

# Trends in hospital service provision

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## Abstract

*In this paper, trends in hospital service provision are measured using data on the numbers and nature of hospitals, on hospital expenditure and on hospital activity over recent years. The number of public acute care hospitals was fairly stable, however, bed numbers decreased. Hospital numbers rose for private hospitals, as did numbers of beds, particularly for group for-profit private hospitals. Recurrent health expenditure on hospitals as a proportion of all recurrent health expenditure fell, although it rose for private hospitals, and real increases in expenditure occurred for both public acute and private hospitals. Population rates for separations and patient days rose for private hospitals and were stable and fell, respectively, for public acute hospitals. Average length of stay decreased for both public acute and private hospitals, with increasing numbers of separations occurring on a same day basis. Increasing proportions of procedures were undertaken during same day stays, and in private hospitals. Separation rates varied geographically, with highest rates overall, and for public hospitals and overnight separations, for patients resident in remote centres and other remote areas. Highest rates for private hospitals were for patients resident in capital cities, other metropolitan centres and large rural centres.*

## Introduction

Hospital services are provided in Australia by a mixture of public hospitals run by State and Territory governments, and private hospitals operated for profit, or by not-for-profit organisations. Private hospitals deliver some government funded services and, conversely, public hospitals are able to treat private patients funded, for example, by private health insurance. Generally, however, most public patients (those treated at no charge under 'Medicare' arrangements) are treated in public hospitals while private patients, who pay their doctors' fees and hospital costs, use private hospitals.

Patterns of hospital service provision change over time with changes to Commonwealth and State health policies, for example. The changes can be measured using a range of different types of data – on the numbers and nature of hospitals and their beds; on expenditure on hospitals; on the number of separations, patient days and lengths of stay; and on the care types, types of procedures undertaken and overall complexity of the hospital work. This paper presents information on changes in hospital service provision using this range of data types, mainly for the period 1993–94 to 2000–01. Particular focuses are on the increasing roles of same day hospitalisations and of private hospitals.

Service provision can also vary geographically, with variation reflecting combinations of different levels of access to services, different community levels of disease and injury, and different patterns of prevention and/or community-based care activities. Variation by the geographical location of the usual residence of the patient (classified using the rural, remote and metropolitan areas classification) is presented at the end of the chapter for hospitalisations overall, and for selected reasons for hospitalisation.

Unless otherwise noted, these data were derived from the Australian Institute of Health and Welfare's National Hospital Morbidity Database (which includes records for essentially all separations in public hospitals, and for about 95% of separations in private hospitals, including free-standing day hospital facilities since 1993–94), National Public Hospital Establishments Database (which includes records for each public hospital since 1993–94) and Health Expenditure Database. Further detail is available in the Institute's Australian Hospital Statistics, Health Expenditure Bulletin and Australia's Health series of publications, available at [www.aihw.gov.au](http://www.aihw.gov.au).

Table 1. Hospitals and available beds, 1993–94 to 2000–01

	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	% change	
									Average since 1993-94	Latest two years
<i>Hospitals</i>										
Public acute <sup>(a)</sup>	702	727	704	706	736	728	726	726	0.5	0.0
Public psychiatric	37	35	34	23	24	21	22	23	-6.6	4.5
<b>Public total</b>	<b>739</b>	<b>762</b>	<b>738</b>	<b>729</b>	<b>760</b>	<b>749</b>	<b>748</b>	<b>749</b>	<b>0.2</b>	<b>0.1</b>
Private free-standing day hospital facilities	111	125	140	153	175	190	207	n.a.	10.9	8.9
Private other <sup>(b)</sup>	329	328	323	319	317	312	302	n.a.	-1.4	-3.2
<b>Private total</b>	<b>440</b>	<b>453</b>	<b>463</b>	<b>472</b>	<b>492</b>	<b>502</b>	<b>509</b>	<b>n.a.</b>	<b>2.5</b>	<b>1.4</b>
<b>All hospitals</b>	<b>1,179</b>	<b>1,215</b>	<b>1,201</b>	<b>1,201</b>	<b>1,252</b>	<b>1,251</b>	<b>1,257</b>	<b>n.a.</b>	<b>1.1</b>	<b>0.5</b>
<i>Available beds<sup>(c)</sup></i>										
Public acute <sup>(a)</sup>	56,140	54,211	54,579	53,410	52,625	50,942	50,188	50,113	-1.6	-0.1
Public psychiatric	5,360	4,685	3,992	3,426	3,112	2,943	2,759	2,478	-10.4	-10.2
<b>Public total</b>	<b>61,500</b>	<b>58,896</b>	<b>58,571</b>	<b>56,836</b>	<b>55,737</b>	<b>53,885</b>	<b>52,947</b>	<b>52,591</b>	<b>-2.2</b>	<b>-0.7</b>
Private free-standing day hospital facilities	917	939	1,023	1,163	1,348	1,460	1,581	n.a.	9.5	8.3
Private other <sup>(b)</sup>	21,241	22,370	22,757	22,966	23,091	23,746	23,665	n.a.	1.8	-0.3
<b>Private total</b>	<b>22,158</b>	<b>23,309</b>	<b>23,780</b>	<b>24,129</b>	<b>24,439</b>	<b>25,206</b>	<b>25,246</b>	<b>n.a.</b>	<b>2.2</b>	<b>0.2</b>
<b>All hospitals</b>	<b>83,658</b>	<b>82,205</b>	<b>82,351</b>	<b>80,965</b>	<b>80,176</b>	<b>79,091</b>	<b>78,193</b>	<b>n.a.</b>	<b>-1.1</b>	<b>-1.1</b>
<i>Available beds per 1,000 population<sup>(d)</sup></i>										
Public acute <sup>(a)</sup>	3.1	3.0	3.0	2.9	2.8	2.7	2.6	2.6	-3.8	-1.3
Public psychiatric	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	-12.4	-11.2
<b>Public total</b>	<b>3.4</b>	<b>3.2</b>	<b>3.2</b>	<b>3.1</b>	<b>3.0</b>	<b>2.9</b>	<b>2.8</b>	<b>2.7</b>	<b>-4.4</b>	<b>-1.8</b>
Private free-standing day hospital facilities	0.1	0.1	0.1	0.1	0.1	0.1	0.1	n.a.	6.9	7.1
Private other <sup>(b)</sup>	1.2	1.2	1.2	1.2	1.2	1.3	1.2	n.a.	-0.6	-1.4
<b>Private total</b>	<b>1.2</b>	<b>1.3</b>	<b>1.3</b>	<b>1.3</b>	<b>1.3</b>	<b>1.3</b>	<b>1.3</b>	<b>n.a.</b>	<b>-0.3</b>	<b>-0.9</b>
<b>All hospitals</b>	<b>4.7</b>	<b>4.5</b>	<b>4.7</b>	<b>4.4</b>	<b>4.3</b>	<b>4.2</b>	<b>4.1</b>	<b>n.a.</b>	<b>-3.5</b>	<b>-2.2</b>

(a) Includes Department of Veteran's Affairs hospitals.

(b) Includes private psychiatric hospitals, excludes private free-standing day hospital facilities.

(c) Average available beds where possible, otherwise available beds at 30 June.

(d) Rates are calculated as crude rates using the December population for each year.

Sources: AIHW National Public Hospital Establishments Database, National Survey of Mental Health Services, ABS 1995, ABS 2001.

## Hospitals and hospital beds

There were 726 public acute care hospitals in 2000–01, and 509 private hospitals (207 free-standing day hospital facilities and 302 other private hospitals) in 1999–00 (Table 1) (AIHW 2002a). 'Acute care hospitals' is the term used to refer to public and private hospitals other than public psychiatric hospitals. These hospitals provide at least minimal medical, surgical or obstetric services for admitted patient treatment and/or care, and

provide 24-hour nursing service as well as other necessary professional services, but do not necessarily provide acute care only. They include private free-standing day hospital facilities that provide services for admitted patients on a day only basis.

Public acute hospitals can be described in terms of peer groups, as developed to explain variability in the average cost per casemix-adjusted separation and to group hospitals into broadly similar groups in terms of their volume of admitted patient activity and geographical location (AIHW 2002a). In 2000–01, there were

- 56 principal referral hospitals, all in metropolitan areas, with an average of 458 beds and reporting an average of 41,105 acute weighted separations each
- 10 specialist women's and children's hospitals, also all in metropolitan areas, with averages of 245 beds and 21,416 weighted separations
- 41 large hospitals (20 in metropolitan areas and 21 in rural areas), with an average of 144 beds each and reporting an average of 13,031 weighted separations
- 102 medium hospitals, with averages of 63 beds and 4,771 weighted separations
- 90 small rural acute hospitals, with an average of 23 beds and 1,033 separations
- 54 small hospitals in remote areas (mainly in Queensland and Western Australia), reporting an average of 23 beds each and 1,165 weighted separations.

Other hospitals reported either very small numbers of separations, or large proportions of non-acute separations. They included 99 small non-acute hospitals, and small numbers of multi-purpose services, hospices, rehabilitation hospitals, mothercraft hospitals and other non-acute hospitals (AIHW 2002a).

Between 1993–94 and 2000–01, numbers of public acute and private hospitals (other than free-standing day hospital facilities) were not much changed. In contrast, there was a marked change in the number of private free-standing day hospital facilities, with numbers nearly doubling, from 111 in 1993–94 to 207 in 1999–00 (ABS 1993, ABS 2001).

The number of public psychiatric hospitals declined by 38% (an average of 6.6% decline per year), from 37 in 1993–94 to 23 in 2000–01. These hospitals are devoted primarily to the treatment and care of admitted patients with psychiatric, mental or behavioural disorders. Reforms under the National Mental Health Strategy have meant that their role has declined in recent years, with relevant services provided to greater extents in acute care hospitals and community settings instead.

## Bed numbers

Changes in the numbers of hospitals can be due to changes in administrative or reporting arrangements and not necessarily to changes in the number of hospital campuses or buildings. In addition, as indicated above, hospitals vary considerably in size; 14 public hospitals had more than 500 beds in 2000–01, but 157 hospitals had fewer than 11 beds. For these reasons, numbers of hospital beds are regarded as a more reliable indicator of the availability of hospital services.

Between 1993–94 and 1999–00, there was a 7% reduction in available beds in hospitals, resulting in a decrease from 4.7 to 4.1 beds per 1,000 population (Table 1). The change in available beds was not evenly distributed among hospital types, with the number of beds/chairs in private free-standing day hospital facilities increasing by 72%, the number of beds in other private hospitals increasing by 11%, and the number of public acute hospital beds decreasing by 11%. Public psychiatric hospital beds fell 54%, from 5,360 to 2,478.

## Corporatisation of private hospitals

Some of the changes in private hospital provision reflect the increased corporatisation of private health care services, including private hospitals, over the last decade or so. In many cases, individual companies have interests in, for example, hospitals, general practice, specialist medical practice, medical centres and pathology and imaging services, enabling patients to be referred from one activity to another within the corporation's group, and sometimes within one physical location.

Group for-profit private hospitals (hospitals that either own other hospitals, or are owned by a parent company that owns other hospitals) have increased their share of the private hospital market. Between 1991–92 and 1999–00, there was an increase of 49% in beds for these hospitals (Table 2), compared with falls of 14% for independent for-profit hospitals, and 1.7% for not-for-profit hospitals. Similarly, the number of beds/chairs for group for-profit private free-standing day hospital facilities increased by 201% between 1991–92 and 1999–00, while numbers for independent for-profit facilities grew by 179%.

These changes were accompanied by a trend to larger group for-profit private hospitals, with an increase in the average number of beds from 63 in 1991–92 to 87 in 1999–00 (38%). In comparison, the average size of not-for-profit hospitals increased from 75 beds to 88 beds (17%) and the size of independent for-profit hospitals fell on average by 11%, from 46 beds to 41 beds. In 1999–00, there were 2 independent for-profit hospitals with more than 100 beds, but 34 group for-profit hospitals of that size.

**Table 2. Private hospitals, beds and activity, by for-profit status, 1991–92 to 1999–00**

	1991-92	1996-97	1999-00
<b>Free-standing day hospital facilities</b>			
<i>For-profit group</i>			
Hospitals	9	8	31
Beds/chairs	83	55	250
Average beds/hospital	9	7	8
Separations ('000)	25	13	75
<i>For-profit independent</i>			
Hospitals	63	145	176
Beds/chairs	473	1,108	1,331
Average beds/hospital	8	8	8
Separations ('000)	99	214	274
<i>All free-standing day hospital facilities</i>			
Hospitals	72	153	207
Beds/chairs	556	1,163	1,581
Average beds/hospital	8	8	8
Separations ('000)	123	226	349
<b>Other private hospitals</b>			
<i>For-profit group</i>			
Hospitals	114	120	124
Beds	7,217	9,516	10,731
Average beds/hospital	63	79	87
Separations ('000)	410	639	851
Patient days ('000)	1,588	2,393	2,891
Average length of stay (days)	3.9	3.7	3.4
Occupancy (%)	60	69	74

(continued)

**Table 2. Private hospitals, beds and activity, by for-profit status, 1991–92 to 1999–00 (continued)**

	1991-92	1996-97	1999-00
<i>For-profit independent</i>			
Hospitals	62	57	59
Beds	2,838	2,248	2,430
Average beds/hospital	46	39	41
Separations ('000)	143	127	158
Patient days ('000)	617	500	516
Average length of stay (days)	4.3	3.9	3.3
Occupancy (%)	60	61	58
<i>Total for-profit</i>			
Hospitals	176	177	183
Beds	10,055	11,764	13,161
Average beds/hospital	57	66	72
Separations ('000)	553	766	1,009
Patient days ('000)	2,205	2,893	3,407
Average length of stay (days)	4.0	3.8	3.4
Occupancy (%)	60	67	71
<i>Not-for-profit</i>			
Hospitals	143	142	119
Beds	10,690	11,202	10,504
Average beds/hospital	75	79	88
Separations ('000)	603	772	790
Patient days ('000)	2,686	2,961	2,825
Average length of stay (days)	4.5	3.8	3.6
Occupancy (%)	69	72	74
<b>All private hospitals</b>			
Hospitals	319	319	302
Beds	20,745	22,966	23,665
Average beds/hospital	65	72	78
Separations ('000)	1,157	1,539	1,799
Patient days ('000)	4,891	5,854	6,232
Average length of stay (days)	4.2	3.8	3.5
Occupancy (%)	65	70	72

Source: Productivity Commission 1999 and ABS Private Health Establishments Collection, unpublished data.

## Recurrent expenditure on hospitals

Total recurrent expenditure on health services in 1999–00 was \$50,189 million, with recurrent expenditure on hospitals, at \$18,806 million, comprising 37.5% (AIHW 2001 and AIHW Health Expenditure Database, unpublished). Recurrent expenditure on public acute hospitals was \$14,193 million (75.5% of total recurrent expenditure on hospitals), on private hospitals was \$4,192 million (22.3%), and there was \$421 million expenditure on public psychiatric hospitals (2.2%).

The proportion of recurrent health expenditure that was for hospital services in 1999–00 was lower than at the beginning of the 1990s (40.6% in 1989–90), with much of the difference relating to the public hospital systems. Expenditure on public acute hospitals in 1999–00 was 28.2%, down from 32.3% in 1989–90, while public psychiatric hospital expenditure was 0.8%, down from 2.0% in 1989–90. However, there was growth in expenditure on private hospitals, from 6.3% in 1989–90 to 8.6% in 1999–00.

Between 1989–90 and 1999–00, there was an increase in recurrent funding (in constant price terms) of 2.8% for public acute hospitals, and 6.9% for private hospitals (Table 3). Funding for public psychiatric hospitals decreased by 4.5%, consistent with their changing role under the National Mental Health Strategy.

**Table 3. Recurrent funding of hospitals, constant prices<sup>(a)</sup>, by hospital type, and annual growth rates, 1989–90 to 1999–00**

Public hospitals								
Public acute			Public psychiatric		Private hospitals		All hospitals	
Year	Amount (\$m)	Growth (%)	Amount (\$m)	Growth (%)	Amount (\$m)	Growth (%)	Amount (\$m)	Growth (%)
1989-90	10,614	..	642	..	2,078	..	13,334	..
1990-91	10,647	0.3	652	1.7	2,323	11.8	13,622	2.2
1991-92	10,845	1.9	640	-2.0	2,518	8.4	14,003	2.8
1992-93	10,948	0.9	574	-10.2	2,663	5.8	14,186	1.3
1993-94	11,042	0.9	546	-5.0	2,844	6.8	14,432	1.7
1994-95	11,385	3.1	522	-4.3	3,117	9.6	15,024	4.1
1995-96	11,924	4.7	484	-7.4	3,394	8.9	15,802	5.2
1996-97	12,539	5.2	429	-11.3	3,656	7.7	16,624	5.2
1997-98	13,217	5.4	390	-9.1	3,761	2.9	17,368	4.5
1998-99	13,675	3.5	397	1.9	3,959	5.3	18,031	3.8
1999-00 <sup>(b)</sup>	13,973	2.2	404	1.7	4,065	2.7	18,442	2.3
Average annual growth rates								
1989-90 to 1992-93		1.0	-3.6		8.6		2.1	
1992-93 to 1997-98		3.8	-7.5		7.1		4.1	
1997-98 to 1999-00		2.8	1.8		4.0		3.0	
1989-90 to 1999-00		2.8	-4.5		6.9		3.3	

(a) Constant price health services expenditure for 1989-90 to 1999-00 is expressed in chain volume measures, referenced to the year 1998-99.

(b) Based on preliminary AIHW and ABS estimates.

Source: AIHW 2001.

In 2000–01, recurrent expenditure on public hospitals was \$15,545 million (current prices) (AIHW 2002a). Salaries and wages expenditure totalled \$9,722 million (62.5% of the total), including \$4,338 million for nurses, \$1,791 for salaried medical officers and \$1,299 million for diagnostic and allied health professionals. Non-salary expenditure components included \$1,192 million for medical and surgical consumable supplies, \$780 million for drug supplies and \$599 million for visiting medical officers.

## Sources of funds

In 1998–99, the Commonwealth government provided 41.9% of funds for hospitals, with 36.1% provided by State, Territory and local governments, 13.1% provided by health insurance funds and 8.9% provided by individuals and other non-government payers (Table 4).

Because most expenditure on hospital services is on public acute hospitals, these shares have been greatly influenced by the Commonwealth/State health funding agreements. In 1989–90, which was the second year of

the second Medicare Agreement period, the Commonwealth Government's share of funding for expenditure on hospitals was 36.4%, State, Territory and local governments met 40.1% and 23.5% was from non-government sources (AIHW 2002b).

The third Agreement period (1993–94 to 1997–98) saw an increase in funding by the Commonwealth for public acute hospitals. Reflecting that, in 1993–94, the Commonwealth share increased markedly, from 37.5% in 1992–93 to 40.5%; the non-government share rose from 24.8% to 26.2%, and the State, Territory and local governments' share fell from 37.7% to 33.4%. By 1997–98, the share of funding met by the Commonwealth had reduced to 37.9% and the share of funding met by the States and Territories had increased to 37.7%. The non-government share was 24.4%.

The marked increase in the Commonwealth's share of funding in 1998–99, the first year of the current agreement period (to 41.9%), was, in part, due to the impact of its subsidies on private health insurance for hospital and other health services.

**Table 4. Recurrent expenditure<sup>(a)</sup> on hospitals, by source of funds, 1998–99 (\$million)**

Area of expenditure	Government sector			Non-government sector				Total all sectors
	Commonwealth	State and local	Total	Health insurance funds	Individuals	Other <sup>(b)</sup>	Total	
Total hospitals	7,555	6,516	14,071	2,358	664	938	3,960	18,031
Public acute hospitals	6,638	6,146	12,784	242	288	361	891	13,675
Public psychiatric hospitals	7	369	376	-	9	13	21	397
Private hospitals	911	-	911	2,116	367	565	3,048	3,959
<b>Total recurrent health expenditure</b>	<b>23,462</b>	<b>9,436</b>	<b>32,899</b>	<b>4,061</b>	<b>8,473</b>	<b>2,049</b>	<b>14,583</b>	<b>47,481</b>

(a) Table shows funding provided by the Commonwealth Government, State and Territory Governments and local government authorities and by the major non-government sources of funding for health services. It does not show gross outlays on health services by the different service provider sectors. Includes depreciation for the non-government sector.

(b) 'Other' includes expenditure on health services by workers' compensation and compulsory motor vehicle third party insurers as well as other sources of income (for example, interest earned) of service providers.

Source: AIHW 2002b.

## Separations, patient days and length of stay

There were 6,138,398 separations of admitted patients from public acute, public psychiatric and private hospitals reported to the National Hospital Morbidity Database for 2000–01, or 305 separations per 1,000 population (Table 5) (AIHW 2002a). There were, 3,849,475 separations from public acute hospitals (63%), 18,132 separations from public psychiatric hospitals (0.3%) and 2,270,791 separations from private hospitals (37%). These separations were associated with 22,468,953 patient days, 67% in public hospitals, 3% in public psychiatric hospitals and 30% in private hospitals.

Between 1996–97 and 2000–01, there was a 6% increase in separations from public acute hospitals and a 35% increase in separations from private hospitals. Over the same period, there was a decrease in patient days for public acute hospitals of 1% and an increase of 15% for private hospitals.

After adjusting for changes in the age and size of the population, the number of separations per 1,000 population decreased by 0.05% for public acute hospitals, and increased by 25% for private hospitals and by 8% overall. The increase for private hospitals over the last year in this series was marked, at 10%, compared with an average of 6% over the previous 3 years. The number of patient days per 1,000 population fell by 7% over the 4-year period, 9% for public acute hospitals, and increased by 6% for private hospitals. In the last year of this series, the number of patient days per 1,000 for private hospitals grew by 4%.

Separations per 1,000 population for public psychiatric hospitals fell by 9% and patient days per 1,000 population fell by 49%.

In 1996–97, 68% of separations and 72% of patient days in acute care hospitals were in public acute hospitals. In 2000–01, these percentages had fallen to 63% and 69%, respectively (AIHW 2002a), showing a shift from the use of public acute to private sector hospitals during the 4-year period.

Group for-profit hospitals have recorded relatively greater increases in market share over recent years. Between 1991–92 and 1999–00, they had increases of 107% for separations (compared with increases of 10% for independent for-profit hospitals and 31% for not-for-profit hospitals), and 82% for patient days (compared with a fall of 16% and an increase of 5%, respectively) (Table 2). This meant that they increased their market share from 35% to 47% of separations, and from 32% to 46% of patient days. Group for-profit private free-standing day hospital facilities increased their separations by 200% but their market share was similar in 1991–92 (20%) and 1999–00 (21%).

**Table 5. Hospital use by admitted patients, 1996–97 to 2000–01**

	1996-97	1997-98	1998-99	1999-00	2000-01	% change	
Separations per 1,000 population	Average since Since 1999-00 1996-97						
Public hospitals	194.2	198.2	199.8	197.4	193.9	0.0	-1.8
Public acute hospitals <sup>(a)</sup>	193.1	197.0	198.7	196.5	193.0	0.0	-1.8
Public psychiatric hospitals	1.1	1.2	1.1	1.0	1.0	-3.5	0.1
Private hospitals	89.2	93.2	95.6	101.4	111.5	5.7	9.9
Private free-standing day hospital facilities	11.8	13.0	13.4	14.1	16.9 <sup>(a)</sup>	10.7	19.4
Other private hospitals	77.5	80.2	82.2	87.3	94.3 <sup>(a)</sup>	4.9	8.0
<b>Total</b>	<b>282.7</b>	<b>290.6</b>	<b>294.6</b>	<b>298.0</b>	<b>304.5</b>	<b>1.9</b>	<b>2.2</b>
Patient days per 1,000 population							
Public hospitals	861.7	848.8	818.2	800.3	758.5	-3.1	-5.2
Public acute hospitals <sup>(a)</sup>	789.4	774.1	751.6	741.0	721.8	-2.2	-2.6
Public psychiatric hospitals <sup>(b)</sup>	72.3	74.7	66.6	59.3	36.7	-16.5	-38.1
Private hospitals	302.0	303.8	299.5	308.0	319.8	1.4	3.8
Private free-standing day hospital facilities	11.9	13.0	13.4	14.1	16.9 <sup>(a)</sup>	10.7	19.4
Other private hospitals	290.2	290.9	286.1	294.0	301 <sup>(a)</sup>	0.8	2.4
<b>Total</b>	<b>1,161.7</b>	<b>1,150.6</b>	<b>1,115.7</b>	<b>1,106.3</b>	<b>1,076.1</b>	<b>-1.9</b>	<b>-2.7</b>
Same-day separations as a percentage of total							
Public acute hospitals <sup>(a)</sup>	42.0	43.3	44.7	45.8	46.4	2.5	1.4
Private hospitals	51.0	53.1	54.8	56.1	58.5	3.5	4.2
Other private hospitals	43.7	45.6	47.6	49.3	51.6 <sup>(a)</sup>	4.4	4.7
<b>Total<sup>(d)</sup></b>	<b>44.7</b>	<b>46.3</b>	<b>47.9</b>	<b>49.2</b>	<b>50.8</b>	<b>3.3</b>	<b>3.2</b>
Average length of stay (days)							
Public acute hospitals <sup>(a)</sup>	4.2	4.0	3.9	3.9	3.9	-1.8	-0.4
Other private hospitals	3.8	3.7	3.6	3.5	3.3 <sup>(a)</sup>	-3.7	-5.1
<b>Total<sup>(d)</sup></b>	<b>4.2</b>	<b>4.1</b>	<b>3.9</b>	<b>3.8</b>	<b>3.7</b>	<b>-3.4</b>	<b>-4.5</b>

cont



**Table 5. Hospital use by admitted patients, 1996–97 to 2000–01**

	1996-97	1997-98	1998-99	1999-00	2000-01	% change	
Separations per 1,000 population							Average since 1999-00 1996-97
Average length of stay, excluding same-day separations (days)							
Public acute hospitals <sup>(a)</sup>	6.5	6.4	6.3	6.4	6.4	-0.4	0.5
Other private hospitals	6.0	6.0	5.9	5.9	5.8 <sup>(a)</sup>	-1.1	-2.2
Total <sup>(d)</sup>	6.8	6.7	6.6	6.6	6.4	-1.4	-2.6

(a) Includes the Department of Veterans' Affairs hospitals.

(b) Victoria was not able to provide patient days data for 407 separations in 1996-97.

(c) Figures are rates per 1,000 population directly age-standardised to the Australian population at 30 June 1991, using December 2000 population estimates as divisors. For private hospitals, rates were derived using populations of the reporting States and Territories only, without adjustment for incomplete reporting.

(d) Public psychiatric hospitals included in these totals.

(e) Excludes Tasmania.

Source: AIHW 2002a.

## Length of stay

Although some categories of patients are admitted for rehabilitation, non-acute specialised mental health services or palliative care (see below), most patients are admitted for 'acute care' and require a relatively short stay in hospital. There is an increasing trend towards day surgery and procedures for this group of patients, with improvements in medical technology (anaesthetics and microsurgery, for example) enabling a wider range of procedures to be performed on a same day basis (Duckett, 2002; Productivity Commission, 1999). Improved drug treatments and efforts to increase hospital productivity have also tended to result in decreased length of stay. With potentially the opposite effect on average length of stay, however, some treatments that have previously required admission are being provided in outpatient clinics and day-care facilities or by community health services.

Overall, the average length of stay in hospital decreased from 4.2 days in 1996–97 to 3.7 days in 2000–01. The average length of stay excluding same-day separations also decreased, but less markedly, from 6.8 days in 1996–97 to 6.4 days in 2000–01. Other OECD countries exclude same-day separations for average length of stay calculations, and report figures that are similar to Australia's 6.4 days.

With public psychiatric hospitals excluded, the average length of stay in 2000–01 was 3.6 days overall, 3.9 days in public acute hospitals and 3.0 days in private hospitals. The difference between public and private hospitals at least in part reflects the different range of patients cared for and treatments undertaken (casemixes) in the two hospital sectors. For example, public acute hospitals had more patients who were under the age of five years (4.3% of separations) compared with private hospitals (0.9% of separations) (AIHW 2002a) and procedures were more commonly reported for patients of private hospitals (89%) than patients of public acute hospitals (73%).

Average length of stay also varied within the private sector by ownership type. In 1999–00, average length of stay in group for-profit hospitals was 3.4 days (down from 3.9 days in 1991–92), in independent for-profit hospitals it was 3.3 days (down from 4.3 days in 1991–92) and in not-for-profit hospitals it was 3.6 days (compared with 4.5 days in 1991–92) (Table 2). Occupancy rates also varied for these hospital types, with group for-profit hospitals and not-for-profit hospitals each recording an occupancy rate in 1999–00 of 74%, compared with the rate of 58% for independent for-profit hospitals.

## Same-day and overnight separations

In 2000–01, there were 3,117,751 same-day separations, 1,785,545 from public acute hospitals, 3,186 from public psychiatric hospitals and 1,329,020 from private hospitals (329,718 in private free-standing day hospital facilities, excluding Tasmania). There was a marked upward trend over the period 1996–97 to 2000–01 in the number of same-day separations (31% increase over the 2.380 million in 1996–97) and in the proportion of separations that were day-

only. In 1996–97, 45% of separations were same day separations, but by 2000–01 this had increased to 51% of all separations. Public hospitals accounted for 36.3% of the increase in same day separations, and private hospitals 63.7%.

Although the number of private free-standing day hospitals increased markedly over recent years (from 111 in 1993–94 to 207 in 1999–00), other private hospitals accounted for 69.4% of the increase in same day separations in the private sector between 1996–97 and 2000–01. The number of same day separations increased by 51% for these hospitals.

In contrast with the increases in same-day separations, overnight separations increased by 2.5% between 1996–97 and 2000–01, from 2.947 million to 3.021 million. There was a 2.0% decrease for public hospitals (from 2.121 million to 2.079 million) but a 14.0% increase for private hospitals, from 826,000 to 942,000.

## Care type

As noted above, Australian hospitals mainly provide acute care services, but they also provide rehabilitation, palliative care and other non-acute care services, to both admitted and non-admitted patients. In 2000–01, public hospitals reported 123,619 separations other than for acute care (3.2% of the total) and private hospitals reported 95,582 (4.2% of the total) (Table 6). The recording of these data was introduced only in 1995–96, and is likely to have been improving with time, for example with the introduction of specific funding arrangements for care types other than acute. The data nevertheless suggest that there have been increases in the provision of rehabilitation services (particularly in the private sector) and palliative care for hospital admitted patients over recent years.

**Table 6. Separations by care type and hospital sector, Australia, 1995–96 to 2000–01**

	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01
<b>Public hospitals</b>						
Acute care <sup>(a)</sup>	3,355,789	3,400,705	3,595,799	3,739,486	3,750,809	3,743,988
Rehabilitation	64,404	66,961	72,482	73,206	70,329	68,715
Palliative care	12,189	14,273	14,907	15,544	16,742	18,239
Non-acute care <sup>(b)</sup>	22,130	20,944	21,118	22,777	26,951	28,304
Other care	2,559	1,071	5,144	5,424	7,897	7,763
Not reported	136,264	138,013	60,648	3,254	87	598
<b>Total</b>	<b>3,593,335</b>	<b>3,641,967</b>	<b>3,770,098</b>	<b>3,859,691</b>	<b>3,872,815</b>	<b>3,867,607</b>
<b>Private hospitals</b>						
Acute care <sup>(a)</sup>	1,473,793	1,580,494	1,682,999	1,781,958	1,938,937	2,175,209
Rehabilitation	18,174	22,135	25,050	28,455	40,799	42,283
Palliative care	1,910	2,513	2,917	3,330	4,599	5,028
Non-acute care <sup>(b)</sup>	15,309	2,925	2,875	4,013	9,839	8,202
Other care	1,646	1,526	11,490	11,556	10,865	10,574
Not reported	66,642	75,355	67,645	46,046	20,950	29,495
<b>Total</b>	<b>1,577,474</b>	<b>1,684,948</b>	<b>1,792,976</b>	<b>1,875,358</b>	<b>2,025,989</b>	<b>2,270,791</b>

(a) Includes newborn care with qualified patient days from 1998-99.

(b) Geriatric evaluation and management, psychogeriatric care and maintenance care for 2000-01.

Source: AIHW National Hospital Morbidity Database and AIHW 2002a.

## Procedures

### Same-day procedures

As noted above, there were marked increases between 1993–94 and 2000–01 in the proportions of separations from both public acute and private hospitals that were same day. In addition, the proportion of same-day separations for which a procedure was reported rose from 83.5% to 87.1%, so there was an increase of 91.6% (to 2.7 million) same-day separations for which procedures were reported.

In contrast with the 91.6% increase for same day separations, there was a 28.5% increase in overnight separations with procedures. Thus the proportion of all separations for which procedures were reported, that were same-day separations, rose from 45% to 52% in public hospitals, and from 49% to 62% in private hospitals.

Whilst about half of these same day separations with procedures were for procedures that have historically been undertaken largely on a same day basis (haemodialysis, 573,136 separations in 2000–01; fiberoptic colonoscopy, 187,707 separations; panendoscopy, 73,879 separations; chemotherapy administration, 212,075 separations), some of the increases in these same day separations relate to other procedures for which there have been increased proportions undertaken on a same-day basis (Table 7). For example, the proportion of ventricle examination procedures performed on a same day basis rose from 22.6% in 1993–94 to 34.7% in 2000–01. Similarly, 36.0% of procedures for haemorrhoids were undertaken on a same day basis in 1993–94, and 64.1% in 2000–01.

Whilst the National Hospital Morbidity Database includes records for almost all of these procedures for admitted patients in Australia, it does not include data on the same procedures undertaken for non-admitted patients, for example in doctors' rooms. The numbers of these procedures undertaken in doctor's rooms may also have varied over recent years.

**Table 7. Separations and same-day separations for selected procedures, 1993–94 to 1999–00**

Procedure	1993-94	1996-97	1998-99	2000-01
<b>Extracapsular crystalline lens extraction by phacoemulsification</b>				
Separations	22,972	78,983	99448	121,236
% same day	39.4	64.3	77.1	84.1
<b>Release of carpal and tarsal tunnel</b>				
Separations	17,902	21,484	22863	25,485
% same day	54.3	70.3	78.3	84.2
<b>Procedures for haemorrhoids</b>				
Separations	19,320	24,073	24054	27,926
% same day	36.0	50.9	55.9	64.1
<b>Coronary angiography</b>				
Separations	45,239	66,923	73464	78,356
% same day	22.0	26.6	31.5	33.3
<b>Examination procedures on ventricle</b>				
Separations	25,418	56,895	62425	66,620
% same day	22.6	26.1	32.6	34.7

Source: AIHW National Hospital Morbidity Database.

## Procedures in private hospitals

Over recent years there has been an increase in the activity of private hospitals, as described above, accompanied by a widening of the types and an increase in the complexity of services they provide. Services such as intensive care, cardiac surgery, neurosurgery, renal dialysis and oncology have become increasingly available in private hospitals (Productivity Commission 1999).

Between 1991–92 and 1999–00 the number of private hospitals with an oncology unit increased from 8 to 51, and the number of hospitals with separate coronary intensive care units increased from 3 to 29. Renal dialysis units were available in 22 hospitals in 1999–00 compared with 3 hospitals in 1991–92 and neurosurgical units were available in 8 hospitals in 1999–00 compared with only one hospital in 1991–92 (ABS 1993, ABS 2001).

The changing pattern of services available in private hospitals is also reflected in changes in the procedures undertaken in the private sector. For example, high cost procedures, such as bone marrow transplants and tracheostomies are increasingly being undertaken in the private sector. In 1993–94, 1.6% of the total of 621 bone marrow transplants were in private hospitals (Table 8) but, by 2000–01, private hospitals reported 12% of the total. For tracheostomies, 5% of the 2,863 separations were in private hospitals in 1993–94, compared with 16% of the total of 4,627 in 2000–01.

**Table 8. Separations for selected procedures, by hospital sector, 1993–94 and 2000–01**

	1993-94	1996-97	1998-99	2000-01
<b>Bone marrow transplant</b>				
Public hospitals	611	1,051	1,163	1,045
Private hospitals	10	44	134	139
Total	621	1,095	1,297	1,184
% in private hospitals	1.6	4.0	10.3	11.7
<b>Tracheostomy</b>				
Public hospitals	2,730	3,631	4,079	3,907
Private hospitals	134	394	559	720
Total	2,864	4,025	4,638	4,627
% in private hospitals	4.7	9.8	12.1	15.6
<b>Coronary artery bypass graft</b>				
Public hospitals	10,917	10,595	10,703	9,676
Private hospitals	5,254	6,804	6,689	7,040
Total	16,171	17,399	17,392	16,716
% in private hospitals	32.5	39.1	38.5	42.1
<b>Chemotherapy</b>				
Public hospitals	113,585	148,639	139,432	111,992
Private hospitals	20,117	56,187	75,229	110,258
Total	133,702	204,826	214,661	222,250
% in private hospitals	15.0	27.4	35.0	49.6
<b>Haemodialysis</b>				
Public hospitals	210,743	446,074	433,193	499,335
Private hospitals	18,005	36,576	53,589	85,970
Total	228,748	482,650	486,782	585,305
% in private hospitals	7.9	7.6	11.0	14.7

Source: AIHW National Hospital Morbidity Database.

Procedures such as coronary artery bypass grafts are also increasingly being undertaken in private hospitals. For example, in 1993–94, 33% of separations for coronary artery bypass grafts were in private hospitals compared to 42% in 2000–01. Over this period, the number of separations for coronary artery bypass graft increased by 34% in the private sector; in the public sector, they decreased by 11%.

Other procedures that are being increasingly undertaken in the private sector include the high volume procedures of chemotherapy and haemodialysis. Between 1993–94 and 2000–01, the number of separations for chemotherapy increased five-fold in the private sector; they decreased by 1% in public hospitals. Hence, the proportion of separations for chemotherapy that were in private hospitals increased from 15% to 50% over this period. For haemodialysis, 8% of separations were in private hospitals in 1993–94, but by 2000–01 this had risen to 15%.

A summary measure of the resource intensiveness of hospitalisations is the average cost weight of separations, based on the AR-DRG of each separation. In 2000–01, the average cost weight for public acute hospitals was 0.99. For private hospitals (with public sector cost weights, for comparative purposes), it was 0.90, 0.49 for free-standing day hospital facilities and 0.97 for other private hospitals. That year, private hospitals reported separations for all but 4 of the 661 AR-DRGs: liver, lung, heart and multiple organ transplants.

## Non-admitted patient activity

There were 40 million non-admitted patient occasions of service reported for public acute and psychiatric hospitals in 2000–01, or about 2,080 per 1,000 population. A total of 5.4 million or 13% of these occasions of service were provided in accident and emergency departments. Other large categories were radiology/organ imaging and other medical/surgical/obstetric services. However, there is considerable variation in practices amongst States and Territories in the way in which data on non-admitted patient occasions of service are collected, and this is likely to affect the meaningfulness of the data. For emergency departments, for example, New South Wales and Western Australia did not include occasions of service for patients who are subsequently admitted in 2000–01, whereas other jurisdictions did.

Private hospitals also contribute to the provision of non-admitted patient services in Australia. In 1999–00, private hospitals reported 1,819,600 occasions of service (ABS 2001a), with 486,100 or 27% reported for accident and emergency.

The private sector accounted for 8.5% of all emergency department occasions of service in 1999–00. This was marked increase over the proportion in 1993–94 (4.6%), when private hospitals reported 136,900 emergency department occasions of service (ABS 1995), and public hospitals reported 2,816,000.

## Geographical variation

As noted in the introduction, service provision can vary geographically as well as with time, with variation reflecting combinations of different levels of access to services, different community levels of disease and injury, and different patterns of prevention and/or community-based care activities.

The number of hospital beds per 1,000 population can provide some indication of comparative supply of services. Overall, in 1999–00, there were 4.1 beds per 1,000 population (Table 1). South Australia (4.9 beds per 1,000 population), Queensland (4.5 beds), Tasmania (4.1 beds) and Western Australia (4.2 beds) were above the national average (AIHW 2002b).

Private hospital beds were available at a rate of 1.3 beds per 1,000 population, ranging from 1.6 per 1,000 in Queensland, Western Australia and Tasmania, to 1.1 per 1,000 in New South Wales.

Overall, there were 2.7 beds per 1,000 population available in public hospitals in 2000–01, ranging from 2.2 in the Australian Capital Territory to 2.9 in the Northern Territory. More beds were available in remote areas (4.9 beds per 1,000 population) than in rural areas (3.3) and metropolitan areas (2.5) (AIHW 2002a).

Age standardised separation rates varied by the area of usual residence of the patient, categorised using the rural, remote and metropolitan area classification (Table 9). Highest rates overall were for patients resident in remote centres (408 per 1,000 population) and other remote areas (382 per 1,000 population). For same-day separations, highest rates were for residents of remote centres (188 per 1,000 population) and capital cities (163 per 1,000 population). For overnight separations, there was a gradient of increasing rates with increasing remoteness (137 for capital cities to 245 for other remote areas).

Highest rates for public hospital separations were for remote centres (353 per 1,000 population) and other rural areas (334 per 1,000 population) and lowest rates were for metropolitan areas other than capital cities (172 per 1,000 population). For private hospitals, there were decreasing rates with increasing remoteness (about 120 per 1,000 population in capital cities, metropolitan areas and large rural centres to 52 per 1,000 population in other remote areas).

**Table 9. Statistics for selected separation types, by rural, remote, metropolitan area of usual residence of the patient, 2000–01**

Capital cities	Other metropolitan centres	Large rural centres	Small rural centres		Other rural areas			
Remote centres	Other remote areas	Australia <sup>(b)</sup>						
Separations								
Separations	3,810,180	471,571	386,446	427,496	819,369	80,276	122,167	6,119,636
Separation rate <sup>(c)</sup>	300.2	297.0	325.7	319.5	311.3	407.7	381.6	305.9
Separation rate <sup>(c)</sup> for other RRMA's	317.4	306.5	304.6	305.0	305.8	304.7	304.4	
Difference, RRMA & other areas rate (%)	-5.4	-3.1	6.9	4.7	1.8	33.8	25.4	
Significance of difference	**	**	**	**	**	**	**	**
Overnight separations								
Separations	1,747,025	227,460	197,930	234,681	477,898	43,739	78,442	3,008,515
Separation rate <sup>(c)</sup>	137.3	144.3	166.3	176.3	182.3	220.1	245.4	150.5
Separation rate <sup>(c)</sup> for other RRMA's	174.2	150.9	149.4	148.7	145.9	149.6	148.7	
Difference, RRMA & other areas rate (%)	-21.2	-4.4	11.3	18.6	25.0	47.1	65.0	
Significance of difference	**	**	**	**	**	**	**	**
Same day separations								
Separations	2,063,155	244,111	188,516	192,815	341,471	36,537	43,725	3,111,121
Separation rate <sup>(c)</sup>	162.9	152.8	159.4	143.2	129.0	187.7	136.2	155.5
Separation rate <sup>(c)</sup> for other RRMA's	143.3	155.6	155.2	156.4	159.9	155.1	155.7	
Difference, RRMA & other areas rate (%)	13.7	-1.8	2.7	-8.4	-19.4	21.0	-12.5	
Significance of difference	**	**	**	**	**	**	**	**
Public hospitals								
Separations	2,263,162	269,157	235,637	298,957	607,794	69,956	105,856	3,852,184
Separation rate <sup>(c)</sup>	180.0	172.3	202.0	227.8	234.4	352.5	329.3	194.5
Separation rate <sup>(c)</sup> for other RRMA's	221.6	196.3	194.0	192.3	189.0	192.8	192.1	
Difference, RRMA & other areas rate (%)	-18.8	-12.3	4.1	18.5	24.0	82.8	71.4	
Significance of difference	**	**	**	**	**	**	**	**

continued

**Table 9. Statistics for selected separation types, by rural, remote, metropolitan area of usual residence of the patient, 2000–01 (continued)**

Capital cities Remote centres	Other metropolitan centres Other remote areas	Large rural centres Australia <sup>(b)</sup>	Small rural centres		Other rural areas			
Private hospitals								
Separations	1,547,018	202,414	150,809	128,539	211,575	10,320	16,311	2,267,452
Separation rate <sup>(c)</sup>	120.2	124.8	123.7	91.7	76.9	55.2	52.3	111.4
Separation rate <sup>(c)</sup> for other RRMA's	95.9	110.2	110.6	112.8	116.8	111.9	112.3	
Difference, RRMA & other areas rate (%)	25.3	13.2	11.9	-18.6	-34.2	-50.6	-53.4	
Significance of difference	**	**	**	**	**	**	**	
Coronary artery bypass graft								
Separations <sup>(d)</sup>	10,415	1,512	957	1,301	2,087	110	180	16,567
Separation rate <sup>(c)</sup>	0.81	0.88	0.77	0.84	0.69	0.75	0.63	0.80
Separation rate <sup>(c)</sup> for other RRMA's	0.77	0.79	0.80	0.79	0.82	0.80	0.80	
Difference, RRMA & other areas rate (%)	5.4	11.2	-3.1	5.8	-15.7	-5.9	-21.0	
Significance of difference	**	**	-	-	**	-	**	
Angioplasty								
Separations <sup>(d)</sup>	14,499	1,846	1,135	1,405	2,671	140	245	21,951
Separation rate <sup>(c)</sup>	1.12	1.08	0.92	0.93	0.88	0.81	0.81	1.05
Separation rate <sup>(c)</sup> for other RRMA's	0.94	1.05	1.06	1.06	1.08	1.05	1.05	
Difference, RRMA & other areas rate (%)	19.2	3.6	-12.7	-12.7	-18.4	-23.1	-23.2	
Significance of difference	**	-	**	**	**	**	**	
Caesarean section								
Separations <sup>(d)</sup>	39,443	4,385	3,528	3,625	7,042	820	1,258	60,122
Separation rate <sup>(c)</sup>	3.26	3.28	3.47	3.72	3.79	3.39	3.91	3.35
Separation rate <sup>(c)</sup> for other RRMA's	3.57	3.35	3.34	3.33	3.31	3.35	3.34	
Difference, RRMA & other areas rate (%)	-8.6	-2.1	3.9	11.8	14.5	1.2	16.9	
Significance of difference	**	-	*	**	**	-	**	
Separations per 100 in-hospital birth								
separations <sup>(d)</sup>	25.2	23.4	22.3	23.1	23.7	20.6	22.1	24.4
Hip replacement								
Separations <sup>(d)</sup>	13,957	1,845	1,521	2,042	3,875	122	214	23,588
Separation rate <sup>(c)</sup>	1.04	1.03	1.15	1.27	1.26	0.91	0.79	1.09
Separation rate <sup>(c)</sup> for other RRMA's	1.17	1.10	1.09	1.08	1.06	1.09	1.10	
Difference, RRMA & other areas rate (%)	-11.1	-6.6	6.2	17.6	18.1	-16.2	-28.0	
Significance of difference	**	**	*	**	**	*	**	
Hysterectomy								
Separations <sup>(d)</sup>	20,356	2,692	2,213	2,782	5,237	348	457	34,091
Separation rate <sup>(c)</sup>	1.53	1.71	1.84	2.12	1.89	1.49	1.36	1.64
Separation rate <sup>(c)</sup> for other RRMA's	1.84	1.63	1.62	1.61	1.60	1.64	1.64	
Difference, RRMA & other areas rate (%)	-17.1	4.6	13.6	31.9	17.8	-8.8	-17.3	
Significance of difference	**	*	**	**	**	-	**	

continued

**Table 9. Statistics for selected separation types, by rural, remote, metropolitan area of usual residence of the patient, 2000–01 (continued)**

Capital cities	Other metropolitan centres	Large rural centres	Small rural centres			Other rural areas		
Remote centres	Other remote areas	Australia <sup>(b)</sup>						
Myringotomy								
Separations <sup>(a)</sup>	22,587	2,357	2,055	2,065	4,332	358	438	34,202
Separation rate <sup>(c)</sup>	2.04	1.75	1.87	1.72	1.75	1.37	1.10	1.92
Separation rate <sup>(c)</sup> for other RRMA	1.71	1.93	1.92	1.93	1.94	1.93	1.94	
Difference, RRMA & other areas rate (%)	19.3	-9.5	-2.8	-11.0	-9.8	-29.1	-43.0	
Significance of difference	**	**	-	**	**	**	**	
Tonsillectomy								
Separations <sup>(a)</sup>	18,242	2,149	2,259	2,212	4,386	348	468	30,069
Separation rate <sup>(c)</sup>	1.63	1.60	2.06	1.92	1.88	1.43	1.29	1.69
Separation rate <sup>(c)</sup> for other RRMA	1.81	1.70	1.67	1.68	1.67	1.70	1.70	
Difference, RRMA & other areas rate (%)	-9.9	-5.6	23.2	14.7	12.7	-15.9	-23.9	
Significance of difference	**	**	**	**	**	**	**	
Asthma (principal diagnosis)								
Separations <sup>(a)</sup>	28,812	2,855	2,797	3,934	7,858	946	1,478	48,696
Separation rate <sup>(c)</sup>	2.49	2.04	2.51	3.27	3.19	4.07	4.18	2.64
Separation rate <sup>(c)</sup> for other RRMA	2.92	2.69	2.65	2.60	2.57	2.63	2.62	
Difference, RRMA & other areas rate (%)	-14.6	-24.2	-5.5	25.8	24.4	54.8	59.8	
Significance of difference	**	**	**	**	**	**	**	
Type 2 diabetes (principal diagnosis)								
Separations <sup>(a)</sup>	18,781	2,102	1,825	2,365	4,764	569	1,035	31,452
Separation rate <sup>(c)</sup>	1.43	1.18	1.41	1.49	1.55	3.33	3.36	1.48
Separation rate <sup>(c)</sup> for other RRMA	1.56	1.50	1.48	1.48	1.47	1.46	1.45	
Difference, RRMA & other areas rate (%)	-8.5	-21.7	-4.7	0.8	6.0	128.4	132.6	
Significance of difference	**	**	*	-	**	**	**	
Type 2 diabetes (principal or additional diagnosis)								
Separations <sup>(a)</sup>	173,271	22,007	19,171	24,931	41,301	6,751	7,690	295,201
Separation rate <sup>(c)</sup>	13.15	12.42	14.92	15.82	13.42	37.72	25.21	13.84
Separation rate <sup>(c)</sup> for other RRMA	15.06	13.96	13.77	13.69	13.92	13.61	13.65	
Difference, RRMA & other areas rate (%)	-12.7	-11.0	8.3	15.5	-3.6	177.2	84.7	
Significance of difference	**	**	**	**	**	**	**	

(a) A small proportion of private hospitals are not included. See AIHW 2002 for details.

(b) Includes unknown RRMA. Excludes non-residents and patients for whom the State or Territory of residence was not reported. See AIHW 2002 for more details.

(c) Rate per 1,000 population was directly age standardised to the Australian population at 30 June 1991 using June 2000 population estimates as divisors.

(d) Caesarean sections reported for separations for which in-hospital birth was reported. This is an approximate measure of the proportion of all births that are by Caesarean section, as not all in-hospital births could be accurately identified.

— not significant, \* significant at 5%, \*\* significant at 1%

Source: AIHW 2002a.



Separation rates also varied by area of usual residence of the patient for various diagnoses and procedures (Table 9), including:

- asthma and type 2 diabetes (sometimes considered to be ‘ambulatory-sensitive’ conditions, usually largely managed outside the acute hospital setting), used as an indicator of effectiveness of the primary care sector by the National Health Performance Committee (NHPC 2002). Diabetes recorded as either the principal diagnosis or any diagnosis for the separation has been included, as about 90% of diabetes diagnoses are recorded as other than the principal diagnosis.
- caesarean section, used by the NHPC as an indicator of appropriateness in the acute care sector
- myringotomy and tonsillectomy, used by the NHPC as an indicator of appropriateness
- hip replacement, hysterectomy, coronary artery bypass graft and angioplasty, other high volume procedures often undertaken on an elective basis, which can be indicators of appropriateness and/or accessibility of services (AIHW 2002a).

For asthma and diabetes, highest rates were recorded for residents of remote centres and other remote areas, and lowest rates were for less remote areas, particularly other metropolitan areas. Hip replacements, hysterectomy and tonsillectomy were generally more frequently reported for residents of rural areas, whereas myringotomy, coronary artery bypass graft and angioplasty were generally more frequently reported for residents of capital cities and other metropolitan areas. Caesarean section rates were higher for residents of rural and remote areas than for residents of metropolitan areas, but accounted for a higher proportion of estimated in-hospital births in metropolitan areas.

As indicated above, these patterns probably reflect combined effects of differing access to hospital and other services, and differing community levels of disease.

## Conclusion

Available national data on Australia’s hospitals have been used in this paper to describe the changing patterns of hospital service provision over recent years, particularly relating to the increasing roles of same day separations and private hospitals.

The provision of hospital services is ever changing so national hospital data collections also change, reflecting the changing patterns of activity and changing data needs. Whilst this paper has not been able to present information, for example, on the provision of hospital-in-the-home care, whether patients were admitted on an elective or emergency basis, the funding source for separations or detail of emergency department service provision, relevant data have been or are being developed under the National Health Information Agreement, so national data for these purposes will become increasingly available in coming years. The following papers in this volume may point the way for other future national hospital data developments.

## References

- Australian Institute of Health and Welfare (AIHW) 2001. Health Expenditure Bulletin no. 17: Australia’s health services expenditure to 1999–00. AIHW Cat. No. HWE 18. Canberra: AIHW (Health and Welfare Expenditure Series no. 12).
- AIHW 2002a. Australian Hospital Statistics 2000–01. AIHW Cat. No. HSE 20. Canberra: AIHW (Health Services Series no. 19).
- AIHW 2002b. Australia’s Health 2002. Canberra: AIHW.
- Australian Bureau of Statistics (ABS) 1995. Private hospitals Australia 1993–94. Cat no. 4390.0. Canberra: ABS.
- ABS 2001. Private hospitals Australia 1999–00. Cat no. 4390.0. Canberra: ABS.
- Duckett SJ 2002. Australian Hospital Services: an overview. Australian Health Review 25; 2-18.
- National Health Performance Committee 2002. National report on health sector performance indicators 2001. Brisbane: Queensland Health.
- Productivity Commission 1999. Private hospitals in Australia. Commission research paper. Canberra: AusInfo.