7   Health management issues

Health management is concerned with the management of diseases, illnesses and injuries using a variety of services (promotion, prevention/early detection and intervention) in a variety of settings (for example, public acute hospitals, community health centres and general practice). This chapter reports on the management of breast cancer and mental health, and represents only some of the activities of Commonwealth, State and Territory governments in health management.

An overview of health management is provided in section 7.1. Sections 7.2 and 7.3 report on the performance of breast cancer and mental health management respectively. Section 7.4 outlines the future directions for the chapter, and jurisdictions' comments in respect of all the health chapters are summarised in section 7.5. Definitions are listed in section 7.6.

Performance data are presented for the management of breast cancer and mental illness for the third time in this year's Report. A number of improvements have been made for this report, including:

- reporting the interval cancer rate, the ratio of benign to malignant biopsies, and the ratio of conservative surgery to radical surgery for breast cancer; and

- expanded reporting of outcomes data for Indigenous people for mental health.

Supporting tables

Supporting tables for chapter 7 are provided on the CD-ROM enclosed with the Report. The files are provided in Microsoft Excel 97 format as \Publications\Reports\2001\Attach7A.xls and in Adobe PDF format as \Publications\Reports\2001\Attach7A.pdf.

Supporting tables are identified in references throughout this chapter by an 'A' suffix (for example, table 7A.3 is table 3 in the electronic files). They may be subject to revision. The most up-to-date versions of these files can be found on the Review web page (www.pc.gov.au/service/gsp/2001/). Users without Internet access can contact the Secretariat to obtain up-to-date versions of these tables (see details on the inside front cover of the Report).

7.1 Overview of health management

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 promotion, 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.

Breast cancer and mental illness are significant causes of morbidity and mortality in Australia. Cancer control and mental health are identified by governments as National Health Priority Areas, along with diabetes mellitus, cardiovascular health, injury prevention and the control of 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).

Appropriate management of breast cancer and mental health will have a large effect on the health and wellbeing of many Australians. Both are the subjects of public health programs designed to improve community awareness (box 7.1). Public health programs require the participation of 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 5 and 6 respectively.)

The 'Health preface' of this Report 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 of the 'Health preface'). Frameworks for public hospitals and GPs 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.

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. The Commonwealth, States and Territories report a limited number of priority indicators, encompassing the continuum of care (from prevention through to treatment, rehabilitation and

palliation) for each area on a regular basis (AIHW 2000a). The first report on injury prevention and control was released in 1998, and reports for cardiovascular health, diabetes mellitus and mental health were released in 1999. A report on asthma is to be produced in 2001. National reports for the Cervical Screening Program and BreastScreen Australia were published in 1998, 1999 and 2000.

Box 7.1   **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 to 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 areas including communicable diseases (such as HIV/AIDs and tuberculosis), childhood immunisation, and the National Health Priority Areas.

Many public health activities are delivered by a range of health care providers — general practitioners (GPs), 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 (dieticians, community nurses, psychologists and so on). This multi-disciplinary approach makes it difficult to attribute health outcomes to a particular service or provider.

Sources: AIHW (1998a); Fry (1994) and NPHP (1997).

7.2 Breast cancer

Profile

Definition

Breast cancer is a disease whereby uncontrolled, or malignant, cell division leads to the formation of a tumour or tumours in a woman's breast (box 7.2).[1] Tumours may expand locally by invasion of surrounding tissue or may spread via the lymphatic or vascular systems to the rest of the body. If left untreated, most malignant tumours eventually result in the death of the affected person (AIHW 2000b). The focus of this Report is on malignant cancers, although some data are reported on the size and grade of *ductal carcinoma in situ* (non-invasive tumours residing in the ducts of the breast).

Box 7.2 **Some common health terms used in breast cancer management**

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.

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 disease at an earlier stage than would otherwise be the case.
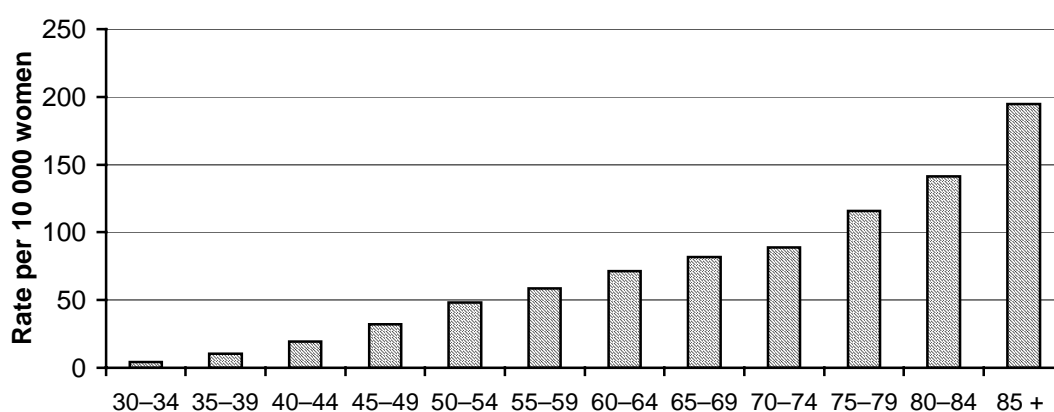

Breast cancer is not amenable to practical prevention, so the focus of breast cancer control is on screening to enable early detection and intervention as this increases the probability of survival. Screening is undertaken through the national breast cancer screening program, BreastScreen Australia. The most effective means of detecting breast cancer at an early stage is by mammography screening every two years. Evidence has shown that for women aged from 50 to 69, this substantially reduces the lifetime risk of dying from the disease.

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[1] The Report does not examine breast cancer in males which is very rare.

Cancers detected early may be treated more conservatively, and such patients generally have a higher likelihood of recovery. Because age is the most significant risk factor, the joint Commonwealth–State BreastScreen Australia program targets women aged from 50 to 69 years, although women aged 40 to 49 years and those over 70 years may also use the service. The program aims to achieve a participation rate of 70 per cent among women aged 50 to 69 years.

The strong relationship between age and the mortality rate from breast cancer for the period 1995 to 1998 is shown in figure 7.1. Whereas women aged 40 to 44 years have a mortality rate of 19.1 per 100 000 women, those in the target age group, 50 to 69 years, have an age standardised mortality rate rate of 63.9 while women aged 75 to 79 have a mortality rate of almost 115.7 per 100 000 women.

Figure 7.1　**Age-specific and age-standardised mortality rates from breast cancer, by age group, 1995–1998[a]**

a Rates were age standardised to the Australian 1991 population.

Source: table 7A.14.

Incidence and prevalence

Breast cancer was the most common cancer affecting Australian women, with over 10 000 new cases diagnosed in 1997 (AIHW 2000b). It was responsible for approximately 2600 deaths, making it the most frequent cause of death from cancer for females (ABS 1999). The risk of a woman developing breast cancer before the age of 75 years for the period 1992-96 was one in 12 in Australia (AIHW *et al.* 1999).

Almost 120 000 new cases of breast cancer were diagnosed in Australian women between 1982 and 1997 (table 7A.1). Over this period, the average annual growth rate in the number of new cases was 4.7 per cent. The number of new cases per year increased steadily from 7943 in 1992 to 9951 in 1995, fell to 9556 in 1996 and grew

again to 10 257 in 1997 (table 7.1 and table 7A.1). The increase in the number of cases detected reflects both an increase in the underlying rate of breast cancer as well as the detection of cancers that would have previously gone undetected for some years (AIHW 2000b).
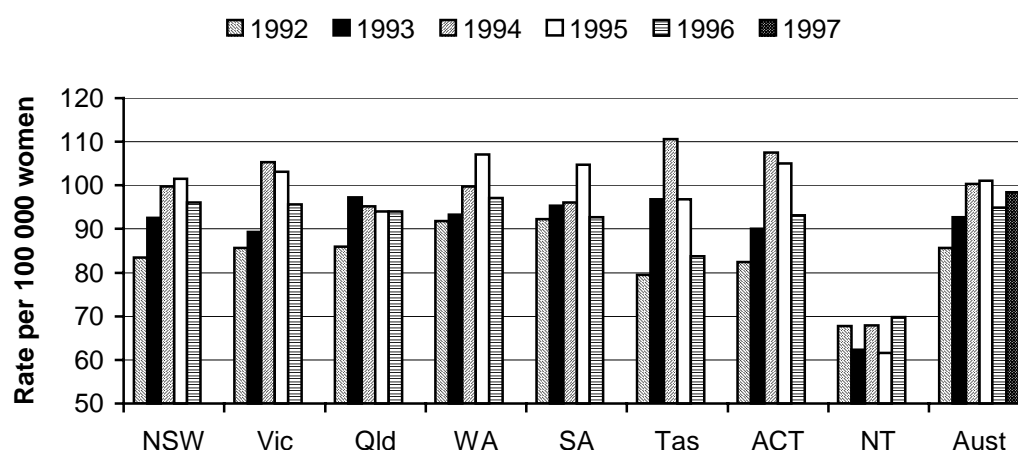
Table 7.1   **New cases of breast cancer**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
1992	2 709	2 054	1 326	751	766	203	100	34	7 943
1993	3 051	2 173	1 551	779	795	245	115	29	8 738
1994	3 331	2 607	1 571	843	820	287	140	43	9 642
1995	3 462	2 602	1 603	937	912	255	147	33	9 951
1996	3 352	2 444	1 661	875	820	224	134	46	9 556
1997	3 516	2 609	1 886	935	889	233	140	49	10 257

Source: table 7A.1.

Age standardised incidence rates of breast cancer are presented in figure 7.2 and table 7A.2. (Age standardisation eliminates differences in population age distributions between jurisdictions to allow valid comparisons of similar age cohorts across jurisdictions.) The Australian incidence rate increased from 69.9 per 100 000 in 1982, to a high of 101.1 in 1995, before declining to 98.5 in 1997. The rate in the NT was substantially lower than in other jurisdictions with 69.8 cases per 100 000 women in 1996. (Age standardised incidence rates by jurisdiction for 1997 were unavailable in time for publication of this Report.)

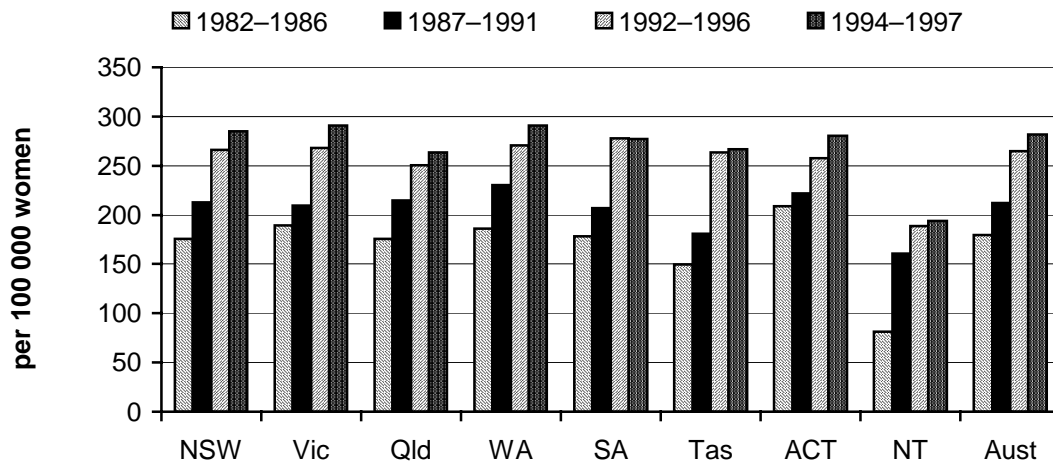Figure 7.2   **Age-standardised incidence rates of breast cancer, women of all ages[a]**

a Rates are expressed per 100 000 women and are age standardised to the Australian 1991 Population Standard.

Source: table 7A.2.

Age standardised incidence rates of breast cancer for women aged from 50 to 69 years for four periods, from 1982–86 to 1994–97, are shown in figure 7.3. Using annual data, the rate increase for Australia averaged 3.1 per cent per year between 1982 and 1996 (AIHW *et al.* 1999).

Figure 7.3 **Age standardised incidence rates of breast cancer, women aged 50–69 years[a]**

Source: table 7A.3.

For women aged from 40 to 49 years the average annual growth rate in the incidence of breast cancer between 1982 and 1996 was 1.6 per cent, for women aged 70 plus years 1.7 per cent, while for women aged 15 to 39 it was 0.2 per cent (AIHW *et al.* 1999).

Size of the sector

There is a significant amount of data available in relation to breast cancer screening, however, data in relation to the management and treatment of breast cancer is less readily available. BreastScreen Australia provides breast cancer screening and assessment services up to the point of diagnosis and referral for treatment. Public hospitals provide acute care management and treatment with follow up care undertaken in the main by private or public sector specialist surgeons and other relevant disciplines. It is an objective of the Review to expand reporting into other services and service settings, such as management and treatment support services. The number of women over 40 years of age screened by BreastScreen Australia between 1996 and 1999 provides an indication of the size of Australia's BreastScreen program (table 7.2). In 1998, almost 740 000 women were screened (excluding the NT). This represented an increase from over 667 000 women screened in the previous year.

Table 7.2   **Number of women screened by BreastScreen Australia, first and subsequent rounds, women aged 40 years and over**

	NSW	Vic[a]	Qld	WA	SA	Tas	ACT	NT[b]
1996	224 935	151 921	94 003	54 717	48 375	16 755	9 726	na
1997	252 502	150 681	123 001	58 827	54 077	17 355	11 193	na
1998	266 016	168 797	146 267	62 998	60 110	20 508	11 016	na
1999	na	na	153 931	60 000	64 194	19 382	12 256	na

[a] Data not available for age groupings 70–84 years and 85 plus years. [b] NT was unable to provide data.

Source: table 7A.4.

Information collected from public hospitals for separations for selected malignant breast cancer related diagnosis related groups (DRGs) provides another indication of the scale of breast cancer related medical procedures carried out in Australia in 1998-99 (table 7.3).

Table 7.3   **Separations for selected breast cancer DRGs, public hospitals, 1998-99[a]**

Description	NSW	Vic	Qld	WA	SA	Tas[b]	ACT[b]	NT[b]	Aust
Major procedures for malignant breast conditions	1 909	1 347	882	365	275	na	na	na	4 987
Minor procedures for malignant breast conditions	1 099	564	766	383	321	na	na	na	3 310
Malignant disorders age>69[c]	126	99	36	20	53	na	na	na	345
Malignant disorders age<70 [c], or age >69[d]	312	315	333	89	143	na	na	na	1 311
Malignant disorders age<70[d]	104	229	81	160	98	na	na	na	729
Total	3 550	2 554	2 098	1 017	890	na	na	na	10 682

[a] AR-DRG (Australian Revised Diagnosis Related Group) version 4.1. [b] Data were not publicly available because of the small number of public hospitals. [c] With complications and comorbidities. [d] Without complications and comorbidities.

Source: table 7A.13.

Table 7.3 shows only a small selection of hospital procedures related to breast cancer. Others include radiotherapy, chemotherapy and a range of other operating room procedures. It is the intention of the Review that these data be improved in the future.

Framework of performance indicators

The measures developed to report on the performance of breast cancer management are based on the objective for managing the disease shared by all Australian governments (box 7.3). These measures are indicators of the performance of the

program in the early detection of breast cancer through an organised public health initiative, and of the treatment of breast cancer in public acute hospitals. The framework includes indicators of performance related to age-specific mortality rates for breast cancer and expenditure on early detection and treatment per episode of illness, as well as some indicators of the performance of early detection and intervention strategies.

Box 7.3   Objective for breast cancer management

The objective for breast cancer management is to provide an effective balance of early detection and treatment with a view to reducing morbidity and mortality in a manner that is equitable and efficient.
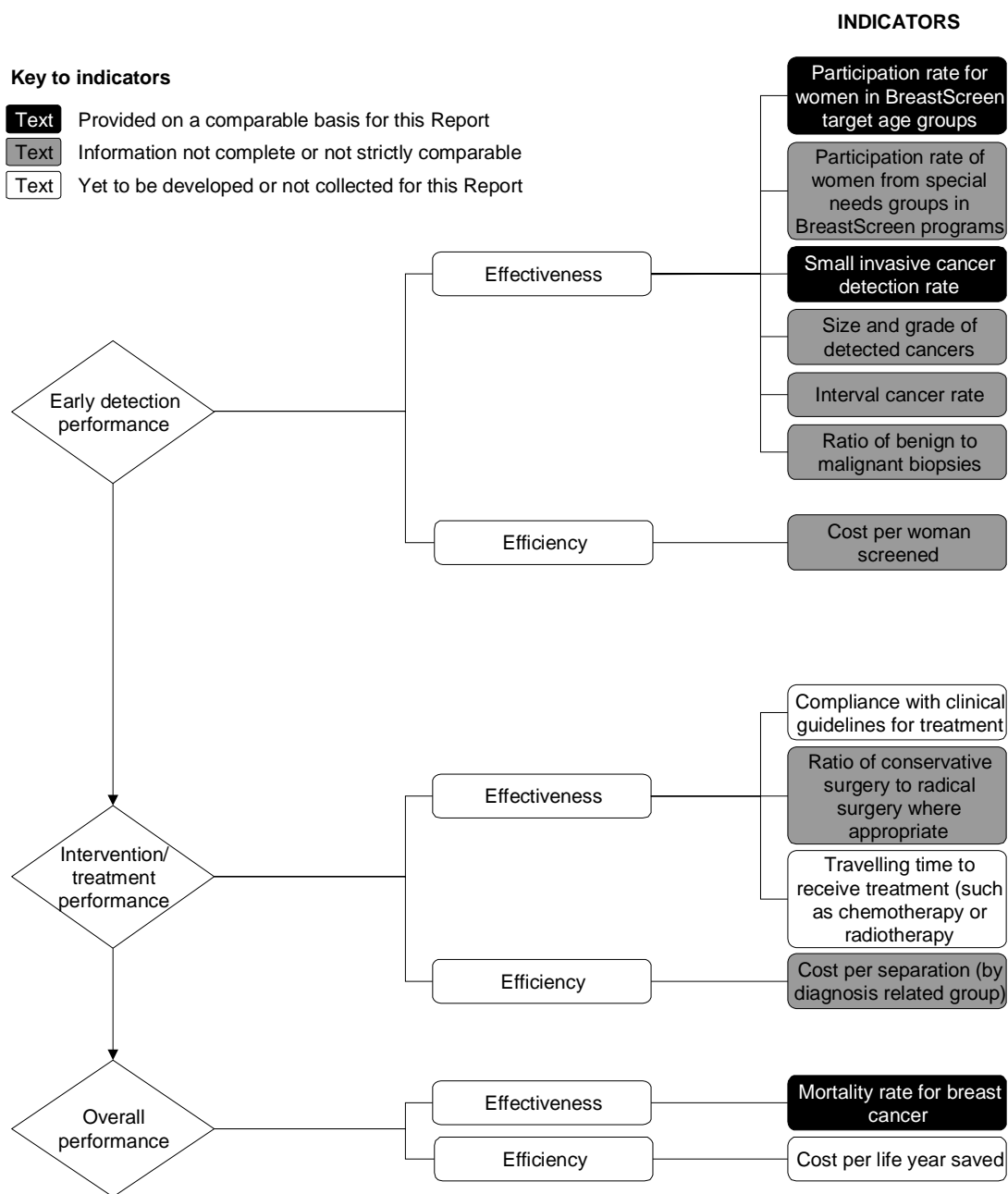

The framework for breast cancer management focuses on achieving a balance between early detection of the disease and treatment. Thus the performance indicators presented relate to early detection, intervention and overall performance (figure 7.4). A similar approach is adopted for emergency management services (see chapter 11).

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 reflects the effectiveness of the breast cancer screening program, while the participation rate of women in screening is a key indicator of population level effectiveness. One efficiency indicator for the breast cancer screening program is the cost per woman screened.

Effectiveness indicators relating to intervention and treatment include the appropriateness of treatment (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, such as the participation rate of women in the target age group in the BreastScreen program and the small cancer detection rate, are presented in this Report for the third year. Data on the overall effectiveness of breast cancer management, as indicated by mortality rates from breast cancer, are also presented for the third time. Other effectiveness indicators are being reported for the second time. These include the size and grade of detected cancers, and the participation rates of Indigenous women and those from non-English speaking backgrounds. Data on these indicators have been sourced directly from jurisdictions, and in the absence of validation, are not necessarily comparable.

Figure 7.4   **Performance indicators for breast cancer management**

INDICATORS

Key to indicators

Text	Provided on a comparable basis for this Report
Text	Information not complete or not strictly comparable
Text	Yet to be developed or not collected for this Report

Early detection performance → Effectiveness →
- Participation rate for women in BreastScreen target age groups
- Participation rate of women from special needs groups in BreastScreen programs
- Small invasive cancer detection rate
- Size and grade of detected cancers
- Interval cancer rate
- Ratio of benign to malignant biopsies

Early detection performance → Efficiency →
- Cost per woman screened

Intervention/ treatment performance → Effectiveness →
- Compliance with clinical guidelines for treatment
- Ratio of conservative surgery to radical surgery where appropriate
- Travelling time to receive treatment (such as chemotherapy or radiotherapy

Intervention/ treatment performance → Efficiency →
- Cost per separation (by diagnosis related group)

Overall performance → Effectiveness →
- Mortality rate for breast cancer

Overall performance → Efficiency →
- Cost per life year saved

Efficiency data have been sourced from jurisdictions and are not strictly comparable as the reporting period and the methodology for data collection, in particular in relation to cost data, is not uniform across all jurisdictions.

Conceptual and practical issues associated with data definition and identification hamper data collection for other indicators. These issues will be addressed in future reports. Indicators can be expected to change over time as better ones are

developed. The framework will also evolve as the focus and objectives of breast cancer management change.

Key performance indicator results
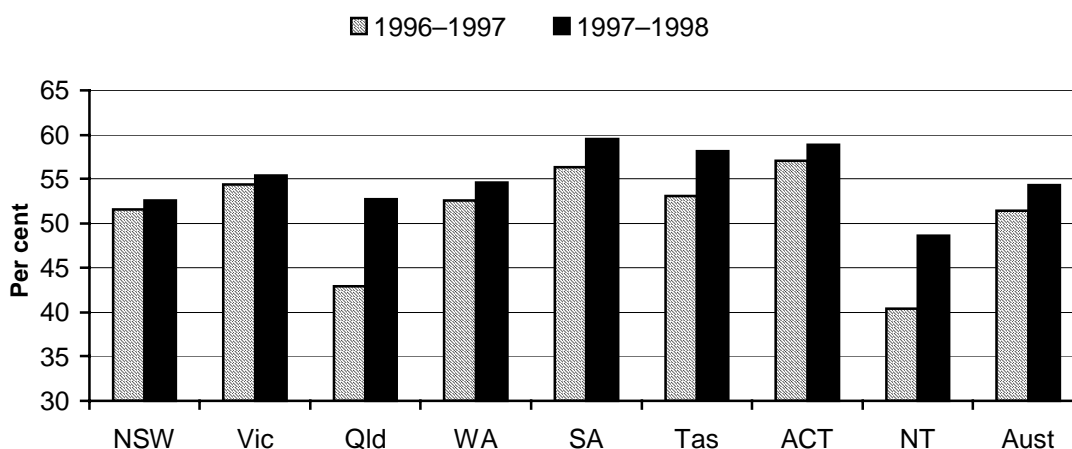
Early detection

Participation rate of women in the target age group

The aim of BreastScreen Australia is to screen 70 per cent of women aged 50 to 69 years at regular two year intervals, where screening services have been established for five years or more. The participation of women in the target age group in breast cancer screening is an indicator of the effectiveness of breast cancer screening programs. In 1997–1998, 54.3 per cent of all women in this age group participated in the program, along with 26.7 per cent of women aged 45 to 49 years and 33.9 per cent of women aged 70 to 74 years (table 7A.5).

Age standardised participation rates varied within the target age group (50 to 69 years) in the two year screening periods of 1996–1997 and 1997–1998 (figure 7.5). Women aged 55 to 59 years were most actively involved in breast cancer screening (with 56.1 per cent in 1997-98 participating in the BreastScreen Australia program), whereas women in the 65 to 69 age group had a slightly lower 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 to 69 years), followed by the ACT (58.9 per cent). By contrast, the NT recorded the lowest participation rate for the target group (48.6 per cent). Relatively large increases in the participation rate occurred in Queensland (9.8 percentage points), the NT (8.2) and Tasmania (5.1) between 1996–1997 and 1997–1998. Queensland's low participation rate in 1996–1997 was influenced by only five out of eleven fixed BreastScreen services operating for five or more years in 1997. The above increases were largely responsible for the national participation rate for women in the target age group increasing from 51.4 to 54.3 per cent over the period.

Queensland and SA were the only jurisdictions to provide participation rate data for 1998–1999. In that two year period, the participation rate for women aged 50–69 years old was 56.1 and 62.1 per cent respectively (table 7A.5).

Figure 7.5 **Participation rates of women aged 50 to 69 years in BreastScreen Australia[a, b]**

◫ 1996–1997　■ 1997–1998

a Data are for bi-calendar years (data for two years are included). **b** 1997-98 rates are expressed as the percentage of the eligible female population and are age standardised to the Australian 1991 population.

Source: table 7A.5.

Under the national accreditation requirements of the program at least 60 per cent of the women screened should be in the target age group. According to BreastScreen Australia this target was achieved in all jurisdictions in 1997-98 with approximately two thirds of women screened in 1997-98 belonging in the target age group (women aged 50 to 69 years), 20 per cent were aged 40 to 49 and 10 per cent were aged seventy years or more (AIHW 2000b).

Participation rates of women from special needs groups in BreastScreen programs

The participation rate of women from special needs groups (Indigenous women, women from non-English speaking backgrounds, and women living in rural and remote areas) in breast cancer screening is another indicator of the effectiveness (in terms of access and equity) of the breast cancer screening program. Data on this indicator are presented in the Attachment tables 7A.6, 7A.6A and 7A.6B.

Data are not fully comparable as jurisdictions have reported different time periods, age groupings, and some differences in collection of Indigenous, non-English speaking background and rural/remote status. Care needs to be taken when drawing inferences across jurisdictions.
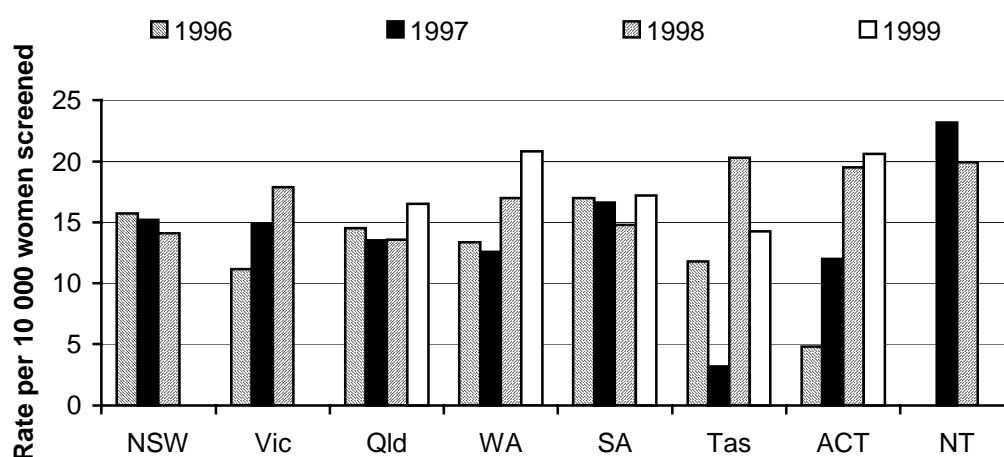
Small invasive cancer detection rate

The small invasive cancer detection rate is an important indicator of the effectiveness of breast cancer screening programs. The BreastScreen Australia

National Accreditation Requirements Standard is that more than 8.0 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, with some cost savings to the health care system and women. Women with small cancers are less likely to require a mastectomy than women with larger tumours (AIHW *et al.* 1998).

For women screened by BreastScreen Australia aged 50 to 69 years, 15.5 small cancers per 10 000 women were detected in 1998 (figure 7.6 and table 7A.7). The small cancer detection rate for women aged 50–69 years screened (all screening rounds) ranged from 13.6 per 10 000 women screened in Queensland to 20.3 per 10 000 women screened in Tasmania. Nationally, the small cancer detection rate for women aged 50-69 rose from 14.4 in 1997, with increases recorded in Victoria, Queensland, WA, Tasmania, and the ACT.

Figure 7.6   **Small diameter cancer detection rate, for target population group of 50–69 years, all rounds of screening[a, b]**

a Age standardised to the Australian 1991 population standard. **b** NT data were not available for 1996.
Source: table 7A.7.

The rate of small invasive cancers detected per 10 000 women screened rapidly increases with age. In 1998, for women aged 40 to 44 years screened in first and subsequent screening rounds, the rate was 2.5 nationally, while for those aged 50 to 54 years it was 10.8, for 60 to 64 years it was 18.6 and for those aged 85 years and over it was 43.1 (AIHW 2000b).

Jurisdictions provided data for 1996 to 1999 (table 7A.7), although the 1998 data presented in the table were sourced from AIHW (2000b). Of the States and Territories that were able to provide 1999 BreastScreen data, the small cancer

detection rate for first and subsequent screenings for the 50–69 age group ranged from 20.8 and 20.6 cancers per 10 000 women screened in WA and the ACT respectively to 14.3 in Tasmania (table 7A.7). Data from jurisdictions with relatively small populations are subject to higher variability.

Size and grade of detected cancers

The size and grade of detected invasive cancers are also indicators of the effectiveness of the breast cancer screening program. The tumour grade describes the degree of similarity of cancer cells to normal cells. The degree of differentiation of the cancer determines the disease prognosis. For example, a well differentiated cancer is associated with a good prognosis and those that are moderately differentiated are associated with an intermediate prognosis (figure 7.7 and table 7A.8).

The percentage of low grade invasive cancers (grade 1) detected, as a percentage of all cancers detected in reporting jurisdictions varied between a high of 42.4 per cent in SA and a low of 21.8 per cent in WA in 1998. However, the latter jurisdiction reported 44.9 per cent of cancers as being of unknown grade or undifferentiated. The diagnosis rate for the relatively more aggressive grade 2 cancers averaged 48.2 per cent in Tasmania and 36.8 per cent in the ACT, while cancers classified as the most aggressive grade 3 type ranged from 20.3 per cent in Queensland to 13.2 per cent in the ACT.

Classified by size, the proportion of cancers that were 10mm or less in size was 39 per cent across all jurisdictions that reported. The proportion was lowest in Queensland and SA (34 per cent) and highest in Tasmania (43 per cent). The proportion of cancers that were 11mm to 15mm was highest in SA (32) and lowest in the ACT (24). Finally, the proportion of cancers that were 15mm or greater in size was lowest in Tasmania (28 per cent) and highest in Queensland (37).

Interval cancer rate

An interval cancer is an invasive breast cancer diagnosed in the interval following a negative screening result and before the next scheduled screening examination. The interval cancer rate provides an indication of both the sensitivity and the efficiency of breast cancer screening. A high rate may indicate that not all breast cancers were detected during screening.

Figure 7.7 Detected invasive cancers by grade and size 1998 (per cent)[a, b, c, d]

Detected cancers by grade

☒ Grade 1 ■ Grade 2 ▨ Grade 3 ▨ Grade unknown or undifferentiated

Detected cancers by size

▨ 10mm or less ■ 11mm to 15mm ▨ > 15mm ▨ Unknown size

a Non-breast malignancies were not counted. **b** Victorian data exclude women aged less than 40 years of age. **c** 1999 South Australian data used in 'detected cancers by grade'. **d** Data were not available from the NT.

Source: table 7A.8.

The interval cancer rate for asymptomatic women aged 50–69 years screened during 1996 (first screening round) varied from 12.8 in the ACT, to 2.4 in Queensland, to a low of 0.0 in the NT (figure 7.8 and table 7A.9). The 95 per cent confidence interval for the ACT was 0.0 to 32.1 and for Queensland 0.5 to 4.4. The 95 per cent confidence interval for all jurisdictions indicates that none of the rates were significantly different from Victoria's rate of 5.5 (AIHW 2000b). The interval cancer rate for asymptomatic women aged 50–69 years screened during 1996 (subsequent screening round) varied from 7.9 in the ACT, to 5.1 in Tasmania, to a

low of 0.0 in the NT (figure 7.8 and table 7A.9). The 95 per cent confidence interval for the ACT was 2.5–16.2 cases, for Tasmania it was from 1.2–10.1 cases. Once again, the 95 per cent confidence interval for all jurisdictions indicates that none of the rates were significantly different from Victoria's rate of 7.5 (AIHW 2000b).

Data are also available for 1997 for some jurisdictions (table 7A.9).

Figure 7.8   **Interval cancer rate for asymptomatic women (first and subsequent screening rounds) aged 50–69 years, 0 to 12 month interval period following attendance, 1996[a, b, c, d]**

a Standardised to the Australian population of women attending BreastScreen services in 1998. **b** None of the jurisdiction rates were significantly different from Victoria at the 5 per cent level of significance. **c** Rate for NT is zero. **d** Interval cancer rates for 1996 from BreastScreen NSW are not available stratified by symptom status.

Source: table 7A.9.

Ratio of benign to malignant biopsies

As the emphasis of breast cancer screening is on detecting small malignant cancers, a low ratio of benign to malignant biopsies indicates effectiveness in detecting malignant cancers while minimising the need for invasive procedures. The BreastScreen Australia National Accreditation Requirements Standards stipulate a benign to malignant open surgical procedure ratio of less than 2:1 for first round screening and of 1:1 for subsequent screening rounds.

In 1999 for all rounds of screening, the ratio of benign to malignant biopsies for:

• Queensland women aged 50–69 years was 0.29, and 0.33 for women of all ages;

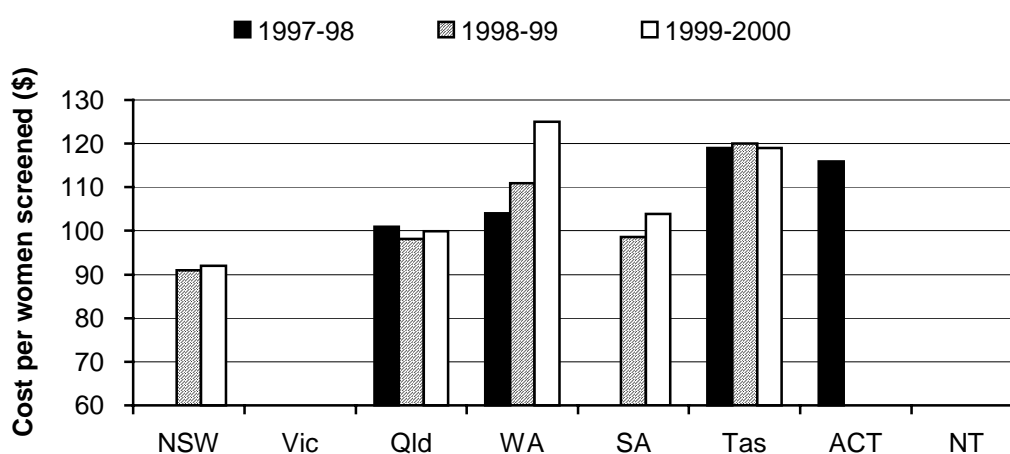• Western Australian women aged 50–69 years was 0.20, and for 0.20 women of all ages;

- South Australian women aged 50–69 years was 0.28, and 0.30 for women of all ages;

- Tasmanian women aged 50–69 years was 0.30 and 0.40 for women of all ages; and

- women of all ages from the ACT was 1.00 (table 7A.10).

Cost per woman screened

The cost per woman screened is an efficiency indicator for the breast cancer screening program. It measures the total cost per woman of providing services including screen-taking, reading all follow-up, assessment procedures, data management, central registration and service management.

Potential differences in the items included in the measures of cost (in the treatment of both depreciation and capital asset charges), and in the scope of activities being costed, mean that care needs to be taken when making comparisons across jurisdictions. Not all jurisdictions have been able to report the cost per women screened. In 1999-2000, the average cost for all jurisdictions that provided data was approximately $100 per woman screened. The cost was lowest in NSW ($92) and highest in WA ($125) (figure 7.9 and table 7A.11).

Figure 7.9 **Cost per woman screened for BreastScreen Australia[a, b, c, d, e]**

[a] Data are for calendar years except WA and SA which are for financial years. [b] WA 'other recurrent' data include capital replacement costs. [c] The data for SA are calculated on an accrual basis and not on a cash basis. [d] Queensland data exclude capital. [e] Data were unavailable for Victoria, the ACT and the NT for at least two years.
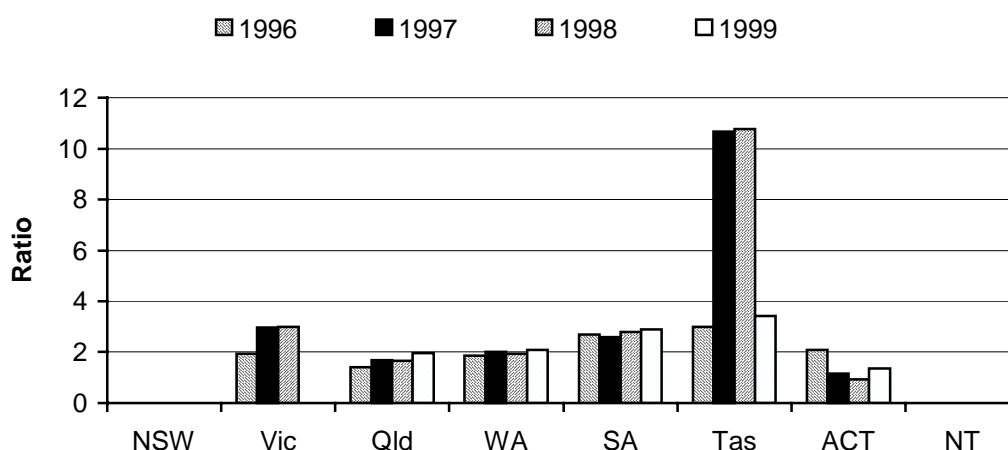
Source: table 7A.11.

Demographic and geographical differences between jurisdictions could significantly affect screening costs. Comparability has improved since previous years, although further work will be required to improve the data.

Intervention/treatment

Ratio of conservative to radical surgery

The ratio of conservative to radical surgery is in part a consequence of the early detection of breast cancer, as breast conserving surgery is more likely to be able to be carried out when cancers are detected at an early stage. Other factors, however, such as the judgment of surgeons as to the best treatment for the patient can also affect the type of surgery undertaken. A high ratio indicates a greater reliance on breast conserving and non-surgical procedures. In 1999, the rate was lowest in the ACT (1.35:1) and highest in Tasmania (3.41:1) (figure 7.10).

Figure 7.10 **Ratio of conservative to radical surgery, all cancers[a, b]**

a Victorian data for all years exclude women aged less than 40 years old. 1996 Victorian data exclude 38 women with unknown treatment, similarly, seven women in 1997 and two in 1998. **b** In WA the following numbers of women had both a mastectomy and wider local excision or open biopsy: in 1996, 38 women; in 1997, 28 women; in 1998, 21 women; and in 1999, 33 women.

Source: table 7A.12.

Cost per diagnosis related group (DRG)

Data are presented for the first time on the cost per DRG. This describes the cost of undertaking surgical and non-surgical hospital procedures on malignant breast tumours (table 7.4). Not all intervention strategies are reported and data are available only for some jurisdictions.

Table 7.4 provides a summary of costs for five selected breast cancer DRGs. It also reports the cost of chemotherapy, which is an average of the cost of treating a variety of cancers. The average cost of major procedures for malignant breast conditions (DRG J062) across Australia was $3826 in 1998-99. The cost of this procedure was highest in WA and SA ($4555 and $4372) and lowest in Queensland ($3352). Minor procedures for malignant breast conditions cost on average $2080 in Australia. The cost was highest in SA and WA ($2775 and $2646) and lowest in NSW and Victoria ($1823). Table 7A.13 also summarises the average length of stay in public acute hospitals associated for each breast cancer DRG.

Table 7.4 **Average cost per DRG, selected breast cancer DRGs, public hospitals, 1998-99 ($)[a]**

DRG description	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Major procedures for malignant breast conditions	3 672	3 963	3 352	4 555	4 372	na	na	na	3 826
Minor procedures for malignant breast conditions	1 823	1 823	1 985	2 646	2 775	na	na	na	2 080
Malignant disorders age>69[b]	7 027	4 447	3 495	7 084	5 340	na	na	na	5 682
Malignant disorders age<70[b], or age >69[c]	3 701	1 795	2 608	2 283	2 248	na	na	na	2 510
Malignant disorders age<70[c]	978	771	1 036	553	1 242	na	na	na	858
Chemotherapy	619	598	687	395	603	na	na	na	606

[a] Data for Tasmania, the ACT and the NT were not separately available because of the small numbers of hospitals and are included in the national total for Australia. [b] With complications and comorbidities. [c] Without complications or comorbidities.
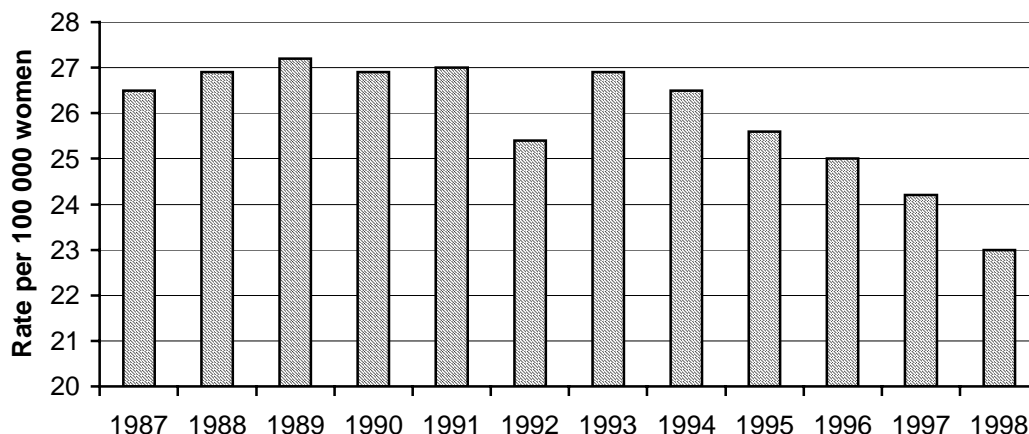
Source: table 7A.13.

Overall performance

Mortality

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 as a result of breast cancer rose steadily from 1987 in 1982 to a peak of 2655 in 1994 but has since decreased slightly to 2542 in 1998. Breast cancer accounted for the largest proportion of female cancer deaths in that year (ABS 1999).

Age standardised mortality rates are the most appropriate measure for looking at changes in mortality rates. While there has only been a relatively small reduction in the number of cancer deaths, this, in association with population growth, has had a

significant effect on the age standardised mortality rate. The rate has declined from a peak of 27.2 (per 100 000 women) in 1989 to 23.0 in 1998 (figure 7.11). The decline appears to have been strong and consistent from 1994 onward.

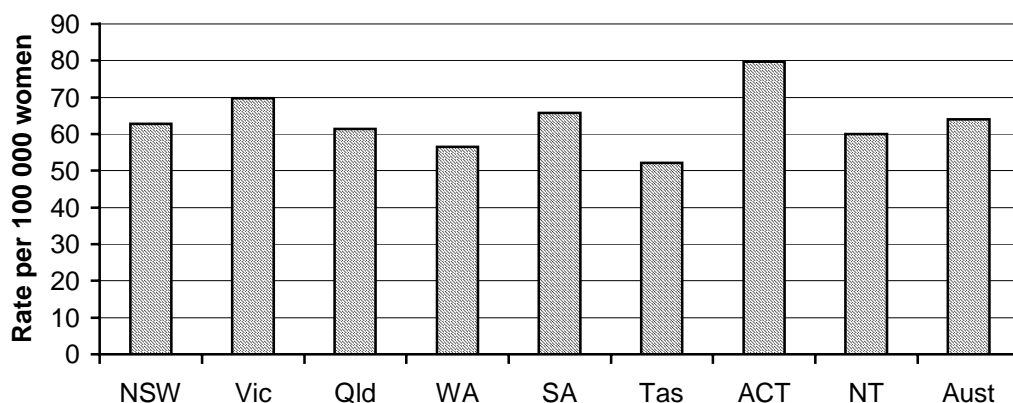Figure 7.11 **Age standardised mortality rate from breast cancer, all ages[a]**

a Rates are expressed per 100 000 women and are age standardised to the Australian population as at 30 June 1991.

Source: AIHW (2000b).

The age standardised mortality rate for Australian women aged 50 to 69 years for the period 1995–1998 was 63.9 per 100 000 women (figure 7.12). The rate was highest in the ACT (79.7 deaths per 100 000 women) and lowest in Tasmania (52.2 deaths per 100 000 women) (table 7A.14).

Figure 7.12 **Age standardised mortality rate from breast cancer, women aged 50–69 years, 1995–1998[a]**

a Rates are expressed per 100 000 women and are age standardised to the Australian population as at 30 June 1991.

Source: table 7A.14.

7.3 Mental health

Mental disorders contribute substantially to the burden of disease in Australia. Depression, suicide and self inflicted injury accounted for 5 per cent of the total years of healthy life lost as a result of disability and premature mortality in 1996 (see table C.2, 'Health preface'). The 1997 National Survey of Mental Health and Wellbeing suggested that almost one in five Australian adults suffered from one or more mental disorders during the 12 months before the survey was conducted (ABS 1998). This relatively high prevalence places a burden on Australia's health care system. Mental health problems accounted for 6.5 per cent of total recurrent expenditure on health in 1997-98 and just over 4 per cent of separations in all hospitals in 1998-99. Depression was the third most common problem managed by GPs (see chapter 6). These factors make mental health a relatively important area for government health policy. Some common terms used in mental health management are outlined at box 7.4.

Box 7.4   **Some common terms used in mental health management**

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

Ambulatory care: community based services provided by hospitals to non-admitted patients comprising outpatient clinics (hospital and clinic based), mobile assessment and treatment teams, day programs and other services dedicated to the assessment, treatment, rehabilitation and care of people affected by mental illness or psychiatric disability who live in the community (DHAC 2000).

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 residential services: services that provide beds in the community, staffed by mental health professionals on a 24-hour basis. These services are designed for people with significant disability and dependency needs and are aimed at replacing many of the functions traditionally performed by long stay psychiatric hospitals. They include residential services established as specialised psychogeriatric nursing homes for older people with mental illness, or dementia with severe behavioural disturbance (DHAC 2000).

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 the achievement of individual and collective goals consistent with justice (DHAC 1999).
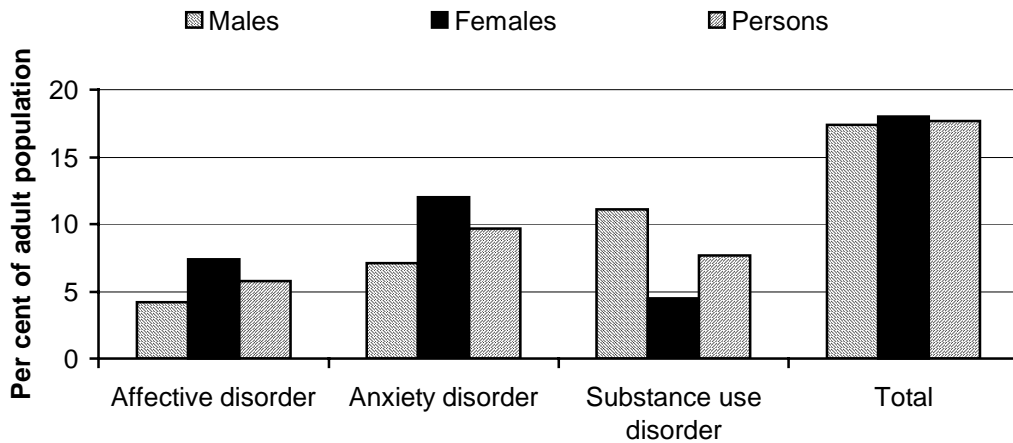

Profile

Definition

Mental health relates to an individual's ability to negotiate the daily challenges and social interactions of life without experiencing undue emotional or behavioural incapacity (DHAC *et al.* 1999). Problems and disorders that interfere with this ability and diminish quality of life and productivity cover cognitive, emotional and behavioural disorders. Some of the major mental disorders perceived to be public health problems are schizophrenia, depression, anxiety disorders, dementia and substance use disorders (DHAC *et al.* 1999). Each of these disorders is unique in terms of its incidence across the lifespan, causal factors and treatments.

Mental health disorders are a major cause of chronic disability. In 1996, mental disorders accounted for 1 per cent of years of life lost as a result of mortality, but were the leading cause of years of healthy life lost as a result of disability (nearly 30 per cent of the non-fatal burden of disease) (Mathers, Vos and Stevenson 1999). Most of this burden has been attributed to affective disorders (35 per cent of the calculated burden), anxiety disorders (24 per cent) and substance use disorders (20 per cent).

The 1997 National Survey of Mental Health and Wellbeing (ABS 1998) did not attempt to cover all mental health disorders. Of the disorders that were covered, anxiety disorders (such as agoraphobia, post-traumatic stress disorder and social

phobia) were the most common (54.5 per cent of those reporting symptoms of a mental disorder) followed by substance use disorders (43.7 per cent), and affective disorders (depression, mania and bipolar disorder) (32.7 per cent) (figure 7.13). Females most commonly experienced anxiety disorders. By contrast, males most commonly experienced substance abuse.

Figure 7.13   **Prevalence of mental disorders in Australian adults, 1997^a**

a Defined as the percentage of adults with a mental disorder. Components do not sum to 100 because respondents may have reported symptoms for more than one type of mental disorder.

Source: table 7A.15.

The survey found that — of those with the mental disorders covered — 38.0 per cent contacted a health service for their problem. General practitioners were the main mental health service providers, seeing 29.4 per cent of patients with a mental disorder (table 7A.16). Less than one per cent of people with the types of mental health disorder covered by the ABS survey were admitted to hospital (ABS 1998).

Roles and responsibilities

Mental health care providers include a range of government and non-government service providers offering promotion, prevention, treatment and management and rehabilitation services. Providers include GPs, community mental health facilities, specialist psychiatrists, psychotherapists, counsellors, public acute hospitals with specialist psychiatric units and stand-alone psychiatric hospitals.

A number of health care professionals also provided health services to mental health patients in a non-mental health setting (GPs, public acute hospitals' emergency departments, general outpatients and general (rather than specialist psychiatric) wards and nursing homes). While some data on these service providers are reported

here, their performance is examined more closely in chapter 5 ('Public hospitals'), chapter 6 ('General practice') and chapter 12 ('Aged care').

State and Territory governments are the primary sources of both funding and service delivery for mental health services. The Commonwealth directly funds some health services for people with mental disorders through the Medicare Benefits Schedule, Pharmaceutical Benefits Scheme, and the Department of Veterans' Affairs programs. In addition, the Commonwealth funds other services for people with mental disorders such as emergency relief, employment, accommodation, income support, rehabilitation and other disability services. These services are not discussed in this Report.
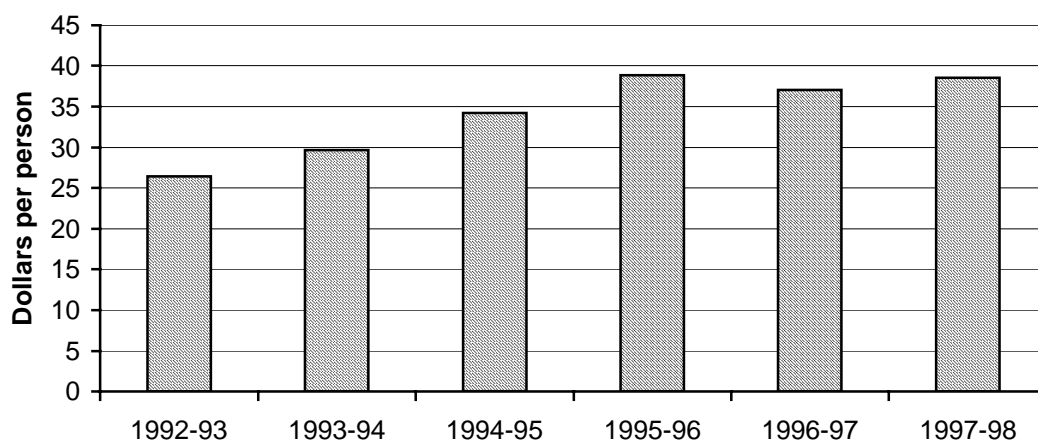
Funding

Recurrent spending of $2.24 billion was allocated to mental health services in 1997-98 (the most recent data available on spending on mental health). This represented around 6.5 per cent of national total gross recurrent expenditure on health services in 1997-98 (DHAC 2000).

State and Territory governments made the largest contribution — $1365 million or 61.1 per cent of recurrent expenditure on mental health services in 1997–98. The Commonwealth Government spent $718 million (around 32.1 per cent of recurrent expenditure on mental health services). Private hospitals accounted for the remainder ($153 million or 6.8 per cent).

Real Commonwealth spending per capita in 1997-98 was $38.60 (figure 7.14 and table 7A.18). This represents an increase from $26.40 in 1992-93.

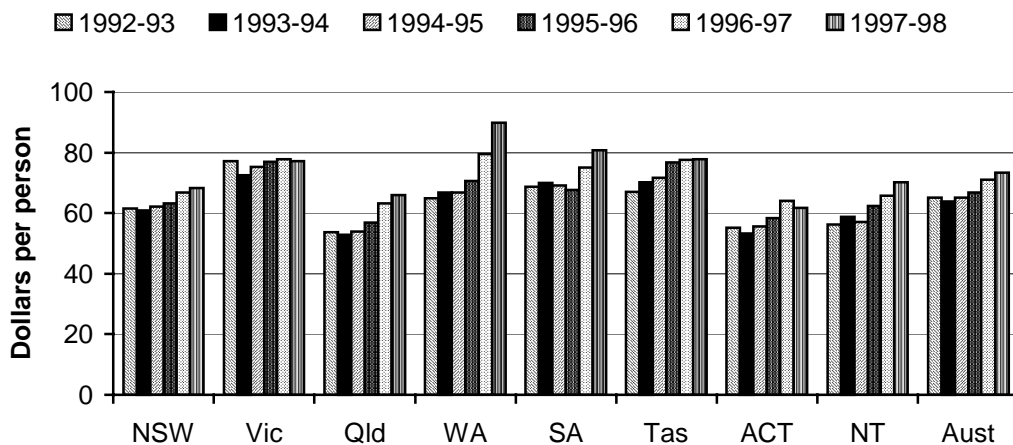Figure 7.14 **Commonwealth recurrent spending, 1997-98 dollars**

Source: table 7A.18.

The largest component of Commonwealth expenditure on mental health services in 1997-98 was expenditure under the Pharmaceutical Benefits Schedule for psychiatric medication (31.6 per cent). Medicare Benefits Schedule payments for consultant psychiatrists accounted for a further 26.5 per cent of Commonwealth expenditure on mental health services, followed by expenditure for mental health care by GPs (20.1 per cent). The residual went to the Department of Veterans' Affairs (10.0 per cent), the National Mental Health Strategy (NMHS) (including reform and incentive grants to States and Territories) (8.9 per cent), research, Commonwealth Rehabilitation Service Psychiatric Teams and Divisions of General Practice, and project grants for mental health (table 7A.17).

State and Territory government spending per person in real terms has increased over time, most markedly in WA (figure 7.15 and table 7A.20). Victorian spending per person has been consistently above average, although it was overtaken by WA in 1996-97 as the highest spending jurisdiction in per person terms. In 1997-98, WA spent the most (nearly $90 per person), followed by SA and Tasmania ($81 and $78 respectively). Queensland and the ACT spent the least in 1997-98 ($66 and $62 respectively).

Figure 7.15 **State and Territory government recurrent expenditure, 1998 dollars[a]**

[a] Excludes all significant non-State/Territory funding sources (Department of Veterans' Affairs, Mental Health Strategy).

Source: table 7A.20.

Figure 7.16 shows how Commonwealth, State and Territory government spending was distributed across the range of mental health services in 1997-98. Across Australia, 51.7 per cent of recurrent expenditure was allocated to hospital based services and around 33.3 per cent to ambulatory services. The distribution, however,

differed across jurisdictions. In Victoria and the ACT, the proportion of recurrent expenditure allocated to hospitals was relatively low (35.7 per cent and 35.3 per cent respectively), whereas in Queensland and SA, the proportion of expenditure allocated to hospital based services was relatively high (61.8 per cent and 59.9 per cent respectively).

Figure 7.16   **Recurrent expenditure on specialised mental health services, 1997-98 (per cent)[a]**

a Indirect expenditure includes administration and other support service costs, professional training and staff development activity not elsewhere included, grants to academic institutions for academic chairs, mental health research undertaken as a discrete program, mental health promotion, salary and other funded overheads such as superannuation, workers compensation, insurance and other mental health expenditures (DHAC 2000).

Source: table 7A.19.

Size and scope of sector

Across Australia in 1997-98 there were 24 psychiatric hospitals and 104 public acute hospitals with specialised psychiatric units (table 7A.21). Data on community mental health establishments collected under the National Minimum Data Set since July 1998 have not yet been published (see 'Policy developments').

Available beds

Across all three types of institutions (psychiatric hospitals, public acute hospitals and community residential facilities) in 1997-98, Tasmania had the highest number of beds per 100 000 people (55.6), followed by SA (46.0). The NT had the lowest number of beds per 100 000 people (15.4) in 1997-98 (figure 7.17 and table 7A.22).

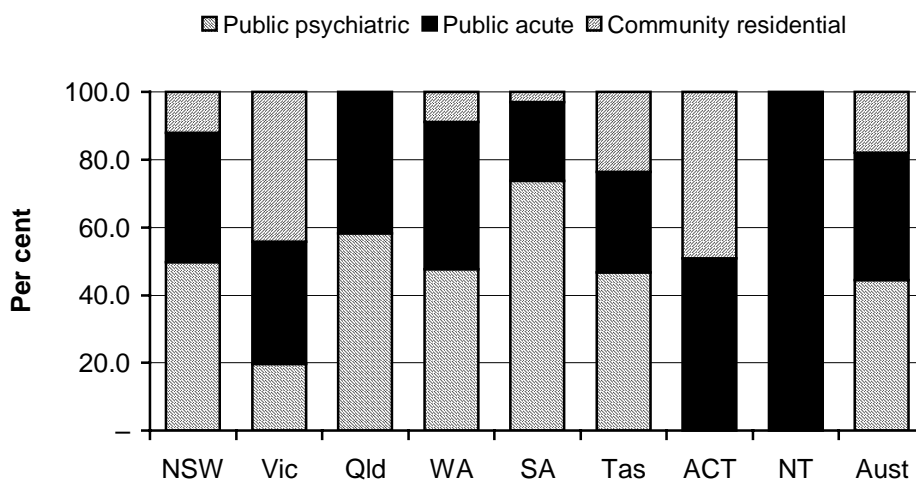Figure 7.17   **Mental health beds per 100 000 people^a**

Figure 7.17   **Mental health beds per 100 000 people[a]**

^a Available beds are beds that are immediately available for use by admitted patients as required.
Source: table 7A.22.

Figure 7.18 shows the distribution of beds across public psychiatric hospitals, public acute hospitals and community residential services in 1997-98. In most jurisdictions, beds were mostly located in public psychiatric hospitals (44.5 per cent). In Victoria, most beds were located in community residential care establishments (44.1 per cent). The ACT and the NT do not have stand-alone psychiatric hospitals and the NT and Queensland do not offer any community residential services.

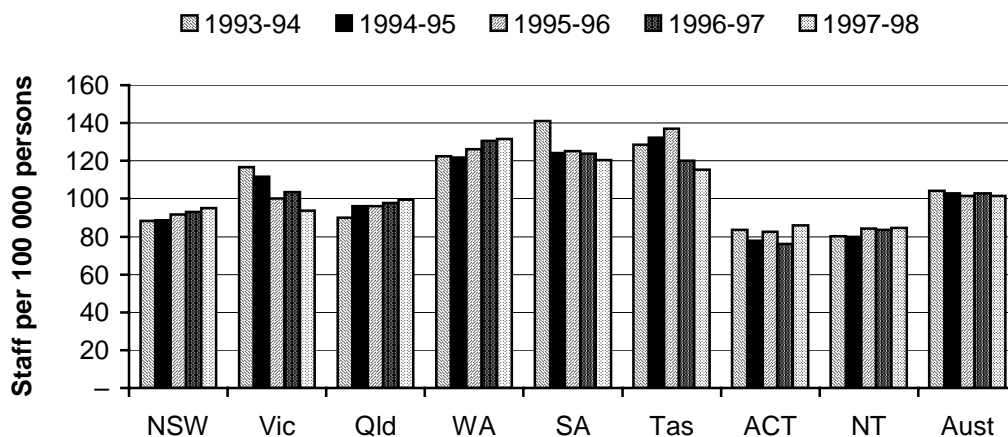Figure 7.18   **Available mental health beds, 1997-98 (per cent) [a]**

[a] Available beds are beds that are immediately available for use by admitted patients as required.
Source: table 7A.22.

Staff

In 1997-98, WA had the most full time equivalent staff per 100 000 people in specialist mental health services (132), closely followed by SA (121) and Tasmania (115). The ACT and the NT had the least staff per 100 000 people in that year (86 and 84 respectively) (figure 7.19 and table 7A.23).

Figure 7.19   **Total full time equivalent staff in specialist mental health services**

Source: table 7A.23.

Nursing staff comprise the largest full time equivalent component of health care professionals employed in mental health services. Across Australia in 1997-98, nurses comprised 67.3 per cent of full time equivalent staff in specialised mental health services. Allied health care staff (occupational therapists, social workers, psychologists and other allied health staff) made up 21.7 per cent of full time equivalent staff in specialised mental health services, and the remainder comprised medical staff (psychiatrists and other medical officers) (table 7A.24).

Services provided

There were 124 310 separations for mental health in public acute and psychiatric hospitals in 1998-99 (AIHW 2000c) (table 7A.25). Public acute hospitals also provided just over two million mental health occasions of service to individual non-admitted patients and public psychiatric hospitals provided 198 297 occasions of service in 1998-99 (table 7A.25). Depressive disorders accounted for the highest number of mental health separations across all hospitals in 1998-99 (table 7.5).

Table 7.5   **Separations for the seven mental disorders with highest number of separations, all hospitals, 1998-99**

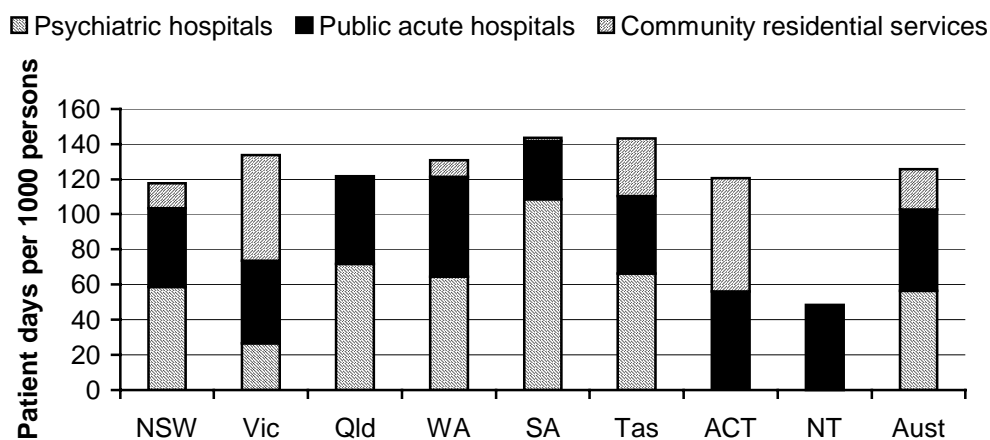|	Total separations	Same day separations	Separations per 10 000 people	Average length of stay (days)
Depressive disorders	58 682	29 998	31.1	7.9
Neurotic, stress-related and somatoform disorders	39 935	18 576	21.2	4.6
Schizophrenia	25 460	5 372	13.5	35.0
Mental, behavioural disorders from use of alcohol	23 490	7 855	12.5	8.4
Mental, behavioural disorders due to other psychoactive substances use	14 902	2 958	7.9	5.5
Other schizophrenic, schizotypal, delusional disorders	14 536	4 046	7.7	13.8
Bipolar affective disorders	14 463	4 225	7.7	15.5
Total mental disorders	**239 237**	**89 473**	**126.9**	**12.5**
Total all hospitals	**5 735 049**	**2 747 617**	**2 945.0**	**3.9**

Source: table 7A.26.

The only data available for Indigenous mental health separations are for short stay patients (with a stay of less than 36 days) (table 7A.28). Comparisons are difficult because of the underidentification of Indigenous people. However, in 1997-98 separation rates (per 1000 people) for short stay Indigenous patients were relatively similar to the rates for the total population (11.6 and 12.0 respectively).

Data outlining community mental health care patient contacts are limited, although collection of these data commenced in July 2000 as part of the National Minimum Data Set (see 'Policy developments'). The most comprehensive way of describing services provided by specialised mental health establishments, including community residential care establishments, is to use 'patient days'.[2] In 1997-98, SA and Tasmania had the highest number of patient days in psychiatric hospitals, public acute hospitals and community residential care per 1000 people (143.6 and 143.3 respectively). The NT had the least patient days per 1000 people (48.3) (figure 7.20 and table 7A.27).

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[2] Patient days refer to days or part days for patients who were admitted for an episode of care and whose episode of care was completed during the reporting period.

Figure 7.20 **Mental health patient days 1997-98**

Figure 7.20 Mental health patient days 1997-98: stacked bar chart showing patient days per 1000 persons by state/territory (NSW, Vic, Qld, WA, SA, Tas, ACT, NT, Aust) categorised into Psychiatric hospitals, Public acute hospitals, and Community residential services.

Source: table 7A.27.

Policy developments

Commonwealth, State and Territory governments agreed to the NMHS in April 1992. The extension of the strategy in July 1998 for a further five years (1998–2003) has been accompanied by a Second National Health Mental Plan. The second plan places greater emphasis on promotion and prevention, partnerships in service reform, quality and effectiveness. Reporting is through the Australian Health Ministers Advisory Council. Recent policy initiatives include the National Depression Initiative (launched in March 2000), the 'Living Is For Everyone' Framework (launched in September 2000), and a NMHS Primary Mental Health Care Initiative with a focus on Divisions of General Practice.[3]

While detailed information on admitted patients in specialised mental health public hospital services is available, there are a paucity of data on community mental health care — in particular, ambulatory services and non-government organisations. Under the National Health Information Agreement signed by Commonwealth and State/Territory Health Ministers, a National Minimum Data Set has been developed to collect comparable data on mental health service delivery and outcomes. Data on admitted patients in specialised mental health hospitals have been collected since 1 July 1997 and data for 1997-98 were published in 2000. Data have been collected for the National Minimum Data Set on community mental health establishments since 1 July 1998, but have not yet been published.

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[3] Divisions of General Practice are described in chapter 6.

A casemix classification for specialised mental health services appropriate for inpatient and community settings (Mental Health Classification and Service Costs (MH-CASC) model) was developed during 1997-98, but variations in the practices of different providers have prevented its adoption so far. Victoria is proposing to trial the model to ascertain its appropriateness and applicability to Victorian services. South Australia is currently collecting casemix data for inpatient episodes using Australian Revised Diagnosis Related Group version 4.1 (AR-DRG version 4.1) and is considering possible integration of AR-DRGs and MH-CASC.

In 1999, Victoria commissioned work to develop a set of key performance indicators to monitor performance of its mental health services. The proposed indicators provide information under the broad categories of efficiency and effectiveness. Additional work is planned to investigate further the findings of the initial study, and to investigate applicability to child and adolescent and aged person services. Queensland proposes to develop an information system that incorporates the implementation of Outcome Measurement Systems.

Framework of performance indicators

The distinction between prevention and intervention is more difficult in the case of 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. The mental illness indicators in this Report 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.

The framework of performance indicators for mental health services builds on government objectives for mental health service delivery (box 7.5) as encompassed in the NMHS. 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 7.21). It covers a number of service delivery types (institutional and community based services) and indicators of systemwide performance.

Box 7.5   **Objectives for mental health service delivery**

Key objectives include to:

- promote community awareness of mental health problems;

- prevent, where possible, the development of mental health problems and mental disorders;

- undertake early intervention of mental health problems and mental disorders;

- reduce the impact of mental health disorders on individuals, families and the community;

- assure the rights of persons with mental disorders;

- encourage partnerships among service providers and between service providers and the community; and

- improve the effectiveness and quality of service delivery and outcomes.

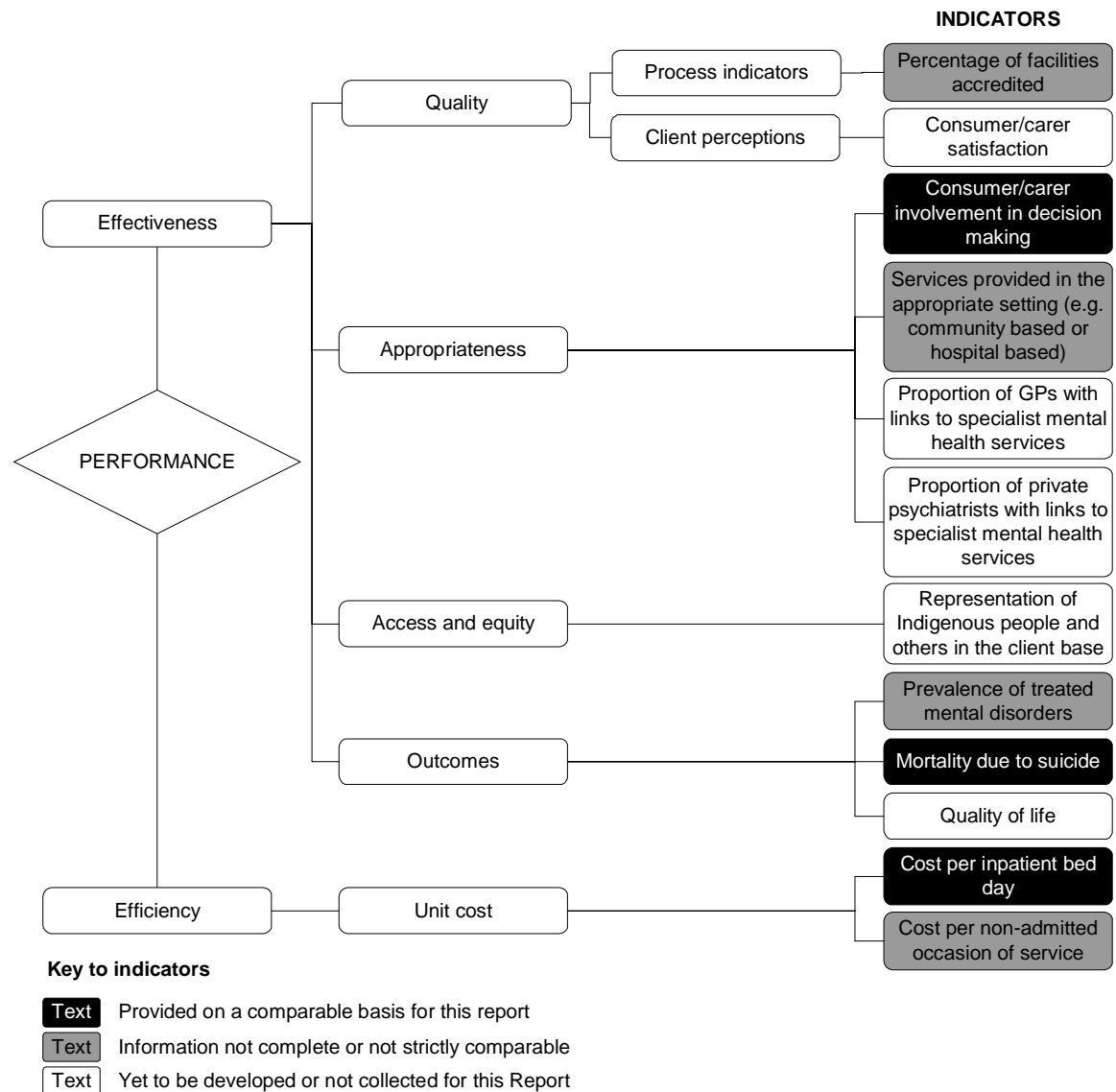Governments also aim to provide services in an equitable and efficient manner.

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 NMHS — to promote the mental health of the Australian community, and where possible, to prevent the development of mental health problems. The quality of life 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 proportion of facilities delivering mental health services to people with a mental health problem that are accredited is used as a process indicator of quality. Consumer/carer involvement in decision making is an appropriateness indicator that reflects the NMHS's aim to assure the rights of people with mental disorders, and to focus on improving the outcomes for consumers.

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, 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.

Figure 7.21   **Performance indicators for mental health services**

Reporting requirements under the NMHS mean that some performance data for mental health services are already available. These include 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, and 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 7.4.

Key performance indicator results

Quality

Percentage of facilities accredited

The percentage of facilities that have been accredited is used as a process indicator of quality. Hospitals and community residential services are accredited by the Australian Council for Healthcare Standards. In NSW, community residential services are accredited through the Community Health Accreditation Scheme. An accreditation model is yet to be developed for non-government organisations.

Imperfect data are available for this indicator (table 7.6) and there is scope for improvement in coverage of reporting and comparability of results. As mentioned in chapter 5, accreditation is an imperfect indicator because facilities that are not accredited do not necessarily provide poorer quality services. Moreover, smaller regional facilities may be disadvantaged in obtaining formal accreditation because of the high fixed costs of accreditation.

Table 7.6   **Percentage of facilities accredited (per cent)[a]**

Facility	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Psychiatric hospitals								
1999	86	–	na	100	50	na	..	..
2000	86	na	33	na	50	100	..	..
Public acute hospitals								
1999	86	88	na	64	100	na	na	na
2000	92	na	31	na	100	100	na	na
Community residential								
1999	na	88	..	50	100	na	na	..
2000	na	na	..	na	100	na	na	..
Community ambulatory								
1999	na	na	na	48	na	na	na	na
2000	na	na	na	na	na	na	na	na

a At June 30. **na** Not available. **..** Not applicable.

Source: table 7A.29.
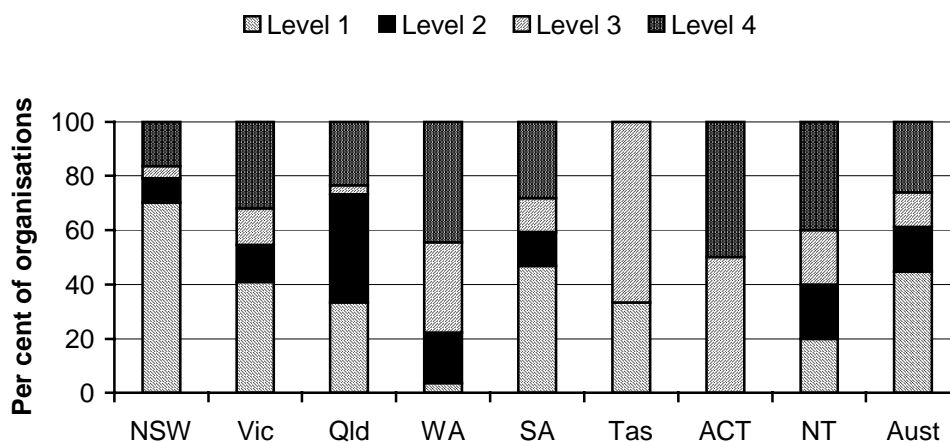
Appropriateness

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.

Overall in 1997-98, 26 per cent of organisations had no arrangements for consumer/carer involvement in decision making. This compares with around 37 per cent in 1996-97. In 1997-98, NSW had the highest proportion of organisations with a level 1 rating (70 per cent) and the ACT the lowest (0 per cent). The ACT had the highest proportion of organisations with a level 4 rating (50 per cent) and Tasmania the lowest (0 per cent) (figure 7.22 and table 7A.30).

Figure 7.22 **Organisations with consumer participation in decision making, 1997-98**

Source: table 7A.30.
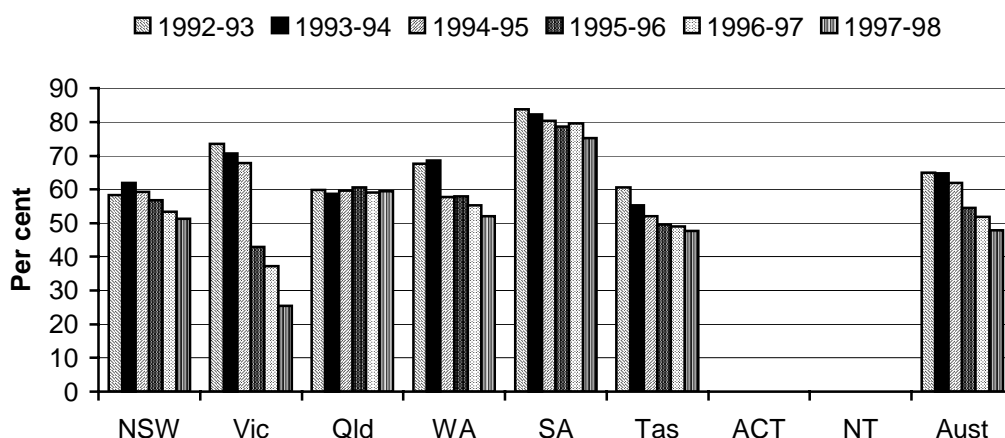
Services provided in the appropriate setting

The NMHS advocates 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 of providing 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

- mental health services being mainstreamed 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.

Figure 7.23 shows the proportion of real recurrent expenditure per person on psychiatric hospitals, public acute hospitals and community residential care allocated to psychiatric hospitals. The proportion allocated to psychiatric hospitals in Victoria has fallen most rapidly. SA maintains the highest proportion of real recurrent expenditure per person on psychiatric hospitals, while Queensland has no community residential services and has not significantly changed the proportion of recurrent spending allocated to psychiatric hospitals. The ACT and the NT have no psychiatric hospitals.

Figure 7.23 **Real recurrent expenditure per person on psychiatric hospitals as a proportion of spending on psychiatric hospitals, acute hospitals and community residential services (per cent)[a]**
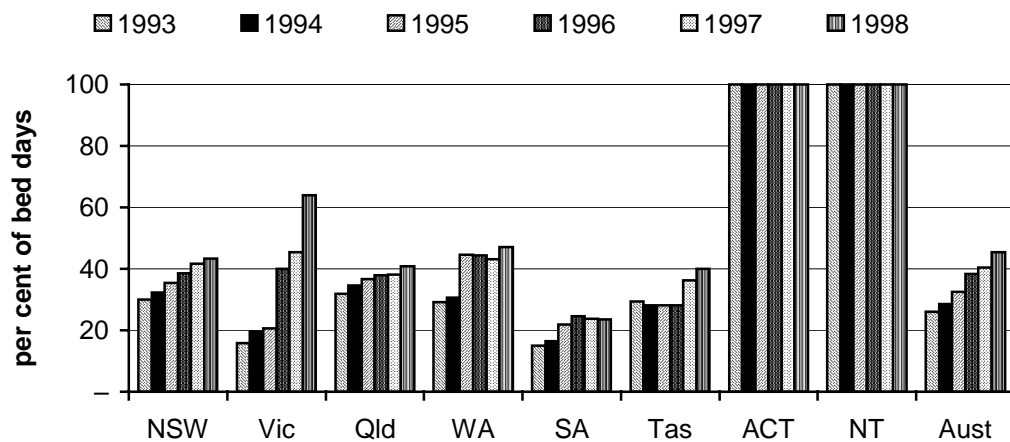

a The ACT and NT have no psychiatric hospitals.

Source: table 7A.31.

Similarly, figure 7.24 shows that Australia-wide, the proportion of mental health bed days in public acute hospitals has increased, with the fastest rate of increase in Victoria. By June 1998, 63.8 per cent of mental health bed days in Victoria were in public acute hospitals. This compares with a low of 23.4 per cent in SA. The ACT and the NT do not have psychiatric hospitals, so 100 per cent of bed days in those States were spent in public acute hospitals (table 7A.27).

Figure 7.24   **Bed days in public acute hospitals as a proportion of total mental health bed days in public psychiatric and public acute hospitals[a]**

a As at June.

Source: table 7A.27.

Outcomes

Prevalence of mental disorders

Outcome indicators for mental health management include the prevalence of mental illness in the community and deaths from suicide amongst adults. Figure 7.25 presents the prevalence of anxiety, affective or substance use disorder by jurisdiction for 1997. The NT had the highest prevalence of all mental disorders (26.5 per cent of the adult population) and Tasmania the lowest (15.0 per cent).

A telephone survey of persons aged over 18 years in SA conducted at the same time as the 1997 National Mental Health and Wellbeing Survey provided similar results for SA, suggesting that the prevalence of a mental health problem during the last few weeks before the interview was 19.5 per cent of adults. Prevalence was found to be higher in younger age groups and in urban areas (Taylor *et al.* 1999).

Figure 7.25   **Prevalence of mental disorder for people aged 18 years and over, 1997**

Anxiety disorders · Substance use disorders
Affective disorders · Total mental disorders
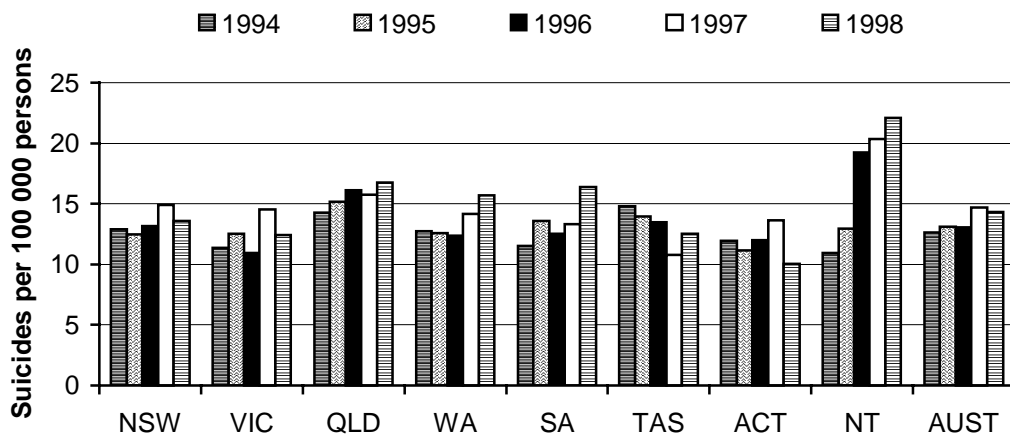

Source: table 7A.32.

The prevalence of mental disorders in 1997 declined with age (table 7A.33). Almost 26.6 per cent of adults aged 18–24 years experienced symptoms of a mental disorder in the 12 months before the 1997 survey, compared with 6.1 per cent of people aged 65 years and over. The prevalence of mental illness did not vary greatly with geographic location (table 7A.34).

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 — equivalent to 14.3 deaths for every 100 000 people. The rate for males was more than three times that for females in 1998 — a trend that was consistent over the 10 years to 1998 (table 7A.35). The rate in the NT has increased markedly from 11.0 suicides per 100 000 people in 1994 to 22.1 suicides per 100 000 in 1998 (figure 7.26 and table 7A.36). The ACT had the lowest suicide rate in 1998.

Suicide was the second leading cause of death for people aged 15–24 years (ABS 1999). In 1998, 23.8 per cent of deaths in this age group resulted from suicide. This was a higher proportion than for other age groups (20.1 per cent of deaths of people aged 25–44 years were suicides, followed by 5.9 per cent of deaths as a result of suicide in the 45–54 years age group).

Figure 7.26 Suicide rate (per 100 000 persons)

Source: table 7A.36.

There were 446 suicide deaths among people aged 15–24 years in Australia in 1998. This was equivalent to a rate of 16.7 deaths per 100 000 persons aged 15–24 years. The NT recorded the highest suicide rates in 1997 and 1998 (35.2 and 38.4 deaths per 100 000 people aged 15–24 years respectively), while Tasmania recorded the lowest (4.6 and 6.2 deaths per 100 000 people aged 15–24 years respectively) (figure 7.27 and table 7A.37).

Figure 7.27 Suicide deaths of persons aged 15–24 years (per 100 000 persons aged 15–24 years)

Source: table 7A.37.

The suicide rate per 100 000 people in 1998 was considerably higher in rural areas than in capital cities or other urban areas in all States except Tasmania (table 7A.38). In 1998, Australia-wide, there were 25.4 suicides per 100 000 people in rural areas compared with 13.3 suicides in capital cities and 11.1 in other urban centres. In NSW, the rate in rural areas was 33.2 suicides per 100 000 people compared with 12.5 in Sydney and other urban areas. The suicide rate in rural areas of WA was similarly high (32.2 suicides per 100 000 people compared with 14.5 in Perth and 9.9 in other urban areas).

In 1998, the suicide rate for Indigenous people was considerably higher than the rate for the total population in those States for which data are considered of publishable standard.[4] In Queensland, the Indigenous suicide rate in 1998 was 45.8 suicides per 100 000 Indigenous people compared with around 16.8 suicides per 100 000 for the total population. In SA, the 1998 Indigenous suicide rate was 45.0 per 100 000 Indigenous people compared with around 16.4 per 100 000 for the total SA population (table 7A.39). Care needs to be taken when interpreting these data for the period 1988–1997.

Efficiency

Cost per inpatient bed day

Comparability of costs is maximised when the full range of costs to government are counted for all jurisdictions. 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 casemix adjusted separation similar to that presented for public acute care hospitals (see chapter 5). However, the current method for adjusting inpatient separations (AR-DRGs) does not account for the full range of mental health services provided. Until an appropriate casemix classification has been developed and introduced, average inpatient day costs will be used as an indicator of efficiency. However, these 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 —

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[4] The ABS considered 1998 data for Queensland, WA, SA and the NT to be of publishable standard. See the 'Health preface' for a discussion of the quality of deaths data collected by the ABS.

for example, 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.

Average length of stay varied across jurisdictions and hospital types (table 7.7). The average length of stay for short stay patients in public hospitals in 1997-98, was highest in WA and Queensland in psychiatric hospitals and highest in SA and Victoria for patients in public acute hospitals. For long stays, the average was highest in Tasmania and NSW in psychiatric hospitals and highest in Victoria for public acute hospitals. The data presented in the table have not been standardised for differences in the complexity of cases. Also, the large variation for long-stay patients in psychiatric hospitals could represent differences across jurisdictions in the interpretation of data definitions. Care needs to be taken when making comparisons across jurisdictions.

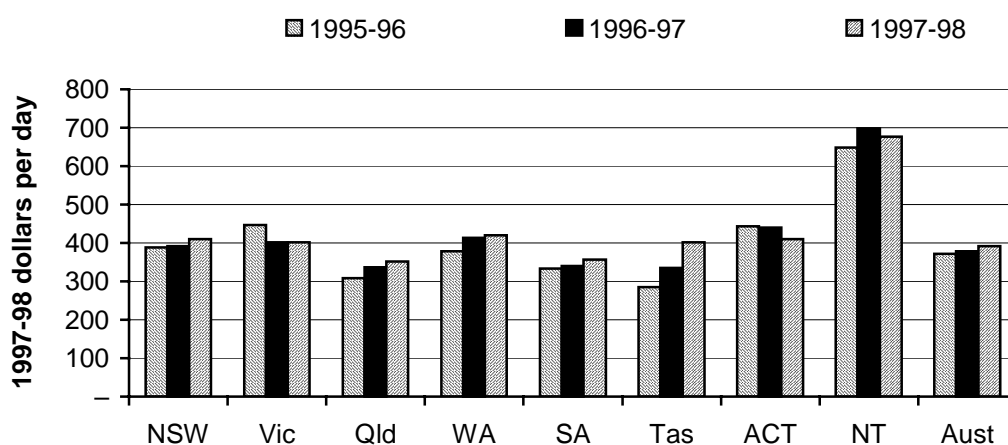Table 7.7   **Average length of stay, public hospitals (days) 1997-98[a]**

	NSW	Vic	Qld[b]	WA[c]	SA[d]	Tas	ACT	NT	Aust
Short stay patients[e]									
Psychiatric hospitals	9.9	10.2	12.6	13.4	10.4	9.6	..	..	10.8
Acute hospitals	10.0	10.4	8.1	na	10.4	7.7	8.6	8.1	9.5
Long stay patients[f]									
Psychiatric hospitals	343.3	126.0	na	144.2	133.5	383.6	..	..	352.7
Acute hospitals	66.2	76.8	57.1	na	53.4	50.9	49.0	57.2	67.6

a Calculated for separations in specialised unit or ward in an acute hospital or any ward in a psychiatric hospital only. **b** The published figure for average length of stay is 879.5 days, however, the Queensland Government advises this is incorrect. **c** Acute general hospitals in WA did not report total psychiatric care days, therefore data reported may be misleading and should not be directly compared to data from other States. WA figures include activity from psycho-geriatric facilities. **d** Data supplied by the SA Government indicate that the length of stay in psychiatric hospitals is 9.8 days and the length of stay in acute hospitals is 8.0 days. **e** Short stay refers to separations with less than 36 patient days. **f** Separations with 36 patient days or more. **..** Not applicable **na** Not available.

Source: table 7A.41.

Average inpatient costs per day (1997-98 prices) are presented in figure 7.28. Changes over time reflect in part institutional change in accordance with the NMHS. In 1997-98, average patient day costs Australia wide were $392.0. The NT reported average costs of $677.0 and Queensland reported costs of $352.0.

Figure 7.28   **Average inpatient costs per day**[a]

a Victorian data exclude infrastructure costs.

Source: table 7A.42.

Inpatient bed day costs for 1998-99 are presented in table 7.8 (table 7A.42). These data have not been verified, limiting comparability across jurisdictions and with the data presented in figure 7.28.

Table 7.8   **Average inpatient bed day costs, 1998-99**

	NSW	Vic[a]	Qld	WA	SA	Tas	ACT	NT
$ per day	441.0	398.4	345.0	391.2	352.5	402.2	na	na
No. days	617 443	325 085	403 996	227 309	210 833	53 388	na	na

a Cost data excludes infrastructure costs. **na** Not available.

Source: table 7A.42.

For community residential services, unverified average costs per patient day are presented in table 7.9. It is likely that these will also be affected by institutional changes occurring as a result of the NMHS. In addition, differences across jurisdictions in the types of patients admitted to community residential care will affect average costs in these facilities. Care needs to be taken when comparing across jurisdictions. Queensland and the NT do not have community residential facilities.

Table 7.9   **Costs per patient day, community residential services**

	NSW	Vic[a]	Qld	WA	SA	Tas	ACT	NT
1997-98 ($)	195	na	..	141	na	na	na	..
1998-99 ($)	242	188	..	191	na	259	na	..

a Cost data excludes infrastructure costs. **..** Not applicable. **na** Not available.

Source: table 7A.42.

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 non-inpatient 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. As a result of significant variability in definitions between jurisdictions used within the calculation of cost per non-admitted occasion of care, information from jurisdictions is not comparable. NSW and Victoria reported the following results:

- New South Wales reported average costs per non-admitted occasion of care across all mental health services of $89.0 in 1997-98, increasing to $90.0 in 1998-99.

- In Victoria, cost per occasion of care for psychiatric non-inpatient hospital services in 1998-99 was $151.30 and for community ambulatory facilities was $75.40.

Queensland, WA, Tasmania, the ACT and the NT were unable to report data for this indicator.

7.4 Future directions in performance reporting

Breast cancer

Key challenges for improving reporting of health management performance of breast cancer include:

- improving the measurement of existing indicators; and

- filling in gaps and developing new indicators.

The number of indicators in this year's Report increased from previous years. Data reported for the first time include: the interval cancer rate, the ratio of benign to malignant biopsies, the ratio of conservative to radical surgery, and the cost per separation (by DRG). The Steering Committee also revised its definitions for several indicators for which it had already collected data with a view to improving comparability — participation rate of women from special needs groups in screening, size and grade of detected cancers, and cost per woman screened.

The Steering Committee anticipates that the comparability of data collected for the Report will gradually improve over time as a result of continued consultation with jurisdictions and BreastScreen organisations — for example, an evaluation plan to be undertaken by BreastScreen Australia, which will provide a comprehensive analysis of the effectiveness and efficiency of the BreastScreen program. The Steering Committee anticipates that the findings of the evaluation will provide a framework that can be used to collect financial data in future Reports.

Existing performance data for breast cancer management places relatively more emphasis on the performance of BreastScreen programs than on the intervention and ongoing management of breast cancer. This is in large part the result of the availability of breast cancer screening data across jurisdictions. The Steering Committee will seek opportunities to report on compliance to clinical guidelines for treatment, travelling time to receive treatment, and cost per life year saved.

Mental Health

Key challenges for improving the reporting of health management performance of mental health include:

- improving the measurement of existing indicators; and

- filling in gaps and developing new indicators.

The Steering Committee can improve on existing indicators by:

- examining options for obtaining more recent data on the prevalence of mental disorders. Prevalence is a key indicator for the Report and the most recent national data are for 1997;

- improving reporting of effectiveness and efficiency indicators for Indigenous, rural/remote and other special needs groups;

- reporting results from the survey of children's and adolescent mental health undertaken by the University of Adelaide and collaborating centres to be released in 2000. Currently, prevalence data are available only for those aged 18 years or over;

- reporting on developments and progress in the adoption of the MH-CASC casemix classification (see 'Policy developments').

The Steering Committee can expand the reporting of indicators by:

- revising the performance indicator framework to take account of the Second National Mental Health Plan to ensure that reporting remains consistent with government policy objectives for mental health; and

- improving reporting of effectiveness/efficiency indicators for community mental health establishments using data from the new National Minimum Data Set. Under the Second National Mental Health Plan, structural reform has resulted in reduced reliance on psychiatric hospitals and expanded delivery of community based care integrated with inpatient care. Enhanced reporting of community based care would also better reflect performance against policy objectives for mental health.

Diabetes mellitus

The Steering Committee has developed a draft performance indicator framework for diabetes mellitus and expects to commence collecting data for the next Report. Commonwealth, State and Territory governments declared diabetes mellitus a National Health Priority Area in 1996 and have agreed to collaborate in the prevention, detection, care and management of the disease in accordance with the *National Diabetes Strategy 2000–2004*.

Diabetes mellitus is a serious and growing health problem in Australia. If undetected or poorly controlled, it can result in debilitating long-term complications such as blindness, kidney failure, amputation, heart attack, stroke and erectile dysfunction (Colagiuri *et al.* 1998). Diabetes mellitus was the seventh largest burden of disease in Australia (when measured in terms of the number of years of life lost to premature mortality or disability — see 'Health preface'). The 1995 ABS National Health Survey suggested that 430 700 Australians had self reported diabetes (ABS 1997), but a significant number of people with type 2 diabetes were undiagnosed. The total diabetic population has been estimated at 780 000 people (4.3 per cent of the total population) (ABS 1997). The significance of diabetes mellitus on the wellbeing of Indigenous Australia was particularly pronounced, accounting for between four and ten per cent of all recorded Indigenous deaths in 1998 (see 'Health preface').

7.5   Jurisdictions comments

This section provides comments from each jurisdiction on the services covered in this chapter and attachment 7A in the CD-ROM. Appendix A (Descriptive Statistics Appendix) contains short profiles on each State and Territory, which may assist in interpreting the performance indicators presented in this chapter. In addition, detailed statistics covering various aspects such as age profile, geographic distribution of the population, income levels, education levels, tenure of dwellings

and cultural heritage (such as Indigenous status and ethnicity) are also found in Appendix A.

New South Wales' comments

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The 2001 Report on Government Services shows that there is clear progress in expanding the breadth of indicators relating to health service performance. This is the consequence of the increased emphasis on benchmarking within the health sector. The data are a significant step towards understanding health system performance in Australia. There still remain some concerns in achieving data comparability between States/Territories however, which are being addressed by groups such as the National Health Performance Committee. Three examples are:

1) Definitional issues. When comparing across States/Territories, the term hospital is applied to a broad range of facilities that provide acute or other types of care (for example psychiatric care) or combinations of care types. Some hospitals have specific roles, for example, paediatrics, mothers and babies, and eye care, whereas others are more general. These differences also exist within States/Territories, especially between the rural and metropolitan sectors. The problem is augmented when hospitals report that they are treating 'acute' patients when the care is predominantly nursing home type, for example, in rural community hospitals. Also, in some instances psychiatric patients treated in non-psychiatric units/hospitals are included in acute care measures and in other cases they are excluded.

2) Reporting of expenditure data. Some States/Territories are yet to implement accrual accounting. Also, where depreciation is reported, the values at which items are depreciated differ across States/Territories. There are also differences in the methodology of collecting and reporting expenditure data, especially in areas such as teaching and research.

3) Hospital/facility size. Data presented by State/Territory disguise the configuration of hospitals contributing to the performance indicator. Hospitals vary a great deal in size, and therefore, will have different costs for similar types of care due to higher overheads for example.

These problems are much easier to control for at the local level than across States/Territories. For example, for internal reporting, NSW presents hospital data based on peer groups, which controls for differences in the size and roles of hospitals. This type of standardisation can also be applied across jurisdictions if the right tools are developed.

The value of the Report on Government Services is also in the presentation of data relating to outcomes, quality and safety and in relating to services other than hospital-based care. The performance indicators in these areas are much less refined. However, their publication can only lead to improvements over time.

NSW is keen to improve the comparability of data by being active in national groups and committees examining issues leading to inconsistencies and developing tools/standards to enhance the uniformity of the data. These efforts will contribute to better decisions in the areas of policy, management and delivery of health services.

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Victorian comments

" Victoria continues to strongly support comparisons of overall performance and key performance indicators between jurisdictions and with the best practitioners worldwide. In this context the establishment of the National Health Performance Committee is particularly welcome. This Committee has been given the responsibility to develop and maintain a national performance measurement framework for the health system as a whole. It has already moved to establish a working relationship with this Review and this should lead to a more coordinated approach to performance measurement at the national level.

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. In particular, the development of a performance measurement framework for general practice, including indicators of quality, safety and evidence of best practice, is important in a funding environment where outcomes are rewarded and emphasis is placed on quality.

As discussed in the previous edition of this Report, the breast cancer control services overseen by BreastScreen Australia provide a good example of a comprehensive mechanism for assessing the effectiveness and efficiency of service delivery at both national and jurisdictional levels. Victoria welcomes the current initiatives of the Review towards extending this approach to some of the other agreed National Health Priority Areas.

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. "

Queensland comments

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Queensland Health is committed to providing quality health care services to the Queensland public and has a strong dedication to performance measurement and benchmarking as a means to promote quality health services. Queensland Health demonstrates this commitment through the chairing of the National Health Performance Committee.

Queensland Health recognises that many indicators need further refinement and development. Queensland Health is continuing to invest in information technology to improve the availability of quality data and information, facilitating activities such as performance measurement and benchmarking. For example, the Decision Support System provides comprehensive information on finance, payroll, pharmacy and pathology. In addition, a clinical benchmarking system, Transition II, has been implemented at Queensland Health's twenty-five largest hospitals providing opportunities to promote clinical process improvement, improved reporting at both the corporate and hospital level and benchmarking opportunities.

The Quality Improvement and Enhancement Program is a major initiative aimed at improving the capacity of Queensland Health to provide accountable, continuously improving, quality services through systematic enhancements at the state-wide and local level. A major effort involving projects across eight broad program areas, valued at $120 million over 5 years is currently being undertaken by Queensland Health.

Queensland Health is committed to developing innovative strategies to address the National Health Priority Areas. Comprehensive Health Outcomes Plans focussing on improving the management of diabetes mellitus and cardiovascular disease, and establishing strategies for injury prevention and control have been developed. The Health Outcome Plans 2000-2004 for Cardiovascular Health: Coronary Heart Disease, Diabetes Mellitus and Injury Prevention and Control were launched in September 2000. Work is being undertaken to develop Health Outcomes Plans for cancer and asthma. The Outcome Plans will guide the broad acquisition and delivery of services required to improve health status and achieve desired health outcomes.

Queensland Health has demonstrated a pro-active approach to Mental Health information systems development, with the implementation of the Client Event System Application (CESA). This system will provide quality information for community mental health practitioners, administrators and managers and will provide robust statewide data to inform program development. The application provides greater ability to track clients across the continuum of care and reduces duplication of data collection and maintenance across health services facilitated by interfaces between information systems. Additionally, it establishes a clinical information infrastructure to support National Minimum Data Set (NMDS) requirements.

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Western Australian comments

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In 2000 the Health Department of Western Australia (HDWA) continued to play a significant role in the development and implementation of performance monitoring activities in the State health sector. For a number of years, there has been a Key Performance Indicators Working Group comprised of representatives from public and private service providers, health insurance firms and the Health Department, which annually updates a manual to assist all stakeholders in refining, reporting and evaluating performance in health care delivery.

In addition to the ongoing developments through the KPI working group, the HDWA has undertaken a series of projects to improve the understanding of the outputs and outcomes in the health system and to identify areas that would benefit from new initiatives. To list some examples of the work in 2000:

- There was a review of Rural Health Service Models, to identify the products of the smaller models of service delivery particularly in the rural sector.

- Results of a three-year reform process into mental health services were released in August 2000 to effect changes and additional services for WA consumers following identified demand.

- A formal Oral Health Program was established, uniquely integrating admitted and outpatient oral health care. In particular, a comprehensive database will allow consistent monitoring of all services provided in this sector.

- A number of providers piloted the WA Rural Palliative Care Database (WARPCD). This patient database enables tracking of clinical progress of palliative care patients and quantification of inputs from various care agencies.

- "HealthNetter", an online State-wide survey was launched in November 2000 to ask people what they want in the way of health information. Survey results will form the basis of an interactive website accessible to the community.

- Through a joint initiative, the Departments of Health and Family and Children's Services initiated Building Blocks, a program aimed at providing appropriate support to families when required, helping to make sure every child has the essential building blocks when they start out in life and assisting parents to build stronger and healthier families.

Despite all this work and more, significant challenges still persist that make it difficult to comprehensively evaluate total performance in health. Identifying appropriate and accepted measures of certain activities such as non-admitted patient services, undertaking cross-sectoral and inter-jurisdictional comparisons and keeping abreast of rapid changes in technology are foremost among these hurdles. WA recognises both the progress and the remaining gaps in the work that is happening in all sectors. The State is committed to allocating significant levels of effort and resources to respond to the challenges that remain.

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South Australian comments

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The Department of Human Services continues to provide a quality health service for the South Australian community. South Australia has for many years had a strong community service sector, in both the health and welfare fields. The Department maintains its efforts to ensure that appropriate health care is provided to all who need it and is actively undertaking further development of integrated and coordinated service provision across all three portfolio areas of health, housing and community services.

Constraints within the human services operational environment include an increasing demand for human services outstripping available resources, ageing capital infrastructure, and new technologies setting higher expectations of medical science. 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). SA is currently implementing successful population based breast and cervix screening, and immunisation programs as well as exploring innovative methods of case management, continuity of care and chronic illness management for target population groups as well as alternative models for service delivery. These alternative models of service delivery include rehabilitation in the home, hospital in the home, same day of admission surgery, telehealth linkages for renal review and the off-site location of clinics closer to their target populations.

Changing population demographics are a continuing challenge. The latter includes the challenge of influencing the continued lower life expectancy for indigenous people, high rates of poverty and associated high rates of ill health, especially for single parents, younger single people and families with children, and to ensure that services are able to respond appropriately to an ageing population.

Health is central to the key outcomes the Human Services portfolio aims to achieve. These aims are to:

- Enhance the quality of life for South Australians through government and community partnerships promoting health and wellbeing, the development of a sustainable community and quality living standards, and

- Provide the care and support necessary for people to maintain and improve their health and wellbeing at a cost the community is willing to bear.

The Department strongly supports directions to improve reporting of GP services to population groups, especially indigenous people, and to improve reporting of effectiveness and efficiency indicators for indigenous, rural/remote and other population groups.

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Tasmanian comments

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The Department of Health and Human Services is developing a 10 Year Plan to support improved health and wellbeing outcomes for people in Tasmania. The Plan will be guided by the vision, goals and benchmarks identified in Tasmania *Together*, a 20 year social, economic and environmental plan. Tasmania *Together* has been developed through an extensive community consultation process and relies on partnerships between State and Local Governments and the private and community sectors to identify whole-of government and whole-of community broad-based goals and to set benchmarks for their achievement.

The 10 year health and wellbeing plan and the Department's approach to measuring and evaluating the quality and performance of its programs and services will be based on the health performance framework developed by the Australian Health Performance Committee. Given the Department's diversity of programs and services (housing through to community services to acute health care) the framework has been modified to adequately capture performance relevant to the three tiers of the framework.

Similar to the national model, the Tasmanian quality and performance framework has regard to *health and wellbeing outcomes*, *determinants of health and wellbe*ing *and health* and *human services system performance*. The *outcomes* component of the framework establishes population health and wellbeing status against state, national and international policy commitments and standards. The *determinants* component assesses the social, economic and environmental context to determine potential future impacts on the health and wellbeing of the Tasmanian population and sub-groups within it. The *system* component is about how well the Department's programs and services are performing against dimensions of quality - such as safety, responsiveness, sustainability, etc — in terms of measurable best practice.

Using data from the Healthy Communities Survey (1998), Tasmania has produced a comprehensive analysis of the economic wellbeing and vulnerability of Tasmanian families and households, and how it impacts on Tasmanian's health and quality of life. The analysis not only identifies who is economically vulnerable and where they live, but also which specific factors (aspects of overall capability) contribute to their economic wellbeing and vulnerability.

Key findings reveal that reduced capability in individuals, families and communities is strongly associated with poorer health and wellbeing outcomes. As a consequence, reduced capability results in increasing demand on government services generally, not just within the health sector. Poor health and psychosocial outcomes that result from reduced capability can reduce productivity as well as cost in terms of life years, disability, unfulfilled potential and social pathology. It also means that people enter the health and community services system sooner and stay longer.

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Northern Territory comments

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The role of the hospital cannot be considered independent of the Primary and Community Health Care sectors. A comprehensive approach to health care through partnerships with primary care, mental health, preventive care and community health is recognised to be a key to overall improvement in health gain.

Five public hospitals in Darwin, Alice Springs, Nhulunbuy (Gove), Katherine and Tennant Creek coupled with community health service outlets form a network throughout the Territory.

Largely due to the remoteness, scattered population and the absence of alternative health care providers, Northern Territory public hospitals fill numerous non acute service gaps in their communities. As service infrastructure develops there will be less need for hospitals to be involved in non acute areas. Health service agreements with each hospital have assisted in defining the role and services to be provided.

Territory Health Services (THS) is facing the challenge of growth in activity in the hospital sector with finite resources to address that growth. In facing this challenge, THS is committed to reform of the health care system incorporating performance based arrangements.

In terms of THS Strategy 21 Corporate Stretch Goals, the effort during the past year focused on collaboration with the community sector. This was demonstrated by the Hospital in the Home initiative at Royal Darwin Hospital and the Post Acute Nursing Service at Alice Springs Hospital.

Overall, a number of factors had an important impact on hospital services. The hospital nursing workforce stabilised with a reduction in staff turnover. Hospital activity grew by 4.7% based on growth rates to March 2000, limiting the ability to impact on growth in elective surgery waiting lists.

Acute activity is measured by Weighted Inlier Equivalent Separations (WIES). Hospital workload is measured in terms of why people came to hospital and how long they stay in hospital. WIES is a measure which addresses both factors. It gives a weighting to each episode of care based on the patient's diagnosis and treatment as well as their length of stay.

Total workload for all Northern Territory hospitals as measured by WIES increased by 4.7%. Individual hospital workloads for 1999/00 were:

- Royal Darwin Hospital increase of 5.7%;
- Alice Springs Hospital increase of 1.1%;
- Katherine Hospital increase of 5.5%;
- Tennant Creek Hospital decrease of 1.9%; and
- Gove District Hospital increase of 19.8%.

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7.6 Definitions

Table 7.10 **Terms**

Term	Definition
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.
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 are sorted into diagnosis related groups (DRGs) 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 and 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 suffers from low mood, loss of interest and enjoyment, and reduced energy. Sleep, appetite and concentration may be affected.
Dysthymia	Constant or constantly recurring chronic depression of mood, lasting at least two years, which is not sufficiently severe, or whose episodes are not sufficiently prolonged, to qualify as recurrent depressive disorder. The person feels tired and depressed, sleeps badly and feels inadequate, but is usually able to cope with the basic demands of everyday life.
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.

(continued next page)

Table 7.10 (continued)

Term	Definition
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 invade healthy or normal tissue.
Mental disorder	A diagnosable illness that significantly interferes with an individual's cognitive, emotional or social abilities.
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 intrude into the person's consciousness against his/her will. The person experiences these as being senseless or repugnant, but is unable to ignore or suppress them.
	Compulsions: recurrent, stereotyped behaviours performed according to certain rules. The person often views them as preventing some unlikely event, often involving harm to, or caused by, themselves. The person generally recognises the senselessness of the behaviour, attempts to resist it and does not derive any pleasure from carrying out the activity.
Panic disorder	Panic (anxiety) attacks that occurs suddenly and unpredictably. A panic attack is a discrete episode of intense fear or discomfort.
Post traumatic stress disorder	A delayed and/or protracted response to a psychologically distressing event that is 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. Public health is characterised by a focus on the health of the population (and particular at-risk groups) and complements clinical provision of health care services.
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.

Table 7.10 **(continued)**

Term	Definition
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 are staffed by mental health professionals on a 24-hour basis.
Stand-alone hospitals	Psychiatric hospitals that are separated from the general health care system.
Substance use disorders	Disorders in which drugs or alcohol 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.

Table 7.11 **Indicators**

Indicator	Definition
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 non-English speaking 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 that 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