).

Table 5A.9 **BEACH Survey Report: problems managed by participating GPs according to ICPC chapter^{a, b}**

<i>Problem managed</i>	<i>Sample size (n)</i>	<i>% of total problems</i>	<i>Rate per 100 encounters</i>
Respiratory	23 554	16.73	24.31
Musculoskeletal	16 404	11.65	16.93
Skin	15 976	11.34	16.49
Circulatory	15 638	11.10	16.14
General and unspecified	12 775	9.07	13.18
Psychological	10 142	7.20	10.47
Digestive	9 926	7.05	10.24
Endocrine and metabolic	8 534	6.06	8.81
Female genital system	6 073	4.31	6.27
Ear	4 757	3.38	4.91
Pregnancy and family planning	3 927	2.79	4.05
Neurological	3 898	2.77	4.02
Urology	2 754	1.96	2.84
Eye	2 720	1.93	2.81
Blood	1 642	1.17	1.69
Male genital systems	1 364	0.97	1.41
Social problems	742	0.53	0.77
<i>Subtotal</i>	<i>140 824</i>	<i>100.00</i>	
Total problems	140 824	100.00	145.33

^a Survey period was April 1998 to March 1999 ^b ICPC = International Classification of Primary Care.

Source: Britt et al., (1999).

Table 5A.10 **BEACH Survey Report: top 30 problems managed by participating GPs^a**

<i>Problem label^b</i>	<i>Sample size (n)</i>	<i>% of total problems</i>	<i>Rate per 100 encounters</i>
Hypertension*	8 042	5.71	8.30
Upper respiratory infection, acute	6 623	4.70	6.83
Immunisation all*	5 025	3.57	5.19
Depression*	3 367	2.39	3.47
Acute bronchitis/bronchiolitis	3 185	2.26	3.29
Asthma	3 079	2.19	3.18
Back complaint*	2 816	2.00	2.91
Diabetes – unspecified*	2 473	1.76	2.55
Lipid disorder	2 393	1.70	2.47
Osteoarthritis*	2 118	1.50	2.19
Rash*	2 106	1.50	2.17
Sprain/strain*	1 790	1.27	1.85
Dermatitis, contact/allergic	1 778	1.26	1.83

(Continued on next page)

Table 5A.10 (Continued)

<i>Problem label^b</i>	<i>Sample size (n)</i>	<i>% of total problems</i>	<i>Rate per 100 encounters</i>
Acute otitis media/myringitis	1 746	1.24	1.80
Anxiety*	1 639	1.16	1.69
Sleep disturbance	1 580	1.12	1.63
Urinary tract infection*	1 569	1.11	1.62
Female genital check-up*	1 566	1.11	1.62
Sinusitis acute/chronic	1 513	1.07	1.56
General check-up*	1 501	1.07	1.55
Oesophagus disease	1 445	1.03	1.49
Menopausal symptom/complaint	1 428	1.01	1.47
Tonsillitis*	1 422	1.01	1.47
Prescription all*	1 360	0.97	1.40
Viral disease, other/NOS	1 284	0.91	1.32
Cardiac check-up*	1 204	0.86	1.24
Arthritis*	1 097	0.78	1.13
Ischaemic heart disease without angina	1 054	0.75	1.09
Fracture*	1 051	0.75	1.08
Gastroenteritis, presumed infection	1 047	0.74	1.08
<i>Subtotal</i>	<i>68 298</i>	<i>48.5</i>	
Total problems	140 824	100.00	145.30

^a Survey period was April 1998 to March 1999. ^b The problem label is the individual International Classification of Primary Care (ICPC) rubric label unless denoted by *, which indicates a grouping of multiple ICPC rubrics under the same problem (concept) label.

Source: Britt et al., (1999).

Effectiveness

Outcomes

Disease prevention

Table 5A.11 Proportion of valid episodes, by immunisation provider, 1997-98 (per cent)^a

<i>Provider type</i>	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
Individual general practitioners	80.66	43.89	0.82	53.74	65.47	84.10	30.10	0.91	47.93
General practice ^b	0.50	1.25	81.20	2.73	1.41	0.00	0.00	0.00	17.57
Public hospital	3.85	0.25	4.30	5.99	6.62	0.10	0.97	1.30	3.10
Private hospital	0.25	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.09
Aboriginal health service	0.32	1.33	1.00	0.55	0.26	0.00	0.10	0.81	0.73
Community health centre	7.00	0.59	4.10	24.04	6.80	0.05	0.84	98.54	8.60

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Table 5A.11 (Continued)

Provider type	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Division of general practice	0.18	0.00	-0.09	1.19	0.40	0.00	0.00	0.00	0.18
Local government council	7.23	52.68	9.20	8.29	17.48	15.75	0.00	0.00	19.55
State health department	0.00	0.00	-0.22	4.79	0.06	0.00	67.99	0.01	2.06
Flying doctor service	0.01	0.00	0.45	0.00	0.16	0.00	0.00	0.00	0.11
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

^a Each vaccine administered to a child by a recognised immunisation provider (generally a number of episodes are included in an encounter). ^b A group of medical practitioners who have registered at the practice level. One registration number has been allocated for use by all providers at the practice for the purpose of the ACIR.

Source: Health Insurance Commission (1999).

Table 5A.12 Proportion of children turning 12 months of age who were immunised^{a, b}

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Fully immunised									
30 June 1997	73.2	80.1	80.6	66.9	77.0	76.0	77.4	61.7	75.9
30 June 1998	82.3	86.2	85.8	83.2	85.3	86.2	85.0	76.0	84.3
30 June 1999	84.3	87.7	88.4	86.2	89.0	87.0	89.0	82.9 ^d	86.5
Immunised against (at 30 June 1999)									
Diphtheria/tetanus	86.2	89.4	89.4	87.2	90.2	88.4	89.5	85.9	88.1
Whooping cough	86.2	89.3	89.3	87.2	90.1	88.2	89.5	85.9	88.0
Diphtheria/tetanus/ whooping cough	86.1	89.3	89.3	87.2	90.0	88.2	89.5	85.9	88.0
Polio	86.0	89.2	89.2	87.3	90.1	88.0	89.5	85.2	87.9
Hib ^c	85.4	88.6	89.7	87.2	89.8	87.6	89.1	89.0	87.7

^a Only vaccines administered before 12 months are included in the coverage calculation. ^b Fully immunised children are those who have been vaccinated against diphtheria/tetanus/pertussis, polio and Hib

^c Haemophilus influenzae type b. ^d Estimates of immunisation coverage rates from the NT Government, based on the Territory's Childhood Immunisation Database, are 89 per cent.

Source: Health Insurance Commission (unpublished — 30 September 1999).

Table 5A.13 Proportion of children turning 24 months who were immunised^{a, b}

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Fully immunised									
30 June 1998	63.8	67.7	72.8	59.2	65.6	67.0	69.7	50.7	66.1
30 June 1999	72.2	77.3	81.1	73.4	76.8	77.1	83.8	67.1	75.9
Immunised against (at 30 June 1999)									
Diphtheria/tetanus	82.1	84.8	86.8	81.9	85.6	85.1	87.0	75.0	84.0
Whooping cough	82.0	84.8	86.7	81.8	85.4	85.2	87.0	75.0	83.9
Diphtheria/tetanus/ whooping cough	81.9	84.7	86.7	81.8	85.4	85.1	87.0	75.0	83.8
Polio	87.9	91.0	91.3	88.3	92.2	91.8	91.7	86.9	89.8

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Table 5A.13 (Continued)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Hib ^c	82.1	84.4	87.0	82.0	83.9	83.8	86.7	82.8	83.8
Measles/mumps/ rubella	86.5	89.7	90.8	87.8	90.1	90.2	91.2	87.3	88.7

^a Only vaccines administered before 24 months are included in the coverage calculation. ^b Fully immunised children are those who have been vaccinated against diphtheria/tetanus/pertussis, polio and Hib and measles/mumps and rubella. ^c Haemophilus influenzae type b.

Source: Health Insurance Commission (unpublished — 30 September 1999).

Table 5A.14 Notifications of whooping cough received by State/Territory health authorities (number)^{a, b}

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
1994	1 534	447	1 937	568	982	26	19	138	5 651
1995	1 342	376	1 416	448	389	118	34	174	4 297
1996	1 112	1 201	766	183	690	30	33	16	4 031
1997	4 094	1 679	1 785	1 163	1 689	119	115	24	10 668
1998	2569	1 151	1 465	380	701	56	87	23	6432
1999 ^c	581	518	536	38	106	48	48	2	1 877
Notifications per 1000 persons aged 0 – 14 years ^d									
1994	1.2	0.5	2.8	1.5	3.3	0.2	0.3	2.9	1.5
1995	1.0	0.4	2.0	1.2	1.3	1.1	0.5	3.6	1.1
1996	0.9	1.3	1.1	0.5	2.3	0.3	0.5	0.3	1.0
1997	3.1	1.8	2.4	3.0	5.6	1.1	1.7	0.5	2.7
1998	2.0	1.2	2.0	1.0	2.4	0.5	1.3	0.5	1.6
1999	0.4	0.5	0.7	0.1	0.4	0.5	0.7	0.0	0.5

^a Whooping cough is pertussis. ^b Data for 1998 and 1999 are provisional and may be revised. ^c At 20 July 1999. ^d ABS, *Estimated Resident Population, by Age* (cat. no. 3201.0).

Source: NNDSS (1999).

Table 5A.15 Notifications of Haemophilus influenzae type b received by State/Territory health authorities (number)^a

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
1994	62	32	38	11	19	4	1	1	168
1995	29	14	9	5	6	5	1	5	74
1996	13	11	11	1	7	1	2	5	51
1997	18	6	15	6	2	2	0	4	53
1998	11	5	11	5	1	2	0	0	35
1999 ^b	7	1	8	3	2	0	0	3	24

^a Data for 1998 and 1999 are provisional and may be revised. ^b At 3 August 1999.

Source: NNDSS (1999).

Table 5A.16 Notifications of measles received by State/Territory health authorities (number)^a

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
1994	1 504	177	2 483	133	70	32	114	402	4 915
1995	649	150	251	58	5	53	48	110	1 324
1996	204	96	93	33	13	23	10	26	498
1997	260	91	261	83	29	38	79	11	852
1998	125	36	44	50	5	36	10	1	307
1999 ^b	23	88	19	15	4	8	5	4	166
Notifications of measles per 1000 people aged 0 – 14 years ^c									
1994	1.2	0.2	3.6	0.3	0.2	0.3	1.7	8.5	1.3
1995	0.5	0.2	0.4	0.2	0.0	0.5	0.7	2.3	0.3
1996	0.2	0.1	0.1	0.1	0.0	0.2	0.1	0.5	0.1
1997	0.2	0.1	0.4	0.2	0.1	0.4	1.2	0.2	0.2
1998	0.1	0.0	0.1	0.1	0.0	0.3	0.1	0.0	0.1
1999	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0

^a Data for 1998 and 1999 are provisional and may be revised. ^b At 3 August 1999. ^c ABS, *Estimated Resident Population, by Age* (cat. no. 3201.0).

Source: NNDSS (1999).

Table 5A.17 Participation rates of women in cervical cancer screening programs, 1997 and 1998 (per cent)

<i>Age group (years)</i>	<i>NSW^a</i>	<i>Vic</i>	<i>Qld^b</i>	<i>WA</i>	<i>SA^a</i>	<i>Tas</i>	<i>ACT^c</i>	<i>NT</i>	<i>Aust</i>
20–24	48.2	48.8	na	54.5	55.8	65.3	52.5	58.4	50.6
25–29	62.6	66.4	na	68.1	69.4	72.4	66.5	65.0	65.4
30–34	65.7	71.5	na	71.3	71.6	72.3	70.2	65.6	69.0
35–39	66.6	74.9	na	73.2	72.5	72.7	70.8	67.5	70.8
40–44	65.4	74.6	na	71.4	72.0	70.2	71.7	64.4	69.8
45–49	64.3	75.6	na	69.6	71.0	69.8	72.8	69.5	69.4
50–54	66.1	80.7	na	72.0	74.0	70.9	79.4	65.8	72.5
55–59	56.6	70.8	na	62.3	65.0	60.4	71.3	61.8	62.9
60–64	48.3	61.6	na	57.0	59.0	53.4	63.2	48.4	54.9
65–69	36.4	51.3	na	45.1	46.6	41.5	50.2	38.7	43.4
70–74	17.0	26.2	na	20.2	12.8	14.7	22.1	22.4	22.4
75–79	8.2	11.9	na	9.1	na	6.6	10.6	14.6	8.5
80–84	4.0	6.0	na	4.3	na	3.3	4.9	8.8	4.2
85 + ^d	na	na	na	na	na	na	na	na	na
All ages	53.7	61.0	na	60.7	60.8	58.8	64.2	65.7	57.7
AS Rate (A) ^e	54.2	62.3	na	60.0	60.2	60.7	61.3	57.0	58.4
20-69	60.1	68.1	na	66.4	67.2	67.5	67.4	63.9	63.9
AS Rate (A) ^e	59.4	67.8	na	65.7	66.7	66.9	67.0	62.0	63.8

^a All women aged 70 years or more are grouped in the category women aged 70-74 years. ^b Queensland Health Pap Smear Register began operations in February 1999; no data is available for this report. ^c The ACT register contains only women with an ACT address. ^d Rates cannot be calculated for the 85+ age group because hysterectomy fractions are not available for this age group. ^e Rates are expressed per 100 000 women and are age standardised to the Australian 1991 population. **na** Not available.

Source: AIHW (unpublished data).

Chronic illness management

Table 5A.18 GP ordered scripts for anti-depressants ('000)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
1992-93	1305	994	751	282	376	110	39	11	3868
1993-94	1441	1106	859	322	411	120	50	13	4320
1994-95	1554	1200	948	371	447	132	60	15	4727
1995-96	1769	1361	1084	460	503	157	73	19	5424
1996-97	1947	1500	1210	540	560	172	82	22	6034
1997-98	2173	1675	1376	623	617	194	97	26	6781
1998-99	2416	1892	1549	720	687	222	114	29	7628
Annual growth rate %	10.8	11.3	12.8	16.9	10.6	12.4	19.5	17.2	12.0
Number per 1000 persons aged 15 years and over ^a									
1992-93	279	283	320	221	325	303	173	92	283
1993-94	306	313	356	249	354	329	214	102	312
1994-95	326	339	383	282	384	361	256	122	338
1995-96	367	381	426	342	430	426	308	147	382
1996-97	398	415	465	394	477	467	343	167	419
1997-98	438	458	518	444	522	526	403	187	464
1998-99	481	510	571	502	577	599	469	206	514

^a ABS, *Estimated Resident Population, by Age* (cat. no. 3201.0).

Source: Health Insurance Commission (unpublished — November 1999).

Table 5A.19 GP ordered scripts for anxiolytics ('000)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
1992-93	1120	759	641	189	291	113	20	6	3139
1993-94	1106	777	641	193	291	114	22	7	3151
1994-95	1095	799	640	199	296	118	24	7	3179
1995-96	1089	830	657	210	301	122	24	8	3243
1996-97	1085	849	667	217	300	122	25	9	3275
1997-98	1074	843	667	221	300	125	26	10	3267
1998-99	1082	873	677	240	308	128	29	8	3345
Annual growth rate %	-0.6	2.4	0.9	4.1	1.0	2.0	5.9	4.5	1.1
Number per 1000 persons aged 15 years and over ^a									
1992-93	239	216	273	148	251	313	90	51	230
1993-94	235	220	266	149	251	314	95	53	228
1994-95	230	226	259	151	254	321	103	57	227
1995-96	226	232	259	156	258	333	103	66	229
1996-97	222	235	256	158	255	332	106	69	227
1997-98	217	231	251	157	254	339	108	75	224
1998-99	215	235	250	168	259	346	118	57	226

^a ABS, *Estimated Resident Population, by Age* (cat. no. 3201.0).

Source: Health Insurance Commission (unpublished — November 1999).

Gatekeeping to secondary care

See table 4A.10.

Prescribing and diagnosis

Table 5A.20 Benefits paid for selected referrals ordered by GPs, 1998-99 (dollars per person)

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
Pathology tests	37.62	32.81	42.50	33.92	24.05	30.92	31.21	23.20	35.45
Diagnostic imaging	36.61	29.79	31.33	30.41	24.56	27.39	27.15	13.49	31.74

Source: Health Insurance Commission (unpublished — November 1999).

Quality

Table 5A.21 Full time workload equivalent GPs with vocational registration

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
Full time workload equivalent GPs with vocational registration (no.)									
1991-92	3 359	2 331	1 822	759	920	250	154	29	9 623
1992-93	4 664	3 140	2 322	1 041	1 094	311	192	56	12 820
1993-94	4 909	3 303	2 506	1 134	1 154	338	204	61	13 610
1994-95	5 109	3 470	2 616	1 182	1 172	346	205	76	14 176
1995-96	5 210	3 529	2 663	1 234	1 172	348	211	73	14 439
1996-97	5 187	3 592	2 763	1 241	1 200	347	213	76	14 619
1997-98	5 260	3 544	2 833	1 277	1 225	335	222	77	14 772
1998-99	5 229	3 596	2 648	1 275	1 222	327	215	78	14 790
Proportion of full time workload equivalent GPs with vocational registration (%)									
1991-92	64.4	67.9	73.6	66.7	75.9	73.5	76.6	39.9	68.3
1992-93	86.6	86.8	89.1	86.7	88.0	88.3	89.4	74.4	87.2
1993-94	88.1	87.8	91.4	90.4	89.5	93.3	93.1	79.4	89.1
1994-95	89.9	89.6	92.8	90.8	91.7	93.3	92.0	87.1	90.7
1995-96	90.0	89.1	92.3	90.2	90.7	94.4	94.1	85.1	90.4
1996-97	89.6	88.5	92.3	89.8	92.5	93.3	95.0	88.5	90.2
1997-98	89.7	88.5	92.1	91.1	92.9	92.6	94.1	85.9	90.3
1998-99	90.9	89.1	91.8	91.6	92.8	91.7	95.0	89.5	90.9

Source: DHAC (1999 — GP Branch unpublished).

Table 5A.22 Proportion of practices under the Practice Incentives Program with electronic information or management systems, November 1999 (per cent)

	<i>Electronic prescribing</i>	<i>Electronic connectivity</i>
Capital city	56	73
Other major metropolitan	63	77
Large rural city	71	84
Small rural city	66	81
Other rural area	68	83
Large remote centre	57	82
Other remote area	47	78
Total	59	76

Source: Health Insurance Commission (unpublished — 29 November 1999).

Table 5A.23 Practices registered for accreditation, October 1999 (per cent)

<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
35.0	64.2	64.4	48.6	61.7	62.6	40.2	26.4	49.7

Source: AGPAL (1999).

Access and equity

Table 5A.24 Proportion of bulk billed attendances provided by recognised GPs (per cent)

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
1993-94	80.3	74.5	76.7	75.5	70.1	61.9	62.6	64.2	76.2
1994-95	81.4	76.1	78.5	76.5	71.2	63.4	62.7	65.7	77.5
1995-96	82.9	77.8	80.3	79.1	73.3	65.7	63.2	68.6	79.3
1996-97	82.7	78.5	81.1	79.8	73.9	66.3	64.6	68.8	79.7
1997-98	82.0	77.6	80.8	78.2	73.4	64.2	64.5	66.1	78.9
1998-99	81.6	77.7	80.7	77.6	73.7	61.9	64.3	62.8	78.7

Source: DHAC (1999d).

Table 5A.25 Proportion of unREFERRED attendances provided by GPs that were bulk billed (per cent)

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
1984-85	60.2	46.6	50.3	50.1	48.5	42.3	30.0	44.8	52.5
1985-86	64.5	48.5	53.2	53.0	51.6	45.8	32.0	47.1	55.8
1986-87	69.3	52.5	57.4	56.4	55.5	47.3	34.6	48.5	60.1
1987-88	71.0	53.3	61.1	58.8	57.8	49.0	40.1	50.8	62.0
1989-90	74.5	60.3	68.5	64.3	62.6	55.8	50.6	55.8	67.4

(Continued on next page)

Table 5A.25 (Continued)

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
1990-91	76.1	64.5	72.0	68.4	65.7	58.7	55.7	57.9	70.3
1991-92	76.9	69.0	71.8	70.6	67.0	59.4	58.9	59.2	72.0
1992-93	78.6	72.4	74.4	72.9	68.3	60.9	61.3	62.9	74.2
1993-94	81.0	75.8	76.9	76.0	71.5	62.9	64.3	65.4	77.0
1994-95	82.2	77.5	78.8	77.1	72.5	64.3	64.8	67.6	78.5
1995-96	83.7	79.1	80.6	79.5	74.3	66.2	64.9	70.1	80.1
1996-97	83.6	79.9	81.3	80.2	74.9	66.8	65.9	69.6	80.6
1997-98	82.9	79.1	81.1	78.4	74.1	65.1	66.1	67.9	79.8
1998-99	82.4	78.9	80.9	77.6	74.1	63.0	65.6	65.2	79.4

Source: DHAC (1999d).

Table 5A.26 Female full time workload equivalent GPs

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
Number of female full time workload equivalent GPs (no.)									
1991-92	919	548	449	193	199	62	52	18	2 441
1992-93	1 007	614	503	210	223	71	57	17	2 700
1993-94	1 085	683	551	230	253	74	61	18	2 955
1994-95	1 160	750	590	262	265	83	64	22	3 197
1995-96	1 225	811	637	287	270	82	66	24	3 403
1996-97	1 290	860	689	298	268	83	68	24	3 579
1997-98	1 347	867	712	312	279	83	73	26	3 701
1998-99	1 350	889	737	318	286	90	71	28	3 769
Females as a proportion of all full time workload equivalent GPs (%)									
1991-92	17.6	16.0	18.2	17.0	16.4	18.3	25.8	24.6	17.3
1992-93	18.7	17.0	19.3	17.5	17.9	20.1	26.6	22.2	18.4
1993-94	19.5	18.1	20.1	18.3	19.6	20.5	27.9	23.2	19.3
1994-95	20.4	19.4	20.9	20.2	20.7	22.4	28.7	24.8	20.5
1995-96	21.2	20.5	22.1	21.0	20.9	22.1	29.6	28.0	21.3
1996-97	22.3	21.2	23.0	21.6	20.6	22.3	30.3	27.7	22.1
1997-98	23.0	21.7	23.2	22.2	21.2	23.0	31.0	29.4	22.6
1998-99	23.5	22.0	23.8	22.8	21.7	25.3	31.3	31.9	23.2

Source: DHAC (1999 — GP Branch unpublished).

Table 5A.27 Full time workload equivalent GPs, by region

	<i>Capital city</i>	<i>Other metropolitan centre</i>	<i>Large rural centre</i>	<i>Small rural centre</i>	<i>Other rural centre</i>	<i>Remote centre</i>	<i>Other remote area</i>	<i>Total</i>
Full time workload equivalent nonspecialist medical practitioners (no.)								
1991-92	9 784	1 097	798	825	1 359	110	117	14 090
1992-93	10 218	1 145	830	867	1 414	108	117	14 697
1993-94	10 656	1 195	864	899	1 437	109	118	15 279
1994-95	10 901	1 225	889	924	1 453	114	122	15 629

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Table 5A.27 (Continued)

	Capital city	Other metropolitan centre	Large rural centre	Small rural centre	Other rural centre	Remote centre	Other remote area	Total
1995-96	11 172	1 252	908	929	1 472	118	120	15 971
1996-97	11 383	1 267	926	925	1 462	116	121	16 200
1997-98	11 465	1 291	946	930	1 469	121	131	16 353
1998-99	11 428	1 277	939	918	1 458	115	133	16 268
Proportion of full time workload equivalent nonspecialist medical practitioners (%)								
1991-92	69.44	7.79	5.66	5.86	9.65	0.78	0.83	22.78
1992-93	69.52	7.79	5.65	5.90	9.62	0.73	0.80	22.70
1993-94	69.74	7.82	5.65	5.88	9.41	0.71	0.77	22.43
1994-95	69.75	7.84	5.69	5.91	9.30	0.73	0.78	22.41
1995-96	69.95	7.84	5.69	5.82	9.22	0.74	0.75	22.21
1996-97	70.27	7.82	5.72	5.71	9.02	0.72	0.75	21.91
1997-98	70.11	7.89	5.78	5.69	8.98	0.74	0.80	22.00
1998-99	70.25	7.85	5.77	5.64	8.96	0.71	0.82	21.90

Sources: DHFS (1997a, 1997b); DHAC (1999 — GP Branch unpublished).

Table 5A.28 Proportion of full time workload equivalent GPs billing Medicare (per cent)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
1991-92	37.04	24.36	17.57	8.06	8.61	0.24	1.42	0.52	100.00
1992-93	36.66	24.62	17.72	8.17	8.46	2.40	1.46	0.52	100.00
1993-94	36.47	24.64	17.94	8.21	8.44	2.37	1.43	0.50	100.00
1994-95	36.34	24.77	18.03	8.32	8.18	2.37	1.43	0.56	100.00
1995-96	36.25	24.79	18.06	8.57	8.09	2.30	1.41	0.53	100.00
1996-97	35.72	25.06	18.47	8.52	8.01	2.30	1.39	0.53	100.00
1997-98	35.88	24.48	18.81	8.57	8.06	2.21	1.44	0.55	100.00
1998-99	35.38	24.80	19.06	8.56	8.56	2.19	1.39	0.53	100.00

Source: Table 5A.2.

Efficiency

Table 5A.29 Commonwealth Government expenditure on unreferral consultations to GPs (dollars per 1000 population)^a

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
At current prices									
1993-94	130.05	119.20	116.96	103.46	123.56	108.35	101.37	63.53	120.24
1994-95	133.12	123.26	119.04	106.24	123.50	111.20	104.47	66.87	124.35
1995-96	138.42	128.92	122.11	113.83	128.47	115.01	106.56	68.46	128.07
1996-97	135.88	130.52	123.40	112.86	128.78	115.87	108.04	66.74	127.78

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Table 5A.29 (Continued)

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
1997-98	136.65	127.97	125.30	112.36	130.19	113.41	109.44	67.60	127.77
1998-99	135.71	128.82	125.75	111.23	131.36	114.73	109.99	66.88	127.75
At 1998-99 prices									
1993-94	138.20	126.67	124.29	109.95	131.31	115.14	107.73	67.51	127.78
1994-95	140.27	129.88	125.44	111.95	130.14	117.18	110.08	70.46	131.03
1995-96	142.41	132.63	125.63	117.11	132.17	118.32	109.63	70.43	131.76
1996-97	138.09	132.64	125.41	114.70	130.87	117.75	109.80	67.83	129.86
1997-98	137.20	128.48	125.80	112.81	130.71	113.87	109.88	67.87	128.28
1998-99	135.71	128.82	125.75	111.23	131.36	114.73	109.99	66.88	127.75

^a Population is estimated resident population for each year.

Sources: ABS (cat. no. 3201.0); DHAC (1999d).

5A.2 Definitions

Table 5A.30 Terms

<i>Term</i>	<i>Definition</i>
Age standardised	The age standardised rate removes the effect of different age distributions (across jurisdictions or over time) when making comparisons. It is calculated by weighting the age specific rates for each jurisdiction by the national age distribution
Ambulatory services	Services provided by hospitals to non-admitted patients
Case mix adjustment	Adjustment of data on cases treated to account for the number and type of cases. Cases were sorted into diagnosis related groups which represented a class of patients with similar clinical conditions requiring similar hospital services.
Community health services	Health services for individuals and groups delivered in a community setting, rather than in hospitals or in private facilities
Consultations	The different types of services provided by GPs (also called encounters).
Divisions of general practice	Local networks of GPs operating within a defined geographic area.
Full time workload equivalents	A measure of medical practitioner supply based on claims processed by Medicare in a given period. The calculation is made by dividing the practitioner's Medicare billing by the mean billing of full time practitioners for that period. Full time equivalents (FTEs) are calculated in the same way as full time workload equivalents.
General practice	The organisational structure in which one or more GPs provide and supervise health care for a 'population' of patients. This definition includes medical practitioners who work solely with one specific population such as women's health, and Indigenous health.
General practitioner	A recognised general practitioner who had at least half of the schedule fee value of his/her Medicare billing from 'non-referred attendance items'

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Table 5A.30 (Continued)

<i>Term</i>	<i>Definition</i>
Management	Ongoing process beginning with initial client contact and includes all actions relating to that client. Included are assessment/evaluation, education of the person, family or carer(s), diagnosis, treatment. Problems associated with adherence to treatment and liaison with or referral to other agencies are also included.
Other medical practitioner	A medical practitioner other than a recognised general practitioner who had at least half of the schedule fee value of his/her Medicare billing from 'other non-referred attendance items'
Other specialist	A medical practitioner not classified as 'general practitioner', 'other medical practitioner' or 'recognised specialist' but undertaking a majority of specialist work, although not formally recognised as a specialist by Medicare. Also includes specialists with recognition in one field but working in an unrelated field.
Pap smear	A procedure for the detection of cancer and pre-cancerous conditions of the female genital tract
Primary care	Essential health care based on practical, scientifically sound and socially acceptable methods made universally accessible to individuals and families in the community.
Prevalence	The percentage of the population suffering from a disorder at a given point in time (point prevalence) or during a given period (period prevalence)
Preventive interventions	Programs designed to decrease the incidence, prevalence and negative outcomes of disorders
Public health	The organised, social response to protect and promote health and to prevent illness, injury and disability. The starting point for identifying public health issues, problems and priorities, and for designing and implementing interventions, is the population as a whole or population subgroups.
Psychiatrist	Medical practitioner with specialist training in psychiatry
Reasons for consultation	The expressed demand of the patient for care as perceived and recorded by the GP
Recognised general practitioner	A vocationally registered general practitioner, a Fellow of the Royal Australian College of General Practitioners or equivalent, or a general practice registrar in a training placement
Recognised immunisation provider	A provider recognised by the Health Insurance Commission as a provider of immunisation to children
Recognised specialist	A medical practitioner classified as a specialist on the Medicare database earning at least half of his/her income from relevant specialist items in the schedule having regard to the practitioner's field of specialist recognition
Screening	The performance of tests on apparently well people to detect a medical condition at an earlier stage than would otherwise be possible without the test
Unreferred attendances	GP services, emergency attendances after hours, other prolonged attendances, group therapy and acupuncture. All attendances for specialist services are excluded as these must be 'referred' to receive Medicare reimbursement.
Vocational registration	A formal training program that promotes quality in general practice. Vocationally registered GPs are registered separately from other nonspecialist practitioners for Medicare purposes, and receive higher Medicare benefits for services.

Table 5A.31 Indicators

<i>Indicator</i>	<i>Definition</i>
Immunisation coverage	Percentage of children aged 12 months and 24 months who were fully immunised
Notifications of selected childhood diseases	Number of cases of measles, pertussis and Haemophilus influenzae type b notified by State/Territory health authorities
Cervical cancer screening rates for target population	Percentage of women screened against cervical cancer in the age group 20–60 years
Prescribing rates for mental illness	Number of GP scripts per 1000 persons for anti-depressants and anxiolytics
Standardised separation rates for selected conditions often not requiring secondary treatment	Age- and sex-standardised hospital separation rates for myringotomy and tonsillectomy
Standardised separation rates for selected conditions often requiring secondary treatment	Age- and sex-standardised hospital separation rates for hip replacements, lens insertion and angioplasty
Per person benefits paid for GP ordered pathology	Total benefits paid for pathology tests ordered by GPs divided by the population
Per person benefits paid for GP ordered diagnostic imaging	Total benefits paid for diagnostic imaging tests ordered by GPs divided by the population
Proportion of practices with electronic information management systems	Number of practices with electronic prescribing and/or electronic connectivity, registered under the Practice Incentive Program, divided by the total number of practices registered
Proportion of practices registered for accreditation	Number of practices which have registered for accreditation through Australian General Practice Accreditation Limited divided by the total number of practices in the Divisions of General Practice
Proportion of GPs with vocational registration	Number of full time workload equivalent GPs who are vocationally registered divided by the total number of fulltime workload equivalent GPs
Nonspecialist attendances which are bulk billed	Number of unreferral attendances which were bulk billed and provided by nonspecialist medical practitioners divided by the total number of unreferral attendances
Nonspecialist medical practitioners by region	Number of full-time workload equivalent nonspecialist medical practitioners practising in capital cities, other metropolitan centres and rural/remote areas, divided by the total number of FWE nonspecialists
Proportion of GPs who are female	Number of all full time workload equivalent GPs who are female divided by the total number of full time workload equivalent GPs
Cost to government per unreferral attendance	Cost to the Commonwealth Government of total unreferral attendances by nonspecialist medical practitioners per 1000 population.

6 Health management issues

Some fundamental changes have taken place in the Australian health care system in recent years. Policy makers are seeking alternative service delivery settings and a more coordinated approach to managing health problems. The growing interest in preventative care, for example, has given prominence to community based health services. The ability of governments to improve particular health outcomes is maximised when health care providers integrate their prevention/early detection and intervention services. Measuring the management of a health problem involves measuring the performance of service providers and the management of prevention/early detection and intervention programs.

The issues discussed in this chapter relate to breast cancer management strategies and mental illness management. Each has a broad ranging public health focus and involves a variety of services (prevention/early detection and intervention) available in a range of settings (public acute care hospitals, community health services and general practice) (box 6.1). Cancer control and mental health are identified by governments as National Health Priority Areas, along with diabetes mellitus, cardiovascular health, injury prevention and control and asthma. These areas represent a significant proportion of the burden of illness in Australia, and their management offers considerable scope for reducing this burden (AIHW 1998a).

Chapter 6 provides descriptive information for each health management issue (section 6.1), a discussion of the framework of performance indicators for each area (section 6.2), the key performance results (section 6.3) and the future directions in performance reporting in these areas (section 6.4). The chapter also includes comments from each jurisdiction on their performance in managing breast cancer and mental illness (section 6.5).

Performance data are presented for these health issues for the second time in this Report. The data for breast cancer management covers selected performance measures that monitor the effectiveness of BreastScreen Australia and the effectiveness of breast cancer control generally. The data for mental illness cover aspects of both the efficiency and effectiveness of health care services provided to treat mental illness.

Box 6.1 **Some common health terms used in this chapter**

Affective disorder: a mood disturbance that includes mania, hypomania and depression

Ambulatory care: services provided by hospitals to non-admitted patients

Anxiety disorder: represented by feelings of tension, distress or nervousness. Includes agoraphobia, social phobia, panic disorder, generalised anxiety disorder, obsessive-compulsive disorder and post traumatic stress disorder

Community health services: health services for individuals and groups delivered in a community setting, rather than in hospitals or in private facilities

General practice: a medical practice that offers primary, continuing, comprehensive, whole-person care for individuals, families and the community

Health management: the ongoing process beginning with initial client contact and including all actions relating to the client. Included are assessment/evaluation, education of the person, family or carer(s), diagnosis and treatment. Problems associated with adherence to treatment and liaison with or referral to other agencies are also included

Incidence rate: the proportion of the population suffering from a disorder or illness for the first time during a given period (often expressed as per 100 000 persons)

Invasive cancer: a tumour whose cells invade healthy or normal tissue

Mental disorder: a diagnosable illness that significantly interferes with an individual's cognitive, emotional or social abilities

Mental health: 'the capacity of individuals within groups and the environment to interact with one another in ways that promote subjective wellbeing, optimal development and use of mental abilities (cognitive, affective and relational) and achievement of individual and collective goals consistent with justice' (DHAC 1999)

Mental health prevention: 'interventions that occur before the initial onset of a disorder' (DHAC 1999a)

Mental health problem: a disruption in the interactions between the individual, the group and the environment, producing a diminished state of mental health

Mental health promotion: 'focuses on improving environments (social, physical, economic) which affect mental health and enhancing the 'coping' capacity of communities as well as individuals' (DHAC 1999a)

Prevalence: the number of cases of a disease present in a population at a given time (point prevalence) or during a given period (period prevalence)

Screening: the performance of tests on apparently well people to detect a medical condition at an earlier stage than would otherwise be the case

6.1 Profile of health management

Breast cancer and mental illness are significant causes of morbidity and mortality in Australia, so appropriate management of these illnesses will have a large effect on the health and wellbeing of many Australians. Both are the subjects of public health campaigns designed to improve community awareness (box 6.2). Their treatment also requires public acute care hospital services, community health services and general practice services. (The public acute care hospital and general practice components of the health care system are discussed in chapters 4 and 5 respectively).

Breast cancer management

Breast cancer was the most common cancer affecting Australian women in 1996, with over 9500 new cases diagnosed in that year (AIHW 1999b). It was also responsible for 2542 deaths in 1998, making it the most common cause of cancer deaths among females (ABS 1999).

The risk of a woman developing breast cancer before the age of 75 years is 1 in 12 in Australia. The major risk factors for breast cancer are age (breast cancer rates typically increase with age from the third decade), family history of breast cancer, long duration of menstrual life, late first birth and low parity (number of children) (AIHW 1999a). However, known risk factors explain only one-third of all breast cancers. Age is the best indicator of risk, with women over the age of 50 years accounting for almost three quarters of all new cases.

Breast cancer is not amenable to practical prevention, so the focus of breast cancer control is on screening and early detection. Cancers detected early may be treated more conservatively, and patients generally have a higher likelihood of recovery. Because age is the most significant risk factor, the joint Commonwealth/State BreastScreen program targets women aged 50–69 years, although women aged 40–49 years and over 70 years may also use the service. The program aimed to achieve a participation rate of 70 per cent among women aged 50–69 years by 1999.

More than 109 000 new cases of breast cancer were diagnosed in women in Australia between 1982–96. This represented an average annual growth rate of 4.5 per cent. The number of new cases per year increased steadily from (7943) in 1992 to 1995 (9951) then fell in 1996 to (9556) (figure 6.1).

Box 6.2 Public and community health

Public health is defined as the organised social response to protect and promote health and to prevent illness, injury and disability. The starting point for identifying public health issues, problems and priorities, and for designing and implementing interventions, is the population as a whole or population subgroups. All jurisdictions perform public health services or undertake programs to enhance the health of the population. Activities provided and classified as public health are grouped under four headings:

- promotion of health (for example, public campaigns designed to improve nutrition);
- protection against hazards (for example, surveillance of food premises and control of water and air quality through legislation or regulation);
- prevention and early detection of illness (for example, child immunisation and breast and cervical cancer screening services); and
- provision of health services (for example, school dental services and drug and alcohol treatment services).

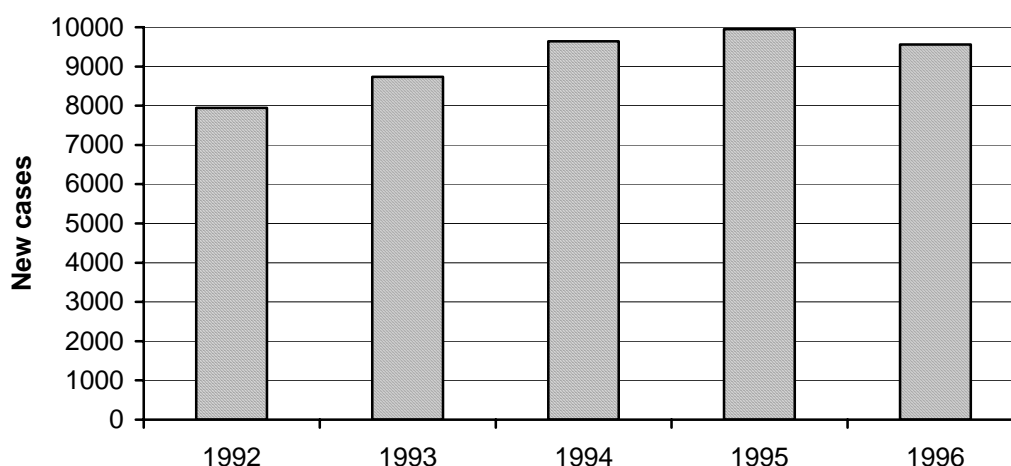
Promotion and protection activities are often referred to as population public health activities because they are delivered to populations rather than individuals. Prevention and provision activities are termed 'public health personal clinical activities'.

This Report focuses on public health activities related to promotion, prevention and provision activities. (Most protection activities are not the responsibility of health care providers and therefore are not included in the analysis.) Public health efforts currently target communicable diseases (such as HIV/AIDs and tuberculosis), childhood immunisation, asthma, oral health, nutrition and risk factors for disease.

Many public health activities are delivered by a range of health care providers — general practitioners, public hospitals and community health services. General practitioners and public acute care hospitals provide a range of services in addition to these public health services, whereas community health services concentrate on health promotion, early detection of health problems, and the assessment and care of health problems. Community health care services are diverse by nature, incorporating a range of service providers (dietitians, community nurses, psychologists and so on). This multidisciplinary approach makes it difficult to attribute health outcomes to a particular service or provider.

Sources: AIHW (1998a); Fry (1994); NPHP (1997).

Figure 6.1 Number of new cases of breast cancer, across Australia



Source: AIHW (1999b).

Between 1982 and 1996, the average annual growth rate in the incidence (number of new cases) of breast cancer among women aged 40–49 years was 5.5 per cent and 4.4 per cent among women aged 50–69. For women in the age group 15–39 years, the average annual growth rate was 2 per cent for the same period.

The age-standardised incidence rates of breast cancer from 1982–86 to 1992–96 are shown in table 6.1. The incidence of breast cancer among women aged between 15 and 39 years remained relatively stable between 1987 and 1996, but continued to rise for each of the older age groups.

Table 6.1 Age-standardised incidence rates of breast cancer per 100 000 woman years in Australia ^{a, b}

Age group	1982-86	1987-91	1992-96
15-39 years	16.6 (16.0-17.3)	17.9 (17.2-18.5)	17.8 (17.2-18.5)
40-49 years	119.2 (115.9-122.5)	134.8 (131.6-137.9)	146.3 (143.3-149.3)
50-69 years	179.7 (176.6-182.9)	211.9 (208.5-215.2)	264.8 (261.1-269.4)
70+ years	254.9 (249.3-260.5)	282.7 (261.1-268.4)	304.4 (299.1-309.8)

^a Age-standardised rates are expressed per 100 000 woman years, and are age-standardised to the Australian 1991 Population Standard. ^b Data in brackets are 95 per cent confidence intervals.

Source: AIHW (1999b).

Mental health management

Mental disorders refer to a group of problems such as depression, bipolar disorder, eating disorders (anorexia and bulimia), anxiety, phobias, schizophrenia and other psychoses, dual diagnosis (problematic alcohol and drug abuse in addition to a mental disorder) and personality disorders. There is evidence that some people may be predisposed to mental disorders such as schizophrenia. Factors such as stress, bereavement, relationship breakdown, child abuse, unemployment and social isolation can also contribute to the onset of mental disorders (DHAC 1999a).

The results from the first component of the National Survey of Mental Health and Wellbeing (ABS 1997) found that almost one in five Australians had an anxiety, affective or substance use disorder (or more than one of these disorders) during the 12 months prior to the survey. However, this figure underestimates the prevalence of all mental disorders among Australian adults, mainly because it excludes mental disorders such as schizophrenia, dementia and the personality and somatoform disorders. These disorders are estimated to add approximately 3 per cent to the overall prevalence of mental disorders.

Of the nearly 18 per cent of people suffering from a mental disorder, only 38 per cent contacted a health service for their problem and 50 per cent of this group saw a mental health professional. General practitioners were the main service providers, seeing 29 per cent of those people with a mental disorder who contacted a health service because of their mental health problem. These data suggest that almost two thirds of Australians with a mental disorder do not receive any form of treatment.

The episodes of mental disorders experienced may be mild or temporary for some people, but severe or prolonged for others. Some people recover spontaneously, although the majority requires some form of treatment (such as counselling and/or pharmacotherapy). Most requiring treatment recover fully; only a small number of people experience long periods of distress and disability (DHAC 1999a).

The National Survey of Mental Health and Wellbeing found that the prevalence of mental disorders differed between males and females although this difference was not large. Females were more likely to suffer from anxiety disorders (12 per cent) and males were more likely to suffer from substance use disorders (11 per cent) (table 6.2).

Table 6.2 Prevalence of mental disorders in all Australian adult men and women, 1997

<i>Mental disorder</i>	<i>No. of affected persons</i>		<i>Proportion of population affected</i>	
	<i>Males</i>	<i>Females</i>	<i>Males</i>	<i>Females</i>
	<i>no.</i>	<i>no.</i>	<i>per cent</i>	<i>per cent</i>
Any affective disorder	275 300	503 300	4.2	7.4
Any anxiety disorder	470 400	829 600	7.1	12.0
Any substance use disorder	734 300	307 500	11.1	4.5
Total	1 151 600	1 231 500	17.4	18.0

Source: DHAC (1999c).

The World Health Organisation and the World Bank have identified that the burden of mental illness, while responsible for little more than 1 per cent of all deaths, accounts for almost 11 per cent of the disease burden worldwide. It has been estimated that depression alone will constitute one of the greatest health problems worldwide by 2020 (Murray and Lopez 1996).

Commonwealth and State and Territory governments recognised the importance of mental health (in terms of its effect on both quality of life and the total health care budget) by launching the National Mental Health Strategy in April 1992. The aim of the strategy was to set directions for the reform of Australia's mental health services. It also established a collaborative framework to assist the State, Territory and the Commonwealth governments in pursuing these directions.

The extension of the strategy for a further five years (1998–2003) has been accompanied by a Second National Health Mental Plan, which was endorsed in July 1998 (box 6.3). The plan provides a framework for a coordinated national approach to mental health service and policy reform within which all jurisdictions will work. It includes policy objectives and service delivery plans provided by the Commonwealth and State and Territory governments. The focus of the plan is consistent with the need to consider mental health reform within the broader health reform context. The plan retains the national policy framework outlined in the National Mental Health Policy, builds on achievements to date, and identifies further priority areas for reform within three key areas.

Box 6.3 **The Second National Mental Health Plan**

The Second National Mental Health Plan is a joint statement by the health ministers of the Commonwealth, State and Territory governments of Australia. The five-year plan commenced on 1 July 1998 and will end on 30 June 2003.

The aim of the second plan is to build on the achievements of the first National Mental Health Plan by identifying additional areas for national activity. It will also provide the future framework for policy development and activity in mental health service reform.

The second plan targets three additional areas for reform: They are:

- *promotion and prevention*, including mental health promotion, community education, prevention of mental disorder and early intervention;
- *partnerships in service reform*, recognising that specialised mental health services can only meet some of the needs of people with mental disorders; and
- *quality and effectiveness*, which focuses on the quality and effectiveness of mental health services, with particular emphasis on improved consumer outcomes across the lifespan of the plan.

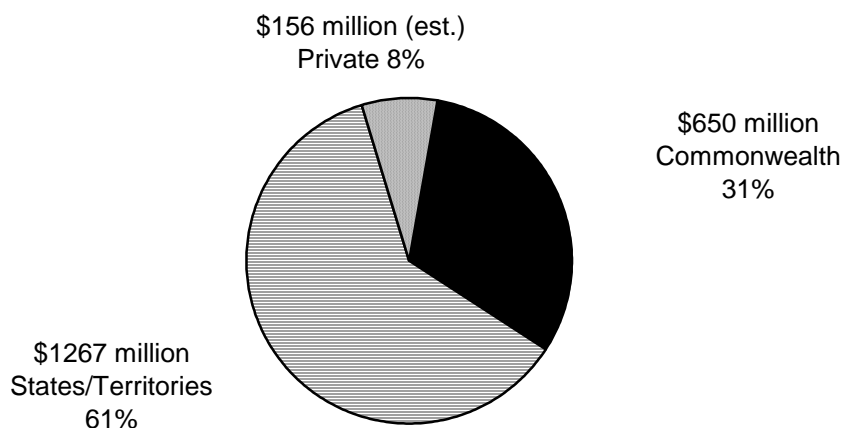
The plan clarifies Commonwealth, State and Territory government roles and responsibilities as a basis for a national approach to mental health reform. It also provides an agreed nationally consistent framework for future activity at all levels of government.

Source: DHFS (1998b).

The analysis of expenditure on mental health services is limited because the scope of the expenditure data only covers the provision of ‘specialised mental health services’, and thus understates total health expenditure. Expenditure estimates exclude services such as general hospital and medical services, and general community support programs. For example, expenditure on mental health services excludes the treatment of a patient for depression who was admitted to a general ward of a hospital. Further, the focus is on recurrent expenditure only, and fails to take account of capital costs.

Targeted spending on mental health and related services was \$2074 million in 1996-97. Of the 1996-97 expenditure, State and Territory governments contributed \$1267 million (61 per cent of targeted spending on mental health), the Commonwealth Government contributed \$650 million (31 per cent), and \$156 million (8 per cent) was privately funded (figure 6.2).

Figure 6.2 **Distribution of recurrent expenditure on mental health services, 1996-97**

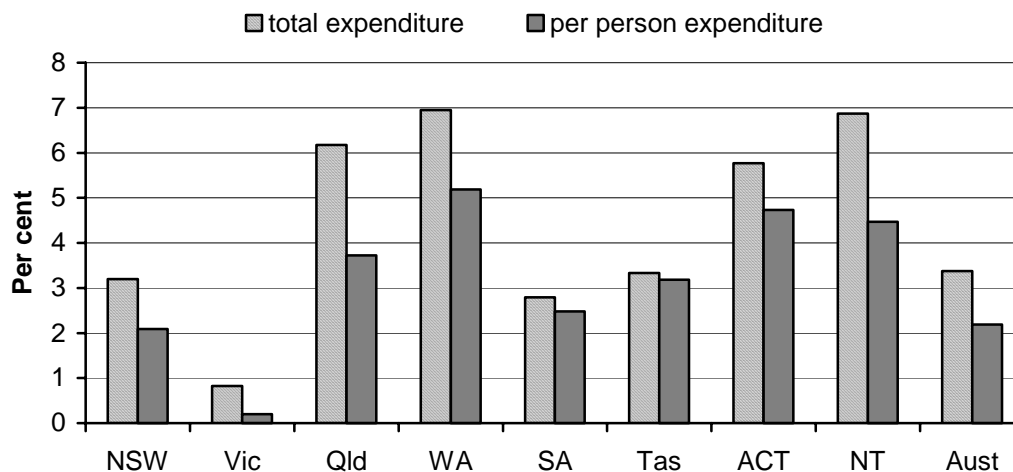


Source: table 6A.31.

Targeted funding for mental health services increased by an average of 5.7 per cent per year (in 1996-97 dollars) between 1992-93 and 1996-97 across Australia. The largest increase came from the Commonwealth Government, whose expenditure rose by nearly \$213 million (10.4 per cent per year). Private health insurance funding of private hospitals rose by \$42.8 million (8.3 per cent per year), while total expenditure by State and Territory governments rose by \$157.5 million (3.4 per cent per year). The average annual growth rate in recurrent expenditure across jurisdictions was highest in WA, the NT and Queensland (6.9 per cent, 6.9 per cent and 6.2 per cent respectively) and lowest in Victoria (0.8 per cent) in real terms over this period (figure 6.3).

In contrast, per capita mental health expenditure has grown relatively slower than total expenditure. The average annual growth rate of targeted expenditure per person on mental health services was 2.2 per cent per year (in 1996-97 dollars) across Australia between 1992-93 and 1996-97. The highest average annual growth rate for the same period was in WA (5.2 per cent), with both the ACT and the NT recording 4.7 per cent and 4.5 per cent respectively (figure 6.4). Victoria had the lowest average annual growth rate. However, in absolute terms, per person expenditure on mental health services remained at a consistently high level in Victoria. Across jurisdictions, WA had the highest per person expenditure (\$78.10) in 1996-97 and Queensland had the lowest (\$61.80) (figure 6.4).

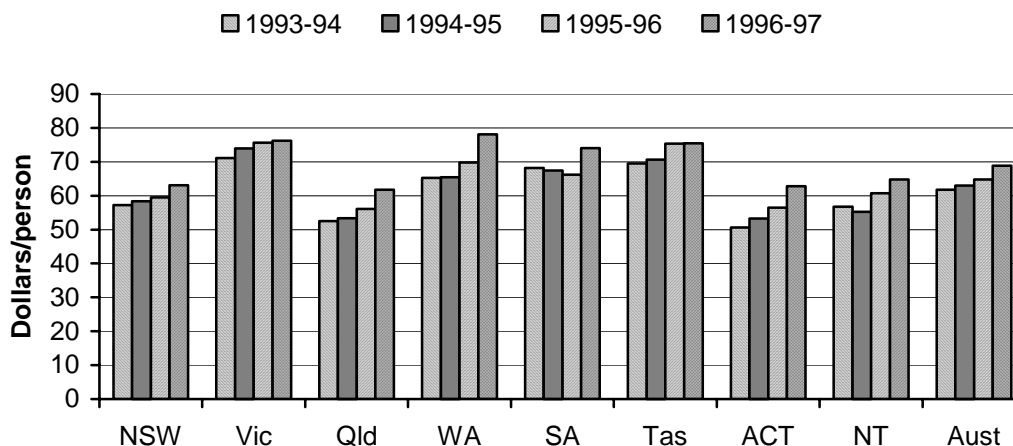
Figure 6.3 Average annual growth rate in recurrent expenditure by jurisdiction, 1992-93 to 1996-97^a



^a In 1996-97 dollars.

Sources: table 6A.33.

Figure 6.4 Average targeted real expenditure on mental health services^a



^a In 1996-97 dollars.

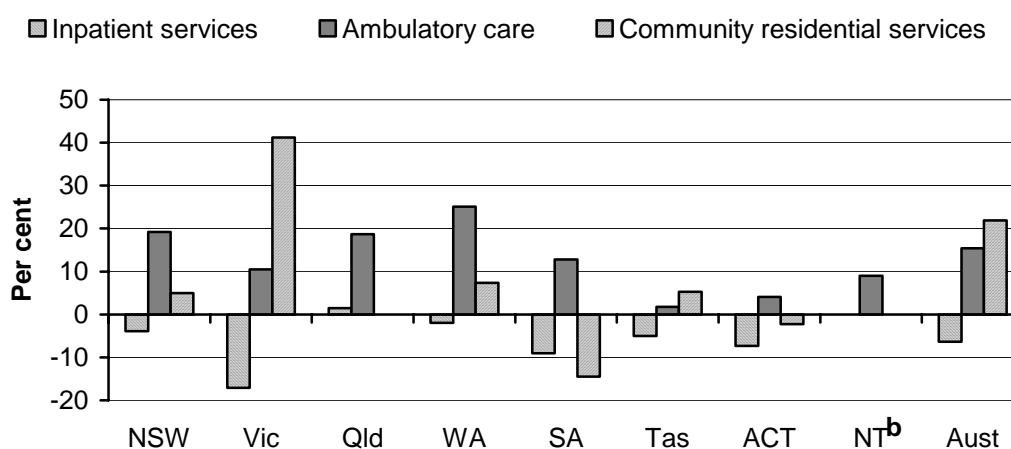
Source: table 6A.34.

Nearly 19 000 full time equivalent staff were estimated to be employed in public mental health services in 1996-97, of whom 59 per cent worked in inpatient facilities (psychiatric hospitals and general hospitals). Nursing and related occupations accounted for 53 per cent of the total workforce, while medical,

diagnostic and allied health, and administrative/domestic staff comprised 8 per cent, 15 per cent and 20 per cent respectively (DHAC 1999a).

The overall size of the workforce did not change substantially between 1993-94 and 1996-97. However, there were some important changes in composition. The average growth rate per year of full time equivalent staff working in ambulatory care settings and community residential services rose by 15 per cent and 22 per cent respectively, while there was a decrease of 6 per cent per year in the number of staff employed in inpatient facilities. Across jurisdictions, staff composition across service settings changed most noticeably in Victoria, where there was an average annual increase of 41 per cent in full time staff employed in community residential services and a decrease of 17 per cent for those working in inpatient services. These trends reflect the major structural reform which has taken place under the National Mental Health Strategy since its inception (figure 6.5).

Figure 6.5 **Average annual growth rate in the number of full time equivalent staff employed in specialist mental health services, by service setting and jurisdiction^a, 1993-94 to 1996-97**



^a Community residential services are not provided in Queensland and the NT. ^b The annual growth rate in staff employed in inpatient services is zero.

Source: table 6A.35.

6.2 Framework of performance indicators

The 'Health preface' outlines the complexities of reporting on the performance of the health system in meeting its objectives. This Report breaks the health system into smaller components and reports on their performance (see figure C.4 in the 'Health preface'). Frameworks for public hospitals and general practitioners report

the performance of particular service delivery mechanisms. The appropriateness of the mix of services (prevention versus intervention) and the appropriateness of the mix of delivery mechanisms (hospital based versus community based) are indicated in this chapter.

The framework for breast cancer management focuses on achieving a balance between early detection of the disease and intervention. Thus the performance indicators developed relate to early detection, intervention and overall performance. A similar approach is adopted for emergency management services (see chapter 10).

The distinction between prevention and intervention is more difficult for mental illness. Preventing the onset of mental illness is challenging primarily because individual disorders have many origins. Most efforts have been directed at treating mental illness when it occurs and, in particular, at determining the most appropriate setting for providing treatment. Thus, the mental illness indicators focus on aspects of service delivery by different providers. However, the Second National Mental Health Plan places considerable emphasis on promoting and preventing mental illness. The Mental Health Promotion and Prevention National Action Plan has been drawn up specifically to meet the prevention and promotion priorities and outcomes outlined in the second plan. Indicators representing these components of mental illness management will be developed for future Reports.

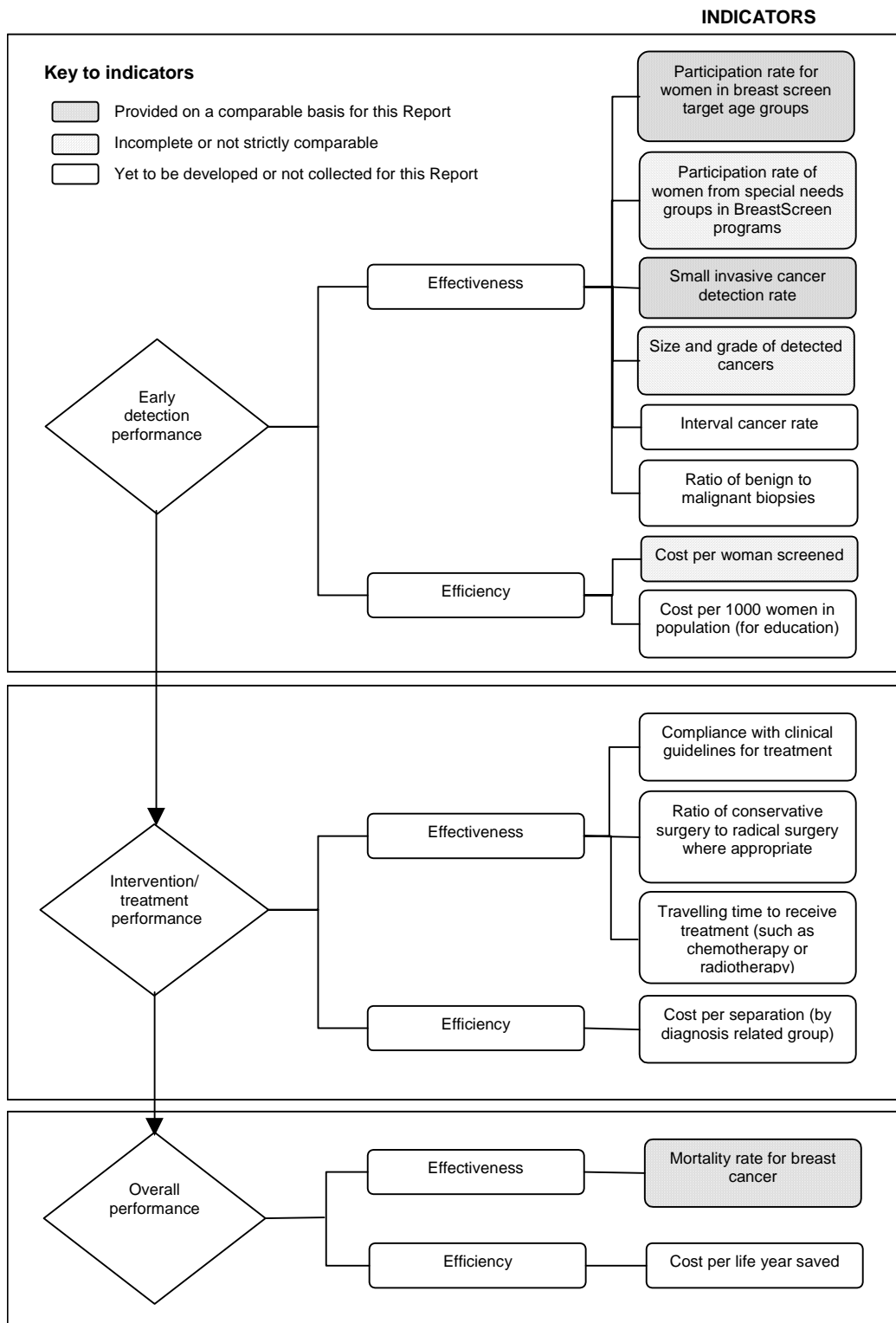
Breast cancer management

The measures developed to report on the performance of breast cancer management are based on the shared government objective for managing the disease (box 6.4). These measures are indicators of the performance of the program to undertake early detection of breast cancer through an organised public health initiative, and of the treatment of breast cancer in public acute care hospitals (figure 6.6). The framework includes indicators of performance related to age-specific mortality rates for breast cancer and combined expenditure on early detection and treatment per episode of illness, as well as indicators of the performance of early detection and intervention strategies.

Box 6.4 Objective for breast cancer management

The objective for breast cancer management is to provide an effective balance of early detection and treatment services with a view to reducing morbidity and mortality in a manner that is equitable and efficient.

Figure 6.6 Performance indicators for breast cancer management



The BreastScreen Australia program aims to detect breast cancer early through organised breast screening services, primarily targeted at women aged 50 to 69 years. If breast cancer is detected early, while still localised in the breast, chances of

five-year survival are around 90 per cent; the survival rate drops to 18 per cent if the tumour has spread to other parts of the body (NBCC 1999). The size and grade of detected cancers reflect the effectiveness of early detection programs. Other effectiveness indicators, such as the participation rate of women in screening and the small cancer detection rate, are specific to breast cancer screening programs. The two efficiency indicators for early detection programs are the cost per woman screened and the cost of education programs per 1000 women in the population.

Effectiveness indicators for treatment focus on appropriateness (general practitioner and surgeon compliance with clinical practice guidelines for the management of early and advanced breast cancer, and the ratio of conservative surgery to radical surgery), and access (travelling time for radiotherapy and/or chemotherapy).

Some data on the effectiveness of breast cancer screening services, such as the participation rate of women in the target age group in breast screening programs and the small cancer detection rate, are presented in this Report for the second year. Data on the overall effectiveness of breast cancer management, as indicated by mortality rates from breast cancer, are also presented for the second time.

Other effectiveness indicators are being reported for the first time. These include the size and grade of detected cancers, and the participation rates of Indigenous women and those from culturally and linguistically diverse backgrounds. Data on these indicators have been sourced from jurisdictions directly, and in the absence of validation, are not strictly comparable.

Efficiency data on the cost per woman screened are presented for the first time. Data have been sourced from jurisdictions and are not strictly comparable as the reporting period is not yet uniform across all jurisdictions.

Data collection for some of the other indicators (such as the ratio of benign to malignant biopsies, cost of education programs per 1000 women in the population, and cost per separation for treatment services) is hampered by conceptual and practical issues with data definitions and identifying data items. These issues will be addressed for future Reports, thus the indicators may change over time as better ones are developed. The framework can also be expected to evolve as the focus of and objectives for breast cancer management change.

Mental health

The framework of performance indicators for mental health services builds on governments' objectives for mental health service delivery (box 6.5) as encompassed in the National Mental Health Strategy. The framework reports on the

effectiveness (in terms of quality, appropriateness, access and outcomes) and efficiency (in terms of unit cost) of mental health services (figure 6.7). It covers a number of service delivery types (institutional and community based services) and indicators of systemwide performance.

Box 6.5 Objectives for mental health service delivery

Key objectives include:

- to promote the mental health of the Australian community;
- to prevent, where possible, the development of mental health problems and mental disorders;
- to reduce the impact of mental disorders on individuals, families and the community;
- to assure the rights of people with mental disorders;
- to encourage partnerships between service providers; and
- to improve the quality of service delivery.

Governments also aim to provide services in an equitable and efficient manner.

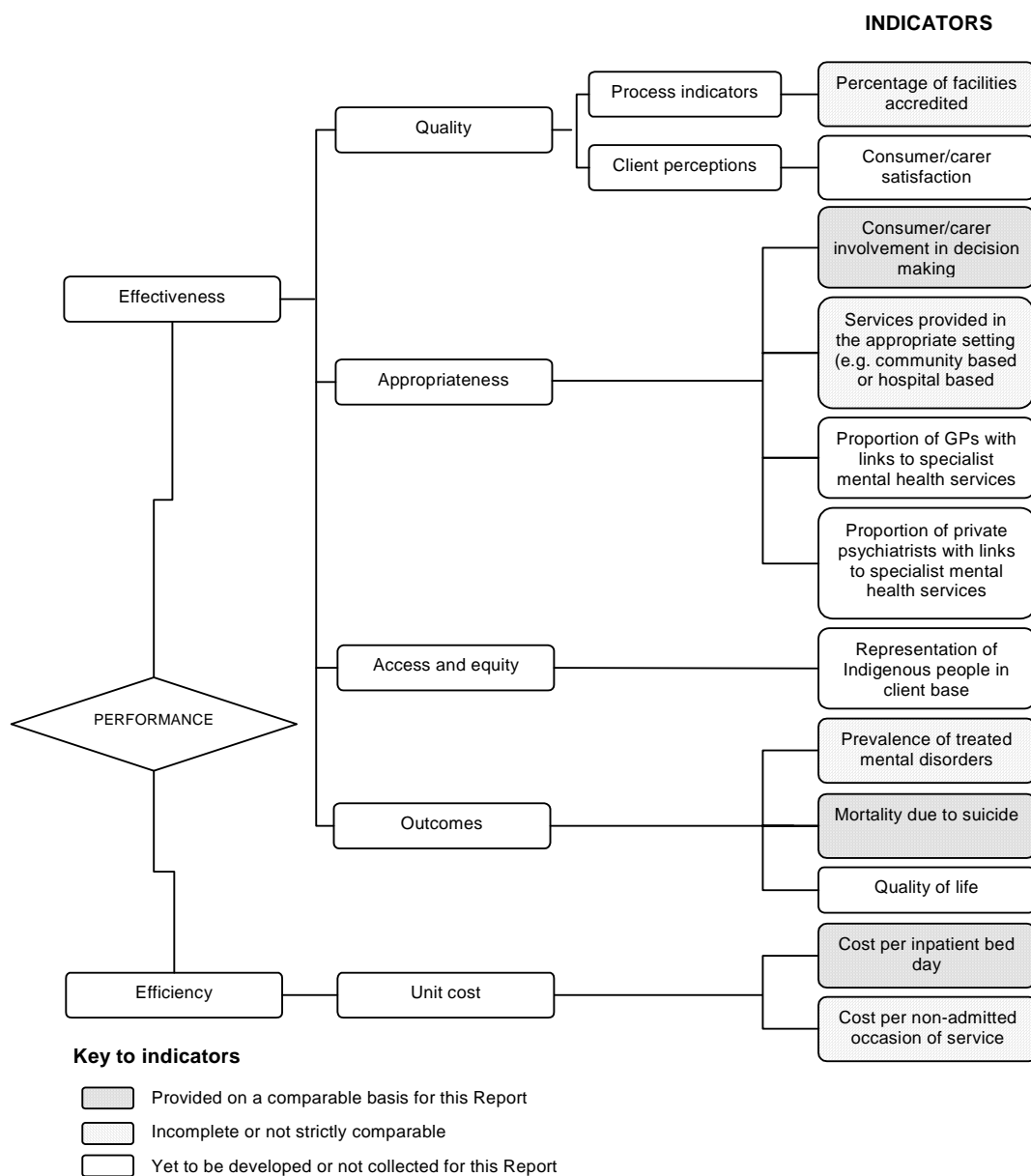
Source: DHFS (1998b); DHAC (1999a).

The prevalence of mental disorders in the general population and the mortality rate from suicide (both indicators of outcomes of mental health services) reflect two goals of the National Mental Health Strategy: to promote the mental health of the Australian community, and where possible, to prevent the development of mental health problems. The quality of life outcome indicator, which has still to be developed, provides some information on the ability of mental health services to reduce the effect of mental illness on individuals, families and the community. It is important to note that these outcome indicators may be influenced by a range of factors in addition to mental health care services; for example, social and disability support, education and employment are all likely to have an effect on the prevalence of mental illness and the number of deaths from suicide.

The percentage of accredited facilities delivering mental health services to people with a mental health problem is used as a process indicator of quality. Some data are available and are being reported for the first time this year.

Consumer/carer involvement in decision making is an appropriateness indicator, which reflects the National Mental Health Strategy's aim to assure the rights of people with mental disorders, and to focus on improving the outcomes for consumers.

Figure 6.7 Performance indicators for mental health services



A number of other effectiveness indicators are included in the framework. For example, the extent to which mental health services are offered as part of mainstream health care services, quality imperatives (the proportion of facilities accredited and consumer/carer satisfaction) and access and equity (the representation in the client base of special needs groups, such as Indigenous people and those from culturally and linguistically diverse backgrounds, and people in rural and remote areas. The efficiency of mental health services is indicated by the cost per bed day for inpatient services and the cost per non-admitted occasion of service for outpatient and community based services.

Reporting requirements under the National Mental Health Strategy mean that some performance data for mental health services are already available. This Report presents data on some aspects of the effectiveness of mental health services (consumer/carer involvement in decision making, the appropriateness of care setting, the prevalence of mental disease in the general population, mortality rates from suicide) and the efficiency of institutional services (cost per inpatient bed day).

Ongoing work to provide a more comprehensive set of performance indicators and to improve existing indicators and the data, is discussed in section 6.4.

6.3 Key performance indicator results

Breast cancer management – Early detection

Participation rates of women in the target age group

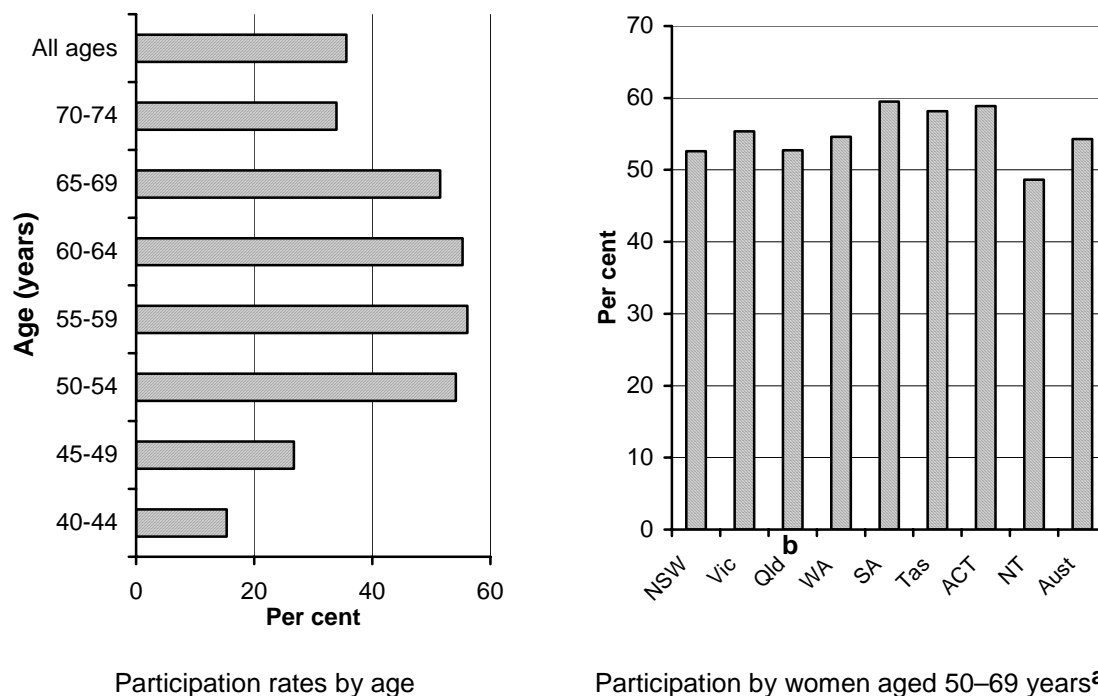
The aim of BreastScreen Australia is to screen 70 per cent of women aged 50–69 years, regularly at two-yearly intervals. The participation of women in the target age group in breast cancer screening is an indicator of the effectiveness of early detection programs (figure 6.8). Fifty-four per cent of all women in this age group participated in the program in 1997 and 1998, along with 26.7 per cent of women aged 45–49 years and 33.9 per cent of women aged 70–74 years.

Age standardised participation rates varied within the target age group (50–69 years) in 1997 and 1998. Women aged 55–59 years were most actively involved in breast screening (with 56.1 per cent participating in the BreastScreen Australia program), whereas women in the 65–69 age group had the lowest participation rate (51.5 per cent). Participation of women in the target age group was highest in SA (59.5 per cent of women aged 50–69 years), followed by ACT (58.9 per cent). By contrast, the NT recorded the lowest participation rates in the target group (48.6 per cent).

Participation rates of women from special needs groups in breast screen programs

The participation rate of Indigenous women and women from culturally and linguistically diverse backgrounds in breast cancer screening is another indicator of the effectiveness of early detection programs. Data on this indicator are being presented for the first time in this Report. However, the data for jurisdictions are not comparable as different time periods for screening have been reported.

Figure 6.8 Participation rates of women in BreastScreen Australia, 1997 and 1998



^a Rates are age standardised to the Australian 1991 population. ^b Only five of the 11 BreastScreen services were in operation five or more years.

Source: table 6A.1.

Jurisdictions reported the following results:

- NSW reported that in 1998-99, 18 per cent of Indigenous women and 23 per cent of women from culturally and linguistically diverse backgrounds, in the target age group 50–69, were screened (table 6A.5);
- Victorian data for the 1997 calendar year indicated that 36 per cent of Indigenous women and 52 per cent of women from culturally and linguistically diverse backgrounds, in the target age group 50–69, were screened (table 6A.7);
- Queensland and WA reported that in 1997-98, the participation rates for Indigenous women in the target age group 50–69 years were 46 per cent and 36 per cent respectively. For women from culturally and linguistically diverse backgrounds in the target age group 50–69 years, the participation rates were 61 per cent and 47 per cent respectively (tables 6A.11 and 6A.15). Queensland anticipates that, with the establishment in 1999 of a relocatable service that travels to the far north of the State, the participation rate of Indigenous women in breast screening services will increase;
- SA reported that 42 per cent of Indigenous women and 53 per cent of women from culturally and linguistically diverse backgrounds, in the target age group

50–69, were screened in the 24 month period to 31 December 1998 (table 6A.20);

- Tasmania reported that in the period 1 April 1994 to 30 June 1999, 39 per cent of Indigenous women and 53 per cent of women from culturally and linguistically diverse backgrounds, in the target age group 50–69, were screened (table 6A.23);
- the ACT reported that in the period 1 April 1997 to 30 June 1999, 50 per cent of Indigenous women and 71 per cent of women from culturally and linguistically diverse backgrounds, in the target age group 50–69, were screened (table 6A.26);
- the NT reported that from 1 October 1996 to 31 December 1998, 57 per cent of Indigenous women and 70 per cent of women from culturally and linguistically diverse backgrounds, in the target age group 50–69, were screened (table 6A.29).

Small invasive cancer detection rate

The small invasive cancer detection rate is also an indicator of the effectiveness of early detection programs for breast cancer. The BreastScreen Australia National Accreditation Requirements standard is that more than eight invasive cancers per 10 000 women screened have a diameter of 10 millimetres or less. Small cancers (those with a diameter less than or equal to 10 millimetres) are generally associated with increased survival rates and reduced morbidity and mortality, thus are less expensive to manage. Women with small cancers are less likely than women with larger tumours to require a mastectomy (AIHW 1998b).

The rate of small cancers detected, under the BreastScreen Australia screening and assessment services in 1998, was unavailable for NSW and consequently national totals have not been presented. However, data from other jurisdictions showed that the age standardised rate of small cancers detected over all age groups was highest in Tasmania (32.2 for every 10 000 women screened) and lowest in the ACT (10.4 per 10 000 women screened (table 6.3).

There was significant variation in the age standardised small cancer detection rate within the target age group (50 - 69 years) across jurisdictions in 1998. The rate of small invasive cancers detected per 10 000 women was highest in Tasmania (22.3 for every 10 000 women screened), compared with 13.4 in Queensland and 15.1 in SA (table 6.3).

**Table 6.3 Detection rate of small diameter, invasive breast cancers, 1998
(number per 10 000 women screened)**

<i>Women aged</i>	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
40-44	na	1.5	4.8	0.0	2.9	0.0	10.5	0.0	na
45-49	na	10.3	5.7	5.5	5.6	5.8	0.0	14.3	na
50-54	na	13.2	10.1	9.1	11.1	22.1	16.8	8.3	na
55-59	na	15.2	10.3	18.2	14.3	10.8	24.0	15.9	na
60-64	na	24.2	18.8	18.3	19.7	29.2	14.0	59.0	na
65-69	na	22.2	15.1	31.5	15.9	27.3	19.1	0.0	na
70-74	na	28.3	35.8	20.9	30.1	0.0	0.0	0.0	na
75-79	na	28.7	36.4	31.8	25.0	94.6	0.0	344.8	na
80-84	na	64.7	30.6	84.0	129.4	0.0	0.0	0.0	na
85+	na	0.0	101.3	0.0	0.0	666.7	0.0	0.0	na
All ages ^a	na	16.4	16.3	15.7	16.6	32.2	10.4	31.8	na
50-69 ^a	na	18.4	13.4	18.7	15.1	22.3	18.4	20.8	na

^a Age standardised to the Australian 1991 population.

Source: table 6A.2.

Size and grade of detected cancers

The size and grade of detected invasive cancers is also an indicator of the effectiveness of early detection programs for breast cancer. The tumour grade describes the degree of similarity of the cancer cells to normal cells. The degree of differentiation of the cancer indicates the prognosis of the disease. For example, a well-differentiated cancer is associated with a good prognosis and those which are moderately differentiated are associated with an intermediate prognosis. Data on this indicator are being presented for the first time in the 2000 Report. Most jurisdictions were able to supply data and the results are as follows:

- Victoria reported that in 1997, 40 per cent of cancers which were 10mm or less in diameter were found to be well differentiated, while nearly 21 per cent of this group were poorly differentiated. For cancers 11-15mm in diameter, the majority (48 per cent) were moderately differentiated (table 6A.8);
- Queensland reported that in 1998, 43 per cent of cancers which were 10mm or less in diameter were found to be well differentiated, while nearly 18 per cent of this group were poorly differentiated. For cancers 11-15mm in diameter, the majority (51 per cent) were moderately differentiated (table 6A.13);
- WA reported that from January 1996 to December 1998, 50 per cent of cancers which were 10mm or less in diameter were found to be well differentiated, while 9 per cent of this group were poorly differentiated. For cancers 11-15mm in diameter, the majority (46 per cent) were well differentiated (table 6A.17);

-
- SA reported that in 1998, 56 per cent of cancers which were 10mm or less in diameter were found to be well differentiated, while nearly 7 per cent of this group were poorly differentiated. For cancers 11-15mm in diameter, the majority (48 per cent) were well differentiated (table 6A.21);
 - Tasmania reported that in 1998, 40 per cent of cancers which were 10mm or less in diameter were found to be well differentiated, while 17 per cent of this group were poorly differentiated. For cancers 11-15mm in diameter, the majority (55 per cent) were moderately differentiated (table 6A.24); and
 - the ACT reported that in 1998, 54 per cent of cancers which were 10mm or less in diameter were found to be well differentiated, while 8 per cent of this group were poorly differentiated. For cancers 11-15mm in diameter, the majority (50 per cent) were moderately differentiated (table 6A.27).

Cost per woman screened

The cost per woman screened is an efficiency indicator for the prevention and early detection of breast cancer. It measures the total cost per woman screened of providing the BreastScreen program. Costs include screen taking, reading X-rays, assessment, recruitment, data collection and service management, in addition to the cost of providing the service to women. Data on this indicator are being reported for the first time in the 2000 Report. The results presented are not yet strictly comparable, and further work will be required to improve the data.

Jurisdictions reported the following results:

- NSW reported that for 1998-99, the cost per woman screened, including capital expenditure was \$91 and excluding capital expenditure was \$87 (table 6A.6);
- Victoria reported that for 1997, the cost per woman screened in rural areas was \$112 and in urban areas \$90 (table 6A.10);
- Queensland and WA reported that for 1998-99, the cost per woman screened was \$108 and \$94 respectively (table 6A.14 and table 6A.19);
- SA and Tasmania reported that for 1997-98, the cost per woman screened was \$97 and \$115 respectively (table 6A.22 and table 6A.25);
- the ACT reported that for 1997-98, the cost per woman screened was \$116 (table 6A.28); and
- the NT reported that for 1998-99, the cost per woman screened was \$235 (table 6A.30).

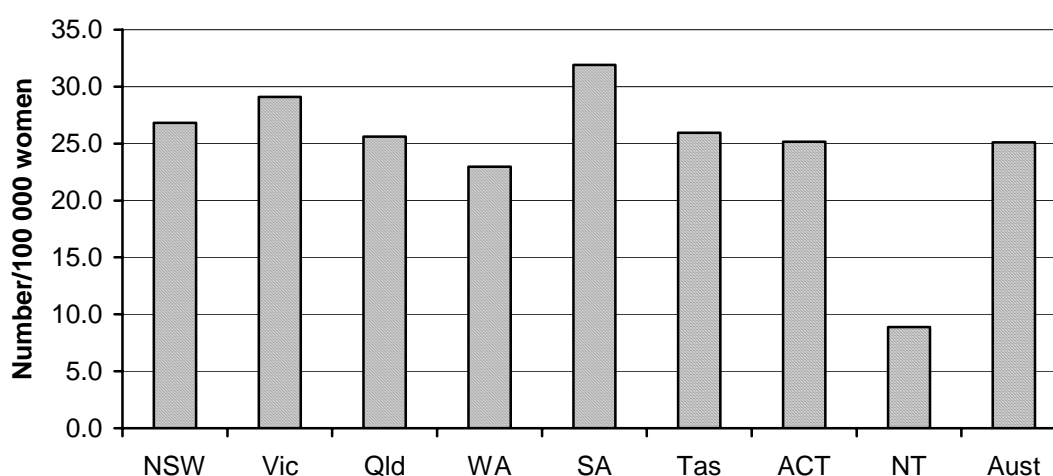
Breast cancer management – Overall performance

Mortality rate for breast cancer

The number of women dying from breast cancer and age-specific mortality rates partly indicate the effectiveness of both early detection and treatment services for breast cancer. The number of deaths due to breast cancer rose steadily from 1989 to 1995 but has been decreasing since then. Breast cancer claimed the lives of 2542 Australian women in 1998, accounting for the largest proportion of cancer deaths of women in that year. It also comprised 4.2 per cent of all deaths in that year (ABS 1999).

There were 25.1 deaths from breast cancer per 100 000 women in 1998 (figure 6.9). The highest rates were recorded in Victoria and SA (29.1 and 31.9 deaths per 100 000 women respectively), and the NT recorded the lowest rate (8.9 deaths for every 100 000 women).

Figure 6.9 **Mortality rate from breast cancer, 1998**



Source: table 6A.4.

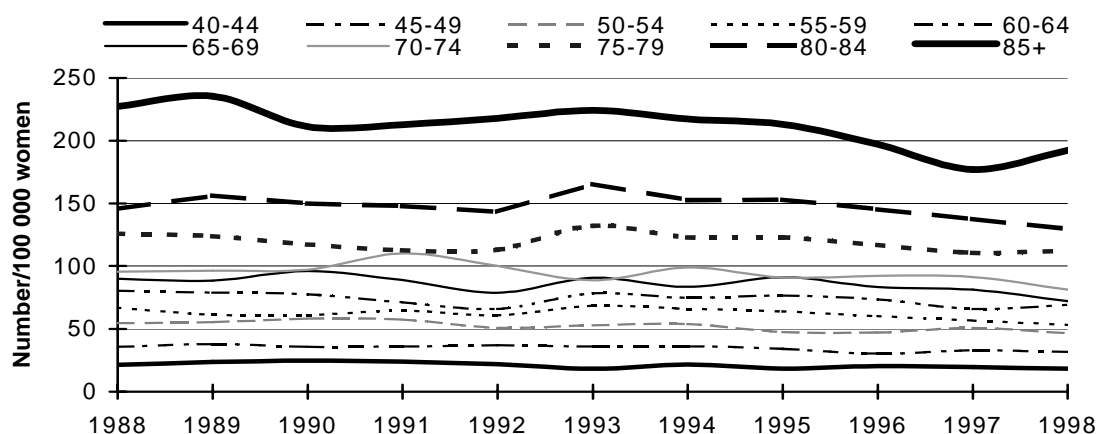
Age-standardised mortality rates are the most appropriate measure for looking at changes in mortality rates over time and these data are available for the 10 years to 1998. The age-standardised mortality rate for all ages fell from 27 deaths per 100 000 women in 1988 to 23 deaths per 100 000 women in 1998 (figure 6.9).

The age-standardised mortality rate in 1998 was:

- 18 per 100 000 woman years for women aged 40–44 years;
- 32 per 100 000 woman years for women aged 45–49 years;

- 59 per 100 000 woman years for women in the target age group 50–69 years; and
- 121 per 100 000 woman years for women aged 75–79 years and over (AIHW unpublished).

Figure 6.10 **Age-specific and age-standardised mortality rates from breast cancer^a**



^a Rates were age standardised to the Australian 1991 population.

Source: table 6A.3.

The changes in age-specific breast cancer mortality rates varied across age cohorts. The age standardised mortality rate for women in the target age group, 50–69 years, fell from 68.3 deaths per 100 000 women in 1982 to 64.9 in 1996. The mortality rates also fell for women aged 40–49 years from 27.3 to 25.3 deaths and for women aged over 70 years (from 125.5 to 121 deaths). Over the same period, the death rates remained fairly constant for women in younger age groups 15–39 years.

Mental health management – Quality

Percentage of facilities accredited

The percentage of accredited facilities, delivering services to people with a mental health problem, is used as a process indicator of quality. Imperfect data are available for this Report (number of facilities accredited, not percentage) but improvements can be expected when the National Standards for Mental Health Services review is complete in about two years.

Jurisdictions reported the following:

-
- NSW reported that, as at 30 June 1999, 43 facilities providing inpatient public mental health services were accredited. The number of accredited beds available in these facilities was 1933;
 - Victoria reported that, as at 30 June 1998, 55 facilities providing acute inpatient public mental health services were accredited. The number of accredited beds available in these facilities was 1120. There were 39 community and residential facilities accredited with 868 beds available;
 - Queensland reported that, as at 30 June 1999, 12 public hospitals providing acute inpatient public mental health services were accredited. The number of accredited acute and non-acute beds available in these facilities was 375;
 - in WA, as at 30 June 1998, 16 facilities were accredited. These facilities included authorised hospitals, extended care units and psychiatric wards in public acute care hospitals. The number of accredited beds available in these facilities was 372;
 - in SA, as at 30 June 1998, eight public hospitals with designated/specialist mental health facilities were accredited. The number of accredited beds available in these facilities was 183;
 - Tasmania reported that, as at 30 June 1998, four public hospitals with designated/specialist mental health facilities were accredited. The number of accredited beds available in these facilities was 80; and
 - the ACT reported that, in 1997-98, two public hospitals with designated/specialist mental health facilities were accredited. The number of accredited beds available in these facilities was 52.

Mental health management - Appropriateness

Consumer/carer participation in decision making

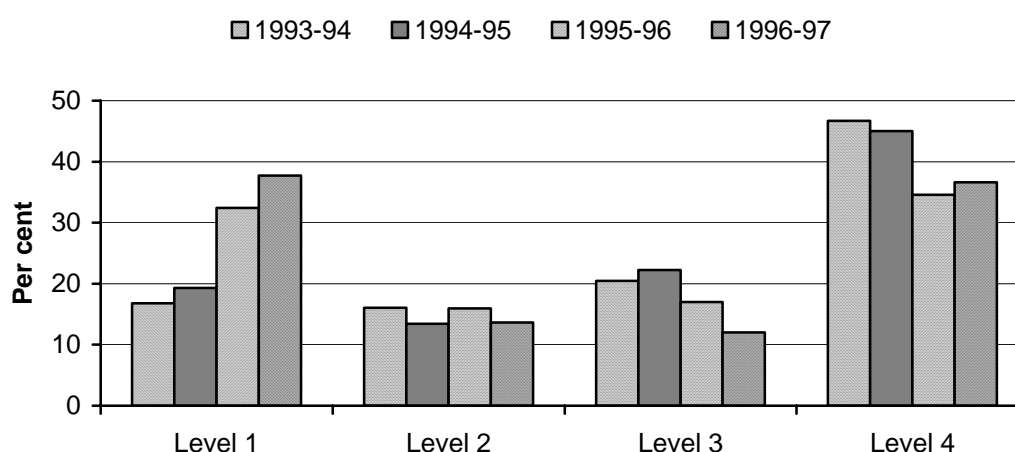
An indicator of appropriateness is consumer/carer participation in decision making. Public sector mental health service organisations are asked each year to describe the arrangements provided to allow consumers and carers to contribute to local service planning and delivery. Responses are grouped into four categories:

- level 1 — appointment of a person to represent the interests of consumers and carers on the organisation management committee or a specific consumer/carer advisory group to advise on all aspects of service delivery;
- level 2 — a specific consumer/carer advisory group to advise on some aspects of service delivery;

- level 3 — participation of consumers/carers in broadly based committees; and
- level 4 — other/no arrangements.

Of the 137 organisations responding in 1993-94, 17 per cent reported a level 1 rating. Approximately 16 per cent reported a level 2 rating, 20 per cent reported a level 3 rating, and almost half (47 per cent) reported a level 4 rating. By 1996-97, the survey results suggested consumers/carers had a greater involvement in decision making, with 38 per cent of the 183 respondents reporting a level 1 rating. For level 2, the rating was 14 per cent and for levels 3 and 4, 12 and 37 per cent respectively (figure 6.11).

Figure 6.11 Trends in consumer/carer participation in decision making



Source: 6A.40.

Services provided in the appropriate setting

The National Mental Health Strategy advocated the development of local, comprehensive mental health service systems. The services must be capable of responding to the individual needs of people with mental disorders and provide continuity of care, so consumers can move between services as their needs change. Under the directions set by the Strategy, structural reform of mental health services has resulted in:

- reduced reliance on stand-alone psychiatric hospitals;
- expanded delivery of community based care integrated with inpatient care; and
- mainstreamed mental health services with other components of health care.

By encouraging treatment of patients in community settings and general hospitals, rather than in stand-alone psychiatric hospitals — that is, to substitute the service settings — more appropriate treatment options can be provided.

Across Australia, per person expenditure on community based mental health services was \$31 in 1996-97, compared with \$16 for services in co-located units in general hospitals and \$23 for stand-alone psychiatric hospitals (table 6.4). Across jurisdictions, per person expenditure on community services ranged from \$21 in Queensland to \$47 dollars in Victoria. For stand-alone hospitals, per person expenditure was highest in SA and lowest in Victoria (\$39 and \$15 respectively).

The average annual growth rate for community services across Australia was almost 14 per cent between 1992-93 and 1996-97. The annual growth rate was highest in Victoria (19 per cent) and lowest in the ACT (nearly 6 per cent). Per person expenditure rose by 4 per cent annually over the same period for co-located units, but fell by almost 8 per cent for stand-alone hospitals (table 6.4).

Table 6.4 Average per person real government expenditure, by service type^{a, b}

	<i>Stand-alone hospitals</i>			<i>Co-located units</i>			<i>Community services</i>		
	<i>1992-93</i>	<i>1996-97</i>	<i>Change</i>	<i>1992-93</i>	<i>1996-97</i>	<i>Change</i>	<i>1992-93</i>	<i>1996-97</i>	<i>Change</i>
	\$	\$	%	\$	\$	%	\$	\$	%
NSW	27	23	-4.0	15	16	0.6	18	26	10.3
Vic	41	15	-21.9	10	14	9.1	24	47	18.9
Qld	25	25	-0.6	17	17	0.2	12	21	16.5
WA	33	29	-3.1	14	21	10.8	17	29	14.4
SA	39	39	-0.4	7	10	8.3	20	27	7.1
Tas	32	25	-5.8	13	18	7.5	21	34	12.7
ACT	0	0	0.0	21	27	5.7	29	36	5.7
NT	0	0	0.0	30	37	5.5	22	35	12.4
Aust	31	23	-7.8	14	16	4.2	19	31	13.9

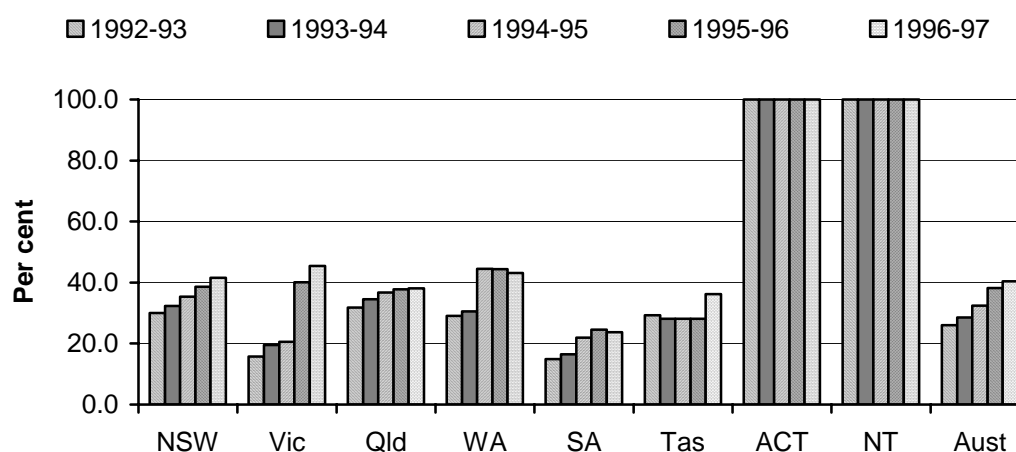
^a In 1996-97 dollars. ^b Numbers have been rounded off to the nearest dollar.

Source: table 6A.36.

The trend away from stand-alone hospitals towards co-located units in general hospitals and services offered in community settings was also reflected in changes in patient days over the period. Approximately 26 per cent of total inpatient bed days occurred in co-located units in general hospitals in 1992-93, rising to 40 per cent in 1996-97. Across jurisdictions, the largest increase occurred in Victoria, where the growth rate in patient bed days spent in co-located units as a proportion of total bed days was 30 per cent per year over the same period. The growth rate was lowest in Queensland (4.6 per cent) (figure 6.12).

Victoria recorded the highest proportion of inpatient days occurring in co-located units in 1996-97 (46 per cent), followed by (43 per cent) in WA (among jurisdictions where both service types are available). By contrast, the proportion was lowest in SA and Tasmania (24 per cent and 36 per cent respectively) (figure 6.12).

Figure 6.12 Bed days in co-located units as a proportion of total inpatient bed days



Source: table 6A.38.

The number of patient bed days, recorded in community based services delivering 24-hour specialised mental health care, rose by 13 per cent per year between 1992-93 and 1996-97 — up from 259 200 to 427 208 (figure 6.13). There was strong yearly growth in the number of bed days in Victoria (27 per cent). The other two States in which growth occurred over the same period were NSW and Tasmania (5 and 3 per cent respectively). There was a fall in South Australia (19 per cent per year) and in WA (4 per cent per year). The ACT did not record any growth during this period. These services were not available in Queensland and the NT.

Mental health management - Outcomes

Prevalence of mental disorders

Outcome indicators for mental health management include the prevalence of mental illness in the community and deaths from suicide. According to the 1997 National Survey of Mental Health and Wellbeing, approximately 2.4 million adults (or

17.7 per cent of all adults) experienced the symptoms of a mental disorder at some time in the 12 months before the survey.

Figure 6.13 Average annual growth rate in the number of patient bed days in community based residential services



^a These services were not available in Queensland or the NT.

Source: 6A.39.

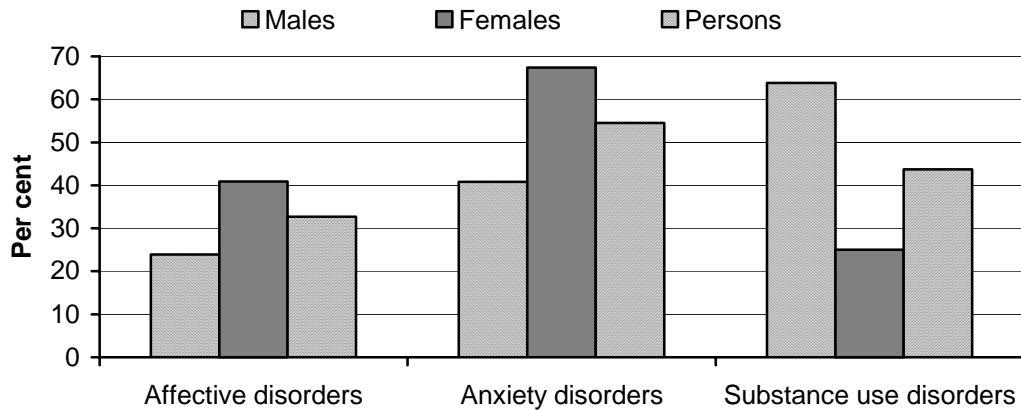
Overall, anxiety disorders (such as agoraphobia, post-traumatic stress disorder and social phobia) were the most common type of mental disorder reported in 1997, with persons reporting anxiety symptoms accounting for 54.5 per cent of those reporting symptoms of a mental disorder. Persons reporting substance use disorders accounted for 43.7 per cent of the total, and persons with affective disorders (such as depression, mania and bipolar disorder) accounted for 32.7 per cent (figure 6.14).

There were differences between males and females. Females most commonly experienced anxiety disorders (which accounted for 67.4 per cent of females experiencing mental disorder symptoms), followed by affective disorders (40.9 per cent) and substance abuse (25.0 per cent). By contrast, males most commonly suffered substance abuse (which accounted for 63.8 per cent of males experiencing mental disorder symptoms), followed by anxiety disorders (40.8 per cent) and affective disorders (23.9 per cent) (figure 6.14).

The prevalence of mental disorders was higher for younger people than older people (figure 6.15). Almost 27 per cent of adults aged 18–24 years experienced symptoms of a mental disorder in the 12 months before the survey, compared with 6.1 per cent of people aged 65 years and over. The prevalence of anxiety disorders was highest for adults aged 45–54 years (11.9 per cent); the prevalence of affective disorders

was highest in the 35–44 year age range (7.2 per cent); and the prevalence of substance use disorders was highest in adults aged 18–24 (16.1 per cent).

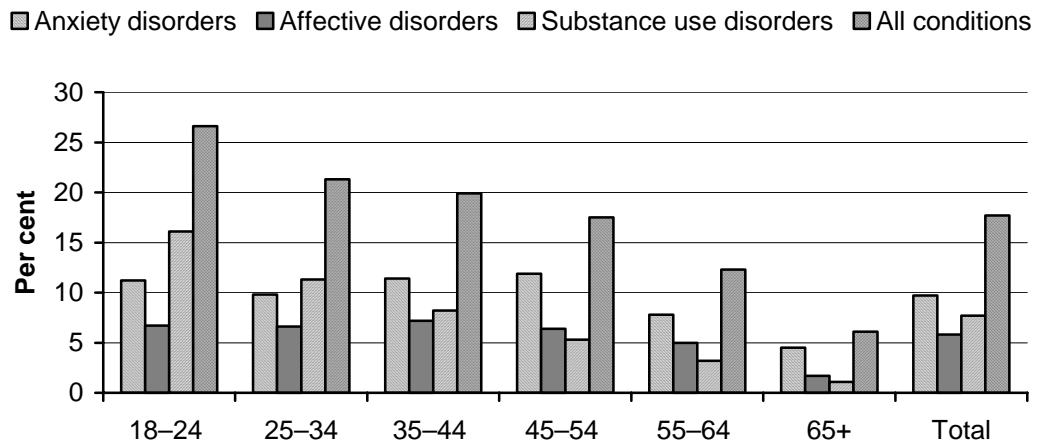
Figure 6.14 Prevalence of mental disorders, 1997^a



^a Defined as the percentage of adults with a mental disorder. Components do not add to 100 because respondents may have reported symptoms for more than one type of mental disorder.

Source: table 6A.41.

Figure 6.15 Prevalence of mental disorders, by age, 1997^a



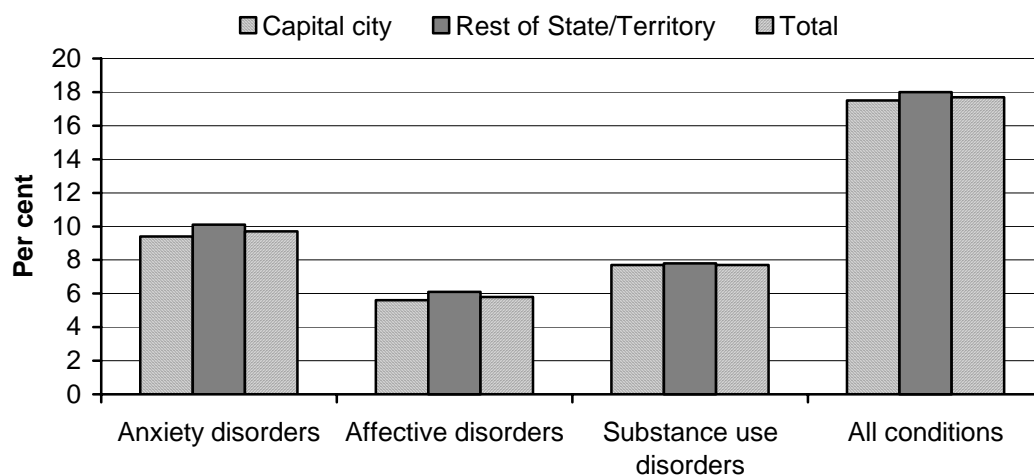
^a Percentage of all adults with a mental disorder. Components do not add to 100 because respondents may have reported symptoms for more than one mental disorder.

Source: table 6A.42.

The prevalence of mental illness did not vary greatly with geographic location (figure 6.16). Eighteen per cent of adults residing outside capital cities experienced mental disorder symptoms in the 12 months before the survey, compared with

17.7 per cent of adults living in capital cities. A similar pattern was recorded for individual disorders.

Figure 6.16 Prevalence of mental disorders, by geographic location, 1997^a



^a Components do not add to 100 because respondents may have reported symptoms for more than one mental disorder.

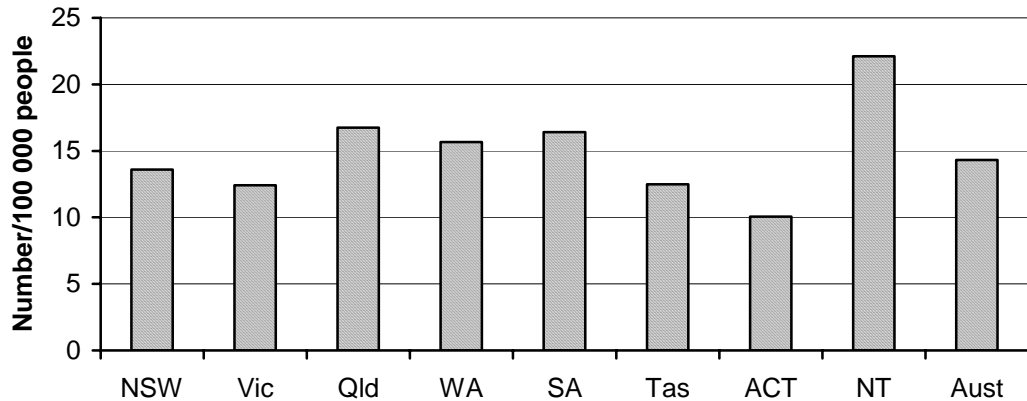
Source: table 6A.43.

Mortality due to suicide

The prevalence of mental illness is thought to have a significant effect on the number of deaths from suicide. Nearly 2700 deaths from suicide were recorded in Australia in 1998, which equalled 14.3 deaths for every 100 000 people. Across jurisdictions, the death rate from suicide in 1998 ranged from 10.1 per 100 000 people in the ACT to 22.1 in the NT (figure 6.17).

The mortality rate due to suicide for males was more than three times that for females in 1998 — a trend that was consistent over the 10 years to 1998. Overall, the mortality rate was relatively stable, although there was a large increase in the number of deaths between 1996 and 1997. The mortality rate increased in that period from 13.1 deaths per 100 000 people in 1996 to 14.7 in 1997, falling slightly to 14.3 deaths per 100 000 people in 1998 (figure 6.18).

Figure 6.17 Mortality rate due to suicide, 1998

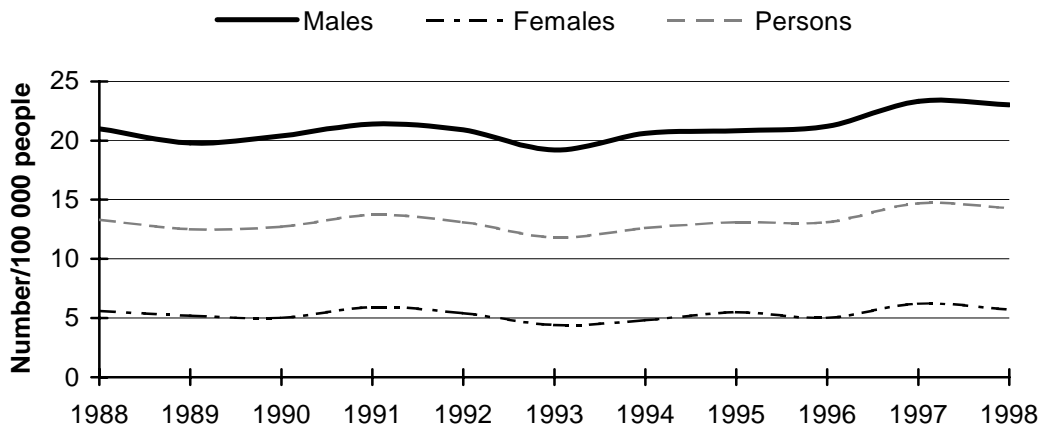


Source: table 6A.45.

The largest proportion of suicides in 1998 was committed by people aged 15–24 years (23.8 per cent), followed by people aged 25–44 years (20.1 per cent). Moreover, suicide was the second leading cause of death for people in both age groups (ABS 1999). The death rate from suicide for people aged 15–24 years was 16.7 deaths per 100 000 people of that age group in 1998. Across jurisdictions, the NT recorded the highest rate (38.7 deaths per 100 000 people), while Tasmania recorded the lowest (6.3 deaths per 100 000 people) (figure 6.19). There was an average annual increase in the mortality rate due to suicide in this age group of 4.7 per cent between 1996 and 1998, with the largest rises occurring in the NT (30.3 per cent), and SA (23.5 per cent). Queensland, Tasmania and the ACT recorded a decrease in the annual mortality rate.

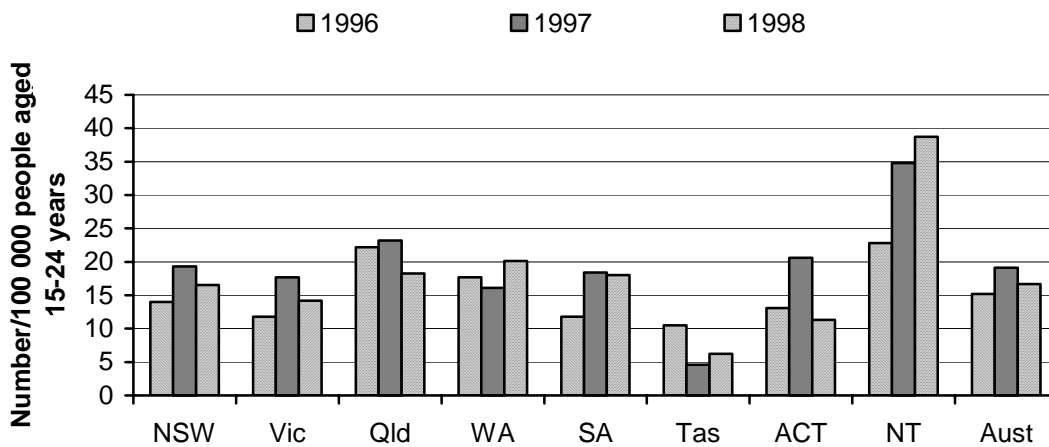
The high proportion of deaths of people aged 15–24 years (especially males) attributable to suicide prompted governments to establish the National Youth Suicide Prevention Strategy in 1995. The strategy aims to address Australia's youth suicide rates that are high in comparison with a number of other Western countries. It recognises the complexity of youth suicide prevention, and the necessary links between preventing youth suicide and promoting emotional and social health and wellbeing (DHAC 1999a).

Figure 6.18 Mortality rate due to suicide



Source: table 6A.44.

Figure 6.19 Mortality rate due to suicide for people aged 15–24 years



Source: table 6A.46.

Mental health management - Efficiency

Cost per inpatient bed day

It is an objective of the Review to report comparable estimates of costs. Comparability is maximised when the full range of costs to government is counted on a comparable basis. Where the full costs cannot be counted, comparability is achieved by estimating costs on a consistent basis.

A proxy indicator of efficiency is the level of government inputs per unit of output (unit cost). The most suitable indicator for mental health services would be to adjust the number of separations by the type and complexity of cases to develop a cost per case mix adjusted separation similar to that presented for public acute care hospitals. However, the current method for adjusting inpatient separations (AN-DRGs) does not accurately reflect differences in treating those with mental illnesses (section 6.3). Until an appropriate casemix classification has been developed and introduced, average inpatient day costs will be used as an indicator of efficiency. However, this data should be used cautiously in any comparative assessment.

The cost per inpatient bed day is affected by factors such as differences in the client mix and average length of stay. The client mix in inpatient settings may differ, for example, if some jurisdictions treat a higher proportion of less complex patients in inpatient settings rather than in the community. Longer lengths of stay may also be associated with lower average inpatient day costs, because the cost of admission and discharge and more intensive treatment early in a stay is spread over more days of care. Across Australia, the average length of stay for patients with mental illness was nearly 16 days in 1997-98. Queensland reported the highest average length of stay (25 days) and the NT the lowest (10 days) (table 6.5).

Table 6.5 Average length of stay in public acute and psychiatric hospitals for mental health^a, 1997-98

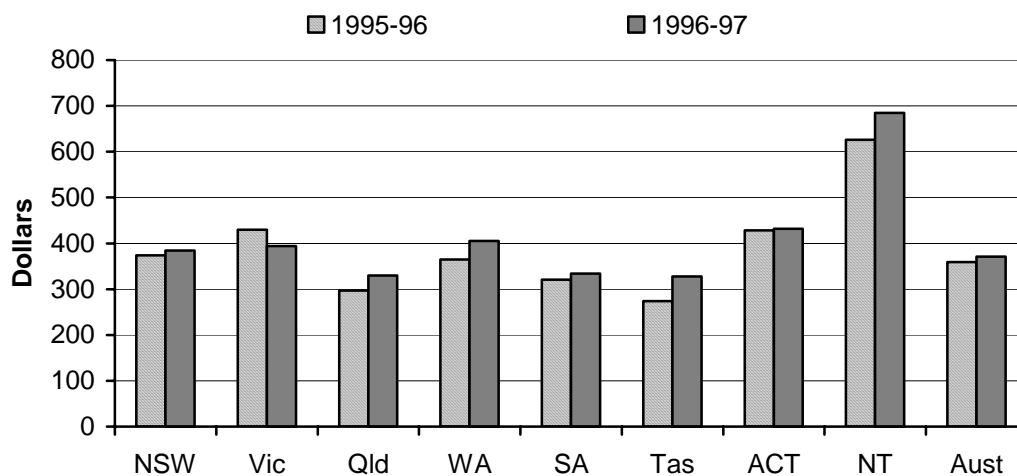
	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
Average length of stay	14.1	13.3	25.0	15.9	12.0	11.8	13.1	9.9	15.8

^a Excludes alcohol and drug related episodes.

Source: AIHW (1999a).

The average cost of treating an inpatient was \$371 per day in 1996-97 which was 3 per cent higher than the previous year. Across jurisdictions, the average cost ranged from \$328 in Tasmania to \$685 in the NT. Compared to 1995-96, there was a decrease of 8 per cent in average inpatient costs in Victoria in 1996-97. In Tasmania there was a steep increase of 20 per cent and in both Queensland and WA the increase in inpatient costs was 11 per cent (figure 6.20).

Figure 6.20 Average inpatient costs per day for patients with mental illness



Source: table 6A.47.

Cost per non-admitted occasion of care

The provision of ambulatory treatment, rehabilitation and support to non-inpatients is an important component of public hospital services. Community health services also play an important role in the provision of services to people in an acute phase of a mental health problem or who are receiving post-acute care. The average cost per occasion of service in both service settings provides a measure of the efficiency with which non-inpatient services are provided. The following results from jurisdictions are not comparable due to differences in definitions.

Jurisdictions reported the following results:

- NSW estimated that the average cost of treating a public psychiatric patient in an emergency department, outpatient clinic, and in a primary and community based setting was \$80, \$133 and \$93 respectively (table 6A.50);
- in WA the average cost of treating a public psychiatric patient under community management in 1997-98 was \$1859, which was 7 per cent less than the previous year (table 6A.57); and
- in SA the average cost of treating a public psychiatric patient in an outpatient clinic was \$92 in 1996-97. The cost per patient of treating adults and children in primary and community based settings was \$118 and \$184 respectively (table 6A.50).

6.4 Future directions in performance reporting

Key challenges for improving reporting on health management performance are:

- filling gaps in reporting;
- improving the reporting on Aboriginal and Torres Strait Islander peoples' access to mainstream health services;
- improving the measurement of unit costs;
- reviewing the indicator framework; and
- extending the coverage of the Review.

Filling gaps in reporting

Breast cancer

Currently performance data for breast cancer management are limited to some aspects of the effectiveness and efficiency of the breast cancer screening program, BreastScreen Australia, and breast cancer management overall. Data on the effectiveness indicators—the participation rate of Indigenous women and women from culturally and linguistically diverse backgrounds in screening programs and the size and grade of detected cancers—have been reported by jurisdictions for the first time. It is anticipated that more comparable and comprehensive data will be available for future Reports.

Data on the efficiency of early detection (such as cost per woman screened) have been reported by some jurisdictions for the first time. An evaluation plan has been developed by BreastScreen Australia which will provide a comprehensive analysis of the effectiveness and efficiency of the program, including an economic evaluation. It is anticipated that nationally comparable data will be available for future Reports.

The National Breast Cancer Centre announced the release of a new protocol in July 1999 for *'The ascertainment and reporting of interval cancers within the BreastScreen Australia Program'*. This report has been endorsed by the BreastScreen National Advisory Committee. The protocol outlines the major reasons for measuring interval cancer rates in a screening program, including measuring the effect of the screening program on mortality. Program evaluation and comparison can also be achieved using measures such as program sensitivity, which relies on the calculation of the interval cancer rate (NHMRC 1999a). The development and reporting of the interval cancer rate, which is an indicator of the

effectiveness of the screening program, will also facilitate program outcomes to be compared across States and Territories and on an international basis. It is anticipated that national data will be made available from the Australian Institute of Health and Welfare in March 2000. Reporting of this new performance indicator for effectiveness is expected to take place for the first time in the 2001 Report.

It is anticipated that data will be available for the 2001 Report on the effectiveness indicators, the ratio of benign to malignant biopsies and the ratio of conservative surgery to radical surgery. Clarification is also being sought on the availability of data on the indicators, travelling time to receive treatment, cost per separation by AN-DRG and cost per life year saved.

The National Health and Medical Research Council (NHMRC) *Clinical Practice Guidelines: The Management of Early Breast Cancer* was first published in 1995. The initiative was part of the national program to promote the development of evidence-based clinical practice guidelines. The guidelines summarise areas of knowledge and highlight those areas where there is a deficiency in knowledge. Continuing evaluation of the guidelines will be carried out to determine the degree of use by practitioners, and the resultant effects on patient outcomes (NHMRC 1999b). The guidelines are specifically designed to:

- assist in decision making by women and their doctors, and educate all involved in the care of women with breast cancer; and
- assess and assure the quality of care.

The second edition of the guidelines are expected to be released in early 2000.

The National Health and Medical Research Council National Breast Cancer Centre established a multi-disciplinary working group in 1996 to develop *Clinical Practice Guidelines: The Management of Advanced Breast Cancer*. The first edition is expected to be released in mid 2000. The overarching aim of the guidelines is to develop a process of caring support when a woman is diagnosed with advanced breast cancer. This includes outlining the patterns of care available to her in a clear and compassionate manner over an appropriate period of time.

When developing the guidelines for the management of early and advanced breast cancer, it became evident that women with breast cancer suffer significant emotional morbidity. This impacts on the ability of the woman to function as an individual and impacts on her family as well. In response to this, *Psychosocial Clinical Practice Guidelines: Providing Information, Support and Counselling to Women with Breast Cancer* has been developed and will be released on 14 February 2000. These guidelines aim to consider the extent and type of psychosocial needs of women with breast cancer and the most effective ways of providing appropriate interventions.

In addition, it was recognised that an important risk factor for common cancers is considered to be attributable to inherited cancer predisposition. Therefore, the need for a coordinated national policy on cancer genetics has become apparent. In response to this, the Australian Cancer Network, the National Breast Cancer Centre and the National Health and Medical Research Council have developed *Guidelines on Familial Aspects of Cancer*, which are expected to be released in mid 2000.

Mental health management

The National Health Priority Areas initiative, which is a collaborative effort between Commonwealth and State and Territory governments, has targeted depression as a primary focus. This is allied to the estimates of the World Health Organisation and the World Bank which predict that depression will constitute the greatest disease burden in the developing world and rank second to ischaemic heart disease world wide by 2020. Depression is also a major focus of the Second National Mental Health Plan that includes the development of a proposed three-year National Depression Action Plan. It is anticipated that greater emphasis for future Reports will be placed on reporting indicators, such as prevalence rates of depression in the community, hospital separations for suicide, self-inflicted injury among young adults, and exploration of the link between depression and suicide.

Under the first National Mental Health Plan, policies were proposed to encourage increased involvement of general practitioners in the management of psychiatric clients. The second of the key themes in the Second National Mental Health Plan highlights the Commonwealth's commitment to the integration of mental health services with other health services, and to the development of strategic partnerships and alliances. Particular importance is placed on establishing closer working relationships with general practitioners.

Arrangements designed to develop better links between GPs and mental health specialists are often described as shared care models. Governments have sought to increase access to joint or shared care for suitable patients, but currently there are no data that enable reporting on these efforts (AHM 1998).

Government funding arrangements can affect the adoption of these models. One shared care project used a seeding grant to the local Division of General Practice to pay general practitioners for time spent consulting about their patients with psychiatrists from the Area Mental Health Service. A paper examining this project noted that the most common single impediment to transfer of a patient from the care of the Area Mental Health Service to a GP was drug costs. Some drugs are free to patients under Area Mental Health Service care but costly if prescribed by a GP (Meadows 1998).

Before data can be collected for this indicator, a nationally agreed definition of shared care against which data can be collected will need to be developed. This will be complicated as the concept is still being developed and, as a result, a range of shared care models may evolve. One such shared care model is Consultation Liaison in Primary Care in Psychiatry, based in the northwest of Melbourne (box 6.6).

Box 6.6 Shared care models — Consultation Liaison in Primary Care Psychiatry

The Northwest Melbourne Area Mental Health Service has promoted collaboration between GPs and public sector mental health services through the clinical consultation-liaison in primary care psychiatry (CLIPPP) service since 1995. During the first two years, more than 220 patients had consultations in their general practice clinic with psychiatrists from the area mental health service. More than 90 were transferred from the specialist care of the area mental health service to shared care. Forty GPs from seven group practices participated. Key features of the shared care model are:

- case managers within the area mental health service identify candidate patients — typically clinically stable, without recent relapse, with fair to good insight, and with some social support;
- patients are prepared for transfer. A concise summary of diagnosis, history and treatment adherence is prepared from the case notes. Impediments to transfer are identified and acted upon, where possible; the outcome of this action is recorded;
- a management plan is drawn up. An appointment between the GP, psychiatrist and patient is arranged to discuss the draft plan and establish the plan for continuing management;
- the GP takes over primary responsibility for the care of the patient;
- a patient registration and tracking system, maintained by area mental health service staff, supports the GP in maintaining continuity of care and provides information about satisfaction and other quality assurance;
- an electronic diary of due dates for review of each patient is maintained. Clinical staff review patients at three monthly intervals, by telephone contact with the patient and by checking the GP's case notes for continued contact; and
- a psychiatrist usually reviews patients every six to 12 months.

Source: Meadows (1998).

A shared care model is also being developed in Queensland under the General Practice and Psychiatric Partnerships (GPAPP) project. This project commenced in July 1999 and is expected to be completed in July 2003. The appropriateness indicator, the proportion of GPs having shared care arrangements with specialist mental health services, attempts to measure the extent of this involvement. Priority

will be given to developing this indicator to reflect the directives and aims of the Second National Mental Health Plan.

Improving reporting on Aboriginal and Torres Strait Islander peoples' access to mainstream services

In May 1997, the Prime Minister requested that the Steering Committee give priority to developing indicators that measured the performance of mainstream services in meeting the needs of Indigenous Australians. This is an important task, but large gaps remain. The availability and coverage of nationally consistent data on the provision of services to Indigenous clients will increase in future Reports.

A number of reports have contributed to the identification of the mental health needs of the Aboriginal and Torres Strait Islander communities. They include the Royal Commission into Aboriginal Deaths in Custody 1988, the Report of the Human Rights and Equal Opportunities Commission Inquiry into Human Rights and Mental Illness 1993, and the National Consultancy Report on Aboriginal and Torres Strait Islander Mental Health 1995. There is an acknowledgment of the holistic concept of health held by Aboriginal and Torres Strait Islander communities (NACCHO 1997):

Not just the physical well-being of the individual but the social, emotional, spiritual and cultural well-being of the whole community ... Health services should strive to achieve the state where every individual can achieve their full potential as human beings ...

There is also recognition of the complexity and breadth of issues that contribute to the psychological wellbeing and mental health of individuals, and their significance in the development of culturally appropriate and effective treatment models and programs. The Second National Mental Health Plan seeks to identify better ways of meeting the mental health needs of Indigenous people, people from culturally and linguistically diverse backgrounds, and those living in rural and remote areas.

Only limited national statistics are available on the mental health status of Indigenous people. Investigations have shown that loss, separation and traumatic experiences for Indigenous peoples significantly contribute to psychosocial morbidity. Trauma, grief and loss have affected the physical as well as mental health of Indigenous people, yet no data are available to quantify the extent and role of this impact. Studies have shown that these risk factors are key variables contributing to the high levels of psychiatric disorder found in Indigenous communities, particularly to a high frequency of depression (Swan and Raphael 1995). The high rate of entry into the criminal and juvenile justice system for Indigenous peoples is also a risk factor.

Improving the measurement of unit costs

The Steering Committee is working to improve estimates of unit costs by introducing a more consistent treatment of:

- superannuation costs (see SCRCSSP 1998);
- payroll tax (see SCRCSSP 1999); and
- depreciation and the user cost of capital.

Accounting for these should improve the comparability and accuracy of unit cost information in future Reports.

Little accurate cost data are available for reporting the efficiency of mental health services, particularly services provided outside hospitals. Funding for these services is generally based on historic cost or input based funding methods which hardly allow for differences in the illness and/or severity of clients. Further, these funding methods do not provide strong financial incentives for efficiency, quality, improved consumer outcomes or substitution between different service types.

The framework for public hospitals includes cost per case mix adjusted separation as an efficiency indicator, which accounts for the differences in patient mix across operators. Each case mix class groups patients with clinical similarities and resource use similarities.

The main classification system used in Australia is the AN-DRG model. However, AN-DRGs do not accurately predict the cost of treating different people with mental illnesses. Further, they were developed for classifying acute inpatient episodes and therefore may provide perverse incentives to substitute inpatient care for community based care.

The Mental Health Classification and Service Costs (MH-CASC) project was a major service utilisation study conducted under the National Mental Health Strategy. The project commenced in 1995 and continued over three years. The aims of the project were to determine whether clinical factors predict service costs and to develop the first version of a national case mix classification (with associated cost weights) for specialist mental health services that:

- can be used to classify mental health patients in the various treatment settings;
- has sensible clinical groupings; and
- relies on information generated for clinical purposes.

The project developed an episode classification for inpatient and community health care. The recommended first version of the classification system includes 42 patient

classes — 19 for community episodes and 23 for inpatient episodes. The classification may be used for management information and funding purposes (Buckingham *et al.* 1998).

Under the National Information Priorities and Strategies, which is part of the Second National Mental Health Plan, further development and refinement of the mental health case mix classification will be undertaken. This will build on the findings of the MH-CASC project.

Reviewing the indicator framework

The Second National Mental Health Plan incorporates three key themes that form the basis for the plan: promotion/prevention, development of partnerships in service reform, and the quality and effectiveness of service delivery. Under this plan, strategies to implement change in each area and the resulting outcomes have been developed. It is anticipated that in the future priority will be given to developing new indicators which reflect the focus areas of the Second National Mental Health Plan.

Extending the coverage of the Review

A longer term goal of the Review is to extend the health management framework to other health issues, such as the remaining National Health Priority Areas (that is, cardiovascular health, diabetes mellitus, asthma and injury prevention and control). These priorities focus government attention on areas where a concerted effort could achieve significant gains in the health of the nation. A limited number of priority indicators, encompassing the continuum of care (from prevention through to treatment, rehabilitation and palliation) are reported for each area every two years. The first report on injury prevention and control was released in 1998, and reports for cardiovascular health and diabetes mellitus were released in 1999.

6.5 Jurisdictions' comments

This section provides comments from each jurisdiction on the services covered in chapters 4, 5 and 6. Appendix A contains detailed statistics and short profiles on each State and Territory, which may assist in interpreting the performance indicators presented in this chapter. The information covers aspects such as age profile, geographic distribution of the population, income levels, education levels, tenure of dwellings and cultural heritage (such as aboriginality and ethnicity).

New South Wales Government comments

“ A scan across performance indicator development activities in health reveals the scale of effort currently devoted to these enterprises. Performance indicators are being developed for the Review of Government Services, under the previous National Health Ministers Benchmarking Working Group, for each of the National Health Priority areas (such as cardiovascular health, cancers, diabetes, and mental health) and through the National Mental Health Report. Indicators have been developed for over 20 national strategies such as BreastScreen Australia, the National Tobacco Strategy and the National Alcohol Strategic Plan. Through the Public Health Partnership a public health indicator framework is being developed. Performance indicators are reported through the Australian Health Care Agreement and the Public Health Outcome Funding Agreements. Performance indicators are reported by various State health portfolios (for example see the NSW Hospital Comparison Data Book and the Chief Health Officer's Report at <http://www.health.nsw.gov.au/pubs/>). Outside the public sector many other performance comparison activities are under way for example as an adjunct to accreditation processes.

The breadth of these activities highlights the need for a national framework for performance measurement that delivers meaningful, useful and timely information. To be justified these efforts must contribute to improved policy, management and delivery of health services, and not remain interesting but esoteric exercises. Despite existing efforts there remain concerns that identifying the performance of whole health systems is elusive, and significant gaps remain in areas such as the contribution of the health system to improved health, the quality of services and the performance of important services such as community based services. Some of these concerns lay behind the recent establishment, by Health Ministers, of a National Health Performance Committee. This Committee has commenced its work and will be seeking to develop an appropriate framework during 2000. The Committee will be working closely with the Review and other national processes concerned with performance comparison. NSW Health strongly supports these developments.

The 2000 Report further expands reporting of measures and this is welcomed. This year's report has also been able to further explore issues lying behind the comparisons. The inclusion of waiting times for elective surgery across all jurisdictions comes after a gap of many years. These data suggest Australia is achieving waiting times that exceed the performance of many western countries. However issues of comparability across States remain, particularly in the allocation of 'urgency' categories. The discussion of unit costs for public hospitals demonstrates key issues have yet to be resolved. A key step is to estimate costs for 'acute' patients. NSW aims to provide these estimates for the next report. A challenge for the review is to create a process that leads to improved services, not just interesting comparisons. To meet this challenge the Review needs to consider ways of comparing services below the jurisdiction level, for example comparing peer organisations and services. Information on underlying variation in performance should also be presented.

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Victorian Government comments

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Victoria continues to strongly support comparisons of overall performance and key performance indicators between jurisdictions and with the best practitioners worldwide. The increased and broader emphasis on health care services in recent editions of this report is also welcome and reflects the level of government expenditure on these services.

The development of a performance measurement framework for general practice, including indicators of quality, safety and evidence of best practice, is particularly important in a funding environment where outcomes are rewarded and emphasis is placed on quality. Mental health, aged care, palliative care and other chronic illness management are major areas of general practice involvement where *care* is important and *cure* less certain. In the absence of standard measures for assessing the outcomes of general practice there is a risk of focusing on doing what can be counted, and on programs where improvements can be clearly demonstrated, in return for resource investment.

The breast cancer control services overseen by BreastScreen Australia provide an example of a comprehensive mechanism for assessing the effectiveness and efficiency of service delivery at both national and jurisdictional levels. There is an extensive national data collection covering all aspects of the screening service and arrangements are in place for national reporting by State and Territory BreastScreen programs against agreed key performance indicators. State/Territory data are provided for annual national reports, prepared by the AIHW on behalf of the Commonwealth. The purpose of the AIHW reports is to collect and publish critical descriptive data on national program performance. Considerable work is being done to ensure that the data are accurate, valid and comparable both between States/Territories and from year to year.

It is acknowledged that many of the indicators in the health chapters of this report need further development as they often highlight differences in state administrations, funding mechanisms and service provision rather than performance. However, they do provide a useful starting point for further analysis. The recognition of the need for separate unit cost measures for acute, psychiatric and sub-acute admitted patient services provides an example of this and highlights the need for continual development of even the most conceptually simple indicators. For this reason the Review's iterative approach to reporting, publishing imperfect data with caveats and then working to improve quality and comparability, is strongly supported.

Encouragement should also be given for individual service providers to benchmark at a much greater level of detail, and to achieve improvements at the organisational level, as well as for benchmarking between jurisdictions.

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Queensland Government comments

Queensland Health supports enhanced cooperation between the public and private sectors aimed at improving quality, efficiency and accessibility to health services. For example, the General Practitioners Integration Project will improve integration of care between public hospital services and the broader health and community care services, particularly the general practice sector. Another example is the establishment of a number of collocated public and private hospitals including at Caboolture, Gladstone, The Prince Charles Hospital, Logan and Redland Hospital. Two Build, Own, Operate and Transfer hospital projects have also been initiated at Noosa and Robina.

Better integration of internal resources is also crucial to achieving more efficient and effective service delivery. The Clinical Benchmarking Project will establish an interface between clinical costing software and core feeder systems to support coordinated clinical service reform. The project will integrate feeder systems including finance, payroll, patient admissions, discharge information, patient nurse dependency, theatre, pathology, imaging and pharmacy. This will enhance planning, performance management and budgeting.

Queensland Health has developed the Queensland BreastScreen Register and the Queensland Pap Smear Register during 1998-99, providing central repositories for screening information. The registers improve services to Queensland women by identifying women who are unscreened, and groups of women who are under-screened to allow more effective targeting of future educational and promotional strategies.

An Aboriginal and Torres Strait Islander Health Information Network (linking information from Queensland Health services, Aboriginal and Torres Strait Islander community health services, public health services and non-government health organisation) is being established which will enhance information relevant to the health status of Aboriginal and Torres Strait Islander people. This information will inform the future development of health services.

Queensland is taking steps to improve access to health services through a variety of measures. Access to health services for people living in rural and remote areas will be enhanced through increased use of Telemedicine. Telemedicine has proved very effective in meeting the health needs of rural and remote communities. Access to elective surgery has increased through the adoption of improved processes. Queensland Health has increased admissions for elective surgery by 3.3 per cent and the percentage of patients waiting longer than 30 days for admission was only 1.9 per cent at 1 July 1999 for category 1 patients. This has been achieved by strategies to optimise throughput, targeting long wait complex surgical cases, increasing day only surgery use, theatre utilisation and liaison with general practitioners. Additionally, waiting lists are published each quarter for 95 per cent of the State's elective surgery by hospital, category and specialty.

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Western Australian Government comments

Within the constraints of limited resources, WA continues to pursue innovations in health service delivery that would maximise the value of the health dollar for the community.

The State launched a health call centre named HealthDirect in May 1999. This service gives the community a 24-hour a day, seven-day a week point of contact for assistance with health concerns. HealthDirect provides advice on the most appropriate way to deal with a health problem when the caller is unable to contact his or her own GP. After three months of operation, call volumes levelled out at approximately 3000 calls a week with the busiest periods being from 5:00pm to 11:00pm and the busiest days being the weekends.

A number of issue-specific initiatives were introduced to the community. To address the need to move from a concentration on a clinical model of maternity care, for example, a consumer information booklet titled *Your Birthing Choice* was produced and distributed through GP Divisions, the Australian College of Midwives and Health Services, the State Library and similar networks. In recognition of Western Australia's low donation rates, DonateWest was established to maximise donation rates and ensure positive outcomes for donor families and recipients. This agency provides a statewide framework for policy and practice to lift donation rates and increase community awareness about the importance of donation. The Universal Neonatal Hearing Screening Program was launched to detect hearing loss in the first three months of life. This early diagnosis and intervention has been demonstrated to make significant differences in outcomes for affected children.

Certain projects that were commenced in recent years have made significant gains. The renal dialysis program has been substantially expanded in the past four years with the addition of nine new services including an in-centre facility at Fremantle Hospital and several metropolitan and rural satellite services. In 1999-00 five new satellite services were planned including two in the northwest to provide an opportunity for repatriation of patients who had been forced to move to Perth for treatment. Innovative service delivery models are being explored including community-based dialysis and the involvement of private providers. In response to continuing issues with waiting lists, the Central Wait List Bureau was established in 1998. In its first 12 months of operation elective surgery waiting lists were reduced by 26 per cent through a combination of audits and of fast tracking patient procedures through service coordination. The Bureau is currently working with GP divisions to conduct clinical reviews of existing lists.

WA continues to develop the output based model of care delivery with a framework that supports policies of care closer to home, value for money and innovative service models. Its efforts at achieving allocative efficiency are articulated in its purchasing intentions and provider arrangements.

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South Australian Government comments

The SA Department of Human Services continues to provide a quality public health service within the constraints of cost pressures and increasing demand. These ongoing pressures result from a number of factors including developments in technology and the ageing of the population. A continuing important element of demand is that arising from the increasing numbers of people in SA dependent on government income support (for example, the unemployed, single parents) who, along with the elderly, are among the largest users of the public health system.

Despite these pressures the SA public hospital system is still one of the most technically efficient (as measured by the cost per casemix-adjusted separation). The department has maintained its efforts to ensure that appropriate health care is provided to all who need it. SA has for many years had a strong community service sector, in both the health and welfare fields. The department is actively undertaking further development of integrated and coordinated service provision across all three portfolio areas of health, housing and community services.

The department has released a Strategic Plan for the Human Services portfolio for the period 1999 – 2002. This Strategic Plan includes commitments to:

- improve service outcomes through the adoption of continuous improvement and best practice processes by promoting evidence based decision making and reviewing and further trialing coordinated care,
- improve outcomes for those who receive hospital treatment by benchmarking services for best practice,
- improve the response of mainstream services to meet the needs of Indigenous people,
- improve the range and mix of services available to people with mental health needs ranging from mental health promotion and illness prevention to long term support for people with an on-going psychiatric disability, and
- an increase in the levels of community- based mental health services.

The department supports the development of performance indicators across the broader (non-hospital) health sector based on nationally agreed data definitions.

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Tasmanian Government comments

In seeking to expand the focus on 'health gain' at all levels of treatment and care in the public health system, Tasmania is continuing to develop performance and quality measurement frameworks to support the collection of data and to inform decisions about the efficacy of existing service outputs.

Over the past year Tasmania has conducted the most comprehensive public health assessment ever undertaken in the state. The *Healthy Communities Survey* was sent to over 25 000 Tasmanians in November 1998 and a first analysis was published in August of this year. As a document indicating how Tasmanians assess their own health, it reveals, for example, that four out of five assess their health as good and that there is little difference in health status between men and women or between people in urban and non-urban areas.

As noted in previous reports, Tasmania supports the continued reporting and publication of information to inform governments and the public about performance in the public health sector. Care should be taken, however, in comparing data between jurisdictions because of differences in how health services are managed. It should be noted that the comparatively high number of private hospital beds in Tasmania can influence *the representation* of performance in the public hospital sector as a percentage of total population when compared with other jurisdictions. Tasmania's small population, particularly in relation to the usage of some services, also makes it prone to statistical fluctuation from year to year.

Tasmania continues to be characterised by a highly regionalised low level population base. The relative social and economic disadvantage of the population generally, statistically low health status, rising community expectations about ready access to high quality (and expensive) medical treatment, and isolation all contribute to the costs of service provision in Tasmania being higher than in other larger jurisdictions.

While some pressure on the public health system has been partially alleviated by a significant one-off budget allocation in 1999 and an increased recurrent commitment by the State Government to the Department of Health and Human Services, it will be some time before the positive impacts on service provision are reflected in performance reporting.

In terms of quality, Tasmania's public health system is highly rated, with all three major hospitals having gained full accreditation from the *Australian Council on Health Care Standards* and many other services working towards assessment and accreditation against national standards programs.

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Australian Capital Territory Government comments

The ACT has entered its fourth year of operation under a purchaser-provider arrangement. The purchase of services in the acute care sector is on the basis of price, volume and quality and these are defined in purchase agreements between the Department of Health and Community Care and the two public hospitals. The Territory currently funds public hospital activity using a case mix based funding model.

Most national benchmarking studies examining the factors contributing to the costs of the public hospital system show that the ACT has a high cost system. The causes of these higher costs are the result of a number of different factors including local ACT factors and policy decisions (or opportunity costs) and higher cost structures for example the high cost of Visiting Medical Officers. The Government is concerned about the high costs and is committed to developing strategies to bring these costs more in line with national benchmarks.

Since 1995-96 there has been an increase in the number of separations and cost weighted separations produced in the ACT public hospital system. Also, the average acuity of these separations has been increasing. This reflects Government policy in a number of areas including the introduction of bone marrow transplants and cardio-thoracic surgery, the development of a clinical school and development of a regional teaching and referral role for the ACT. This trend towards increasing acuity and throughput presents a significant challenge to the ACT public hospital system.

In October 1998 the ACT Government released its *Setting the Agenda* document to guide the Department of Health and Community Care in determining and implementing the future directions of the provision of health care in the ACT. The document's objectives include reforming the hospital system by focusing hospital services on essential acute services and continually reviewing services with a view to, where clinically appropriate, shifting services to a stronger community based primary care sector. The first step in the process of moving functions to the community has occurred with the transfer of the allied health areas of The Canberra Hospital to ACT Community Care.

The ACT continues to support the comparative reporting of data across jurisdictions where it can provide meaningful indicators of the performance of the public hospital system. Care needs to be exercised in the interpretation of the comparative data because of factors such as the differences in state administration, funding models and service provision.

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Northern Territory Government comments

There are five public hospitals in the Northern Territory (NT) located in Darwin, Alice Springs, Nhulunbuy (Gove), Katherine and Tennant Creek. The only private hospital in the Territory is located in Darwin. The combined hospital bed numbers are 721.

The NT has unique demographic features, which augment the challenges government faces in contributing to the wellbeing of Territorians. Our scattered population represents 1 per cent of Australians living in 17 per cent of the land area. Aboriginal people have the highest impact on demand for health services, and comprise 28 per cent of the population but account for 43.9 per cent of hospital separations.

The demographics and the high number of Aboriginal people using health services feed into high morbidity rates and greater proportion of separations than other states.

Waiting times for elective surgery in part are due to the number of public and private facilities available in the NT compared to other states, as well as the availability of specialist services. Specialist services have been expanded, and combined with new technology to reduce waiting times and the number of people travelling interstate for certain types of treatment. Data on emergency department waiting times will be included in the next edition.

Hospitals which are not accredited or booked for survey are preparing intended plans to meet accreditation requirements. The hospitals are also reporting on a broad range of clinical indicators and to that end, resolving issues of data collection and validation such is evident in the reported unplanned re-admission rate. The proportion of same day and not same day care includes gynaecological and endoscopic procedures, which in other states are more likely to be outpatient or privately sourced work.

The NT boasts a highly integrated approach to primary health care, preventive strategies and a commitment to strengthen community capacity. Although breast cancer control strategies and the management of mental illness are targeted in this edition, the interactions between community based services and hospitals are a focus in the NT. The Territory has also pioneered Australia's first fully integrated Community Care Information System to track client and health progress across the continuum of community and tertiary health care. An example of the interactions are the Coordinated Care Trials conducted in the Tiwi Islands and Katherine West.

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6A Health management issues — attachment

Definitions for the descriptors and indicators in this attachment are in section 6A.5. Unsourced information was obtained from Commonwealth, State or Territory governments. Data in this Report are examined by the Review's Health Working Group but have not been formally audited by the Secretariat.

The data contained in this attachment may be subject to revision. The web page version of the Report contains the most up-to-date data where changes have occurred. This attachment can be found at www.pc.gov.au/service/gsp/2000/attach6A.pdf. Users without Internet access can contact the Secretariat (details inside front cover of the Report).

6A.1 All jurisdictions' data — breast cancer management

Prevention/early detection performance

Effectiveness

Table 6A.1 **Age-specific participation rates of women in BreastScreen Australia, 1997 and 1998 average (per cent)**

Age group (years)	NSW	Vic	Qld ^a	WA	SA	Tas	ACT	NT ^c	Aust
40-44	19.5	7.1	23.3	10.4	10.7	19.8	14.9	12.4	15.3
45-49	31.5	14.1	34.4	27.2	23.3	38.6	32.9	23.6	26.7
50-54	51.0	57.9	52.3	53.8	58.3	58.2	57.2	54.3	54.1
55-59	55.0	56.2	54.1	56.2	62.3	61.7	63.0	53.9	56.1
60-64	54.0	55.0	53.8	56.5	61.7	59.0	60.3	42.8	55.3
65-69	50.5	51.8	50.6	51.7	55.6	53.2	54.9	42.1	51.5
70-74	38.9	39.9	35.1	16.9	17.8	16.4	19.0	23.4	33.9

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Table 6A.1 (Continued)

Age group (years)	NSW	Vic	Qld ^a	WA	SA	Tas	ACT	NT ^c	Aust
75-79	20.2	11.9	22.7	8.5	7.9	7.8	11.5	17.7	15.9
80-84	9.1	3.5	10.0	3.0	2.8	2.4	3.7	7.1	6.5
85+	2.2	0.9	2.7	0.7	0.5	0.5	1.3	0.4	1.6
Not stated	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
All ages									
Rate ^b	36.1	31.7	37.4	31.8	32.9	36.5	36.6	30.7	34.5
ASR(A) ^c	37.1	32.6	38.3	32.9	34.6	38.1	37.0	31.3	35.6
95% ^d	37.1-37.2	32.5-32.7	38.2-38.4	32.8-33.1	34.5-34.8	37.7-38.4	36.6-37.5	30.6-32.0	35.5-35.7
50-69									
Rate ^b	52.5	55.5	52.7	54.6	59.4	58.2	58.9	50.8	54.3
ASR(A) ^c	52.6	55.4	52.7	54.6	59.5	58.2	58.9	48.6	54.3
95% ^d	52.4-52.8	55.2-55.6	52.5-52.9	54.2-54.9	59.2-59.9	57.6-58.8	58.0-59.7	47.4-49.9	54.2-54.4

^a Only five of the 11 BreastScreen services had been in operation five or more years. ^b Rate of participation not adjusted for differences in age-profiles across jurisdictions. ^c Age standardised rate based on Australian 1991 population profile. ^d 95 per cent confidence interval.

Source: AIHW (unpublished data).

Table 6A.2 Detection rate of small diameter, invasive breast cancers, 1998 (number per 10 000 women screened)

Age group (years)	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
40-44	na	1.5	4.8	0.0	2.9	0.0	10.5	0.0	na
45-49	na	10.3	5.7	5.5	5.6	5.8	0.0	14.3	na
50-54	na	13.2	10.1	9.1	11.1	22.1	16.8	8.3	na
55-59	na	15.2	10.3	18.2	14.3	10.8	24.0	15.9	na
60-64	na	24.2	18.8	18.3	19.7	29.2	14.0	59.0	na
65-69	na	22.2	15.1	31.5	15.9	27.3	19.1	0.0	na
70-74	na	28.3	35.8	20.9	30.1	0.0	0.0	0.0	na
75-79	na	28.7	36.4	31.8	25.0	94.6	0.0	344.8	na
80-84	na	64.7	30.6	84.0	129.4	0.0	0.0	0.0	na
85+	na	0.0	101.3	0.0	0.0	666.7	0.0	0.0	na
All ages									
Rate ^a	na	18.4	13.7	15.4	14.7	17.6	13.6	18.8	na
ASR(A) ^b	na	16.4	16.3	15.7	16.6	32.2	10.4	31.8	na
95% ^c	na	14.3-18.9	13.6-19.0	12.8-63.2	12.4-21.4	12.7-63.0	5.8-15.9	10.6-58.1	na
Ages 50-69									
Rate ^a	na	18.0	12.9	17.7	14.8	21.6	18.6	16.6	na
ASR(A) ^b	na	18.4	13.4	18.7	15.1	22.3	18.4	20.8	na
95% ^c	na	16.3-20.5	11.3-15.5	15.9-29.3	12.0-18.0	15.6-29.2	10.3-27.7	3.9-41.2	na

^a Rate of participation not adjusted for differences in age-profiles across jurisdictions. ^b Age standardised rate based on Australian 1991 population profile. ^c 95 per cent confidence interval.

Source: AIHW (unpublished data).

Overall performance

Effectiveness

Table 6A.3 Age-specific and age-standardised mortality rates from breast cancer (number) per 100 000 women^a

Age group	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
20–24	0.0	0.2	0.0	0.3	0.1	0.0	0.1	0.1	0.0	0.1	0.3
25–29	0.7	1.0	0.8	1.7	0.6	0.3	0.3	0.7	1.3	0.8	1.0
30–34	4.1	5.2	3.9	3.7	4.7	5.5	2.6	3.6	4.0	5.2	4.0
35–39	10.6	10.5	9.7	12.2	12.0	10.9	12.8	8.1	12.6	11.3	9.1
40–44	21.4	23.5	24.6	23.9	21.7	18.2	21.6	18.3	20.5	19.5	18.2
45–49	35.6	37.9	35.7	36.0	37.1	36.0	36.1	34.2	30.2	33.0	31.7
50–54	54.6	55.5	58.1	57.4	50.9	53.0	53.9	47.5	47.2	50.7	46.5
55–59	66.8	61.2	61.0	64.7	60.9	68.4	65.9	64.0	60.1	56.7	53.1
60–64	80.3	79.1	77.7	71.1	66.0	78.4	74.8	76.5	73.7	65.9	69.2
65–69	89.9	88.4	96.1	88.8	78.8	90.6	83.5	91.2	83.2	81.3	72.0
70–74	95.7	96.3	97.2	110.2	100.2	88.6	99.0	91.0	92.3	91.4	81.2
75–79	125.8	123.8	117.4	112.6	113.1	132.2	122.9	123.0	116.9	110.7	112.3
80–84	145.7	156.2	150.0	147.9	143.3	165.5	152.5	153.1	145.5	137.5	129.4
85+	227.4	235.4	211.2	212.7	217.9	224.1	217.2	212.9	197.0	177.0	192.3
<i>All ages</i>											
ASR (A)	26.9	27.2	26.9	27.0	25.4	26.9	26.5	25.6	25.0	24.2	23.0
<i>50–69</i>											
ASR (A)	71.9	70.1	72.2	69.6	63.3	71.5	68.6	68.5	65	62.8	59.4

^a Rates were age standardised to the Australian 1991 population.

Source: AIHW (unpublished data).

Table 6A.4 Mortality rate from breast cancer (number per 100 000 women)^a

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
1998	26.8	29.1	25.6	23.0	31.9	25.9	25.2	8.9	25.1

^a Estimated resident population at 30 June.

Sources: ABS *Causes of Death Australia*, 1998 (cat. no. 3303.0); ABS, *Estimated Resident Population by Age* (cat. no. 3201.0).

6A.2 Single jurisdiction data — breast cancer management

New South Wales

Effectiveness

Table 6A.5 **Participation rate of Indigenous women and women from culturally and linguistically diverse backgrounds in BreastScreen programs, 1998-99**

	<i>Per cent</i>
<i>Indigenous women</i>	
Aged 40–49	9
Aged 50–69	18
Aged 70+	11
<i>Women from culturally and linguistically diverse backgrounds</i>	
Aged 40–49	9
Aged 50–69	23
Aged 70+	11

^a The number of women screened, which is used to calculate the participation rate, differs slightly from the total number of screens because a small number of women had more than one screen during the year.

Efficiency

Table 6A.6 **Cost per woman for breast screening services, 1998-99 (dollars)^{a, b}**

Without capital expenditure	87.40
With capital expenditure	90.88

^a The cost per woman screened is the total cost of providing breast screening services divided by the number of women screened. The total cost is defined as the cost of providing the BreastScreen NSW Program (screen taking, reading of X-rays, assessment, recruitment, data collection and service management) in addition to the cost of providing the program to women (HDWA 1997-98). ^b Data are estimates only. The definition does not specifically include capital purchases and recurrent provision for capital. Calculations do not account for subsidies, depreciation and overheads, and exclude expenditures against special project funding and funding rolled over from previous years.

Victoria

Effectiveness

Table 6A.7 Participation rate of Indigenous women and women from culturally and linguistically diverse backgrounds in BreastScreen programs, 1997

	<i>Per cent</i>
<i>Indigenous women</i>	
Aged 40–49	7
Aged 50–69	36
Aged 70+	32
<i>Women from culturally and linguistically diverse backgrounds</i>	
Aged 40–49	9
Aged 50–69	52
Aged 70+	24

Table 6A.8 Size and grade of detected cancers, 1997

<i>Tumour grade</i>	<i>Size of invasive cancer</i>				<i>Total</i>
	<i>0–10 mm</i>	<i>11–15 mm</i>	<i>>15 mm</i>	<i>Unknown</i>	
<i>Grades unknown</i>	19	8	19	11	57
<i>Grades known</i>					
<i>Well differentiated</i>					
Number	92	66	34	7	199
Per cent of subtotal	40.4	36.3	17.4	36.8	31.9
<i>Moderately differentiated</i>					
Number	115	88	92	8	303
Per cent of subtotal	50.4	48.4	47.2	42.1	48.6
<i>Poorly differentiated</i>					
Number	21	28	69	4	122
Per cent of subtotal	9.2	15.4	35.4	21.1	19.6
<i>Subtotal</i>					
Number	228	182	195	19	624
Per cent	100.0	100.0	100.0	100.0	100.0

Table 6A.9 Interval cancer rate, 1997^a

	<i>Unit</i>	<i>Age groups</i>			
		<i>40–49</i>	<i>50–59</i>	<i>60–69</i>	<i>70+</i>
<i>0–<12 Months</i>					
Symptomatic status		22.36	14.33	29.49	33.47
Cancers	no.	7	6	7	4

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Table 6A.9 (Continued)

	Unit	Age groups			
		40–49	50–59	60–69	70+
Women screened	no.	3130	4188	2374	1195
Rate per 10 000 women screened	%	22.36	14.33	29.49	33.47
Asymptomatic status					
Cancers	no.	9	30	15	2
Women screened	no.	15 025	40 719	32 015	11 729
Rate per 10 000 women screened	%	5.99	7.37	4.69	1.71
12–<24 Months					
Symptomatic status					
Cancers	no.	5	13	3	1
Women screened	no.	3 120	4 176	2 364	1 188
Rate per 10 000 women screened	%	16.03	31.13	12.69	8.42
Asymptomatic status					
Cancers	no.	17	56	44	21
Women screened	no.	15 009	40 651	31 961	11 701
Rate per 10 000 women screened	%	11.33	13.78	13.77	19.69
0–<24 Months					
Symptomatic status					
Cancers	no.	13	19	10	5
Women screened	no.	6 250	8 364	4 738	2 383
Rate per 10 000 women screened	%	20.80	22.72	21.11	20.98
Asymptomatic status					
Cancers	no.	26	86	59	23
Women screened	no.	30 034	31 370	63 976	23 430
Rate per 10 000 women screened	%	8.66	27.40	9.22	9.82

^a Definition: Rate of interval invasive breast cancers per 10 000 women years. Stratification: By age group and symptomatic status. Definitions are taken from NHMRC, *The Ascertainment and Reporting of Interval Cancers within the BreastScreen Australia Program* (1999, p. 28). Stratification of variables is also taken from the above report. Numerator: Number of interval invasive breast cancers diagnosed in the time since screening. Denominator: Number of women 'at risk' for the time since screening.

Efficiency

Table 6A.10 Cost per woman (\$) for breast screening services, 1997 (dollars)^a

Rural	112
Urban	90
Total	202

^a The cost per woman screened is the total cost of providing breast screening services divided by the number of women screened. The total cost includes the cost of providing the BreastScreen Victoria program (screen taking, reading of X-rays, assessment, recruitment, data collection and service management) in addition to the cost of providing the program to women (HDWA 1997-98).

Queensland

Effectiveness

Table 6A.11 Participation rate of Indigenous women and women from culturally and linguistically diverse backgrounds in BreastScreen programs, 1997-98

	<i>Per cent</i>
<i>Indigenous women</i>	
Aged 40–49	28
Aged 50–69	46
Aged 70–74	30
<i>Women from culturally and linguistically diverse backgrounds</i>	
Aged 40–49	33
Aged 50–69	61
Aged 70–79	30

Table 6A.12 Small cancer detection rate, 1998 (number per 10 000 women screened)

Women aged 50–69	12.9
All women	13.5

Table 6A.13 Size and grade of detected cancers, 1998

<i>Tumour grade</i>	<i>Size of invasive cancer</i>				<i>Total</i>
	<i>0–10 mm</i>	<i>11–15 mm</i>	<i>>15 mm</i>	<i>Unknown</i>	
<i>Grade unknown</i>	12	7	11	2	32
<i>Grade known</i>					
<i>Well differentiated</i>					
Number	80	53	41	1	175
Per cent of subtotal	43	32.7	19.5	33.3	31.2
<i>Moderately differentiated</i>					
Number	73	83	108	2	266
Per cent of subtotal	39.2	51.2	51.4	66.7	47.4
<i>Poorly differentiated</i>					
Number	33	26	61	0	120
Per cent of subtotal	17.7	16.0	29.0	0	21.4
<i>Subtotal</i>					
Number	186	162	210	3	561
Per cent	100	100	100	100	100
Total invasive cancers	198	169	221	5	593

Efficiency

Table 6A.14 Cost per woman for breast screening services, 1998-99 (dollars)^a

Cost per woman screened	108
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^a The cost per woman screened is the total cost of providing breast screening services divided by the number of women screened. The total cost includes the cost of providing the BreastScreen Queensland Program (screen taking, reading of X-rays, assessment, recruitment, data collection and service management) in addition to the cost of providing the program to women (HDWA 1997-98). Calculations incorporate all cash expenditure, including capital expenditure and one-off special project expenditure.

Western Australia

Effectiveness

Table 6A.15 Participation rates in breast screening programs for women in the target age group 50–69 years (per cent)^a

	1995-96	1996-97	1997-98
Age group 50–69 years	48	56	60

^a The participation rate is the number of women aged 50–69 screened in a 27 month interval divided by the total estimated target population for the same period.

Source: HDWA (1998).

Table 6A.16 Participation rate of Indigenous women and women from culturally and linguistically diverse backgrounds in BreastScreen programs, 1997-98

	Per cent
<i>Indigenous women</i>	
Aged 40–49	14
Aged 50–69	36
Aged 70+	13
<i>Women from culturally and linguistically diverse backgrounds</i>	
Aged 40–49	15
Aged 50–69	47
Aged 70+	6

Table 6A.17 Size and grade of detected cancers, January 1996 – December 1998

<i>Tumour grade</i>	<i>Size of invasive cancer</i>				<i>Total</i>
	<i>0–10 mm</i>	<i>11–15 mm</i>	<i>>15 mm</i>	<i>Unknown</i>	
<i>Grades unknown</i>	217	131	174	20	542
<i>Grades known</i>					
Well differentiated					
Number	88	59	35		182
Per cent of subtotal	50.3	45.7	22.4		39.6
Moderately differentiated					
Number	71	58	88		217
Per cent of subtotal	40.6	45.0	56.4		47.2
Poorly differentiated					
Number	16	12	33		61
Per cent of subtotal	9.1	9.3	21.2		13.3
Subtotal					
Number	175	129	156		460
Per cent	100.0	100.0	100.0		100.0

Table 6A.18 Interval cancer rate 1996–98^a

	<i>Unit</i>	<i>Age groups</i>			
		<i>40–49</i>	<i>50–59</i>	<i>60–69</i>	<i>70+</i>
<i>0–<12 Months</i>					
Symptomatic status		None ^b			
Cancers	no.				
Women screened	no.				
Rate per 10 000 women screened	%				
Asymptomatic status					
Cancers ^c	no.	5	6	1	0
Women screened ^d	no.	9 658	8 718	4 451	1 189
Rate per 10 000 women screened	%	5.2	6.9	2.2	0
<i>12–<24 Months</i>					
Symptomatic status		None ^b			
Cancers	no.				
Women screened	no.				
Rate per 10 000 women screened	%				
Asymptomatic status					
Cancers ^c	no.	12	12	5	1
Women screened ^d	no.	8 709	7 902	3 953	1 014
Rate per 10 000 women screened	%	13.8	15.2	12.6	9.9

(Continued on next page)

Table 6A.18 (Continued)

	Unit	Age groups				
		40–49	50–59	60–69	70+	
0–<24 Months						
Symptomatic status		None ^b				
Cancers	no.					
Women screened	no.					
Rate per 10 000 women screened	%					
Asymptomatic status						
Cancers ^c	no.	17	18	6	1	
Women screened ^d	no.	18 367	16 621	8 404	2 203	
Rate per 10 000 women screened	%	9.3	10.8	7.1	4.5	

^a Definition: Rate of interval invasive breast cancers per 10 000 women years. Stratification: By age group and symptomatic status. Definitions taken from the NHMRC. *The Ascertainment and Reporting of Interval Cancers within the BreastScreen Australia Program* (1999, p. 28). Stratification of variables is also taken from the above report. Numerator: Number of interval invasive breast cancers diagnosed in the time since screening. Denominator: Number of women 'at risk' for the time since screening. ^b Symptomatic women and those with a personal history of cancer are excluded, except if presenting for early re-screen with a symptom. Only first round women were reported to the AIHW and only those women are reported here. ^c All asymptomatic women without a personal history of cancer with an interval cancer detected within 12 months of the first screen where the first screen was in 1996. Women may be one or two yearly re-screens. ^d All women without a personal history of cancer who were first screened in 1996.

Source: Mammography Screening Registry, Women's Cancer Screening Service, HDWA (unpublished data).

Efficiency

Table 6A.19 Cost per woman screened for breast screening services (dollars)^a

	1993-94	1994-95	1995-96	1996-97	1997-98 ^b
Cost	128.88	153.67	111.43	113.43	93.75

^a The cost per woman screened is the total cost of providing breast screening services divided by the number of women screened. The total cost includes the cost of providing BreastScreen WA Program (screen taking, reading of X-rays, assessment, recruitment, data collection and service management) in addition of providing the program to women. ^b The decrease in cost per woman screened is due to an increase in efficiency of providing the service and a reduction in the number of women who were assessed within the program. Two hospitals contracted to provide assessment services could not accommodate the number of women requiring assessment in 1997-98.

Source: HDWA (1998).

South Australia

Effectiveness

Table 6A.20 **Participation rate of Indigenous women and women from culturally and linguistically diverse backgrounds in BreastScreen programs, 1997 and 1998**

	<i>Per cent</i>
<i>Indigenous women</i>	
Aged 40–49	12
Aged 50–69	42
Aged 70+	11
<i>Women from culturally and linguistically diverse backgrounds.</i>	
Aged 40–49	15
Aged 50–69	53
Aged 70+	8

Table 6A.21 **Size and grade of detected cancers, 1998**

<i>Tumour grade</i>	<i>Size of invasive cancer</i>				<i>Total</i>
	<i>0–10 mm</i>	<i>11–15 mm</i>	<i>>15 mm</i>	<i>Unknown</i>	
<i>Grades unknown</i>	2	0	3	2	7
<i>Grades known</i>					
<i>Well differentiated</i>					
Number	49	41	23	1	114
Per cent of subtotal	55.7	47.7	26.1	14.3	42.4
<i>Moderately differentiated</i>					
Number	29	32	41	2	104
Per cent of subtotal	33.0	37.2	46.6	28.6	38.7
<i>Poorly differentiated</i>					
Number	6	12	20	0	38
Per cent of subtotal	6.8	14.0	22.7	0.0	14.1
<i>Undifferentiated</i>					
Number	1	0	1	0	2
Per cent of subtotal	1.1	0.0	1.1	0.0	0.7
<i>Not applicable</i>					
Number	2	1	0	1	4
Per cent of subtotal	2.3	1.2	0.0	14.3	1.5
<i>Unknown</i>					
Number	1	0	3	1	5
Per cent of subtotal	1.1	0.0	3.4	14.3	1.9
<i>Subtotal</i>					
Number	88	86	88	7	269
Per cent	100.0	100.0	100.0	100.0	100.0

Efficiency

Table 6A.22 **Cost per woman (dollars) for breast screening services, 1997-98 (dollars)^a**

Cost	97
------	----

^a The cost per woman screened is the total cost of providing breast screening services divided by the number of women screened. The total cost includes the cost of providing the SA BreastScreen program (screen taking, reading of X-rays, assessment, recruitment, data collection and service management) in addition to the cost of providing the program to women (HDWA 1997-98).

Tasmania

Effectiveness

Table 6A.23 **Participation rate of Indigenous women and women from culturally and linguistically diverse backgrounds in BreastScreen programs^a**

	<i>Per cent</i>
<i>Indigenous women</i>	
Aged 40–49	19
Aged 50–69	39
Aged 70+	8
<i>Women from culturally and linguistically diverse backgrounds</i>	
Aged 40–49	na
Aged 50–69	53
Aged 70+	na

^a Data are from 1 April 1994 to 30 June 1999. **na** Not available.

Table 6A.24 **Size and grade of detected cancers, 1998**

<i>Tumour grade</i>	<i>Size of invasive cancer</i>				<i>Total</i>
	<i>0–10 mm</i>	<i>11–15 mm</i>	<i>>15 mm</i>	<i>Unknown</i>	
<i>Grades unknown</i>	5	1	1	1	8
<i>Grades known</i>	30	20	22	2	74
<i>Well differentiated</i>					
Number	12	7	3	0	22
Per cent of subtotal	40	35	14	0	30
<i>Moderately differentiated</i>					
Number	13	11	14	1	39
Per cent of subtotal	43	55	64	50	53
<i>Poorly differentiated</i>					
Number	5	2	5	1	13
Per cent of subtotal	17	10	23	50	18

(Continued on next page)

Table 6A.24 (Continued)

Tumour grade	Size of invasive cancer				Total
	0–10 mm	11–15 mm	>15 mm	Unknown	
Subtotal					
Number	30	20	22	2	74
Per cent	100.0	100.0	100.0	100.0	100

*Efficiency*Table 6A.25 **Cost per woman for breast screening services, 1997-98 (dollars)^a**

Cost	115
------	-----

^a The cost per woman screened is the total cost of providing breast screening services divided by the number of women screened. The total cost includes the cost of providing the BreastScreen Tasmania program (screen taking, reading of X-rays, assessment, recruitment, data collection and service management) in addition to the cost of providing the program to women (HDWA 1997-98).

Australian Capital Territory*Effectiveness*Table 6A.26 **Participation rate of Indigenous women and women from culturally and linguistically diverse backgrounds in BreastScreen programs^a**

	Per cent
<i>Indigenous women</i>	
Aged 40–49	20
Aged 50–69	50
Aged 70+	17
<i>Women from culturally and linguistically diverse backgrounds</i>	
Aged 40–49	28
Aged 50–69	71
Aged 70+	16

^a Data are from 1 April 1997 to 30 June 1999.

Table 6A.27 Size and grade of detected cancers, 1998

<i>Tumour grade</i>	<i>Size of invasive cancer</i>				<i>Total</i>
	<i>0–10 mm</i>	<i>11–15 mm</i>	<i>>15 mm</i>	<i>Unknown</i>	
<i>Grades unknown</i>	1	1	0	0	2
<i>Grades known</i>					
Well differentiated					
Number	7	3	5	0	15
Per cent of subtotal	54	38	39	0	44
Moderately differentiated					
Number	5	4	5	0	14
Per cent of subtotal	39	50	39	0	41
Poorly differentiated					
Number	1	1	3	0	5
Per cent of subtotal	8	13	23	0	15
Subtotal					
Number	13	8	13	0	34
Per cent	100.0	100.0	10.0	100.0	100.0

Efficiency

Table 6A.28 Cost per woman for breast screening services, 1997-98 (dollars)^a

Estimated cost	116
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^a The cost per woman screened is the total cost of providing breast screening services divided by the number of women screened. The total cost includes the cost of providing the BreastScreen ACT program (screen taking, reading of X-rays, assessment, recruitment, data collection and service management) in addition to the cost of providing the program to women (HDWA 1997-98).

Northern Territory

Effectiveness

Table 6A.29 Participation rate of Indigenous women and women from culturally and linguistically diverse backgrounds in BreastScreen programs^a

	<i>Per cent</i>
<i>Indigenous women</i>	
Aged 40-49	na
Aged 50-69	57
Aged 70+	na

(Continued on next page)

Table 6A.29 (Continued)

	<i>Per cent</i>
<i>Women from culturally and linguistically diverse backgrounds</i>	
Aged 40-49	na
Aged 50-69	70
Aged 70+	na

^a Data are from 1 October 1996 to 31 December 1998. **na** Not available.

Efficiency

Table 6A.30 **Cost per woman for breast screening services, 1998-99 (dollars)^a**

Rural	235
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^a The cost per woman screened is the total cost of providing breast screening services divided by the number of women screened. The total cost includes the cost of providing the BreastScreen NT program (screen taking, reading of X-rays, assessment, recruitment, data collection and service management) in addition to the cost of providing the program to women (HDWA 1997-98).

6A.3 All jurisdictions' data — mental health services

Descriptors

Table 6A.31 **Recurrent expenditure on mental health services, by source (in 1996-97 dollars)**

	<i>Unit</i>	<i>State and Territory government</i>	<i>Commonwealth Government</i>	<i>Private health insurance funds^a</i>	<i>Total</i>
1992-93	\$m	1 109.6	437.3	113.6	1 660.5
1993-94	\$m	1 097.3	498.6	125.9	1 721.8
1994-95	\$m	1 131.7	583.7	138.6	1 854.0
1995-96	\$m	1 178.8	675.0	146.4	2 000.2
1996-97	\$m	1 267.1	650.2	156.4	2 073.7
Annual growth rate	%	3.4	10.4	8.3	5.7

^a Private hospital expenditure for 1994-95 and 1995-96 was significantly overestimated in the 1996 National Mental Health Report. The data are based on re-analysis of the ABS data and update previous estimates. Data for 1996-97 are estimates based on growth from 1992-93 to 1995-96.

Source: DHAC (1999a), based on data collected from the National Survey of Mental Health Services (AIHW).

Table 6A.32 Recurrent expenditure by States and Territories (adjusted for non-State funds)^a

	<i>Unit</i>	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
1992-93	\$m	319.1	322.2	152.2	101.4	93.3	29.2	14.6	8.9	1 040.9
1993-94	\$m	320.6	305.2	155.5	105.9	96.8	30.8	14.5	9.6	1 038.9
1994-95	\$m	338.6	322.7	165.1	108.8	97.2	32.1	15.7	9.6	1 089.9
1995-96	\$m	358.8	338.2	181.6	120.2	96.7	35.1	17.1	10.9	1 158.3
1996-97	\$m	394.1	349.1	208.3	139.2	109.2	35.8	19.4	12.0	1 267.1
Annual growth rate	%	5.4	2.0	8.2	8.2	4.0	5.2	7.4	7.8	5.0

^a At current prices.

Source: DHAC (1999a), based on data collected from the National Survey of Mental Health Services (AIHW).

Table 6A.33 Recurrent expenditure by States and Territories (adjusted for non-State funds) (in 1996-97 dollars)

	<i>Unit</i>	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
1992-93	\$m	347.5	337.8	163.9	106.4	97.8	31.4	15.5	9.2	1 109.6
1993-94	\$m	345.1	318.6	165.3	110.6	99.0	32.8	15.2	9.8	1 097.3
1994-95	\$m	355.8	332.6	172.1	113.0	98.1	33.4	16.1	9.7	1 131.7
1995-96	\$m	366.9	343.1	185.2	122.1	96.7	35.7	17.2	11.0	1 178.8
1996-97	\$m	394.1	349.1	208.3	139.2	109.2	35.8	19.4	12.0	1 267.1
Annual growth rate	%	3.2	0.8	6.2	6.9	2.8	3.3	5.8	6.9	3.4

Source: DHAC (1999a), based on data collected from the National Survey of Mental Health Services (AIHW).

Table 6A.34 Government recurrent expenditure on mental health services per person (in 1996-97 dollars)

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
1992-93	58.1	75.6	53.4	63.8	67.1	66.6	52.2	54.4	63.1
1993-94	57.2	71.1	52.5	65.3	68.2	69.5	50.6	56.8	61.8
1994-95	58.4	73.9	53.4	65.4	67.4	70.6	53.3	55.2	63.0
1995-96	59.5	75.6	56.1	69.8	66.2	75.4	56.5	60.7	64.8
1996-97	63.1	76.2	61.8	78.1	74.0	75.5	62.8	64.8	68.8
Annual growth rate %	2.1	0.2	3.7	5.2	2.5	3.2	4.7	4.5	2.2

Source: DHAC (1999a), based on data collected from the National Survey of Mental Health Services (AIHW).

Table 6A.35 Full time equivalent staff employed in specialist mental health services, by service setting (number)

	NSW	Vic	Qld ^a	WA	SA	Tas	ACT	NT ^b	Aust
<i>Inpatient services</i>									
1993-94	3 882	3 519	2 305	1 668	1 640	408	113	84	13 618
1994-95	3 556	3 014	2 467	1 620	1 268	396	84	84	12 488
1995-96	3 520	2 232	2 371	1 565	1 282	417	99	78	11 566
1996-97	3 441	2 006	2 410	1 572	1 234	350	90	84	11 187
Annual growth rate %	-3.9	-17.1	1.5	-2.0	-9.0	-5.0	-7.3	0.0	-6.3
<i>Ambulatory care</i>									
1993-94	1 210	1 418	532	361	407	128	78	54	4 188
1994-95	1 533	1 593	627	440	531	142	85	56	5 007
1995-96	1 932	1 644	798	596	551	145	97	74	5 836
1996-97	2 050	1 912	889	707	584	135	88	70	6 434
Annual growth rate %	19.2	10.5	18.7	25.1	12.8	1.8	4.1	9.0	15.4
<i>Community residential services</i>									
1993-94	239	294	0	38	16	72	61	0	720
1994-95	313	423	0	34	22	89	65	0	946
1995-96	268	676	0	48	10	88	56	0	1 146
1996-97	277	828	0	47	10	84	57	0	1 303
Annual growth rate %	5.0	41.2	0.0	7.3	-14.5	5.3	-2.2	0.0	21.9
1993-94	5 332	5 231	2 837	2 067	2 063	608	251	138	18 526
1994-95	5 401	5 030	3 094	2 094	1 821	627	235	140	18 442
1995-96	5 720	4 553	3 169	2 209	1 843	650	252	152	18 548
1996-97	5 768	4 746	3 298	2 326	1 828	569	235	154	18 924
Annual growth rate %	2.7	-3.2	5.1	4.0	-4.0	-2.2	-2.2	3.7	0.7

^a Queensland Health did not provide community residential services in the reported years. It is anticipated that in 2000 it will decentralise some of its extended care inpatient beds to community based services. ^b The NT did not provide community residential services in the reported years.

Source: DHAC (1999a), based on data collected from the National Survey of Mental Health Services (AIHW).

Effectiveness

Appropriateness

Table 6A.36 Average per person real government expenditure on mental health services, by service setting (in 1996-97 dollars)^a

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
<i>Stand-alone hospitals</i>									
1992-93	26.72	40.97	25.12	32.76	39.45	31.77	0.00	0.00	31.11
1993-94	27.71	33.67	23.85	32.59	38.08	29.38	0.00	0.00	29.15
1994-95	26.14	32.17	23.80	27.66	37.70	26.99	0.00	0.00	27.64

(Continued on next page)

Table 6A.36 (Continued)

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
1995-96	23.93	19.10	23.77	27.92	35.98	26.23	0.00	0.00	23.47
1996-97	22.65	15.23	24.56	28.87	38.87	24.99	0.00	0.00	22.50
Annual growth rate %	-4.0	-21.9	-0.6	-3.1	-0.4	-5.8	0	0	-7.8
<i>Co-located units</i>									
1992-93	15.32	9.98	16.99	14.03	7.05	13.15	21.26	29.61	13.63
1993-94	13.84	9.52	16.99	13.89	7.63	15.39	19.64	32.96	13.12
1994-95	13.85	9.94	16.27	19.16	8.73	15.19	21.09	30.40	13.71
1995-96	14.55	15.65	15.57	19.00	9.51	16.66	23.07	29.18	15.37
1996-97	15.69	14.12	17.13	21.14	9.71	17.57	26.55	36.70	16.05
Annual growth rate %	0.6	9.1	0.2	10.8	8.3	7.5	5.7	5.5	4.2
<i>Community services^b</i>									
1992-93	17.53	23.70	11.51	16.68	20.29	20.83	29.05	21.76	18.52
1993-94	17.29	27.48	12.07	18.98	21.75	24.67	29.26	21.88	19.91
1994-95	20.67	32.30	14.21	19.24	22.75	28.66	31.14	25.40	22.88
1995-96	22.96	41.15	18.90	24.96	24.53	33.69	33.61	36.77	27.67
1996-97	25.93	47.41	21.19	28.55	26.73	33.65	36.31	34.70	31.19
Annual growth rate %	10.3	18.9	16.5	14.4	7.1	12.7	5.7	12.4	13.9

^a Estimates of per capita expenditure in each of the service mix categories refer to all mental health services reported by jurisdictions, regardless of source of funds. ^b Comprises ambulatory care, 24-hour residential services and non-government organisations.

Source: DHAC (1999a), based on data collected from the National Survey of Mental Health Services (AIHW).

Table 6A.37 Patient bed days, by State/Territory and service setting (number)

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
<i>Stand-alone hospitals</i>									
1992-93	549 673	525 855	331 195	171 561	193 840	58 154	0	0	1 830 278
1993-94	497 719	441 283	313 510	157 762	186 495	52 997	0	0	1 649 766
1994-95	441 759	407 904	289 450	127 163	163 408	53 979	0	0	1 483 663
1995-96	399 343	217 945	267 085	124 430	156 078	53 360	0	0	1 218 241
1996-97	377 710	186 667	263 954	126 573	163 948	39 960	0	0	1 158 812
<i>Co-located units</i>									
1992-93	235 998	98 548	154 686	70 403	33 898	24 089	17 481	10 247	645 350
1993-94	237 244	106 830	165 429	69 264	36 715	20 692	16 171	7 904	660 249
1994-95	242 213	105 393	167 923	101 795	45 787	21 120	17 159	9 247	710 637
1995-96	250 845	145 588	162 104	99 179	50 780	20 873	16 352	8 371	754 092
1996-97	268 929	155 577	162 556	96 020	50 961	22 700	18 975	9 932	785 650
<i>Total bed days</i>									
1992-93	785 670	624 403	485 881	241 964	227 738	82 243	17 481	10 247	2 475 628
1993-94	734 963	548 113	478 939	227 026	223 210	73 689	16 171	7 904	2 310 015
1994-95	683 972	513 297	457 373	228 958	209 195	75 099	17 159	9 247	2 194 300
1995-96	650 188	363 533	429 189	223 609	206 858	74 233	16 352	8 371	1 972 333
1996-97	646 639	342 244	426 510	222 593	214 909	62 660	18 975	9 932	1 944 462

Source: DHAC (1999a), based on data collected from the National Survey of Mental Health Services (AIHW).

Table 6A.38 Bed days in co-located units as a proportion of total inpatient bed days, by State/Territory

	<i>Unit</i>	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
1992-93	no.	30.0	15.8	31.8	29.1	14.9	29.3	100.0	100.0	26.1
1993-94	no.	32.3	19.5	34.5	30.5	16.4	28.1	100.0	100.0	28.6
1994-95	no.	35.4	20.5	36.7	44.5	21.9	28.1	100.0	100.0	32.4
1995-96	no.	38.6	40.0	37.8	44.4	24.5	28.1	100.0	100.0	38.2
1996-97	no.	41.6	45.5	38.1	43.1	23.7	36.2	100.0	100.0	40.4
Annual growth rate	%	8.5	30.3	4.6	10.3	12.3	5.5	0.0	0.0	11.6

Source: table 6A.37.

Table 6A.39 Patient bed days in community based residential services delivering 24-hour specialised mental health care (number)

	<i>NSW</i>	<i>Vic</i>	<i>Qld^a</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
<i>General adult psychiatry</i>									
1992-93	49 704	12 302	0	26 061	7 793	4 746	21 243	0	121 849
1993-94	43 863	20 772	0	18 951	8 827	6 889	21 247	0	129 549
1994-95	54 938	24 596	0	17 926	4 638	7 164	21 285	0	130 747
1995-96	48 408	41 579	0	21 898	3 285	7 444	21 733	0	142 309
1996-97	48 137	87 494	0	21 764	3 285	7 444	21 267	0	189 391
<i>Geriatric psychiatry</i>									
1992-93	34 748	86 304	0	0	0	16 299	0	0	137 351
1993-94	39 612	88 997	0	0	0	16 118	0	0	144 727
1994-95	47 873	102 524	0	0	0	16 776	0	0	167 173
1995-96	55 131	130 099	0	0	0	15 751	0	0	200 981
1996-97	53 708	167 764	0	0	0	16 345	0	0	237 817
<i>Total beds</i>									
1992-93	84 452	98 606	0	26 061	7 793	21 045	21 243	0	259 200
1993-94	83 475	109 769	0	18 951	8 827	23 007	21 247	0	265 276
1994-95	102 811	127 120	0	17 926	4 638	23 940	21 485	0	297 920
1995-96	103 539	171 678	0	21 898	4 322	20 120	21 733	0	343 290
1996-97	101 845	255 258	0	21 764	3 285	23 789	21 267	0	427 208
Annual growth rate %	4.8	26.8	0	-4.4	-19.4	3.1	0.0	0	13.3

^a Queensland Health did not provide these services in the reported years. It is anticipated that in 2000 it will decentralise some the extended care inpatient beds to community based services.

Source: DHAC (1999a), based on data collected from the National Survey of Mental Health Services (AIHW), incorporating adjustments to previous years reported data.

Table 6A.40 Consumer/carer participation in public sector mental health service organisations (number)

		<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
Level 1 participation ^a	1994	8	6	6	1	2	0	0	0	23
	1995	13	4	9	0	5	2	0	0	33
	1996	30	5	8	0	14	3	0	1	61
	1997	43	5	9	1	9	1	0	1	69
Level 2 participation ^b	1994	12	5	4		1				22
	1995	11	6	1	1	1	1	1	1	23
	1996	9	5	10	2	2		1	1	30
	1997	6	2	9	4	3			1	25
Level 3 participation ^c	1994	9	6	4	3	4	2			28
	1995	12	11	1	7	6			1	38
	1996	9	7	2	11	3				32
	1997	5	3	1	4	6	2	1		22
Level 4 participation ^d	1994	14	14	8	12	6	1	2	7	64
	1995	22	14	7	12	16		1	5	77
	1996	12	16	11	13	12		1		65
	1997	13	11	11	17	11		1	3	67
Total number of organisations with valid response	1994	43	31	22	16	13	3	2	7	137
	1995	58	35	18	20	28	3	2	7	171
	1996	60	33	31	26	31	3	2	2	188
	1997	67	21	30	26	29	3	2	5	183

^a Appointment of a person to represent the interests of consumers and carers on the organisation management committee or a specific consumer/carer advisory group to advise on all aspects of service delivery. ^b Specific consumer/carer advisory group to advise on some aspects of service delivery. ^c Consumers/carers participating on broadly based committees. ^d No specific arrangements for carer and consumer participation.

Source: DHAC (1999a), based on data collected from the National Survey of Mental Health Services (AIHW).

Outcomes

Table 6A.41 Prevalence of mental disorders in adults, 1997

	Number			Share of adults with a mental disorder			Share of total adults		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
	'000	'000	'000	%	%	%	%	%	%
<i>Anxiety disorders</i>									
Panic disorder	36.7	133.8	170.5	3.2	10.9	7.2	0.6	2.0	1.3
Agoraphobia	49.2	101.9	151.1	4.3	8.3	6.3	0.7	1.5	1.1
Social phobia	161.4	207.3	368.7	14.0	16.8	15.5	2.4	3.0	2.7
Generalised anxiety disorder	156.8	256.0	412.8	13.6	20.8	17.3	2.4	3.7	3.1

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Table 6A.41 (Continued)

	Number			Share of adults with a mental disorder			Share of total adults		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
	'000	'000	'000	%	%	%	%	%	%
Obsessive compulsive disorder	19.3	29.2	48.6	1.7	2.4	2.0	0.3	0.4	0.4
Post traumatic stress disorder	153.3	285.8	439.2	13.3	23.2	18.4	2.3	4.2	3.3
Total	470.4	829.6	1 299.9	40.8	67.4	54.5	7.1	12.1	9.7
<i>Affective disorders</i>									
Depression	227.6	465.3	692.9	19.8	37.8	29.1	3.4	6.8	5.1
Dysthymia	63.4	88.3	151.7	5.5	7.2	6.4	1.0	1.3	1.1
Total	275.3	503.3	778.6	23.9	40.9	32.7	4.2	7.4	5.8
<i>Substance abuse disorders</i>									
Alcohol harmful use	285.4	123.8	409.2	24.8	10.1	17.2	4.3	1.8	3.0
Alcohol dependence	339.8	126.9	466.7	29.5	10.3	19.6	5.1	1.9	3.5
Drug use	206.9	89.2	296.0	18.0	7.2	12.4	3.1	1.3	2.2
Total	734.3	307.5	1041.8	63.8	25.0	43.7	11.1	4.5	7.7
Total adults with a mental disorder	1 151.6	1 231.5	2 383.1	100.0	100.0	100.0	17.4	18.0	17.7
Total adults in the population	6 627.1	6 837.7	13 464.8	..	..	..	100.0	100.0	100.0

.. Not applicable.

Source: ABS, *Mental Health and Wellbeing: Profile of Adults, Australia, 1997* (cat. no. 4326.0, 1997).

Table 6A.42 Prevalence rates of mental disorders, by age, 1997 (per cent of all adults)

	18–24 years	25–34 years	35–44 years	45–54 years	55–64 years	65 years or more	Total
Anxiety disorders	11.2	9.8	11.4	11.9	7.8	4.5	9.7
Depressive disorders ^a	6.7	6.6	7.2	6.4	5.0	1.7	5.8
Substance abuse disorders	16.1	11.3	8.2	5.3	3.2	1.1	7.7
All conditions	26.6	21.3	19.9	17.5	12.3	6.1	17.7

^a Includes all affective disorders.

Source: ABS, *Mental Health and Wellbeing: Profile of Adults, Australia, 1997*, (cat. no. 4326.0, 1997).

**Table 6A.43 Prevalence of mental disorders, by geographic location, 1997
(per cent of all adults)**

	<i>Capital city</i>	<i>Rest of State/Territory</i>	<i>Total</i>
Anxiety disorders	9.4	10.1	9.7
Affective disorders	5.6	6.1	5.8
Substance abuse disorders	7.7	7.8	7.7
All conditions	17.5	18.0	17.7

Source: ABS, *Mental Health and Wellbeing: Profile of Adults, Australia, 1997* (cat. no. 4326.0, 1997).

Table 6A.44 Suicides and mortality rate, by sex

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
<i>Suicides (number)</i>											
Males	1 730	1 658	1 735	1 847	1 820	1 687	1 830	1 872	1 931	2 146	2 150
Females	467	438	426	513	474	394	428	495	462	577	533
Persons	2 197	2 096	2 161	2 360	2 294	2 081	2 258	2 367	2 393	2 723	2 683
<i>Mortality rate (number per 100 000 people)^a</i>											
Males	21.0	19.8	20.4	21.4	20.9	19.2	20.6	20.8	21.2	23.3	23.0
Females	5.6	5.2	5.0	5.9	5.4	4.4	4.8	5.5	5.0	6.2	5.7
Persons	13.3	12.5	12.7	13.7	13.1	11.8	12.6	13.1	13.1	14.7	14.3

^a As 30 June.

Sources: ABS, *Causes of Death Australia, 1998* (cat. no. 3303.0, 1999); ABS, *Estimated Resident Population, by Age, 1998* (cat. no. 3201.0).

Table 6A.45 Mortality rate from suicide, by jurisdiction (number per 100 000 people)^a

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
1998	13.6	12.4	16.8	15.7	16.4	12.5	10.1	22.1	14.3

^a Estimated resident population at 30 June.

Sources: ABS, *Causes of Death Australia, 1998* (cat. no. 3303.0, 1999); ABS, *Estimated Resident Population, by Age, 1998* (cat. no. 3201.0).

Table 6A.46 Mortality rate from suicide for people aged 15–24 years by jurisdiction (deaths per 100 000 people)^a

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
1996	14.0	11.8	22.2	17.7	11.8	10.5	13.1	22.8	15.2
1997	19.3	17.7	23.2	16.1	18.4	4.6	20.6	34.8	19.1
1998	16.5	14.2	18.2	20.1	18.0	6.3	11.3	38.7	16.7
Average annual growth rate	8.7	9.7	-9.4	6.7	23.5	-22.8	-7.0	30.3	4.7

^a Estimated resident population aged 15–24 years at 30 June.

Sources: ABS, *Causes of Death, Australia 1998*, (cat. no. 3303.0, 1999), ABS, *Estimated Resident Population, by Age, 1998* (cat. no. 3201.0).

Efficiency

Table 6A.47 **Average costs per day for patients with mental illness, by inpatient program type (dollars)^{a, b}**

	<i>NSW</i>	<i>Vic</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>Tas</i>	<i>ACT</i>	<i>NT</i>	<i>Aust</i>
<i>General psychiatry</i>									
1995-96	396	468	290	370	324	357	428	547	376
1996-97	394	403	324	409	344	342	432	666	376
<i>Child/adolescent psychiatry</i>									
1995-96	698	545	600	520	428	0	0	0	575
1996-97	502	641	715	549	546	0	0	0	579
<i>Geriatric psychiatry</i>									
1995-96	340	365	280	330	290	165	0	0	314
1996-97	370	331	297	368	297	276	0	0	333
<i>Forensic psychiatry</i>									
1995-96	161	275	406	478	531	140	0	1 181	291
1996-97	275	393	441	495	424	268	0	750	378
<i>Total</i>									
1995-96	374	430	297	365	321	274	428	626	359
1996-97	384	394	330	405	334	328	432	685	371
Annual growth rate %	2.7	-8.4	11.1	11.0	4.0	19.7	0.9	9.4	3.3

^a Bed day costs are based on adjusted inpatient expenditure following distribution of indirect amounts. ^b All cells represent weighted averages.

Source: DHAC (1999), based on data collected from the National Survey of Mental Health Services (AIHW).

6A.4 Single jurisdiction data — mental health services

The jurisdiction-specific data presented below are not comparable.

New South Wales

Quality

Table 6A.48 **Accredited mental health facilities, 1999^{a, b}**

<i>Accredited facilities</i>	<i>Proportion accredited</i>	<i>Accredited beds^c</i>
no.	%	no.
43		1933

^a Accreditation status of facilities at September 1999. ^b Contains all public mental health inpatient units. Excludes community residential units or authorised private hospital beds. ^c Accreditation status of beds at 30 June 1999.

Table 6A.49 Unplanned psychiatric re-admissions to hospital within 28 days for the same condition, 1997-98^{a, b, c}

<i>Condition group</i>	<i>Number in condition group</i>	<i>Re-admissions as proportion of condition group</i>	<i>Re-admissions as proportion of selected population</i>
	<i>no.</i>	<i>%</i>	<i>%</i>
Schizophrenia and selected disorders	888	18	5.7
Major depression and selected disorders	7603	20	5
Adjustment and stress reaction	4483	8	1.3
Anxiety and related disorders	2830	19	2
Personality disorders	1372	27	1.3
Childhood disorders	277	22	0.2
Eating disorders (bulimia and anorexia nervosa)	236	24	0.2
Others	2098	4	0.3
Total	27787	16	16

^a A re-admission flag is set in the inpatient statistics database when a patient has been re-admitted to hospital within 28 days. This may be the same hospital, or another hospital and depends on the report of the service provider. Record matching for individuals is not undertaken. Therefore it is possible that the re-admission may not be for the same psychiatric illness. However, it must be for a psychiatric condition due to the selection criteria for the population under consideration. Conditions have been grouped into clinically similar classes rather than the AN-DRG groups. ^b Includes public hospitals (including psychiatric and general). ^c Excludes same day admissions. Includes patients treated in NSW but residents of another State, but excludes NSW residents treated in another State.

Efficiency — unit cost

Table 6A.50 Cost per non-admitted occasion of service, 199? (dollars)^{a, b, c}

<i>Hospital type</i>	<i>Emergency</i>	<i>Outpatient</i>	<i>Primary and community based</i>	<i>Same day</i>
All types	80	133	93	342

^a Estimates based on 1997-98 National Survey of Mental Health Services. ^b Includes direct and indirect costs. ^c The National Survey of Mental Health Services includes same day admissions as ambulatory care. They are included in this estimate.

Victoria

Table 6A.51 Accredited mental health facilities, 1998^a

	<i>Accredited facilities</i>	<i>Proportion accredited</i>	<i>Accredited beds</i>
	<i>no.</i>	<i>%</i>	<i>no.</i>
Acute inpatient facilities	55		1120
Community and residential facilities	39		868

^a At 30 June 1998.

Table 6A.52 Unplanned psychiatric re-admissions to hospital within 28 days for the same condition, 1997-98^a

<i>Hospital type</i>	<i>Number discharged</i>	<i>Proportion re-admitted</i>
	no.	%
Public acute care	16 037	17.2

^a The Victorian mental health information system cannot distinguish between unplanned and planned readmissions. The rate includes all 'conditions' but only relates to admissions to an acute inpatient mental health unit.

Queensland

Table 6A.53 Percentage of accredited mental health facilities^a

<i>Accredited facilities</i>	<i>Proportion accredited</i>	<i>Accredited beds^b</i>
no.	%	no.
12	na	375

^a At 30 June 1999. Public hospitals only accredited through the ACHS. ^b Acute and non-acute public mental health beds.

Western Australia

Quality

Table 6A.54 People treated under community mental health programs admitted to hospital overnight for psychiatric treatment, by age, gender and Indigenous status (per cent)

	1993-94	1994-95	1996-97	1997-98
<i>Age group</i>				
0-17	6.5	6.7	7.0	7.3
18-64	23.5	25.0	27.4	28.2
65+	39.7	42.7	41.2	43.2
<i>Indigenous status</i>				
Non-Indigenous	21.8	23.0	24.7	25.4
Indigenous	40.7	40.1	36.9	41.8
<i>Gender</i>				
Male	23.5	24.7	26.5	26.3
Female	20.1	21.3	22.5	24.3
Total	21.7	22.9	24.4	25.3

Source: HDWA (1997-98).

Table 6A.55 Accredited mental health facilities, 1998^a

<i>Accredited facilities^b</i>	<i>Proportion accredited</i>	<i>Accredited beds</i>
no.	%	no.
16	na	372

^a At 30 June 1998. ^b Includes authorised hospitals, extended care units and psychiatric wards in public acute care hospitals.

Table 6A.56 Unplanned psychiatric re-admissions to hospital within 28 days for the same condition, 1997-98 (per cent)^a

<i>Hospital type</i>	<i>Proportion re-admitted</i>
Teaching	5.7
Metropolitan non-teaching	5.1
Total	5.5

^a Re-admissions are overnight stays within 28 days with the same four-digit ICD9-CM diagnosis. ACHS standards were used as endorsed by Royal Australian and New Zealand College of Psychiatrists (*ACHS Clinical Indicators: A User's Manual, Psychiatry Indicators, Vol. 2*).

Efficiency

Table 6A.57 Average cost per public patient under community management (dollars)^a

	<i>1995-96</i>	<i>1996-97</i>	<i>1997-98</i>
Actual	1 657	2 299	2 132
Real	1 445	2 004	1 859

^a The figures for this indicator were obtained by dividing the combined gross accrued cost of community based services by the total number of persons who received at least one occasion of service during the period.

Source: Finance and Resource Management, Health Department of Western Australia, Mental Health Information System.

South Australia

Table 6A.58 Accredited mental health facilities, 1998^a

<i>Accredited facilities</i>	<i>Proportion accredited</i>	<i>Accredited beds^b</i>
no.	%	no.
8	na	183

^a At 30 June 1998. ^b The public hospitals accredited are those with designated/specialised mental health facilities.

Table 6A.59 Cost per non-admitted occasion of service (dollars)

<i>Hospital type</i>	<i>Emergency</i>	<i>Outpatient</i>	<i>Primary and community based</i>
Public hospitals ^a	na	92	na
Community adults ^b	329	na	118
CAMHS–children ^c			184

^a Data from Coopers & Lybrand outpatient study 1996-97. ^b Direct contacts only, including the elderly; 1997-98 data. ^c Includes community initiatives; 1997-98 data. **na** Not available.

Tasmania

Table 6A.60 Accredited mental health facilities, 1999^a

<i>Accredited facilities</i>	<i>Proportion accredited</i>	<i>Accredited beds</i>
no.	%	no.
4	na	80

^a Accreditation commenced at different times for the four facilities in the first six months of 1999.

Australian Capital Territory

Table 6A.61 Accredited mental health facilities, 1997-98

<i>Accredited facilities</i>	<i>Proportion accredited</i>	<i>Accredited beds</i>
no.	%	no.
2	na	52

Table 6A.62 Unplanned psychiatric re-admissions to hospital within 28 days for the same condition, 1998 (per cent)^{a, b}

<i>Hospital type</i>	<i>Proportion re-admitted</i>
Acute care facility	8.0

^a Includes patients re-admitted for treatment of the same condition, related condition and complication of the condition for which the patient was previously hospitalised. ^b 1 January to 30 June 1998.

6A.5 Definitions

Table 6A.63 Terms

<i>Term</i>	<i>Definition</i>
Acute care hospital	A hospital that provides at least minimum medical, surgical or obstetric services for inpatient treatment and/or care, and around-the-clock, comprehensive, qualified nursing services as well as other necessary professional services

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Table 6A.63 (Continued)

<i>Term</i>	<i>Definition</i>
Affective disorders	A mood disturbance, includes mania, hypomania, bipolar affective disorder, depression and dysthymia
Agoraphobia	Fear of being in public places from which it may be difficult to escape. A compelling desire to avoid the phobic situation is often prominent.
Ambulatory services	Services provided by hospitals to non-admitted patients
Antidepressant	A drug that alleviates depression, usually by energising the person and thus elevating mood
Anxiolytics	Tranquillisers; drugs that reduce anxiety
Anxiety disorders	Feelings of tension, distress or nervousness. Includes agoraphobia, social phobia, panic disorder, generalised anxiety disorder, obsessive–compulsive disorder and post traumatic stress disorder.
Bipolar disorder	A mood disorder characterised by a history of manic (or hypomanic) episodes usually alternated with depressive episodes
Case mix adjustment	Adjustment of data on cases treated to account for the number and type of cases. Cases were sorted into diagnosis related groups which represented a class of patients with similar clinical conditions requiring similar hospital services.
Co-located units	Psychiatric units in general hospitals. Includes ambulatory services, specialised residential services.
Community health services	Health services for individuals and groups delivered in a community setting, rather than in hospitals or in private facilities
Comorbidity	The simultaneous occurrence of two or more disorders such as depressive disorder with anxiety disorder, or depressive disorder with anorexia
Depression	A state of gloom, despondency or sadness lasting at least two weeks. The person usually suffered from low mood, loss of interest and enjoyment, and reduced energy. Their sleep, appetite and concentration might have been affected.
Dysthymia	Constant or constantly recurring chronic depression of mood, lasting at least two years, which was not sufficiently severe, or whose episodes were not sufficiently prolonged, to qualify as recurrent depressive disorder. The person felt tired and depressed, slept badly and felt inadequate, but was usually able to cope with the basic demands of everyday life.
General practice	A medical practice that offered primary, continuing, comprehensive whole-person care for individuals, families and the community
Generalised anxiety disorder	Unrealistic or excessive anxiety and worry about two or more life circumstances for six months or more, during which the person had these concerns more days than not
Hypomania	A lesser degree of mania characterised by a persistent, mild elevation of mood and increased activity lasting for at least four days. Increased sociability, over-familiarity and a decreased need for sleep were often present, but not to the extent that they led to severe disruption.
Invasive cancer	A tumour whose cells had a tendency to invade healthy or normal tissues
Mental disorder	A diagnosable illness that significantly interferes with an individual's cognitive, emotional or social abilities

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Table 6A.63 (Continued)

<i>Term</i>	<i>Definition</i>
Mental health problems	Diminished cognitive, emotional or social abilities but not to the extent that the criteria for a mental disorder are met
Mental health promotion	Action to maximise mental health and wellbeing among populations and individuals
Obsessive–compulsive disorder	Obsessions: recurrent, persistent ideas, thoughts, images or impulses that intruded into the person’s consciousness against their will. The person experienced these as being senseless or repugnant, but was unable to ignore or suppress them. Compulsions: recurrent, stereotyped behaviours performed according to certain rules. The person often viewed them as preventing some unlikely event, often involving harm to, or caused by, themselves. The person generally recognised the senselessness of the behaviour, attempted to resist it and did not derive any pleasure from carrying out the activity.
Panic disorder	Panic (anxiety) attacks that occurred suddenly and unpredictably. A panic attack was a discrete episode of intense fear or discomfort.
Post traumatic stress disorder	A delayed and/or protracted response to a psychologically distressing event that was outside the range of usual human experience
Prevalence	The percentage of the population suffering from a disorder at a given point in time (point prevalence) or during a given period (period prevalence)
Preventive interventions	Programs designed to decrease the incidence, prevalence and negative outcomes of disorders
Public health	The organised, social response to protect and promote health and to prevent illness, injury and disability. The starting point for identifying public health issues, problems and priorities, and for designing and implementing interventions, is the population as a whole or population subgroups.
Psychiatrist	Medical practitioner with specialist training in psychiatry
Schizophrenia	A combination of signs and symptoms which may include delusions, hallucinations, disorganised speech or behaviour, a flattening in emotions and a restriction in thought, speech and goal-directed behaviour
Screening	The performance of tests on apparently well people to detect a medical condition at an earlier stage than would otherwise be the case
Social phobia	A persistent, irrational fear of being the focus of attention, or fear of behaving in a way that would be embarrassing or humiliating
Specialised residential services	Services provided in the community that were staffed by mental health professionals on a 24-hour basis
Stand-alone hospitals	Psychiatric hospitals that were separated from the general health care system
Substance use disorders	Disorders in which drugs are used to such an extent that behaviour becomes maladaptive; social and occupational functioning is impaired, and control or abstinence becomes impossible. Reliance on the drug may be psychological as in substance misuse, or physiological as in substance dependence.

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Table 6A.63 (Continued)

<i>Term</i>	<i>Definition</i>
Unplanned psychiatric readmissions to hospital within 28 days for the same condition	The total number of unplanned readmissions for the same condition within 28 days of separation, during the time period under study, divided by the total number of separations during the same period. (ACHS, <i>Measurement of Care in Australian Hospitals</i> , vol. 5, Nov. 1998)

Table 6A.64 Indicators

<i>Indicator</i>	<i>Definition</i>
Consumer/carer involvement in decision making	Consumer participation arrangements in public sector mental health service organisations according to the scoring hierarchy (levels 1–4) developed for monitoring State and Territory performance under Medicare Agreements Schedule F1 indicators
Cost per patient bed day	The average patient day cost according to the inpatient type
Cost per non-admitted occasion of service	The proportion of expenditure allocated to patients who were not admitted divided by the total number of non-admitted occasions of service
Cost per woman screened	The total cost of provision of breast screening services divided by the number of women screened. The total cost of provision of breast screening services should include the cost of providing the BreastScreen Program in each jurisdiction, in addition to the cost of providing the program to women.
Detection rate for small cancers	The rate of small (≤ 10 mm) invasive breast cancers detected per 10 000 women screened
Mortality rate from breast cancer	The age-specific and age-standardised mortality rates, expressed per 100 000 women in the population, who died as a result of breast cancer
Mortality rate from suicide	The percentage of the population who died as a result of suicide
Participation rate	Age-specific rates for women participating in breast screening under BreastScreen Australia as a percentage of all women in the population
Participation rate of Indigenous women and women from culturally and linguistically backgrounds	Age-specific rates for women identifying themselves as being of Aboriginal and Torres Strait Islander descent, and for women from a non-English speaking background, participating in breast screening under BreastScreen Australia, as a percentage of their respective population group
Percentage of facilities accredited	The percentage of facilities providing mental health services which are accredited
Prevalence of treated mental disorders	Percentage of people in the population suffering from a mental disorder
Size and grade of detected cancers	The percentage of invasive cancers detected classified according to tumour size and grade