

### 3 Hospital performance indicators

Performance indicators are defined as statistics or other units of information that, directly or indirectly, reflect either the extent to which an anticipated outcome is achieved or the quality of the processes leading to that outcome (NHPC 2001).

This chapter presents hospital performance indicators within the context of the National Health Performance Framework (NHPF).

#### The National Health Performance Framework

In 2001, the National Health Performance Committee (NHPC) developed a framework to report on the performance of the Australian health system, which was adopted by health ministers. In late 2006, the NHPC identified the need to review the framework and in 2008, the Australian Health Ministers Advisory Committee's National Health Information Standards and Statistics Committee (NHISSC) endorsed a revised framework, termed the National Health Performance Framework 2009.

The NHPC describes the framework as a structure to guide the understanding and evaluation of the health system, facilitating consideration of how well the health system or program is performing. The framework has three domains: Health Status, Determinants of Health and Health System Performance. Questions are posed for each domain and a number of dimensions have been identified within each domain. The dimensions guide the development and selection of performance indicators that can be used together to answer that domain's questions. Sometimes, single indicators can provide information relevant to several dimensions of the framework.

The Health System Performance domain is most directly relevant to assessment of the provision of hospital and other health-care services. The six dimensions are: *Effectiveness, Safety, Responsiveness, Continuity of care, Accessibility* and *Efficiency & sustainability* (Table 3.1).

The questions asked for the Health System Performance domain in the National Health Performance Framework 2009 are:

- How does the health system perform?
- What is the level of quality of care across the range of patient care needs?
- Does the system deliver value for money and is it sustainable?
- Is it the same for everyone?

#### What data are reported?

Eleven hospital performance indicators are presented in this chapter and listed in Table 3.2 against the dimensions of the NHPF. Some indicators can be related to more than one dimension of the NHPF, even though they are presented here against only one dimension. For example, hospital accreditation could be related to *Safety* and *Responsiveness*, as well as *Effectiveness*.

Table 3.2 also shows whether the indicator is included in a nationally agreed set of performance indicators:

- the NHPF set as endorsed by health ministers for reporting in *Australia's health 2010* (AIHW 2010e)
- the National Healthcare Agreement (NHA) (CRC 2010).

Most of the performance indicators presented in this report align with the NHA performance indicators for the outcome area of 'hospital and related care' (CRC 2010). The NHA includes 70 performance indicators and nine performance benchmarks (including a number for 'hospital and related care') that are to be reported regularly under the Intergovernmental Agreement on Federal Financial Relations. The NHA performance indicators based on 2007–08 hospital data have been published by the COAG Reform Council (CRC 2010). The performance indicators presented here are based on data for the 2009–10 financial year and on specifications anticipated to be used for the Council's 2012 report.

Additional data for some hospital performance indicators are presented elsewhere in this report. For example, summary information on waiting times in public hospital emergency departments is presented in this chapter, with more detailed information in *Chapter 5*.

**Table 3.1: The National Health Performance Framework – Health System Performance domain**

<b>Effectiveness</b> Care/intervention/action provided is relevant to the client's needs and based on established standards. Care, intervention or action achieves desired outcome.	<b>Safety</b> The avoidance or reduction to acceptable limits of actual or potential harm from healthcare management or the environment in which health care is delivered.
<b>Continuity of care</b> Ability to provide uninterrupted, coordinated care or service across programs, practitioners, organisations and levels over time.	<b>Accessibility</b> People can obtain health care at the right place and right time irrespective of income, physical location and cultural background.
<b>Responsiveness</b> Service is client orientated. Clients are treated with dignity, confidentiality, and encouraged to participate in choices related to their care.	<b>Efficiency &amp; sustainability</b> Achieving desired results with most cost-effective use of resources. Capacity of system to sustain workforce and infrastructure, to innovate and respond to emerging needs.

### **Box 3.1: What are the limitations of the data?**

The performance indicators presented here should be interpreted with consideration of the limitations of the data from which they are derived. Information on variation in data recording practices, data quality and database coverage are presented in *appendixes 1* and *2*. While the rates could be interpreted as reflecting hospital system performance, they may also reflect variation in underlying needs for hospitalisation, admission and data recording practices, and availability of non-hospital services.

**Table 3.2: Hospital performance indicators in this report, by National Health Performance Framework dimension**

Table(s)	Indicator	Related national indicator set	
		NHA	NHPF
Effectiveness			
Table 3.4	Accreditation of hospitals and beds		✓
Safety			
Table 3.5	Adverse events treated in hospitals		✓
Table 3.6	Unplanned/unexpected readmissions within 28 days of selected surgical admissions	✓	
Table A6.3, Appendix 6	Falls resulting in patient harm in hospitals	✓ Interim	✓
Table A6.4, Appendix 6	Intentional self-harm in hospitals	✓ Interim	
Responsiveness			
No indicators available			
Continuity of care			
No indicators available			
Accessibility			
Tables 3.7 and 3.8 and Figure 3.1	Waiting times for emergency department care	✓	✓
Tables 3.9 and 3.10	Waiting times for elective surgery	✓	✓
Table 3.11, and Figures 3.2 to 3.4	Rates of services: overnight separations	✓	
Tables 3.12, S3.9	Rates of services: hospital procedures	✓	✓
Tables 3.13 and 3.14	Rates of services: non-acute care separations	✓	
Table A6.2, Appendix 6	Rates of services: outpatient occasions of service	✓ Interim	
Efficiency & sustainability			
Tables 3.15, 3.16, S3.1 to S3.7	Cost per case mix-adjusted separation for acute care episodes	✓	✓
Tables 3.17, S3.8	Relative stay index		✓
Figure 3.5, Table S3.10	Average length of stay for selected AR-DRGs		✓

*Abbreviations:* AR-DRG—Australian Refined Diagnosis Related Group; NHA—National Healthcare Agreement; NHPF—National Health Performance Framework.

Interim indicators include those measures that are of poor quality due to variation in reporting, or because the available data does not completely match the intent of the indicator. For more information on the Interim indicators, see *Appendix 6*.

Table 3.3 lists four other NHA performance indicators presented elsewhere in this report. These indicators are not presented in this chapter as they are not indicators of hospital performance. They include one proxy measure for which the available data does not completely match the intent of the indicator.

**Table 3.3: Other performance indicators in this report**

Indicator	Related national indicator set		Section
	NHA	NHPF	
Selected potentially preventable hospitalisations	✓	✓	<b>Chapter 7.</b> Related to the NHA outcome area of primary and community health.
People aged 65 years or over receiving sub-acute services	✓		<b>Chapter 11.</b> Related to the NHA outcome area of aged care.
Hospitalisation for injury and poisoning	✓		<b>Chapter 7.</b> Related to the NHA outcome area of social inclusion and Indigenous health.
Hospital patient days used by those eligible and waiting for residential aged care	✓ Proxy		<b>Appendix 6,</b> Table A6.4. Proxy measure. Related to the NHA outcome area of aged care.

*Abbreviations:* NHA—National Healthcare Agreement; NHPF—National Health Performance Framework.

### **Box 3.2: What methods were used?**

Readers should note the following:

- unless otherwise indicated in footnotes, separations with a care type of *Newborn* (without qualified days) and records for *Hospital boarders* and *Posthumous organ procurement* have been excluded
- separation rates are age-standardised (see *Appendix 1*)
- public hospitals includes *Public acute* and *Public psychiatric* hospitals
- private hospitals includes *Private free standing day hospital facilities* and *Other private* hospitals.
- The abbreviation n.p. – not published may appear in a table to protect confidentiality of private hospital data, or for very small cell sizes (see *Appendix 1*).

Details of methods, including the selection of AR-DRGs, diagnoses and procedures used are presented in *Appendix 1* for:

- adverse events treated in hospitals
- rates of service: hospital procedures
- cost per casemix-adjusted separation
- relative stay index
- average length of stay for selected AR-DRGs.

## Effectiveness

Care/intervention/action provided is relevant to the client's needs and based on established standards. Care, intervention or action achieves desired outcome.
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### Performance indicator: Hospital accreditation

Accreditation is recognised through a variety of bodies, including the Australian Council on Healthcare Standards, EQUiP, Business Excellence Australia, the Quality Improvement Council, and hospitals can be certified as compliant with the International Organization for Standardization's (ISO) 9000 quality family.

Accreditation at any point in time does not assume a fixed or continuing status as accredited.

For Australia as a whole, 637 public hospitals were accredited by one or more providers at 30 June 2010, with 52,651 public hospital beds (85% of public hospitals and 93% of public hospital beds) (Table 3.4). These hospitals delivered 95% of separations and 93% of patient days in public hospitals. The proportion of public hospitals that were accredited ranged from 17% in Tasmania to 100% in Victoria, Western Australia, the Australian Capital Territory and the Northern Territory.

A total of 316 private hospitals were accredited in 2008–09, with 22,855 private hospital beds (56% of hospitals, accounting for 84% of the beds).

The proportion of public hospital beds in accredited hospitals ranged from 82% in New South Wales to 100% in Victoria, Western Australia, the Australian Capital Territory and the Northern Territory. The proportion of separations in accredited public hospitals ranged from 85% in New South Wales to 100% in Victoria, Western Australia, the Australian Capital Territory and the Northern Territory.

The comparability of accreditation data among states and territories is limited because of the voluntary nature of participation in award schemes for hospitals in some jurisdictions. As accreditation for public hospitals was counted as at 30 June 2010, some hospitals that were accredited for the majority of the financial year, but had their accreditation status lapse shortly before this date, were counted as non-accredited.

**Table 3.4: Selected statistics by accreditation status and states and territories, public hospitals 2009–10, private hospitals, 2008–09**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
<b>Public hospitals<sup>(a)</sup></b>									
<i>Total hospitals</i>	226	150	170	95	80	24	3	5	753
Accredited hospitals	165	150	142	95	73	4	3	5	636
Accredited (%)	73	100	84	100	91	17	100	100	84
<i>Total beds</i>	19,608	13,186	10,911	5,376	4,859	1,359	907	694	56,900
Accredited beds	16,037	13,186	10,585	5,376	4,743	1,123	907	694	52,651
Accredited (%)	82	100	97	100	98	83	100	100	93
Separations in accredited hospitals (%)	85	100	98	100	99	95	100	100	95
Patient days in accredited hospitals (%)	83	100	98	100	98	80	100	100	93
<b>Private hospitals<sup>(b)</sup></b>									
<i>Total hospitals</i>	176	152	106	50	54	n.p.	n.p.	n.p.	564
Accredited hospitals	89	84	66	30	31	n.p.	n.p.	n.p.	316
Accredited (%)	51	55	62	60	57	n.p.	n.p.	n.p.	56
<i>Total beds</i>	7,052	7,271	6,304	3,305	1,988	n.p.	n.p.	n.p.	27,180
Accredited beds	5,076	6,360	5,580	3,113	1,543	n.p.	n.p.	n.p.	22,855
Accredited (%)	72	87	89	94	78	n.p.	n.p.	n.p.	84

(a) The number of average available beds presented here may differ from the counts published elsewhere. For example, counts based on bed numbers at a specified date such as 30 June may differ from the average available beds over the reporting period.

(b) Accreditation statistics for private hospitals were sourced from the Australian Bureau of Statistics Private hospitals Australia (ABS 2010). As these data are for 2008–09, the numbers of private hospitals and private hospital beds presented here do not match the numbers presented in *chapters 2 and 4*.

Note: See boxes 3.1 and 3.2 for notes on data limitations and methods.

Abbreviation: n.p.—not published.

## Safety

The avoidance or reduction to acceptable limits of actual or potential harm from health-care management or the environment in which health care is delivered.

### Performance indicator: Adverse events treated in hospitals

Adverse events are defined as incidents in which harm resulted to a person receiving health care. They include infections, falls resulting in injuries, and problems with medication and medical devices. Some of these adverse events may be preventable.

Hospital separations data include information on diagnoses, places of occurrence and external causes of injury and poisoning that can indicate that an adverse event was treated and/or occurred during the hospitalisation. However, other diagnosis codes may also suggest that an adverse event has occurred, and some adverse events are not identifiable using these codes.

In 2009–10, 4.9% of separations reported an ICD-10-AM code for an adverse event. The proportion of separations with an adverse event was 5.8% in the public sector and 3.7% in the private sector (Table 3.5). The data for public hospitals are not comparable with the data for private hospitals because their casemixes differ and recording practices may be different.

**Table 3.5: Separations with an adverse event<sup>(a)</sup>, public and private hospitals, 2009–10**

Adverse event	Public hospitals		Private hospitals		Total	
	Separations	Per 100	Separations	Per 100	Separations	Per 100
<b>External cause of injury and poisoning</b>						
Adverse effects of drugs, medicaments and biological substances	102,367	2.0	24,015	0.7	126,382	1.5
Misadventures to patients during surgical and medical care	13,005	0.3	5,238	0.2	18,243	0.2
Procedures causing abnormal reactions/complications	163,411	3.2	91,109	2.6	254,520	3.0
Other external causes of adverse events	5,339	0.1	978	0.0	6,317	0.1
<b>Place of occurrence of injury and poisoning</b>						
Place of occurrence: Health service area	286,168	5.6	123,917	3.6	410,085	4.8
<b>Diagnoses</b>						
Selected post-procedural disorders	40,029	0.8	23,851	0.7	63,880	0.7
Haemorrhage and haematoma complicating a procedure	23,928	0.5	14,124	0.4	38,052	0.4
Infection following a procedure	23,000	0.4	11,336	0.3	34,336	0.4
Complications of internal prosthetic devices	59,359	1.2	34,331	1.0	93,690	1.1
Other diagnoses of complications of medical and surgical care	42,903	0.8	17,987	0.5	60,890	0.7
<b>Total (any of the above)<sup>(b)</sup></b>	<b>297,391</b>	<b>5.8</b>	<b>127,692</b>	<b>3.7</b>	<b>425,083</b>	<b>4.9</b>

(a) Separations that included ICD-10-AM diagnosis and/or external cause codes that indicated an adverse event was treated and/or occurred during the hospitalisation.

(b) Categories do not sum to the totals because multiple diagnoses and external causes can be recorded for each separation and external cause codes and diagnosis codes can be used together to describe adverse events.

Note: See boxes 3.1 and 3.2 for notes on data limitations and methods.

In the public sector, about 55% of separations with an adverse event reported *Procedures causing abnormal reactions/complications* and 34% reported *Adverse effects of drugs, medicaments and biological substances*.

In the private sector, about 71% of separations with an adverse event reported *Procedures causing abnormal reactions/complications* and 26% reported *Complications of internal prosthetic devices, implants and grafts*.

The data presented in Table 3.5 can be interpreted as representing selected adverse events in health care that have resulted in, or have affected, hospital admissions, rather than all adverse events that occurred in hospitals. Some of the adverse events included in these tables may represent events that occurred before admission. Condition onset flag information (see *Appendix 1*) could be used in the future to exclude conditions that arose before admission and to include conditions not currently used to indicate adverse events, in order to provide more accurate estimates of adverse events occurring and treated within single episodes of care.

## Performance indicator: Unplanned/unexpected readmissions within 28 days of selected surgical admissions

'Unplanned or unexpected readmissions after surgery' are defined as the number of separations involving selected procedures where readmission occurred within 28 days of the previous separation, that were considered to be unexpected or unplanned, and where the principal diagnosis related to an adverse event (see above). The measure is regarded as an indicator of the safety of care. It could also be regarded as an indicator of effectiveness of care; however, the specifications identify adverse events of care as causes of readmission, rather than reasons that could indicate effectiveness.

Rates of unplanned or unexpected readmissions were highest for *Hysterectomy* (31 per 1,000 separations) and *Prostatectomy* (30 per 1,000) (Table 3.6). For *Cataract extraction*, fewer than 4 in 1,000 separations had a readmission within 28 days.

**Table 3.6: Number and rate of unplanned/unexpected readmissions<sup>(a)(b)</sup> within 28 days to the same public hospital, selected surgical procedures, states and territories, 2009–10**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total <sup>(b)</sup>
<b>Knee replacement</b>									
Separations	4,481	2,776	2,003	n.a.	933	289	180	35	10,697
Number of readmissions	100	68	69	n.a.	14	7	0	n.p.	259
Per 1,000 separations	22.3	24.5	34.4	n.a.	15.0	24.2	0.0	n.p.	24.2
<b>Hip replacement</b>									
Separations	3,125	2,526	1,307	n.a.	771	273	168	31	8,201
Number of readmissions	47	40	26	n.a.	n.p.	6	n.p.	0	124
Per 1,000 separations	15.0	15.8	19.9	n.a.	n.p.	22.0	n.p.	0.0	15.1
<b>Tonsillectomy</b>									
Separations	6,287	7,795	4,624	n.a.	2,354	468	335	224	22,087
Number of readmissions	123	195	143	n.a.	76	24	6	22	589
Per 1,000 separations	19.6	25.0	30.9	n.a.	32.3	51.3	17.9	98.2	26.7
<b>Hysterectomy</b>									
Separations	3,761	3,355	2,270	n.a.	1,073	337	151	85	11,032
Number of readmissions	105	95	85	n.a.	26	22	n.p.	n.p.	338
Per 1,000 separations	27.9	28.3	37.4	n.a.	24.2	65.3	n.p.	n.p.	30.6
<b>Prostatectomy</b>									
Separations	2,887	2,874	1,239	n.a.	772	175	57	51	8,055
Number of readmissions	96	68	39	n.a.	26	5	n.p.	10	245
Per 1,000 separations	33.3	23.7	31.5	n.a.	33.7	28.6	n.p.	196.1	30.4
<b>Cataract extraction</b>									
Separations	19,125	18,411	7,242	n.a.	5,622	865	1,010	540	52,815
Number of readmissions	74	61	30	n.a.	25	6	n.p.	7	205
Per 1,000 separations	3.9	3.3	4.1	n.a.	4.4	6.9	n.p.	13.0	3.9
<b>Appendicectomy</b>									
Separations	8,944	6,677	4,929	n.a.	1,772	502	640	291	23,755
Number of readmissions	198	164	119	n.a.	64	9	15	15	584
Per 1,000 separations	22.1	24.6	24.1	n.a.	36.1	17.9	23.4	51.5	24.6

(a) Includes readmissions to the same hospital only, for public hospitals.

(b) Total excludes data for Western Australia.

Note: See boxes 3.1 and 3.2 for notes on data limitations and methods.

Abbreviations: n.a.—not available; n.p.—not published due to less than five readmissions



This indicator was prepared using public hospital data only, where the readmission occurred in the same hospital. Data for Western Australia were not available.

## Responsiveness

Service is client orientated. Clients are treated with dignity, confidentiality, and encouraged to participate in choices related to their care.

There are no indicators of responsiveness available for hospitals.

## Continuity of care

Ability to provide uninterrupted, coordinated care or service across programs, practitioners, organisations and levels over time.

There are no indicators of continuity of care available for hospitals.

## Accessibility

People can obtain health care at the right place and right time irrespective of income, physical location and cultural background.

### Performance indicator: Waiting times for emergency department care

Emergency department waiting time to service delivery is 'the time elapsed for each patient from presentation in the emergency department to commencement of service by a treating medical officer or nurse'.

Emergency department waiting times information is summarised as the proportions of presentations in which patients were treated within the recommended time (for the urgency of their condition), and is presented for emergency departments in hospitals classified as *Principal referral and specialist women's and children's hospitals* and *Large hospitals*. The urgency of treatment is categorised using the Australasian Triage Scale that has five categories that incorporate the time by which the patient should receive care (ACEM 2000). For more information on triage categories see *Chapter 5*.

For 2009–10, for all triage categories overall, the proportion of presentations in which patients received emergency department care within the required time was 68%, ranging from 49% in the Northern Territory to 73% in New South Wales (Table 3.7).

**Table 3.7: Proportion<sup>(a)</sup> of emergency presentations<sup>(b)</sup> seen on time, by triage category, selected public hospitals<sup>(c)</sup>, states and territories, 2009–10**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Resuscitation	100	100	99	99	100	99	100	100	100
Emergency	81	80	77	68	77	70	83	63	78
Urgent	69	70	59	51	61	49	60	47	64
Semi-urgent	71	65	65	60	62	61	56	44	65
Non-urgent	86	84	88	89	85	86	77	84	86
<b>Total</b>	<b>73</b>	<b>71</b>	<b>65</b>	<b>60</b>	<b>66</b>	<b>60</b>	<b>63</b>	<b>49</b>	<b>68</b>

(a) The proportion of presentations for which the waiting time to service delivery was within the time specified in the definition of the triage category.

(b) Records with a type of visit of *Emergency presentation*.

(c) For emergency department presentations reported for hospitals classified as *Principal referral and specialist women's and children's hospitals* and *Large hospitals* for which episode-level data were available. For more information, see the text of *Chapter 5* and *Appendix 1*.

There were variations between states and territories in the proportion of emergency presentations seen on time, by hospital peer group, Indigenous status, remoteness area of residence and socioeconomic status of area of residence. Overall, 67% of emergency presentations were seen on time for *Principal referral and specialist women's and children's hospitals* and 73% were seen on time for *Large hospitals* (Table 3.8).

There were only slight differences overall in the proportion of presentations seen on time for *Indigenous Australians* compared to *Other Australians* (66% and 69% respectively) and there was little variation by socioeconomic status of the patient's area of usual residence. Patients from *Very remote* areas were the group with the lowest proportion of presentations seen on time.

Additional information on the proportion seen on time by triage category and by state and territory is included in additional tables that accompany this report online. More information on triage categories and emergency department waiting times for all public hospitals for which data were available (including hospitals that were not *Principal referral and specialist women's and children's hospitals* and *Large hospitals*) is available in *Chapter 5*.

**Table 3.8: Proportion<sup>(a)</sup> of emergency presentations<sup>(b)</sup> seen on time by triage category, selected public hospitals<sup>(c)</sup>, 2009–10**

	Resuscitation	Emergency	Urgent	Semi-urgent	Non-urgent	Total
<b>Hospital peer group</b>						
Principal referral and specialist women's and children's	100	77	62	64	86	67
Large hospitals	99	80	71	70	85	73
<b>Indigenous status<sup>(d)</sup></b>						
Indigenous	100	74	62	62	87	66
Other Australians	100	78	64	66	86	69
<b>Remoteness of residence<sup>(e)</sup></b>						
Major cities	100	79	63	65	84	68
Inner regional	99	75	64	67	88	69
Outer regional	100	78	66	67	90	70
Remote	99	76	71	71	92	74
Very remote	100	71	59	55	88	61
<b>Socioeconomic status of area of residence<sup>(f)</sup></b>						
1—Lowest	99	79	65	65	86	68
2	100	77	64	66	85	69
3	99	77	64	65	86	68
4	100	77	60	63	85	65
5—Highest	100	80	66	68	86	71
<b>Total</b>	<b>100</b>	<b>78</b>	<b>64</b>	<b>65</b>	<b>86</b>	<b>68</b>

(a) The proportion of presentations for which the waiting time to service delivery was within the time specified in the definition of the triage category.

(b) Records with a type of visit of *Emergency presentation*.

(c) For emergency department presentations reported for hospitals classified as *Principal referral and specialist women's and children's hospitals* and *Large hospitals* for which episode-level data were available. For more information, see the text of *Chapter 5* and *Appendix 1*.

(d) *Other Australians* includes presentations for which the Indigenous status was *Not reported*. The totals exclude data for Tasmania and the Australian Capital Territory.

(e) Disaggregation by remoteness area is by usual residence, not remoteness of hospital. However, state/territory data are reported by jurisdiction of the hospital, regardless of the jurisdiction of residence.

(f) Disaggregation by socioeconomic group is based on the patient's usual residence, not the location of the hospital. The socioeconomic status of area of residence is based on the ABS Index of Relative Socio-economic Disadvantage (IRSD). These socioeconomic groups represent approximately 20% of the national population, but do not necessarily represent 20% of the population in each state or territory.

## Performance indicator: Waiting times for elective surgery

Elective surgery waiting times data provide information on patients removed from public hospital elective surgery waiting lists for their surgery. Waiting times for elective surgery are an indicator of the provision of timely care. The median waiting time indicates the time within which 50% of patients were admitted for the awaited procedure. The 90th percentile waiting time indicates the amount of time within which 90% of patients were admitted for the awaited procedure.

The NHA indicator is prepared using linked elective surgery waiting times and admitted patient care data (for which demographic data were available), allowing analyses by remoteness areas, socioeconomic status groups and Indigenous status. The linked data accounted for about 91% of the records provided with waiting times. For Tasmania, it was not possible to link the elective surgery waiting times and admitted patient care data. For

those states for which linking was possible, there was some variation in the linked data coverage between states and territories, ranging from 59% for the Northern Territory to 99% for New South Wales, Queensland, Western Australia and South Australia (Table 3.9).

Table 3.9 presents waiting time statistics for all patients admitted from public hospital waiting lists for elective surgery, and for those records with demographic data available (linked with the admitted patient care data). In 2009–10, the overall median waiting time for patients who were admitted from waiting lists was 36 days. It ranged from 27 days in Queensland to 73 days in the Australian Capital Territory. The 90th percentile for waiting time ranged from 150 days in Queensland to 357 days in the Australian Capital Territory, with an overall value of 247 days (Table 3.9). In 2009–10, 3.6% of patients admitted from public hospital waiting lists waited over a year for their elective surgery.

**Table 3.9: Waiting time statistics for patients admitted from public hospital waiting lists for elective surgery<sup>(a)(b)</sup>, by state and territory, 2009–10**

	NSW	Vic	Qld	WA <sup>(c)</sup>	SA	Tas <sup>(d)</sup>	ACT	NT	Total
<b>Elective surgery waiting times data<sup>(a)</sup></b>									
Number of admissions	198,503	155,761	113,884	61,298	44,227	16,610	9,778	9,028	609,089
Days waited at 50th percentile	44	36	27	32	36	36	73	53	36
Days waited at 90th percentile	330	196	150	161	189	332	357	279	247
% waited more than 365 days	4.9	2.8	2.5	1.5	1.1	8.7	9.5	5.6	3.6
<b>Elective surgery waiting times records with demographic data<sup>(b)(c)</sup></b>									
Number of admissions	196,031	129,917	113,169	58,720	43,675	n.a.	9,703	5,368	556,603
Proportion linked (%)	99	83	99	96	99	n.a.	99	59	91
Days waited at 50th percentile	44	36	28	31	36	n.a.	74	42	36
Days waited at 90th percentile	330	191	151	160	189	n.a.	357	256	245
% waited more than 365 days	4.9	2.7	2.5	1.5	1.1	n.a.	9.5	5.3	3.3

(a) Includes records with a reason for removal of *Admitted as an elective patient for awaited procedure in this hospital*.

(b) Records from the National Elective Surgery Waiting Times Collection for which demographic information was obtained from the National Hospital Morbidity Database. The linked records represent about 91% of records (excluding Tasmania) in the National Elective Surgery Waiting Times Data Collection for 2009–10. This information included the sex, age group, Indigenous status and area of usual residence of the patient.

(c) The data for Western Australia do not include elective surgery for non-metropolitan hospitals.

(d) The linked demographic data for Tasmania were not available.

Abbreviation: n.a.—not available.

Table 3.10 presents waiting time statistics by Indigenous status, remoteness area and socioeconomic status using the linked elective surgery waiting times and admitted patient care data.

There was a difference in the overall median waiting time for *Indigenous Australians* compared to *Other Australians* (40 days and 35 days respectively) (Table 3.10). There were also variations by socioeconomic area of residence, with persons from higher socioeconomic groups having shorter overall median waiting times than those from lower socioeconomic groups. Persons residing in *Remote* areas and *Major cities* had shorter overall median waiting

times than persons from other areas. However, these overall data do not take into account variations in the types of surgery awaited by patients from different socioeconomic groups or different remoteness areas.

**Table 3.10: Waiting time statistics for patients admitted from public hospital waiting lists for elective surgery<sup>(a)(b)</sup>, by Indigenous status, remoteness area of residence and socioeconomic status of area of residence, 2009–10**

	NSW	Vic	Qld	WA	SA	Tas <sup>(b)</sup>	ACT	NT	Aust
<b>Indigenous status<sup>(c)</sup></b>									
Indigenous	49	36	35	33	33	n.a.	n.p.	47	40
Other Australians	44	36	27	31	36	n.a.	n.p.	40	35
<b>Remoteness of residence<sup>(d)</sup></b>									
Major cities	40	37	27	33	37	n.a.	77	n.p.	35
Inner regional	53	34	28	28	31	n.a.	68	n.p.	37
Outer regional	60	28	31	32	28	n.a.	n.p.	43	39
Remote	35	26	33	28	29	n.a.	n.p.	37	33
Very remote	50	n.p.	34	29	27	n.a.	n.p.	50	38
<b>Socioeconomic status of area of residence<sup>(e)</sup></b>									
1—Lowest	49	42	29	29	37	n.a.	56	47	40
2	57	34	28	31	36	n.a.	63	59.5	41
3	41	37	27	30	36	n.a.	74	35	34
4	37	35	27	35	34	n.a.	80	43	33
5—Highest	27	31	25	33	34	n.a.	73	48	30
<b>Total</b>	<b>44</b>	<b>36</b>	<b>28</b>	<b>32</b>	<b>36</b>	<b>n.a.</b>	<b>74</b>	<b>42</b>	<b>35</b>

(a) Records with a reason for removal of *Admitted as an elective patient for awaited procedure in this hospital or another hospital*.

(b) For the 91% of elective surgery records for which demographic data were available (see Table 3.9). The linked demographic data for Tasmania were not available.

(c) *Other Australians* includes records for which the Indigenous status was *Not reported*. The totals exclude data for Tasmania and the Australian Capital Territory.

(d) Disaggregation by remoteness area is by usual residence, not remoteness of hospital. However, state/territory data are reported by jurisdiction of the hospital, regardless of the jurisdiction of residence. Data not published for remoteness areas that are not included in the state/territory of hospital.

(e) Disaggregation by socioeconomic group is based on the patient's usual residence, not the location of the hospital. The socioeconomic status of area of residence is based on the ABS Index of Relative Socio-economic Disadvantage (IRSD). These socioeconomic groups represent approximately 20% of the national population, but do not necessarily represent 20% of the population in each state or territory.

Abbreviation: n.a.—not available n.p.—not published.

For more information on elective surgery waiting times, see *Chapter 10*.

## Performance indicator: Rates of service—overnight separations

The number of overnight separations per 1,000 population is regarded as an indicator of the accessibility of hospital services. The number of overnight separations is considered to be more comparable among the states and territories, and between the public and private sectors, than the total number of separations. This is due to variations in admission practices, which lead to variation, in particular in the number of same-day admissions.

Rates of overnight separations in public hospitals ranged from 95 per 1,000 in Tasmania to 185 per 1,000 in the Northern Territory (Table 3.11). For private hospitals, rates of overnight separations ranged from 38 per 1,000 in New South Wales to 61 per 1,000 in Queensland. Separation rates presented by the state or territory of hospitalisation will include separations

for patients not usually resident in that state or territory. For the Australian Capital Territory, about 77% of separations were for Australian Capital Territory residents, with most of the remainder being residents of New South Wales.

**Table 3.11: Overnight separations per 1,000 population, states and territories, 2009–10**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
<b>Hospital sector</b>									
Public	114.5	108.4	102.0	105.5	119.6	95.0	122.0	184.7	110.3
Private	38.2	51.7	60.6	53.5	51.2	n.p.	n.p.	n.p.	48.7
<b>Indigenous status<sup>(a)</sup></b>									
Indigenous	244.5	234.6	281.7	360.9	354.6	n.p.	n.p.	370.4	293.1
Other Australians	152.4	161.4	159.6	153.4	170.5	n.p.	n.p.	150.1	157.5
<b>Remoteness of residence<sup>(b)</sup></b>									
Major cities	147.0	152.6	152.7	147.8	161.2	..	138.5	..	150.6
Inner regional	157.9	179.3	173.3	169.1	165.1	139.8	n.p.	..	167.8
Outer regional	181.0	191.8	167.2	185.3	225.6	142.1	..	160.8	179.0
Remote	240.7	268.0	221.6	209.9	210.0	143.8	..	219.4	218.1
Very remote	256.3	..	251.3	232.8	230.4	160.9	..	303.4	260.6
<b>Socioeconomic status of area of residence<sup>(c)</sup></b>									
1—Lowest	167.3	163.8	188.3	247.8	198.5	137.1	n.p.	255.1	177.3
2	150.1	175.9	179.4	168.8	168.9	186.8	n.p.	203.9	164.7
3	157.3	163.2	157.7	153.9	179.8	139.7	303.0	252.2	160.1
4	140.7	157.0	151.7	152.9	142.7	137.4	191.0	137.7	150.1
5—Highest	139.8	143.8	131.2	138.6	137.4	..	128.7	174.0	138.9
<b>Total</b>	<b>152.7</b>	<b>160.2</b>	<b>162.6</b>	<b>159.0</b>	<b>170.8</b>	<b>n.p.</b>	<b>n.p.</b>	<b>n.p.</b>	<b>159.1</b>

(a) *Other Australians* includes records for which the Indigenous status was *Not reported*. The totals exclude data for Tasmania and the Australian Capital Territory.

(b) Disaggregation by remoteness area is by usual residence, not remoteness of hospital. However, state/territory data are reported by jurisdiction of the hospital, regardless of the jurisdiction of residence.

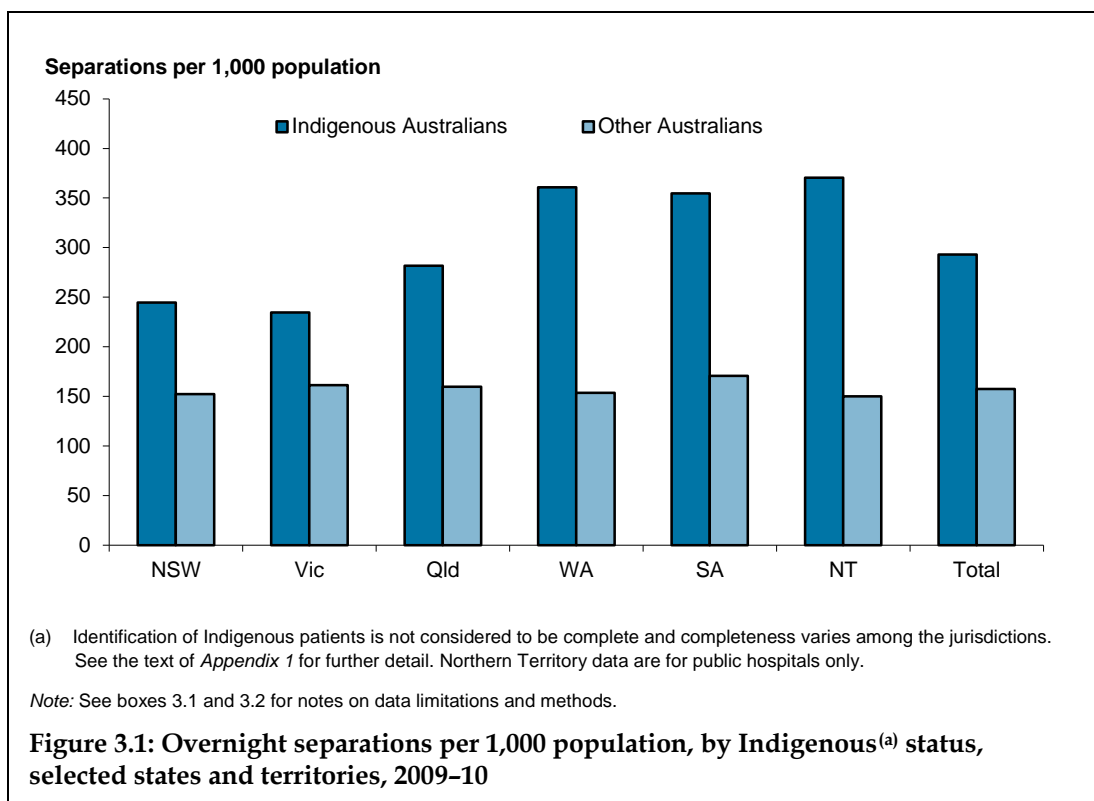
(c) Disaggregation by socioeconomic group is based on the patient's usual residence, not the location of the hospital. The socioeconomic status of area of residence is based on the ABS Index of Relative Socio-economic Disadvantage (IRSD). These socioeconomic groups represent approximately 20% of the national population, but do not necessarily represent 20% of the population in each state or territory.

Note: See boxes 3.1 and 3.2 for notes on data limitations and methods.

Abbreviations: ..—not applicable; n.p.—not published.

There were also variations in rates of overnight separations by Indigenous status, remoteness area of residence and socioeconomic status of area of residence.

There were 293 overnight separations for patients reported as Indigenous per 1,000 Indigenous persons. This was about 1.8 times the rate for *Other Australians*. Overnight separation rates by Indigenous status are presented for the six jurisdictions with data of sufficient quality for analytical purposes (see *Appendix 1*). The rate of overnight separations for *Indigenous Australians* was almost twice the rate for *Other Australians* (157 per 1,000) (Figure 3.1). More information on the number of separations, separations per 1,000 population and the standardised separation rate ratio (SRR) by Indigenous status is available in *chapters 7, 8, 9, 10 and 11*.

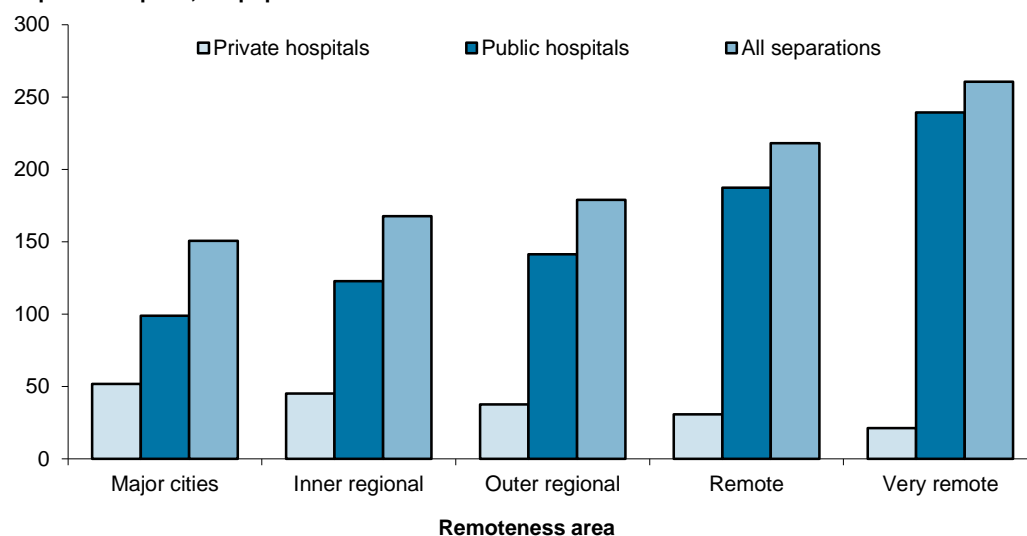


There were also large variations by area of residence. Persons usually resident in *Very remote* areas had 261 overnight separations per 1,000 population compared with 151 per 1,000 for persons usually resident in *Major cities*. For public hospitals, rates of overnight separations increased with remoteness of the patient's area of usual residence, ranging from 99 per 1,000 population in *Major cities* to 239 per 1,000 in *Very remote* areas (Figure 3.2). For private hospitals, rates of overnight separations decreased with remoteness, ranging from 21 per 1,000 in *Very remote* areas to 52 per 1,000 in *Major cities*.

There was less variation by socioeconomic group, with persons from the lowest socioeconomic group having an overnight separation rate about 1.3 times as high as persons from the highest socioeconomic group. Rates of overnight separations in public hospitals increased with socioeconomic disadvantage, and for private hospitals decreased with socioeconomic disadvantage (Figure 3.3).

More information on overnight acute separations, including demographic and clinical data, is available in *Chapter 9*. Similar information for same-day acute separations is available in *Chapter 8*.

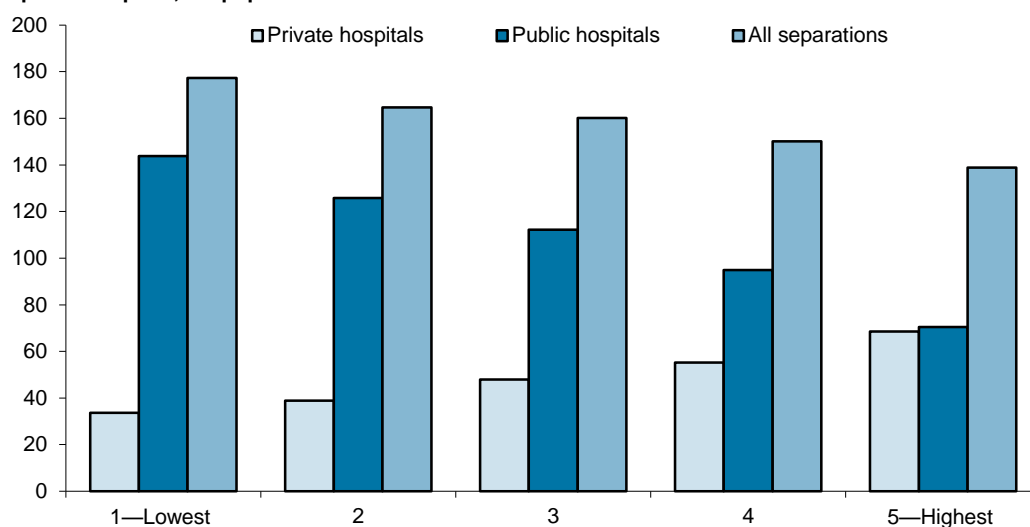
**Separations per 1,000 population**



Note: See boxes 3.1 and 3.2 for notes on data limitations and methods.

**Figure 3.2: Overnight separations per 1,000 population, by remoteness area of usual residence, public and private hospitals, 2009–10**

**Separations per 1,000 population**



Note: See boxes 3.1 and 3.2 for notes on data limitations and methods.

**Figure 3.3: Overnight separations per 1,000 population, by socioeconomic status group, public and private hospitals, 2009–10**



## Performance indicator: Rates of services—hospital procedures

This indicator relates to accessibility of hospitals services and may also relate to the appropriateness of hospital care. Generally, these procedures were selected because of the frequency with which they are undertaken, because they are often elective and discretionary and because there are sometimes treatment alternatives available.

Table 3.12 presents separations per 1,000 population for the procedures, by state or territory of residence. There was some variation among states and territories. For example, separations for *Cataract extraction* ranged from 6.9 per 1,000 population in the Australian Capital Territory to 9.8 per 1,000 population in Western Australia.

**Table 3.12: Separations per 1,000 population for hospital procedures<sup>(a)</sup>, all hospitals, states and territories, 2009–10**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Cataract extraction	8.9	8.3	9.4	9.8	7.7	9.6	6.9	8.1	8.8
Cholecystectomy	2.1	2.3	2.3	2.1	2.3	2.3	2.3	1.8	2.2
Coronary angioplasty	1.5	1.6	1.4	1.4	1.5	1.4	3.2	..	1.5
Coronary artery bypass graft	0.5	0.6	0.6	0.3	0.6	0.5	0.7	..	0.5
Cystoscopy	3.9	5.2	5.1	6.8	5.4	5.5	4.8	3.1	4.9
Haemorrhoidectomy	2.6	1.5	1.4	1.1	1.3	2.0	1.1	2.2	1.8
Hip replacement	1.3	1.5	1.2	1.6	1.5	1.8	2.3	0.5	1.4
Hysterectomy <sup>(b)</sup> , females aged 15–69	2.3	2.2	2.6	2.5	2.8	2.7	2.4	1.8	2.4
Inguinal herniorrhaphy	2.1	2.2	2.3	2.2	2.1	2.4	2.3	2.1	2.2
Knee replacement	1.7	1.5	1.8	1.8	1.9	1.5	2.5	0.5	1.7
Myringotomy	1.4	1.8	1.5	2.0	3.2	1.4	2.5	1.1	1.7
Prostatectomy <sup>(c)</sup>	2.9	3.5	2.7	2.5	2.8	3.0	3.4	1.7	2.9
Septoplasty	1.0	1.4	0.9	0.9	1.4	0.5	1.2	0.4	1.1
Tonsillectomy	2.1	2.3	2.2	2.4	2.9	1.8	3.0	1.0	2.2
Varicose veins, stripping and ligation	0.5	0.8	0.5	0.5	0.7	0.7	1.0	0.4	0.6

(a) The procedures are defined using Australian Classification of Health Interventions (ACHI) codes in *Appendix 1*.

(b) For Hysterectomy, the rate per 1,000 population was calculated for the estimated resident female population aged 15 to 69 years.

(c) For Prostatectomy, the rate per 1,000 population was calculated for the estimated resident male population.

*Note:* See boxes 3.1 and 3.2 for notes on data limitations and methods. Additional information is available in Table S3.9 at the end of this chapter.

*Abbreviation:* ..—not applicable.

Additional information for these procedures by hospital sector, Indigenous status, remoteness area of usual residence and socioeconomic status is available in additional tables that accompany this report online. The additional tables include the numbers of separations, the separation rates and standardised separation rate ratios (SRRs).

## Performance indicator: Rates of service—non-acute care separations

Table 3.13 presents rates of overnight separations for non-acute care by state and territory. Caution should be used in interpreting these data as there are apparent variations in the statistical discharge practice and in assignment of care type categories between jurisdictions.

**Table 3.13: Overnight separations for non-acute care per 1,000 population, states and territories, 2009–10**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Rehabilitation	4.9	5.1	3.7	4.6	3.7	3.5	10.2	1.3	4.6
Palliative care	1.1	1.1	1.6	1.3	0.9	0.6	2.0	2.7	1.2
Geriatric evaluation and management	0.4	2.1	0.4	0.3	0.6	0.1	2.1	0.2	0.9
Psychogeriatric care	0.1	0.3	0.1	0.7	0.1	0.0	0.1	0.0	0.2
Maintenance care	0.8	0.1	1.4	0.7	1.2	0.7	5.0	3.4	0.9
<b>Total</b>	<b>7.3</b>	<b>8.7</b>	<b>7.2</b>	<b>7.5</b>	<b>6.5</b>	<b>5.0</b>	<b>19.4</b>	<b>7.6</b>	<b>7.7</b>

*Note:* See boxes 3.1 and 3.2 for notes on data limitations and methods.

*Abbreviation:* n.p.—not published.

There was a large difference in the overall rate of overnight non-acute care between public and private hospitals (5.3 per 1,000 population and 2.4 per 1,000 respectively) (Table 3.14). The overnight non-acute separation rate for *Indigenous Australians* was about 30% higher than the rate for *Other Australians* (10.6 per 1,000 and 7.8 per 1,000 respectively).

There were also variations by remoteness of area of residence, with persons residing in *Remote* areas having the lowest rate of non-acute separations and persons residing in *Major cities* having the highest rate.

More information on sub-and non-acute admitted patient care for both same-day and overnight separations, is available in *Chapter 11*.

**Table 3.14: Overnight separations for non-acute care per 1,000 population by hospital sector, Indigenous status, remoteness area and socioeconomic status, states and territories, 2009–10**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
<b>Hospital sector</b>									
Public	5.0	5.7	5.0	5.5	4.5	3.6	16.7	7.6	5.3
Private	2.3	3.0	2.2	2.0	2.1	n.p.	n.p.	n.p.	2.4
<b>Indigenous status<sup>(a)</sup></b>									
Indigenous	7.1	12.1	13.5	12.0	7.3	n.p.	n.p.	11.7	10.6
Other Australians	7.6	9.0	7.1	7.5	6.9	n.p.	n.p.	5.1	7.8
<b>Remoteness of residence<sup>(b)</sup></b>									
Major cities	7.8	9.2	7.9	7.7	7.2	..	15.7	..	8.3
Inner regional	6.3	7.9	6.3	6.5	4.1	5.9	n.p.	..	6.7
Outer regional	6.1	6.8	5.7	6.8	4.8	3.2	..	7.5	6.0
Remote	7.4	9.1	4.9	7.8	4.6	3.7	..	5.2	5.9
Very remote	5.6	..	7.4	6.8	5.4	10.6	..	9.9	7.9
<b>Socioeconomic status of area of residence<sup>(c)</sup></b>									
1—Lowest	7.1	7.8	7.3	7.7	6.8	4.0	n.p.	8.9	7.1
2	5.8	8.0	7.6	8.1	6.4	5.3	n.p.	5.2	6.9
3	8.3	8.8	6.7	7.3	6.8	6.1	34.9	10.1	7.9
4	6.8	9.0	7.6	8.3	6.3	7.8	20.5	4.7	8.0
5—Highest	9.1	9.7	6.5	6.7	5.9	..	14.5	7.8	8.7
<b>Total</b>	<b>7.3</b>	<b>8.7</b>	<b>7.2</b>	<b>7.5</b>	<b>6.5</b>	<b>n.p.</b>	<b>n.p.</b>	<b>n.p.</b>	<b>7.7</b>

(a) *Other Australians* includes records for which the Indigenous status was *Not reported*. The totals exclude data for Tasmania and the Australian Capital Territory.

(b) Disaggregation by remoteness area is by usual residence, not remoteness of hospital. However, state/territory data are reported by jurisdiction of the hospital, regardless of the jurisdiction of residence.

(c) Disaggregation by socioeconomic group is based on the patient's usual residence, not the location of the hospital. The socioeconomic status of the area of residence is based on the ABS Index of Relative Socio-economic Disadvantage (IRSD). These socioeconomic groups represent approximately 20% of the national population, but do not necessarily represent 20% of the population in each state or territory.

*Abbreviations:* ..—not applicable; n.p.—not published.

## Efficiency & sustainability

Achieving desired results with most cost-effective use of resources. Capacity of system to sustain workforce and infrastructure, to innovate and respond to emerging needs.

### Performance indicator: Cost per casemix-adjusted separation

The cost per casemix-adjusted separation is a measure of the average cost of providing care for each admitted patient separation, accounting for the relative complexity of the patients' condition. It is calculated for selected public acute hospitals as the average recurrent expenditure for each separation, adjusted using AR-DRG cost weights for the resources expected to be used for the separation. As such it can be taken as a measure of the relative technical efficiency of hospitals.

### Box 3.3: Cost per casemix adjusted separation

Details of the methods used in this analysis are presented in *Appendix 1*.

The scope of the analysis includes public hospitals that provide mainly acute care. These are the hospitals in the public hospital peer groups of *Principal referral and specialist women's and children's hospitals*, *Large hospitals*, *Medium hospitals* and *Small acute hospitals* (see *Appendix 1*). Hospitals included in this analysis accounted for 97% of separations in public acute and psychiatric hospitals in 2009–10, and 94% of recurrent expenditure on public hospitals (excluding depreciation).

*Casemix-adjusted separations* is calculated as the product of *Total separations* and *Average cost weight*.

The *Average cost weight* is sourced from the National Hospital Morbidity Database, using the 2008–09 AR-DRG version 5.2 cost weights (DoHA 2010) for separations for which the care type was reported as *Acute*, *Newborn* (with qualified days) or was *Not reported*.

Nationally, the average cost per casemix-adjusted separation was \$4,706 (excluding depreciation). There was some variation in the average cost per casemix-adjusted separation by state and territory (Table 3.15).

A large portion of the costs was attributed to *Non-medical labour* and *Medical labour* costs. Nationally these costs were \$2,357 and \$1,041, respectively, per casemix-adjusted separation. Depreciation added an average of 4.2% (\$199) to the cost of each separation. More detailed information is available in Table S3.1, at the end of this chapter.

**Table 3.15: Cost (\$) per casemix-adjusted separation (excluding depreciation), selected public hospitals, states and territories, 2009–10**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Medical labour costs	1,061	894	1,099	1,163	1,094	1,141	1,182	1,043	1,041
Non-medical labour costs	2,226	2,385	2,642	2,285	2,065	2,575	2,482	2,847	2,357
Nursing	1,186	1,248	1,293	1,115	1,213	1,307	1,287	1,705	1,229
Other staff (includes superannuation)	1,041	1,137	1,348	1,170	852	1,267	1,195	1,142	1,128
Other recurrent costs (excludes depreciation)	1,270	1,312	1,352	1,281	1,214	1,653	1,325	1,627	1,308
Depreciation	156	318	192	120	151	106	157	46	199
<b>Total (excludes depreciation)</b>	<b>4,557</b>	<b>4,591</b>	<b>5,093</b>	<b>4,728</b>	<b>4,374</b>	<b>5,369</b>	<b>4,989</b>	<b>5,517</b>	<b>4,706</b>

*Note:* See boxes 3.1 and 3.2 for notes on data limitations and methods. Additional information is available in tables S3.2 to S3.7 at the end of this chapter.

Interpretation of the cost per casemix-adjusted separation data should take into consideration factors such as costs incurred that are beyond the control of a jurisdiction. For example, the Northern Territory has high staffing and transport costs, and treats a greater proportion of Aboriginal and Torres Strait Islander patients than other jurisdictions. The cost disabilities associated with providing hospital services in the Northern Territory have been recognised by the Commonwealth Grants Commission.

Table 3.16 presents costs per casemix-adjusted separation data for selected public hospital peer groups. Public hospitals can be classified into peer groups that allow a more meaningful

comparison of cost data. The peer group classification allocates hospitals into broadly similar groups in terms of their level of admitted patient activity and their geographical location (see *Appendix 1*).

**Table 3.16: Cost (\$) per casemix-adjusted separation (excluding depreciation), by public hospital peer group, selected public hospitals<sup>(b)</sup>, states and territories, 2009–10**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Principal referral and specialist women's and children's hospitals	4,565	4,637	5,216	4,560	4,510	5,148	n.p.	5,458	4,746
Large hospitals	4,328	4,243	3,751	4,322	4,245	n.p.	n.p.	..	4,310
Medium hospitals	4,651	4,199	4,681	5,297	3,921	n.p.	..	..	4,600
Small acute hospitals	5,194	5,578	5,131	6,570	3,624	4,507	..	5,944	5,357
<b>Total (selected hospitals)</b>	<b>4,557</b>	<b>4,591</b>	<b>5,093</b>	<b>4,728</b>	<b>4,374</b>	<b>5,369</b>	<b>4,989</b>	<b>5,517</b>	<b>4,706</b>

*Note:* See boxes 3.1, 3.2 and 3.3 for notes on data limitations and methods. Additional information is available in tables S3.1 to S3.7 at the end of this chapter.

*Abbreviation:* ..—not applicable.

For more information on the characteristics of public hospitals, see *Chapter 4*.

### Performance indicator: Relative stay indexes

Relative stay indexes (RSIs) are calculated as the observed number of patient days for separations in selected AR-DRGs, divided by the expected number of patient days (based on national figures), standardised for casemix. The adjustment for casemix allows variation in the types of services provided to be taken into account.

A RSI greater than 1 indicates that an average patient's length of stay is longer than would be expected given the casemix for the category of interest (for example, hospital sector or jurisdiction). A RSI of less than 1 indicates that the length of stay was shorter than would have been expected. More detail on these methods is included in *Appendix 1*.

The indirectly standardised relative stay index is not technically comparable between cells (for example, between hospital groups) but is a comparison of the hospital group with the national average based on the casemix of that group. The directly standardised relative stay index is re-scaled so each group represents the national casemix and allows comparison of RSI values across groups of hospitals.

Table 3.17 presents both indirectly and directly standardised RSIs for all hospitals for 2009–10. For the hospitals included in the cost per casemix-adjusted separation analysis (see above), the RSI was 1.00 overall.

Overall, the RSI for private hospitals was 1.10 directly standardised compared to 1.00 for public hospitals, indicating relatively shorter lengths of stay in the public sector compared with the private sector.

Table 3.17 also presents RSI information for the *Medical*, *Surgical* and *Other* categories of AR-DRGs (DoHA 2006). These figures indicate relatively shorter lengths of stay for *Medical* separations in public hospitals, and for *Surgical* and *Other* separations in private hospitals.

RSIs for selected acute and non-acute public hospitals are presented in tables S3.1 to S3.7 with a range of other information on these hospitals at the end of this chapter.

**Table 3.17: Relative stay index by medical/surgical/other type of AR-DRG, public and private hospitals, states and territories, 2009–10**

Type of hospital	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
<b>Indirectly standardised relative stay index<sup>(b)</sup></b>									
<b>Public hospitals</b>	<b>1.04</b>	<b>0.92</b>	<b>0.94</b>	<b>1.00</b>	<b>1.01</b>	<b>1.05</b>	<b>0.93</b>	<b>1.16</b>	<b>0.99</b>
Medical	1.02	0.90	0.91	0.97	0.99	1.07	0.96	1.09	0.96
Surgical	1.08	0.97	1.03	1.06	1.08	1.02	0.89	1.36	1.04
Other	1.14	0.97	1.02	1.00	1.05	1.01	0.90	1.26	1.04
<b>Private hospitals</b>	<b>1.03</b>	<b>1.04</b>	<b>1.05</b>	<b>1.04</b>	<b>0.97</b>	<b>n.p.</b>	<b>n.p.</b>	<b>n.p.</b>	<b>1.03</b>
Medical	1.20	1.13	1.16	1.08	1.01	n.p.	n.p.	n.p.	1.14
Surgical	0.93	0.97	0.96	1.02	0.94	n.p.	n.p.	n.p.	0.96
Other	0.90	0.94	0.99	0.98	0.94	n.p.	n.p.	n.p.	0.95
<b>All hospitals</b>	<b>1.04</b>	<b>0.96</b>	<b>0.99</b>	<b>1.01</b>	<b>1.00</b>	<b>n.p.</b>	<b>n.p.</b>	<b>n.p.</b>	<b>1.00</b>
Medical	1.05	0.95	0.98	0.99	0.99	n.p.	n.p.	n.p.	1.00
Surgical	1.02	0.97	0.99	1.04	1.01	n.p.	n.p.	n.p.	1.00
Other	1.05	0.95	1.00	0.99	1.00	n.p.	n.p.	n.p.	1.00
<b>Directly standardised relative stay index<sup>(c)</sup></b>									
<b>Public hospitals</b>	<b>1.06</b>	<b>0.94</b>	<b>0.97</b>	<b>1.01</b>	<b>1.03</b>	<b>1.06</b>	<b>0.97</b>	<b>1.25</b>	<b>1.00</b>
Medical	1.03	0.90	0.91	0.97	0.99	1.08	0.98	1.11	0.96
Surgical	1.10	0.99	1.05	1.08	1.08	1.04	0.96	1.49	1.05
Other	1.16	0.99	1.05	1.01	1.08	1.03	1.00	1.42	1.06
<b>Private hospitals</b>	<b>1.12</b>	<b>1.09</b>	<b>1.12</b>	<b>1.13</b>	<b>1.05</b>	<b>n.p.</b>	<b>n.p.</b>	<b>n.p.</b>	<b>1.10</b>
Medical	1.24	1.16	1.20	1.20	1.11	n.p.	n.p.	n.p.	1.18
Surgical	0.93	0.97	0.97	1.02	0.95	n.p.	n.p.	n.p.	0.96
Other	0.93	0.95	1.02	1.06	0.98	n.p.	n.p.	n.p.	0.97
<b>All hospitals</b>	<b>1.04</b>	<b>0.96</b>	<b>0.99</b>	<b>1.02</b>	<b>1.01</b>	<b>n.p.</b>	<b>n.p.</b>	<b>n.p.</b>	<b>1.00</b>
Medical	1.05	0.96	0.98	1.00	1.00	n.p.	n.p.	n.p.	1.00
Surgical	1.02	0.98	1.00	1.04	1.02	n.p.	n.p.	n.p.	1.00
Other	1.05	0.96	1.00	1.00	1.02	n.p.	n.p.	n.p.	1.00

Note: See boxes 3.1 and 3.2 for notes on data limitations and methods. Additional information on RSI by funding source is available in Table S3.8.

### **Performance indicator: Average lengths of stay for 20 selected AR-DRGs**

The selected AR-DRGs (Figure 3.5 and Table S3.9) were chosen on the basis of:

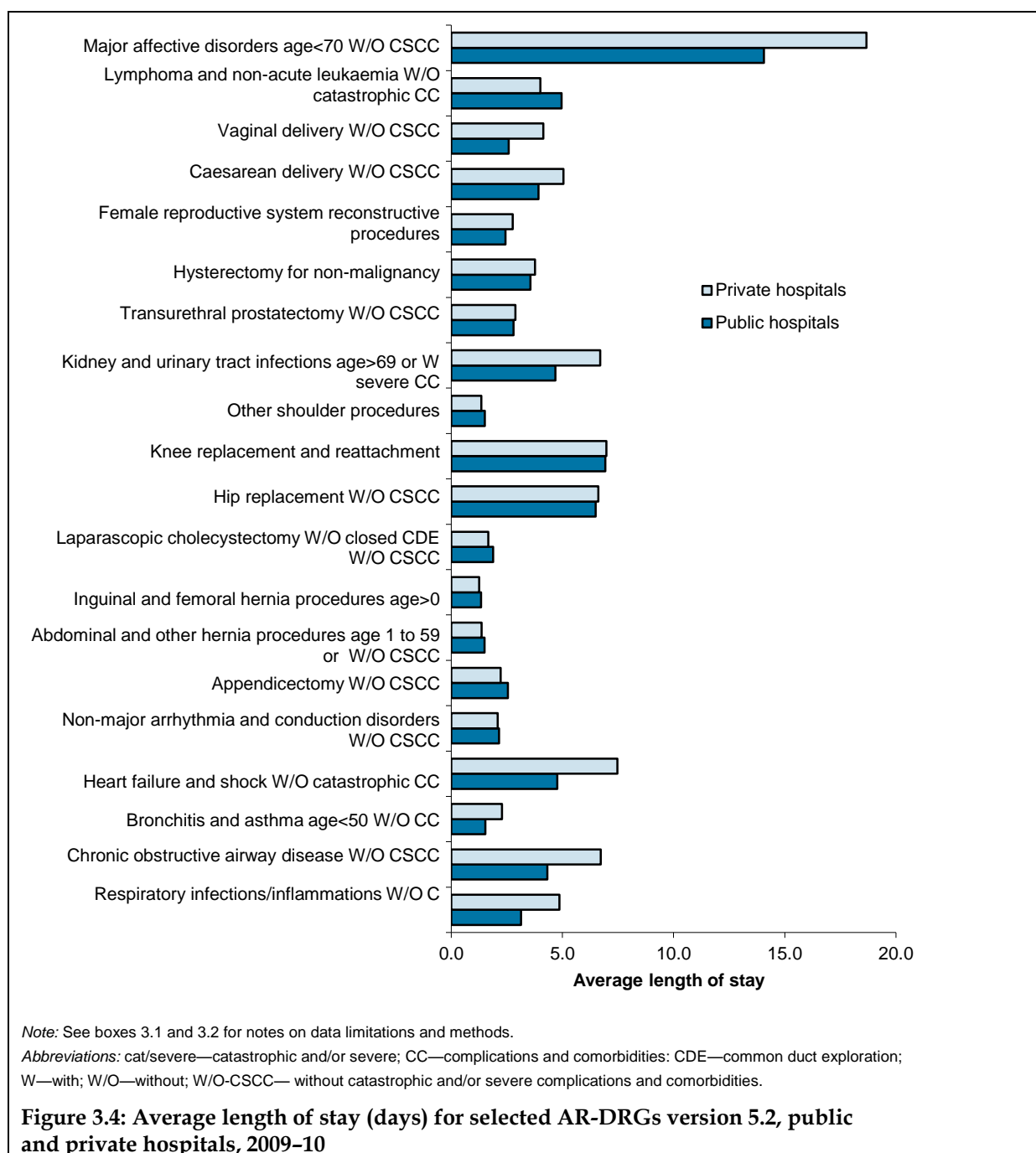
- homogeneity, where variation is more likely to be attributable to the hospital's performance rather than variations in the patients themselves
- representativeness across clinical groups (Major Diagnostic Categories) and surgical and medical AR-DRGs
- differences between jurisdictions and/or sectors
- policy interest as evidenced by:
  - inclusion of similar groups in other tables in *Australian hospital statistics*, such as indicator procedures for elective surgery waiting times
  - high volume and/or cost
  - changes in volume over years.

More information on the basis of selection for the AR-DRGs is included in *Appendix 1*.

Figure 3.5 presents the average length of stay for selected AR-DRGs in public and private hospitals. There were notable differences (more than 1 day) in the average length of stay between public and private hospitals for 7 of the 20 selected AR-DRGs. The average length of stay for U63B *Major affective disorders age <70 without catastrophic or severe complications or comorbidities* was 14.1 days for public hospitals and 18.7 days for private hospitals.

Public hospitals accounted for more than 70% of separations for 8 of the 20 selected AR-DRGs and private hospitals accounted for more than 80% of separations for I16Z *Other shoulder procedures*.

Additional information on the average length of stay for selected AR-DRGs is available by state and territory in the accompanying online material.





## Supplementary tables

### Box 3.4: Notes for Chapter 3 supplementary tables

#### Table S3.1:

- (a) Psychiatric hospitals, Drug and alcohol services, Mothercraft hospitals, Unpeered and other, Hospices, Rehabilitation facilities, Small non-acute hospitals and Multi-purpose services are excluded from this table. The data are based on hospital establishments for which expenditure data were provided, including networks of hospitals in some jurisdictions. Some small hospitals with incomplete expenditure data were not included. See *Appendix 1* for further information.
- (b) These figures should be interpreted in conjunction with the consideration of cost disabilities associated with hospital service delivery in the Northern Territory (see text). Superannuation figures were not available for the Northern Territory.
- (c) Casemix-adjusted separations is the product of total separations and average cost weight. The average cost weight is calculated using the 2008–09 AR-DRG version 5.2 cost weights (DoHA 2010) for separations for which the care type was reported as *Acute, Newborn* (with qualified days) or was *Not reported*.
- (d) Depreciation reported for a subset of South Australian hospitals. For Tasmania, depreciation has not been identified separately for 2 hospitals where services are purchased from the private sector.
- (e) For Tasmania, an award restructure within the Medical category of visting medical officers has resulted in a decrease in expenditure for *Visting Medical Officers* and an increase for *Salaried/Sessional Staff*.
- (f) Estimated private patient medical costs were calculated as the sum of *Salary/sessional* and *Visiting medical officer* payments multiplied by the proportion of patient days that were for private patients. This is a notional estimate of the medical costs for all non-public patients, including those *Self-funded* and those funded by *Private health insurance, Compensation* and the *Department of Veterans' Affairs*.
- (g) Services purchased from the private sector rather than being provided by public hospitals will result in higher medical supplies costs, lower total full time equivalent staff and lower total recurrent expenditure.

#### Table S3.2 to S3.7:

- (a) Casemix-adjusted separations is the product of total separations and average cost weight. The average cost weight is calculated using the 2008–09 AR-DRG version 5.2 cost weights (DoHA 2010) for separations for which the care type was reported as *Acute, Newborn* (with qualified days) or was *Not reported*.

(continued)

**Box 3.4 (continued):**

- (b) Psychiatric hospitals, Drug and alcohol services, Mothercraft hospitals, Unpeered and other, Hospices, Rehabilitation facilities, Small non-acute hospitals and Multi-purpose services are excluded from this table. The data are based on hospital establishments for which expenditure data were provided, including networks of hospitals in some jurisdictions. Some small hospitals with incomplete expenditure data were not included. See *Appendix 1* for further information.
- (c) The number of different version 5.2 AR-DRGs provided by a hospital for which there were at least five acute separations.
- (d) Average cost weight from the National Hospital Morbidity Database, based on separations for which the care type was *Acute*, *Newborn* (with qualified days) or was *Not reported*, using the 2008–09 AR-DRG version 5.2 cost weights (DoHA 2010).
- (e) Indirectly standardised relative stay index calculated as observed divided by expected length of stay modelled on age and AR-DRG version 5.2, for public hospitals using the indirect method. The indirectly standardised relative stay index is not technically comparable between cells but is a comparison of the hospital group with the national average of public hospitals based on the casemix of that group. See *Appendix 1* for details on the methodology.
- (f) Average cost per casemix-adjusted separation excluding depreciation.
- (g) Average cost per casemix-adjusted separation including depreciation. Depreciation reported for a subset of South Australian and Tasmanian hospitals.
- (h) For the Australian Capital Territory, the information presented for RSI, average cost weight and cost per casemix-adjusted separation data are only presented for hospitals reporting admitted patient activity (excludes a mothercraft hospital).

**Table S3.1: Cost per casemix-adjusted separation<sup>(a)</sup> and average cost data for selected public acute hospitals<sup>(a)</sup>, states and territories, 2009–10**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT <sup>(b)</sup>	Total
<b>Non-medical labour costs per casemix-adjusted separation<sup>(c)</sup> (\$)</b>									
Nursing	1,186	1,248	1,293	1,115	1,213	1,307	1,287	1,705	1,229
Diagnostic/allied health	303	383	381	280	239	294	330	369	332
Administrative	295	277	323	367	251	369	347	356	302
Other staff	219	232	330	281	131	281	139	417	243
Superannuation	225	245	315	241	232	324	379	n.a.	251
<i>Total non-medical labour costs</i>	<i>2,226</i>	<i>2,385</i>	<i>2,642</i>	<i>2,285</i>	<i>2,065</i>	<i>2,575</i>	<i>2,482</i>	<i>2,847</i>	<i>2,357</i>
<b>Other recurrent costs per casemix-adjusted separation<sup>(c)</sup> (\$)</b>									
Domestic services	137	107	119	115	89	86	204	127	120
Repairs/maintenance	89	81	97	149	87	68	49	129	94
Medical supplies	480	395	546	309	316	686	419	385	441
Drug supplies	241	265	251	256	227	357	134	239	251
Food supplies	39	46	37	31	29	44	20	45	39
Administration	199	262	279	193	102	250	389	284	227
Other	85	156	23	228	365	162	110	417	136
<i>Total other recurrent costs excluding depreciation</i>	<i>1,270</i>	<i>1,312</i>	<i>1,352</i>	<i>1,281</i>	<i>1,214</i>	<i>1,653</i>	<i>1,325</i>	<i>1,627</i>	<i>1,308</i>
Depreciation <sup>(d)</sup>	156	318	192	120	151	106	157	46	199
<i>Total excluding medical labour costs and depreciation</i>	<i>3,496</i>	<i>3,697</i>	<i>3,994</i>	<i>3,566</i>	<i>3,280</i>	<i>4,228</i>	<i>3,807</i>	<i>4,474</i>	<i>3,665</i>
<b>Medical labour costs per casemix-adjusted separation<sup>(c)</sup> (\$)</b>									
Public patients									
Salaried/sessional staff	559	679	923	835	732	918	754	897	713
Visiting medical officer payments <sup>(e)</sup>	228	71	78	161	185	3	245	94	144
Private patients (estimated) <sup>(f)</sup>	274	143	98	167	177	220	184	52	185
<i>Total medical labour costs</i>	<i>1,061</i>	<i>894</i>	<i>1,099</i>	<i>1,163</i>	<i>1,094</i>	<i>1,141</i>	<i>1,182</i>	<i>1,043</i>	<i>1,041</i>
<b>Total cost per casemix-adjusted separation excluding depreciation</b>	<b>4,557</b>	<b>4,591</b>	<b>5,093</b>	<b>4,728</b>	<b>4,374</b>	<b>5,369</b>	<b>4,989</b>	<b>5,517</b>	<b>4,706</b>
<b>Total cost per casemix-adjusted separation including depreciation</b>	<b>4,713</b>	<b>4,909</b>	<b>5,285</b>	<b>4,848</b>	<b>4,525</b>	<b>5,474</b>	<b>5,147</b>	<b>5,563</b>	<b>4,905</b>

*Note:* See boxes 3.1 to 3.4 for notes on limitations of the data and methods.

*Abbreviation:* n.a.—not available.

**Table S3.2: Cost per casemix-adjusted separation<sup>(a)</sup> and other statistics, acute, non-acute and total selected public hospitals, states and territories, 2009–10**

	Number of hospitals <sup>(b)</sup>	Separations per hospital	AR-DRGs (5+) per hospital <sup>(c)</sup>	Average cost weight <sup>(d)</sup>	Relative stay index <sup>(e)</sup>	Cost/casemix-adjusted sep excl dep <sup>(f)</sup>	Cost/casemix-adjusted sep inc dep <sup>(g)</sup>
<b>Total benchmarking hospitals in cost per casemix-adjusted separation analysis<sup>(b)</sup></b>							
NSW	129	11,506	219	1.06	1.07	4,557	4,713
Vic	67	20,460	176	0.98	0.93	4,591	4,909
Qld	73	12,234	214	1.01	0.95	5,093	5,285
WA	35	13,900	225	0.95	1.01	4,728	4,848
SA	38	9,540	241	1.09	1.03	4,374	4,525
Tas	9	10,997	249	1.05	1.08	5,369	5,474
ACT	2	44,178	441	1.01	0.92	4,989	5,147
NT	5	19,939	262	0.69	1.17	5,517	5,563
<i>Total</i>	<i>358</i>	<i>13,643</i>	<i>192</i>	<i>1.01</i>	<i>1.00</i>	<i>4,706</i>	<i>4,905</i>
<b>Non-acute hospitals in cost per casemix-adjusted separation analysis</b>							
NSW	56	677	21	0.91	1.00	9,592	9,908
Vic	13	959	16	0.81	1.39	4,870	5,597
Qld	28	896	36	0.81	0.88	4,730	4,958
WA	47	337	12	1.08	1.03	7,326	7,597
SA	21	592	22	0.77	1.10	10,411	10,772
Tas	2	419	18	0.84	2.04	6,979	7,247
ACT	0	..	..	..	..	..	..
NT	0	..	..	..	..	..	..
<i>Total</i>	<i>170</i>	<i>616</i>	<i>17</i>	<i>0.87</i>	<i>1.04</i>	<i>7,716</i>	<i>8,068</i>
<b>Public hospitals (including Psychiatric and unpeered) in cost per casemix-adjusted separation analysis</b>							
NSW	226	6,846	134	1.07	1.07	4,718	4,879
Vic	95	14,742	113	0.98	0.93	4,682	5,009
Qld	170	5,429	150	1.00	0.95	5,159	5,358
WA	95	5,325	153	0.96	1.01	5,017	5,146
SA	80	4,788	165	1.08	1.04	4,716	4,875
Tas	24	4,236	170	1.05	1.12	5,455	5,565
ACT <sup>(h)</sup>	2	44,178	441	1.01	0.92	4,989	5,147
NT	5	19,939	262	0.69	1.17	5,517	5,563
<i>Total</i>	<i>698</i>	<i>7,234</i>	<i>124</i>	<i>1.01</i>	<i>1.00</i>	<i>4,853</i>	<i>5,058</i>

*Note:* See boxes 3.1 to 3.4 for notes on limitations of the data and methods.

*Abbreviations:* ..—not applicable; n.a.—not available.

**Table S3.3: Principal referral and specialist women's & children's hospitals – cost per casemix-adjusted separation<sup>(a)</sup> and selected other statistics, 2009–10**

	Number of hospitals <sup>(b)</sup>	Separations per hospital	AR-DRGs (5+) per hospital <sup>(c)</sup>	Average cost weight <sup>(d)</sup>	Relative stay index <sup>(e)</sup>	Cost/casemix-adjusted sep excl dep <sup>(f)</sup>	Cost/casemix-adjusted sep inc dep <sup>(g)</sup>
<b>Principal referral hospitals: Major cities and regional</b>							
NSW	27	37,631	440	1.10	1.09	4,526	4,677
Vic	18	58,535	394	1.00	0.91	4,589	4,888
Qld	16	42,355	384	1.05	0.98	5,060	5,236
WA	5	53,561	438	1.02	1.04	4,514	4,615
SA	4	51,964	503	1.19	1.06	4,398	4,570
Tas	2	39,705	489	1.04	1.05	5,148	5,269
ACT	1	70,319	556	0.99	n.p.	n.p.	n.p.
NT	2	41,872	415	0.73	1.20	5,458	5,502
<i>Total</i>	<i>75</i>	<i>46,086</i>	<i>389</i>	<i>1.05</i>	<i>1.00</i>	<i>4,681</i>	<i>4,874</i>
<b>Specialist women's and children's hospitals</b>							
NSW	3	18,567	238	1.26	1.11	5,310	5,529
Vic	2	28,193	240	1.33	0.98	5,384	5,847
Qld	3	15,277	204	1.21	0.96	7,248	7,537
WA	2	19,402	203	1.30	1.06	4,814	4,917
SA	1	30,263	324	1.13	n.p.	n.p.	n.p.
Tas	0	..	..	..	..	..	..
ACT	0	..	..	..	..	..	..
NT	0	..	..	..	..	..	..
<i>Total</i>	<i>11</i>	<i>20,635</i>	<i>230</i>	<i>1.26</i>	<i>1.05</i>	<i>5,616</i>	<i>5,865</i>
<b>Total Principal referral and specialist women's and children's hospitals</b>							
NSW	30	35,725	426	1.11	1.09	4,565	4,720
Vic	20	55,500	329	1.02	0.91	4,637	4,946
Qld	19	38,080	392	1.06	0.98	5,216	5,399
WA	7	43,801	383	1.06	1.04	4,560	4,661
SA	5	47,623	467	1.18	1.08	4,510	4,667
Tas	2	39,705	489	1.04	1.05	5,148	5,269
ACT	1	70,319	556	0.99	n.p.	n.p.	n.p.
NT	2	41,872	415	0.73	1.20	5,458	5,502
<b>Total</b>	<b>86</b>	<b>42,831</b>	<b>368</b>	<b>1.06</b>	<b>1.01</b>	<b>4,746</b>	<b>4,943</b>

*Note:* See boxes 3.1 to 3.4 for notes on limitations of the data and methods.

**Table S3.4: Large hospitals – cost per casemix-adjusted separation<sup>(a)</sup> and selected other statistics, 2009–10**

	Number of hospitals <sup>(b)</sup>	Separations per hospital	AR-DRGs (5+) per hospital <sup>(c)</sup>	Average cost weight <sup>(d)</sup>	Relative stay index <sup>(e)</sup>	Cost/casemix-adjusted sep excl dep <sup>(f)</sup>	Cost/casemix-adjusted sep inc dep <sup>(g)</sup>
<b>Large hospitals: Major cities</b>							
NSW	12	13,745	253	1.07	1.00	4,286	4,418
Vic	2	17,012	115	0.90	0.92	4,705	5,115
Qld	2	21,621	290	0.84	0.86	3,261	3,405
WA	2	21,719	300	0.77	0.91	4,365	4,447
SA	2	16,719	288	1.19	0.96	4,245	4,390
Tas	0	..	..	..	..	..	..
ACT	1	18,037	326	1.10	n.p.	n.p.	n.p.
NT	0	..	..	..	..	..	..
<i>Total</i>	<i>21</i>	<i>16,053</i>	<i>261</i>	<i>0.99</i>	<i>0.97</i>	<i>4,244</i>	<i>4,406</i>
<b>Large hospitals: Regional and Remote</b>							
NSW	4	10,432	245	0.83	0.91	4,520	4,671
Vic	8	14,433	256	0.88	0.95	4,153	4,375
Qld	2	13,088	259	0.79	0.90	4,638	4,774
WA	2	15,643	249	0.68	0.99	4,252	4,374
SA	0	..	..	..	..	..	..
Tas	1	8,663	263	1.31	n.p.	n.p.	n.p.
ACT	0	..	..	..	..	..	..
NT	0	..	..	..	..	..	..
<i>Total</i>	<i>17</i>	<i>13,136</i>	<i>241</i>	<i>0.85</i>	<i>0.95</i>	<i>4,417</i>	<i>4,593</i>
<b>Total Large hospitals</b>							
NSW	16	12,917	271	1.02	0.99	4,328	4,464
Vic	10	14,948	221	0.89	0.95	4,243	4,520
Qld	4	17,354	274	0.82	0.87	3,751	3,895
WA	4	18,681	274	0.73	0.94	4,322	4,420
SA	2	16,719	288	1.19	0.96	4,245	4,390
Tas	1	8,663	263	1.31	n.p.	n.p.	n.p.
ACT	1	18,037	326	1.10	n.p.	n.p.	n.p.
NT	0	..	..	..	..	..	..
<b>Total</b>	<b>38</b>	<b>14,748</b>	<b>245</b>	<b>0.94</b>	<b>0.96</b>	<b>4,310</b>	<b>4,478</b>

Note: See boxes 3.1 to 3.4 for notes on limitations of the data and methods.

**Table S3.5: Medium hospitals – cost per casemix-adjusted separation<sup>(a)</sup> and selected other statistics, states and territories, 2009–10**

	Number of hospitals <sup>(b)</sup>	Separations per hospital	AR-DRGs (5+) per hospital <sup>(c)</sup>	Average cost weight <sup>(d)</sup>	Relative stay index <sup>(e)</sup>	Cost/casemix-adjusted sep excl dep <sup>(f)</sup>	Cost/casemix-adjusted sep inc dep <sup>(g)</sup>
<b>Medium hospitals: Major cities (&lt;10,000) and Regional (&lt;8,000)</b>							
NSW	9	8,208	201	0.85	0.96	4,160	4,302
Vic	4	8,916	203	0.70	0.95	4,247	4,665
Qld	3	9,735	207	0.66	0.61	3,800	3,960
WA	6	10,822	178	0.79	0.95	5,324	5,475
SA	4	9,529	215	0.79	0.90	4,073	4,200
Tas	1	8,495	222	0.84	n.p.	n.p.	n.p.
ACT	0	..	..	..	..	..	..
NT	0	..	..	..	..	..	..
<i>Total</i>	<i>27</i>	<i>9,270</i>	<i>204</i>	<i>0.78</i>	<i>0.91</i>	<i>4,518</i>	<i>4,697</i>
<b>Medium hospitals: Major cities and Regional (&lt;5,000 acute weighted separations)</b>							
NSW	24	3,306	76	0.90	1.10	5,074	5,248
Vic	13	4,175	102	0.70	1.03	4,178	4,535
Qld	9	3,799	127	0.79	0.86	5,315	5,573
WA	2	3,620	123	0.80	0.84	5,057	5,254
SA	9	3,579	129	0.86	0.87	3,752	3,877
Tas	0	..	..	..	..	..	..
ACT	0	..	..	..	..	..	..
NT	0	..	..	..	..	..	..
<i>Total</i>	<i>57</i>	<i>3,636</i>	<i>99</i>	<i>0.82</i>	<i>1.00</i>	<i>4,681</i>	<i>4,913</i>
<b>Total Medium hospitals</b>							
NSW	33	4,643	133	0.88	1.04	4,651	4,810
Vic	17	5,291	136	0.70	1.00	4,199	4,575
Qld	12	5,283	147	0.73	0.76	4,681	4,898
WA	8	9,021	164	0.79	0.93	5,297	5,453
SA	13	5,410	156	0.83	0.88	3,921	4,048
Tas	1	8,495	222	0.84	n.p.	n.p.	n.p.
ACT	0	..	..	..	..	..	..
NT	0	..	..	..	..	..	..
<b>Total</b>	<b>84</b>	<b>5,447</b>	<b>142</b>	<b>0.80</b>	<b>0.96</b>	<b>4,600</b>	<b>4,806</b>

*Note:* See boxes 3.1 to 3.4 for notes on limitations of the data and methods.

**Table S3.6: Small hospitals – cost per casemix-adjusted separation<sup>(a)</sup> and selected other statistics, 2009–10**

	Number of hospitals <sup>(b)</sup>	Separations per hospital	AR-DRGs (5+) per hospital <sup>(c)</sup>	Average cost weight <sup>(d)</sup>	Relative stay index <sup>(e)</sup>	Cost/casemix-adjusted sep excl dep <sup>(f)</sup>	Cost/casemix-adjusted sep inc dep <sup>(g)</sup>
<b>Small regional acute hospitals</b>							
NSW	46	1,077	47	0.80	1.04	5,058	5,302
Vic	20	1,070	36	0.75	1.28	5,578	6,460
Qld	24	1,101	52	0.76	0.93	4,339	4,729
WA	4	1,604	71	0.78	1.12	6,108	6,483
SA	13	1,040	51	0.83	1.00	3,716	3,862
Tas	5	480	22	0.87	1.70	4,507	4,615
ACT	0	..	..	..	..	..	..
NT	0	..	..	..	..	..	..
<i>Total</i>	<i>112</i>	<i>1,069</i>	<i>37</i>	<i>0.78</i>	<i>1.07</i>	<i>4,884</i>	<i>5,266</i>
<b>Remote acute hospitals</b>							
NSW	4	793	34	0.66	0.97	7,700	8,207
Vic	0	..	..	..	..	..	..
Qld	14	738	48	0.77	1.03	7,154	7,658
WA	12	2,217	81	0.77	0.87	6,660	6,990
SA	5	1,426	55	0.82	0.91	3,445	3,627
Tas	0	..	..	..	..	..	..
ACT	0	..	..	..	..	..	..
NT	3	5,317	110	0.51	0.96	5,944	6,009
<i>Total</i>	<i>38</i>	<i>1,663</i>	<i>60</i>	<i>0.70</i>	<i>0.93</i>	<i>6,259</i>	<i>6,574</i>
<b>Total Small acute hospitals</b>							
NSW	50	1,054	46	0.79	1.04	5,194	5,452
Vic	20	1,070	36	0.75	1.28	5,578	6,460
Qld	38	967	45	0.76	0.96	5,131	5,547
WA	16	2,063	79	0.77	0.92	6,570	6,906
SA	18	1,147	52	0.82	0.97	3,624	3,784
Tas	5	480	22	0.87	1.70	4,507	4,615
ACT	0	..	..	..	..	..	..
NT	3	5,317	110	0.51	0.96	5,944	6,009
<b>Total</b>	<b>150</b>	<b>1,219</b>	<b>39</b>	<b>0.76</b>	<b>1.03</b>	<b>5,357</b>	<b>5,712</b>

*Note:* See boxes 3.1 to 3.4 for notes on limitations of the data and methods.



**Table S3.7: Teaching hospitals – cost per casemix-adjusted separation<sup>(a)</sup> and selected other statistics, states and territories, 2009–10**

	Number of hospitals <sup>(b)</sup>	Separations per hospital	AR-DRGs (5+) per hospital <sup>(c)</sup>	Average cost weight <sup>(d)</sup>	Relative stay index <sup>(e)</sup>	Cost/casemix -adjusted sep excl dep <sup>(f)</sup>	Cost/casemix -adjusted sep incl dep <sup>(g)</sup>
NSW	20	41,156	429	1.15	1.10	4,561	4,723
Vic	5	28,215	239	1.18	0.97	5,154	5,491
Qld	22	32,956	365	1.07	0.97	5,224	5,411
WA	6	43,824	339	1.09	1.07	4,686	4,787
SA	9	31,242	363	1.18	1.05	4,489	4,643
Tas	3	29,358	413	1.07	1.06	5,297	5,406
ACT	2	44,178	441	1.01	0.92	4,989	5,147
NT	2	41,872	415	0.73	1.20	5,458	5,502
<b>Total</b>	<b>69</b>	<b>36,138</b>	<b>378</b>	<b>1.10</b>	<b>1.04</b>	<b>4,847</b>	<b>5,014</b>

Note: See boxes 3.1 to 3.4 for notes on limitations of the data and methods.

### Box 3.5: Notes for Chapter 3 supplementary table S3.8

#### Table S3.8:

- (a) *Public patients* includes separations for Medicare eligible patients who elected to be treated as a public patient and separations with a funding source of *Reciprocal health care agreements, Other hospital or public authority* (with a public patient election status) and *No charge raised* (in public hospitals).
- (b) Tasmania was unable to identify all patients whose funding source may have been *Self-funded*, therefore the number of separations in this category may be underestimated and others may be overestimated.
- (c) *Other* includes separations with a funding source of *Other compensation, Department of Defence, Correctional facilities, Other hospital or public authority* (without a public patient election status), *Other, No charge raised* (in private hospitals) and *Not reported*.

**Table S3.8: Relative stay index (directly standardised), by funding source, public and private hospitals, states and territories, 2009–10**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
<b>Public hospitals</b>									
Public patients <sup>(a)</sup>	1.02	0.92	0.94	0.98	1.00	1.04	0.94	1.15	0.97
Private health insurance	1.08	0.96	1.04	1.09	1.08	1.03	0.95	1.01	1.05
Self-funded <sup>(b)</sup>	1.04	0.90	0.91	1.00	0.88	0.00	0.99	1.23	0.99
Workers compensation	1.15	1.01	1.11	1.15	1.14	0.97	0.93	1.35	1.10
Motor vehicle third party personal claim	1.18	0.88	1.22	1.14	1.28	1.08	0.81	1.34	1.08
Department of Veterans' Affairs	1.00	0.93	0.92	0.93	1.02	1.11	0.77	1.40	0.97
Other <sup>(c)</sup>	1.53	1.07	1.12	1.11	1.09	0.94	1.04	1.45	1.25
<b>Total</b>	<b>1.04</b>	<b>0.92</b>	<b>0.94</b>	<b>1.00</b>	<b>1.01</b>	<b>1.04</b>	<b>0.93</b>	<b>1.16</b>	<b>0.99</b>
<b>Private hospitals</b>									
Public patients <sup>(a)</sup>	0.96	0.76	0.00	0.00	1.18	n.p.	n.p.	n.p.	1.15
Private health insurance	1.03	1.04	1.05	1.03	0.97	n.p.	n.p.	n.p.	1.03
Self-funded <sup>(b)</sup>	0.91	0.92	0.83	0.85	0.80	n.p.	n.p.	n.p.	0.89
Workers compensation	0.94	1.02	0.94	0.91	0.93	n.p.	n.p.	n.p.	0.96
Motor vehicle third party personal claim	0.84	1.01	0.79	0.97	1.29	n.p.	n.p.	n.p.	1.00
Department of Veterans' Affairs	1.18	1.06	1.21	1.26	1.01	n.p.	n.p.	n.p.	1.16
Other <sup>(c)</sup>	0.88	0.98	0.86	1.11	1.21	n.p.	n.p.	n.p.	0.96
<b>Total</b>	<b>1.03</b>	<b>1.04</b>	<b>1.05</b>	<b>1.04</b>	<b>0.97</b>	<b>n.p.</b>	<b>n.p.</b>	<b>n.p.</b>	<b>1.03</b>
<b>All hospitals</b>									
Public patients <sup>(a)</sup>	1.02	0.92	0.94	0.98	1.00	n.p.	n.p.	n.p.	0.97
Private health insurance	1.05	1.03	1.05	1.04	0.99	n.p.	n.p.	n.p.	1.04
Self-funded <sup>(b)</sup>	0.96	0.92	0.85	0.86	0.82	n.p.	n.p.	n.p.	0.91
Workers compensation	1.01	1.01	1.00	0.98	0.99	n.p.	n.p.	n.p.	1.01
Motor vehicle third party personal claim	1.17	0.90	1.22	1.13	1.28	n.p.	n.p.	n.p.	1.07
Department of Veterans' Affairs	1.06	1.00	1.15	1.13	1.02	n.p.	n.p.	n.p.	1.07
Other <sup>(c)</sup>	1.38	1.05	0.93	1.11	1.14	n.p.	n.p.	n.p.	1.11
<b>Total</b>	<b>1.04</b>	<b>0.96</b>	<b>0.99</b>	<b>1.01</b>	<b>1.00</b>	<b>n.p.</b>	<b>n.p.</b>	<b>n.p.</b>	<b>1.00</b>

*Note:* See Box 3.5.

*Abbreviation:* n.p.—not published.

**Table S3.9: Separation statistics for selected hospital procedures<sup>(a)</sup>, all hospitals, states and territories, 2009–10**

<b>Procedure</b>	<b>NSW</b>	<b>Vic</b>	<b>Qld</b>	<b>WA</b>	<b>SA</b>	<b>Tas</b>	<b>ACT</b>	<b>NT</b>	<b>Total</b>
<b>Cataract extraction</b>									
Separations	70,076	48,960	41,131	21,101	15,551	5,864	2,027	914	205,624
Separations not within state of residence (%)	2	2	2	<1	3	25	20	1	3
Proportion of separations public patients <sup>(b)</sup> (%)	98	98	98	100	97	75	80	99	97
Separation rate <sup>(c)</sup>	8.9	8.3	9.4	9.8	7.7	9.6	6.9	8.1	8.8
Standardised separation rate ratio (SRR)	1.0	0.9	1.1	1.1	0.9	1.1	0.8	0.9	
<b>Cholecystectomy</b>									
Separations	15,604	12,790	10,405	4,677	4,043	1,219	790	365	49,893
Separations not within state of residence (%)	2	2	2	1	2	1	20	8	2
Proportion of separations public patients (%)	60	62	51	54	60	60	50	71	58
Separation rate <sup>(c)</sup>	2.1	2.3	2.3	2.1	2.3	2.3	2.3	1.8	2.2
Standardised separation rate ratio (SRR)	1.0	1.0	1.1	0.9	1.1	1.1	1.0	0.8	
<b>Coronary angioplasty</b>									
Separations	11,754	9,554	6,498	3,286	2,876	850	1,033	..	35,851
Separations not within state of residence (%)	2	3	10	1	10	1	43	..	5
Proportion of separations public patients (%)	47	45	44	45	53	54	48	..	46
Separation rate <sup>(c)</sup>	1.5	1.6	1.4	1.4	1.5	1.4	3.2	..	1.5
Standardised separation rate ratio (SRR)	1.0	1.1	0.9	0.9	1.0	0.9	2.1	..	
<b>Coronary artery bypass graft</b>									
Separations	3,888	3,465	2,826	624	1,083	277	212	..	12,375
Separations not within state of residence (%)	4	4	7	1	12	<1	47	..	6
Proportion of separations public patients (%)	51	51	50	54	48	52	61	..	51
Separation rate <sup>(c)</sup>	0.5	0.6	0.6	0.3	0.6	0.5	0.7	..	0.5
Standardised separation rate ratio (SRR)	0.9	1.1	1.2	0.5	1.1	0.9	1.3	..	

(continued)

**Table S3.9 (continued): Separation statistics for selected hospital procedures<sup>(a)</sup>, all hospitals, states and territories, 2009–10**

Procedure	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
<b>Cystoscopy</b>									
Separations	30,410	30,442	23,019	15,095	10,287	3,299	1,539	476	114,567
Separations not within state of residence (%)	2	2	4	<1	2	<1	28	3	2
Proportion of separations public patients (%)	36	47	32	40	40	30	37	48	39
Separation rate <sup>(c)</sup>	3.9	5.2	5.1	6.8	5.4	5.5	4.8	3.1	4.9
Standardised separation rate ratio (SRR)	0.8	1.1	1.0	1.4	1.1	1.1	1.0	0.6	
<b>Haemorrhoidectomy</b>									
Separations	19,036	8,456	6,333	2,524	2,296	1,074	391	438	40,548
Separations not within state of residence (%)	1	2	1	<1	1	<1	11	1	1
Proportion of separations public patients (%)	28	41	22	42	28	38	28	30	31
Separation rate <sup>(c)</sup>	2.6	1.5	1.4	1.1	1.3	2.0	1.1	2.2	1.8
Standardised separation rate ratio (SRR)	1.4	0.8	0.8	0.6	0.7	1.1	0.6	1.2	
<b>Hip replacement</b>									
Separations	10,588	9,190	5,627	3,537	3,092	1,120	711	65	33,930
Separations not within state of residence (%)	2	3	5	<1	3	<1	34	3	3
Proportion of separations public patients (%)	39	39	36	38	35	36	43	65	38
Separation rate <sup>(c)</sup>	1.3	1.5	1.2	1.6	1.5	1.8	2.3	0.5	1.4
Standardised separation rate ratio (SRR)	0.9	1.1	0.9	1.1	1.1	1.3	1.6	0.4	
<b>Hysterectomy, females aged 15–69</b>									
Separations	8,186	6,081	5,747	2,843	2,332	711	434	187	26,521
Separations not within state of residence (%)	2	2	3	<1	2	1	24	1	2
Proportion of separations public patients (%)	39	50	35	35	43	43	31	42	41
Separation rate <sup>(c)</sup>	2.3	2.2	2.6	2.5	2.8	2.7	2.4	1.8	2.4
Standardised separation rate ratio (SRR)	1.0	0.9	1.1	1.1	1.2	1.2	1.0	0.7	

(continued)

**Table S3.9 (continued): Separation statistics for selected hospital procedures<sup>(a)</sup>, all hospitals, states and territories, 2009–10**

<b>Procedure</b>	<b>NSW</b>	<b>Vic</b>	<b>Qld</b>	<b>WA</b>	<b>SA</b>	<b>Tas</b>	<b>ACT</b>	<b>NT</b>	<b>Total<sup>(c)</sup></b>
<b>Inguinal herniorrhaphy</b>									
Separations	15,979	12,616	10,239	5,051	3,665	1,335	769	382	50,036
Separations not within state of residence (%)	2	2	2	<1	1	<1	22	3	2
Proportion of separations public patients (%)	39	43	35	40	43	42	38	43	40
Separation rate <sup>(c)</sup>	2.1	2.2	2.3	2.2	2.1	2.4	2.3	2.1	2.2
Standardised separation rate ratio (SRR)	1.0	1.0	1.0	1.0	0.9	1.1	1.0	1.0	
<b>Knee replacement</b>									
Separations	13,749	8,847	8,262	3,981	3,657	960	809	73	40,338
Separations not within state of residence (%)	1	3	6	<1	6	<1	36	4	4
Proportion of separations public patients (%)	35	34	27	32	28	32	25	49	32
Separation rate <sup>(c)</sup>	1.7	1.5	1.8	1.8	1.9	1.5	2.5	0.5	1.7
Standardised separation rate ratio (SRR)	1.0	0.9	1.1	1.0	1.1	0.9	1.5	0.3	
<b>Myringotomy (with insertion of tube)</b>									
Separations	9,537	9,084	6,531	4,302	4,718	676	836	281	35,965
Separations not within state of residence (%)	2	2	3	<1	1	10	24	1	3
Proportion of separations public patients (%)	30	39	27	35	34	39	26	70	33
Separation rate <sup>(c)</sup>	1.4	1.8	1.5	2.0	3.2	1.4	2.5	1.1	1.7
Standardised separation rate ratio (SRR)	0.8	1.0	0.9	1.2	1.9	0.8	1.5	0.6	
<b>Prostatectomy</b>									
Separations	10,612	9,591	5,904	2,767	2,573	871	508	93	32,919
Separations not within state of residence (%)	3	2	6	<1	2	<1	36	2	3
Proportion of separations public patients (%)	32	33	25	30	33	26	20	54	31
Separation rate <sup>(c)</sup>	2.9	3.5	2.7	2.5	2.8	3.0	3.4	1.7	2.9
Standardised separation rate ratio (SRR)	1.0	1.2	0.9	0.9	1.0	1.0	1.2	0.6	

(continued)

**Table S3.9 (continued): Separation statistics for selected hospital procedures<sup>(a)</sup>, all hospitals, states and territories, 2009–10**

Procedure	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
<b>Septoplasty</b>									
Separations	7,503	7,771	4,095	2,057	2,346	246	445	100	24,563
Separations not within state of residence (%)	3	2	4	<1	2	<1	27	<1	3
Proportion of separations public patients (%)	22	33	17	28	31	23	32	31	26
Separation rate <sup>(c)</sup>	1.0	1.4	0.9	0.9	1.4	0.5	1.2	0.4	1.1
Standardised separation rate ratio (SRR)	0.9	1.3	0.8	0.8	1.3	0.4	1.1	0.4	
<b>Tonsillectomy</b>									
Separations	13,873	11,618	9,663	5,328	4,218	855	1,040	249	46,844
Separations not within state of residence (%)	2	3	3	<1	1	<1	28	1	3
Proportion of separations public patients (%)	36	50	29	38	40	40	27	59	38
Separation rate <sup>(c)</sup>	2.1	2.3	2.2	2.4	2.9	1.8	3.0	1.0	2.2
Standardised separation rate ratio (SRR)	0.9	1.0	1.0	1.1	1.3	0.8	1.4	0.4	
<b>Varicose veins, stripping and ligation</b>									
Separations	3,993	4,608	2,422	1,185	1,209	386	343	82	14,228
Separations not within state of residence (%)	1	1	3	<1	1	<1	26	<1	2
Proportion of separations public patients (%)	32	43	26	20	42	22	28	40	34
Separation rate <sup>(c)</sup>	0.5	0.8	0.5	0.5	0.7	0.7	1.0	0.4	0.6

(a) The procedures are defined using ACHI codes as detailed in *Appendix 1*.

(b) Ophthalmological services purchased from the private sector rather than being provided by public hospitals will result in a understating of Cataract extraction separation rates in the public sector.

(c) Separations per 1,000 population was directly age-standardised as detailed in *Appendix 1*.

Abbreviation: . . —not applicable.

Table S3.10: Average length of stay (days)<sup>(a)</sup> for selected AR-DRGs version 5.2, public and private hospitals, states and territories, 2009–10

AR-DRG	Hospital sector	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
<b>E62C</b>	<b>Respiratory infections/inflammations W/O CC</b>									
ALOS (days)	Public	3.5	2.7	2.7	3.1	3.2	4.2	3.2	3.5	3.1
	Private	5.0	5.2	4.6	4.4	4.6	n.p.	n.p.	n.p.	4.9
	<i>Total</i>	3.6	3.2	3.1	3.2	3.5	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	3.4
Separations	Public	9,912	6,651	5,299	3,005	2,470	648	394	600	28,979
	Private	612	1,478	1,473	363	483	n.p.	n.p.	n.p.	4,547
	<i>Total</i>	10,524	8,129	6,772	3,368	2,953	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	33,526
<b>E65B</b>	<b>Chronic obstructive airway disease W/O catastrophic or severe CC</b>									
ALOS (days)	Public	4.7	3.8	4.1	4.4	4.1	5.4	4.3	4.2	4.3
	Private	7.0	6.8	6.8	7.1	5.5	n.p.	n.p.	n.p.	6.7
	<i>Total</i>	4.9	4.3	4.7	4.8	4.3	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	4.7
Separations	Public	10,026	5,716	5,462	2,273	2,470	833	266	561	27,607
	Private	676	1,307	1,690	392	475	n.p.	n.p.	n.p.	4,674
	<i>Total</i>	10,702	7,023	7,152	2,665	2,945	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	32,281
<b>E69C</b>	<b>Bronchitis and asthma age&lt;50 W/O CC</b>									
ALOS (days)	Public	1.6	1.4	1.4	1.6	1.7	1.7	1.7	1.9	1.5
	Private	2.5	2.6	2.0	2.2	3.3	n.p.	n.p.	n.p.	2.3
	<i>Total</i>	1.6	1.4	1.5	1.7	1.7	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	1.6
Separations	Public	10,582	7,377	5,377	2,120	2,850	464	295	308	29,373
	Private	127	251	646	97	86	n.p.	n.p.	n.p.	1,224
	<i>Total</i>	10,709	7,628	6,023	2,217	2,936	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	30,597

(continued)

**Table S3.10 (continued): Average length of stay (days)<sup>(a)</sup> for selected AR-DRGs version 5.2, public and private hospitals, states and territories, 2009–10**

AR-DRG	Hospital sector	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
<b>F62B</b>	<b>Heart failure and shock W/O catastrophic CC</b>									
ALOS (days)	Public	5.3	4.0	4.5	4.5	5.3	5.7	5.4	4.8	4.8
	Private	8.3	7.2	7.5	7.1	7.1	n.p.	n.p.	n.p.	7.5
	<i>Total</i>	5.6	4.8	5.5	4.9	5.7	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	5.3
Separations	Public	8,103	5,883	4,026	2,226	1,984	555	306	277	23,360
	Private	953	2,007	1,800	473	587	n.p.	n.p.	n.p.	6,040
	<i>Total</i>	9,056	7,890	5,826	2,699	2,571	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	29,400
<b>F71B</b>	<b>Non-major arrhythmia and conduction disorders W/O catastrophic or severe CC</b>									
ALOS (days)	Public	2.5	1.9	2.0	1.8	2.2	2.2	2.4	2.2	2.2
	Private	2.0	2.2	2.3	1.6	2.0	n.p.	n.p.	n.p.	2.1
	<i>Total</i>	2.4	2.0	2.1	1.7	2.1	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	2.1
Separations	Public	11,661	8,371	5,903	2,768	2,994	762	572	292	33,323
	Private	2,206	3,284	3,671	1,478	1,410	n.p.	n.p.	n.p.	12,500
	<i>Total</i>	13,867	11,655	9,574	4,246	4,404	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	45,823
<b>G07B</b>	<b>Appendicectomy W/O Catastrophic or Severe CC</b>									
ALOS (days)	Public	2.7	2.5	2.3	2.4	2.6	2.4	2.6	2.7	2.5
	Private	2.3	2.3	2.0	2.4	2.5	n.p.	n.p.	2.6	2.2
	<i>Total</i>	2.7	2.5	2.2	2.4	2.6	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	2.5
Separations	Public	6,996	4,939	3,786	2,427	1,335	407	490	197	20,577
	Private	766	1,112	1,959	629	382	n.p.	n.p.	n.p.	5,052
	<i>Total</i>	7,762	6,051	5,745	3,056	1,717	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	25,629

(continued)



Table S3.10 (continued): Average length of stay (days)<sup>(a)</sup> for selected AR-DRGs version 5.2, public and private hospitals, states and territories, 2009–10

AR-DRG	Hospital sector	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
<b>G08B</b>	<b>Abdominal and other hernia procedures age 1 to 59 or W catastrophic or severe CC</b>									
ALOS (days)	Public	1.5	1.5	1.4	1.5	1.7	1.4	1.5	1.7	1.5
	Private	1.4	1.4	1.2	1.5	1.6	n.p.	n.p.	n.p.	1.4
	<i>Total</i>	1.4	1.4	1.3	1.5	1.7	n.p.	n.p.	n.p.	1.4
Separations	Public	2,308	2,187	1,565	820	649	218	101	88	7,936
	Private	2,422	1,763	2,039	924	550	n.p.	n.p.	n.p.	8,060
	<i>Total</i>	4,730	3,950	3,604	1,744	1,199	n.p.	n.p.	n.p.	15,996
<b>G09Z</b>	<b>Inguinal and femoral hernia procedures age&gt;0</b>									
ALOS (days)	Public	1.3	1.4	1.3	1.2	1.4	1.2	1.3	1.5	1.3
	Private	1.3	1.3	1.2	1.3	1.3	n.p.	n.p.	n.p.	1.3
	<i>Total</i>	1.3	1.3	1.2	1.3	1.3	n.p.	n.p.	n.p.	1.3
Separations	Public	5,360	4,681	3,015	1,740	1,367	440	193	136	16,932
	Private	7,305	5,417	5,212	2,324	1,594	n.p.	n.p.	n.p.	23,090
	<i>Total</i>	12,665	10,098	8,227	4,064	2,961	n.p.	n.p.	n.p.	40,022
<b>H08B</b>	<b>Laparoscopic cholecystectomy W/O closed CDE W/O catastrophic or severe CC</b>									
ALOS (days)	Public	1.9	1.9	1.8	1.9	1.9	1.6	2.0	2.2	1.9
	Private	1.5	1.8	1.7	1.7	1.8	n.p.	n.p.	n.p.	1.7
	<i>Total</i>	1.7	1.8	1.7	1.8	1.9	n.p.	n.p.	n.p.	1.8
Separations	Public	6,890	5,559	3,933	1,919	1,760	551	288	176	21,076
	Private	5,256	4,000	4,174	1,798	1,297	n.p.	n.p.	n.p.	17,376
	<i>Total</i>	12,146	9,559	8,107	3,717	3,057	n.p.	n.p.	n.p.	38,452

(continued)

**Table S3.10 (continued): Average length of stay (days)<sup>(a)</sup> for selected AR-DRGs version 5.2, public and private hospitals, states and territories, 2009–10**

AR-DRG	Hospital sector	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
<b>I03C</b>	<b>Hip replacement W/O catastrophic or severe CC</b>									
ALOS (days)	Public	6.6	6.4	6.5	6.5	6.5	6.6	5.4	n.p.	6.5
	Private	6.3	6.9	6.3	7.8	6.8	n.p.	n.p.	n.p.	6.6
	<i>Total</i>	<i>6.4</i>	<i>6.7</i>	<i>6.4</i>	<i>7.3</i>	<i>6.7</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>6.6</i>
Separations	Public	2,931	2,090	1,169	870	712	297	158	22	8,249
	Private	4,164	3,762	2,532	1,473	1,479	n.p.	n.p.	n.p.	14,202
	<i>Total</i>	<i>7,095</i>	<i>5,852</i>	<i>3,701</i>	<i>2,343</i>	<i>2,191</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>22,451</i>
<b>I04Z</b>	<b>Knee replacement and reattachment</b>									
ALOS (days)	Public	6.8	6.9	7.4	7.5	6.6	6.3	4.4	n.p.	6.9
	Private	6.7	7.2	6.6	8.8	6.7	n.p.	n.p.	n.p.	7.0
	<i>Total</i>	<i>6.7</i>	<i>7.1</i>	<i>6.8</i>	<i>8.4</i>	<i>6.7</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>7.0</i>
Separations	Public	4,915	3,117	2,210	1,280	1,119	303	199	35	13,178
	Private	7,867	5,562	5,706	2,535	2,468	n.p.	n.p.	n.p.	25,322
	<i>Total</i>	<i>12,782</i>	<i>8,679</i>	<i>7,916</i>	<i>3,815</i>	<i>3,587</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>38,500</i>
<b>I16Z</b>	<b>Other shoulder procedures</b>									
ALOS (days)	Public	1.5	1.6	1.4	1.4	1.7	1.7	1.4	n.p.	1.5
	Private	1.4	1.3	1.3	1.4	1.4	n.p.	n.p.	n.p.	1.3
	<i>Total</i>	<i>1.4</i>	<i>1.4</i>	<i>1.3</i>	<i>1.4</i>	<i>1.4</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>1.4</i>
Separations	Public	1,884	1,596	1,246	982	611	133	126	45	6,623
	Private	8,524	7,761	6,613	5,083	2,932	n.p.	n.p.	n.p.	32,381
	<i>Total</i>	<i>10,408</i>	<i>9,357</i>	<i>7,859</i>	<i>6,065</i>	<i>3,543</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>39,004</i>

(continued)

**Table S3.10 (continued): Average length of stay (days)<sup>(a)</sup> for selected AR-DRGs version 5.2, public and private hospitals, states and territories, 2009–10**

AR-DRG	Hospital sector	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
<b>L63B</b>	<b>Kidney and urinary tract infections age&gt;69 W/O catastrophic CC</b>									
ALOS (days)	Public	5.2	4.1	4.3	4.6	4.9	5.3	4.1	5.4	4.7
	Private	7.3	6.8	6.4	6.5	6.9	n.p.	n.p.	n.p.	6.7
	<i>Total</i>	5.3	4.7	4.9	4.9	5.3	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	5.0
Separations	Public	7,046	4,696	3,499	1,628	1,583	260	194	121	19,027
	Private	552	1,238	1,484	328	357	n.p.	n.p.	n.p.	4,070
	<i>Total</i>	7,598	5,934	4,983	1,956	1,940	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	23,097
<b>M02B</b>	<b>Transurethral prostatectomy W/O catastrophic or severe CC</b>									
ALOS (days)	Public	3.1	2.6	2.6	2.7	2.8	3.1	n.p.	n.p.	2.8
	Private	2.7	2.9	2.9	2.7	3.3	n.p.	n.p.	n.p.	2.9
	<i>Total</i>	2.9	2.8	2.8	2.7	3.1	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	2.9
Separations	Public	2,096	2,018	951	539	556	126	38	35	6,359
	Private	3,719	3,384	2,363	987	891	n.p.	n.p.	n.p.	11,853
	<i>Total</i>	5,815	5,402	3,314	1,526	1,447	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	18,212
<b>N04Z</b>	<b>Hysterectomy for non-malignancy</b>									
ALOS (days)	Public	3.5	3.7	3.3	3.6	3.6	3.4	3.9	4.6	3.6
	Private	3.7	4.2	3.4	3.7	4.0	n.p.	n.p.	n.p.	3.8
	<i>Total</i>	3.6	3.9	3.4	3.7	3.8	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	3.7
Separations	Public	3,382	3,111	1,893	988	1,022	292	130	82	10,900
	Private	4,324	2,698	3,437	1,702	1,135	n.p.	n.p.	n.p.	14,080
	<i>Total</i>	7,706	5,809	5,330	2,690	2,157	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	24,980

(continued)

**Table S3.10 (continued): Average length of stay (days)<sup>(a)</sup> for selected AR-DRGs version 5.2, public and private hospitals, states and territories, 2009–10**

AR-DRG	Hospital sector	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
<b>N06Z</b>	<b>Female reproductive system reconstructive procedures</b>									
ALOS (days)	Public	2.6	2.4	2.0	2.7	2.4	2.3	2.0	n.p.	2.4
	Private	2.9	2.8	2.3	3.0	3.0	n.p.	n.p.	n.p.	2.8
	<i>Total</i>	2.8	2.6	2.2	2.9	2.8	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	2.6
Separations	Public	2,111	1,766	1,089	522	612	220	57	21	6,398
	Private	3,497	2,164	2,593	1,049	1,002	n.p.	n.p.	n.p.	10,813
	<i>Total</i>	5,608	3,930	3,682	1,571	1,614	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	17,211
<b>O01C</b>	<b>Caesarean delivery W moderate complicating diagnosis<sup>(c)</sup></b>									
ALOS (days)	Public	4.0	3.9	3.6	4.0	4.3	4.0	3.9	4.7	3.9
	Private	5.1	5.1	4.6	5.6	5.2	n.p.	n.p.	n.p.	5.0
	<i>Total</i>	4.4	4.4	4.0	4.8	4.6	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	4.4
Separations	Public	15,325	10,959	8,846	4,027	3,081	903	776	566	44,483
	Private	8,301	7,156	7,341	4,010	1,719	n.p.	n.p.	n.p.	30,031
	<i>Total</i>	23,626	18,115	16,187	8,037	4,800	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	74,514
<b>O60B</b>	<b>Vaginal delivery W severe complicating diagnosis<sup>(c)</sup></b>									
ALOS (days)	Public	2.7	2.5	2.4	2.7	2.8	2.8	2.3	2.9	2.6
	Private	4.2	4.2	3.9	4.4	4.2	n.p.	n.p.	n.p.	4.1
	<i>Total</i>	3.0	2.9	2.8	3.2	3.1	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	3.0
Separations	Public	35,977	27,197	20,334	10,019	6,824	1,813	2,007	1,236	105,407
	Private	11,420	10,130	7,423	4,360	2,415	n.p.	n.p.	n.p.	37,854
	<i>Total</i>	47,397	37,327	27,757	14,379	9,239	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	143,261

(continued)

**Table S3.10 (continued): Average length of stay (days)<sup>(a)</sup> for selected AR-DRGs version 5.2, public and private hospitals, states and territories, 2009–10**

AR-DRG	Hospital sector	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
<b>R61B</b>	<b>Lymphoma and non-acute leukaemia W/O catastrophic CC</b>									
ALOS (days)	Public	5.2	4.3	4.8	5.2	5.1	5.2	8.3	n.p.	5.0
	Private	3.5	3.6	5.3	2.9	4.1	n.p.	n.p.	n.p.	4.0
	<i>Total</i>	<i>4.9</i>	<i>3.9</i>	<i>5.1</i>	<i>3.9</i>	<i>4.6</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>4.5</i>
Separations	Public	2,705	2,191	999	716	738	268	153	41	7,811
	Private	626	2,212	1,601	869	683	n.p.	n.p.	n.p.	6,113
	<i>Total</i>	<i>3,331</i>	<i>4,403</i>	<i>2,600</i>	<i>1,585</i>	<i>1,421</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>13,924</i>
<b>U63B</b>	<b>Major affective disorders age&lt;70 W/O catastrophic or severe CC</b>									
ALOS (days)	Public	15.1	13.8	13.3	14.3	12.2	15.4	17.4	12.7	14.1
	Private	19.4	19.1	20.8	13.5	18.0	n.p.	n.p.	n.p.	18.7
	<i>Total</i>	<i>16.7</i>	<i>16.4</i>	<i>16.9</i>	<i>13.9</i>	<i>13.5</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>16.0</i>
Separations	Public	5,850	4,035	2,841	1,945	2,386	379	267	148	17,851
	Private	3,682	3,954	2,698	1,800	695	n.p.	n.p.	n.p.	13,399
	<i>Total</i>	<i>9,532</i>	<i>7,989</i>	<i>5,539</i>	<i>3,745</i>	<i>3,081</i>	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>	<i>31,250</i>

(a) Separations for which the care type was reported as *Acute*, *Newborn* (with qualified days) or was *Not reported*. Excludes separations where the length of stay was greater than 120 days.

(b) Average length of stay has been suppressed for AR-DRGs for which less than 50 separations were reported.

(c) Maternity services purchased from the private sector rather than being provided by public hospitals will result in a understating of separation rates for obstetric conditions in the public sector.

*Abbreviations:* ALOS—average length of stay; CC—complications and comorbidities; CDE—common duct exploration; n.p.—not published; W—with; W/O—without.