# 10 Public hospitals

contents

10.1 Profile of public hospitals 10.2

10.2 Framework of performance indicators for public hospitals 10.14

10.3 Key performance indicator results for public hospitals 10.16

10.4 Profile of maternity services 10.60

10.5 Framework of performance indicators for maternity services 10.62

10.6 Key performance indicator results for maternity services 10.64

10.7 Future directions in performance reporting 10.83

10.8 Definitions of key terms 10.85

10.9 List of attachment tables 10.90

10.10 References 10.95

|  |
| --- |
| Attachment tables |
| Attachment tables are identified in references throughout this chapter by a ‘10A’ prefix (for example, table 10A.1). A full list of attachment tables is provided at the end of this chapter, and the attachment tables are available from the Review website at www.pc.gov.au/gsp. |
|  |
|  |

Public hospitals are important providers of government funded health services in Australia. This chapter reports on the performance of State and Territory public hospitals, focusing on acute care services. It also reports separately on a significant component of the services provided by public hospitals — maternity services.

Major improvements in reporting on public hospitals in this edition include:

* ‘Emergency department waiting times’ and ‘Elective surgery waiting times’ data are reported by socioeconomic status
* a new measure ‘Presentations to emergency departments with a length of stay of 4 hours or less ending in admission’ is reported under the ‘Waiting times for admitted patient services’ indicator
* ‘Selected hospital procedures’ are reported by Indigenous status, remoteness and socioeconomic status
* a new maternity services indicator ‘Instrumental vaginal births’ is reported
* improved data are reported for the maternity services indicator ‘Mother’s average length of stay’
* data quality information (DQI) is available for the first time for the indicators ‘Recurrent cost per non-admitted occasion of service’, ‘Caesareans for selected primiparae’, ‘Inductions for selected primiparae’ and ‘Instrumental vaginal births’.

## 10.1 Profile of public hospitals

### Definition

A key objective of Australian governments is to provide public hospital services to ensure the population has access to cost-effective health services, based on clinical need and within clinically appropriate times, irrespective of geographic location. Public hospitals provide a range of services, including:

* acute care services to admitted patients
* subacute and non-acute services to admitted patients (for example, rehabilitation, palliative care, and long stay maintenance care)
* emergency, outpatient and other services to non-admitted patients
* mental health services, including services provided to admitted patients by designated psychiatric/psychogeriatric units
* public health services
* teaching and research activities.

This chapter focuses on services provided to admitted patients and emergency services provided to non-admitted patients in public hospitals. These services comprise the bulk of public hospital activity and, in the case of services to admitted patients, have the most reliable data relative to other hospitals data. Data in the chapter include subacute and non‑acute care services.

In some instances, data for stand-alone psychiatric hospitals are included in this chapter. However, under the National Mental Health Strategy, the provision of psychiatric treatment is shifting away from specialised psychiatric hospitals to mainstream public hospitals and the community sector. The performance of psychiatric hospitals and psychiatric units of public hospitals is examined more closely in the ‘Mental health management’ chapter of this Report (chapter 12).

### Funding

Total recurrent expenditure on public hospitals (excluding depreciation) was $40.4 billion in 2011-12 (table 10A.1). The majority of public hospital recurrent expenditure is spent on admitted patients. Non-admitted patients account for a much smaller share. For selected public hospitals, in 2011-12, the proportion of total public hospital recurrent expenditure that related to the care of admitted patients (based on the admitted patient cost proportion) was around 70 per cent across Australia (AIHW 2013a).

Funding for public hospitals comes from a number of sources. The Australian, State and Territory governments contributed 91.5 per cent of funding for public hospital services in 2011-12 (figure 10.1). Public hospital services accounted for 41.9 per cent of government recurrent expenditure on health services in 2011-12 (AIHW 2013b).

Figure 10.1 Recurrent expenditure, public hospital services, by source of funds, 2011-12

|  |
| --- |
| Figure 10.1 Recurrent expenditure, public hospital services, by source of funds, 2011-12  More details can be found within the text surrounding this image. |

*Source*: AIHW (2013), *Health expenditure Australia 2011–12*, Health and Welfare Expenditure Series No. 50, Cat. no. HWE 59. Canberra.

Non‑government sources contributed 8.5 per cent of all recurrent expenditure on public hospital services in 2011-12 (including depreciation) (figure 10.2 and table 10A.2). Non‑government expenditure comprised revenue from health insurance funds, individuals, workers’ compensation and compulsory third-party motor vehicle insurers and other sources. The proportion of hospitals’ revenue per person funded from non‑government sources varied across jurisdictions in 2011‑12 (figure 10.2).

Figure 10.2 Source of public hospital recurrent expenditure, 2011-12a, b, c

|  |
| --- |
| Figure 10.2 Source of public hospital recurrent expenditure, 2011-12  More details can be found within the text surrounding this image. |

a Depreciation is included in recurrent expenditure. b Non-government expenditure includes expenditure by health insurance funds, individuals, workers’ compensation, compulsory third-party motor vehicle insurers and other sources. c The expenditure numbers for the ACT include substantial expenditures for NSW residents, and so the ACT expenditure is overstated.

*Source*: AIHW (2013), *Health expenditure Australia 2011–12*, Health and Welfare Expenditure Series No. 50, Cat. no. HWE 59. Canberra; table 10A.2.

Expenditure data in figures 10.1 and 10.2 are sourced from unpublished data from the AIHW Health Expenditure Australia database, and are not directly comparable with other expenditure data used in this chapter, which are drawn from *Australian Hospital Statistics* *2011-12* (AIHW 2013a). The AIHW publication *Health Expenditure Australia* *2011-12* provides information about the differences in the expenditure data between the two sources (AIHW 2013b).

In 2011-12, government real recurrent expenditure on public hospitals was $1792 per person nationally, up from $1525 in 2007‑08 (in 2011-12 dollars) (figure 10.3). It is difficult to make comparisons across jurisdictions based on these recurrent expenditure data, due to differences in the data coverage. The main differences are:

* the inclusion, by some jurisdictions, of expenditure on community health services as well as public hospital services
* the exclusion, by some jurisdictions, of expenditure on privately owned or privately operated hospitals that have been contracted to provide public hospital services.

Figure 10.3 Real recurrent expenditure per person, public hospitals (including psychiatric) (2011-12 dollars)a, b, c, d, e

|  |
| --- |
| Figure 10.3 Real recurrent expenditure per person, public hospitals (including psychiatric) (2011-12 dollars)  More details can be found within the text surrounding this image. |

a Expenditure data exclude depreciation and interest payments. b Recurrent expenditure on purchase of public hospital services at the State, or area health service level, from privately owned and/or operated hospitals is excluded. c Expenditure data are deflated using the hospital/nursing home care price index from AIHW (2013b). d Queensland pathology services were purchased from a Statewide pathology service rather than being provided by hospital employees. e The expenditure numbers for the ACT include substantial expenditures for NSW residents, and so the ACT expenditure is overstated.

*Source*: AIHW (various years), *Australian hospital statistics*, Health Services Series, Cat. nos HSE 71, 84, 107, 117 and 134; AIHW (2013), *Health expenditure Australia 2011–12*, Health and Welfare Expenditure Series No. 50, Cat. no. HWE 59. Canberra, AIHW; table 10A.3.

### Size and scope of sector

There are several ways to measure the size and scope of Australia’s public hospital sector. This chapter reports on: the number and size of hospitals; the number and location of public hospital beds; the number and type of public hospital separations; the proportion of separations by age group of the patient; the number of separations and incidence of treatment, by procedure and Indigenous status of the patient; the number of hospital staff; and types of public hospital activity.

#### Hospitals

In 2011-12, Australia had 753 public hospitals (including 17 psychiatric hospitals) (table 10A.4 and AIHW 2013a). Although 71 per cent of hospitals had 50 or fewer beds, these smaller hospitals represented only 15 per cent of total available beds (figure 10.4 and table 10A.4).

Figure 10.4 Public hospitals, by size, 2011-12a, b, c, d, e

|  |
| --- |
| Figure 10.4 Public hospitals, by size, 2011-12  More details can be found within the text surrounding this image. |

a The number of hospitals reported can be affected by administrative and/or reporting arrangements and is not necessarily a measure of the number of hospital buildings or campuses. b Size is based on the average number of available beds. c The comparability of bed numbers can be affected by the casemix of hospitals including the extent to which hospitals provide same day admitted services and other specialised services. d The count of hospitals in Victoria is a count of the campuses that report data separately to the National Hospital Morbidity Database. e The ACT did not have hospitals with more than 10 to 50 beds or more than 50 to 100 beds. The NT did not have hospitals with 10 or fewer beds.

*Source*: AIHW (2013), *Australian Hospital Statistics 2011-12,* Health Services Series No. 50, Cat no. HSE 134; table 10A.4.

#### Hospital beds

There were 58 420 available beds for admitted patients in public hospitals in 2011‑12, equivalent to 2.6 beds per 1000 people (figures 10.5 and table 10A.4). The concept of an available bed is becoming less important in the overall context of hospital activity, particularly given the increasing significance of same day hospitalisations and hospital-in-the-home care (AIHW 2011a). Nationally, about 88 per cent of beds in public acute hospitals were available for overnight-stay patients in 2011-12 (AIHW 2013a).

Figure 10.5 Available beds, public hospitals**a**

|  |
| --- |
| Figure 10.5 Available beds, public hospitals  More details can be found within the text surrounding this image. |

a Available beds includes both average available beds for overnight and same day accommodation. Average available overnight beds is the number of beds available to provide overnight accommodation for patients (other than neonatal cots (nonspecial-care) and beds occupied by hospital-in-the-home patients), averaged over the counting period. Average available same day beds is the number of beds, chairs or trolleys available to provide accommodation for same-day patients, averaged over the counting period (HDSC 2012).

*Source*: AIHW (various years), *Australian hospital statistics*, Health Services Series, Cat. nos HSE 71, 84, 107, 117 and 134; table 10A.5.

The comparability of bed numbers can be affected by the casemix of hospitals, including the extent to which hospitals provide same day admitted services and other specialised services. There are also differences in admission practices and how available beds are counted, both across jurisdictions and over time.

Nationally, more beds were available per 1000 people in remote areas (figure 10.6). The patterns of bed availability can reflect a number of factors, including patterns of availability of other healthcare services, patterns of disease and injury and the relatively poor health of Indigenous Australians, who have higher population concentrations in remote areas. These data also need to be viewed in the context of the age and sex structure (reported in chapter 2) and the morbidity and mortality (reported in the ‘Health sector overview’) of the population in each State and Territory.

Figure 10.6 Available beds, public hospitals, by location, 2011-12a, b, c

|  |
| --- |
| Figure 10.6 Available beds, public hospitals, by location, 2011-12  More details can be found within the text surrounding this image. |

a  Available beds includes both average available beds for overnight and same day accommodation. Average available overnight beds is the number of beds available to provide overnight accommodation for patients (other than neonatal cots (nonspecial-care) and beds occupied by hospital-in-the-home patients), averaged over the counting period. Average available same day beds is the number of beds, chairs or trolleys available to provide accommodation for same-day patients, averaged over the counting period (HDSC 2012). b Analysis by remoteness area is of less relevance to geographically smaller jurisdictions and those jurisdictions with small populations residing in remote areas (such as Victoria) (AIHW 2013a). c Tasmania and the NT do not have major cities and the ACT does not have regional and remote areas.

*Source*: AIHW (2013), *Australian Hospital Statistics 2011-12,* Health Services Series No. 50, Cat no. HSE 134; table 10A.5.

#### Admitted patient care

There were approximately 5.5 million separations from public (non‑psychiatric) hospitals in 2011-12 (table 10A.6). Nationally, this translates into 236.0 separations per 1000 people (figure 10.7). Acute separations accounted for 95.3 per cent of separations from public hospitals, newborns who required acute care accounted for 1.3 per cent and rehabilitation care accounted for 1.7 per cent (table 10A.13). Palliative care, geriatric evaluation and management and maintenance care constitute the remainder. Of the total number of separations in public (non‑psychiatric) hospitals, 51.0 per cent were for same day patients. Public psychiatric hospitals accounted for around 0.2 per cent of total separations in public hospitals in 2011‑12 (table 10A.6).

Figure 10.7 Separation rates in public (non-psychiatric) hospitalsa, b, c

|  |
| --- |
| Figure 10.7 Separation rates in public (non-psychiatric) hospitals  More details can be found within the text surrounding this image. |

a  Excludes separations for which the care type was reported as ‘newborn with no qualified days’ and records for hospital boarders (hospital boarder is defined in section 10.8) and posthumous organ procurement. b Rates are directly age standardised to the Australian population at 30 June 2001. c The NT has a high percentage of the population that is Indigenous which contributes to the high level of separations in the NT.

*Source*: AIHW (various years), *Australian Hospital Statistics,* Health Services Series, Cat. nos HSE 71, 84, 107, 117 and 134; table 10A.7.

Differences across jurisdictions in separation rates reflect variations in the health profiles of the people living in each State and Territory, the decisions made by medical staff about the type of care required and people’s access to services other than public hospitals (for example, primary care and private hospitals).

Variations in admission rates can reflect different practices in classifying patients as either admitted same day patients or outpatients. For example in SA, chemotherapy and scope procedures are treated as an outpatient rather than same day service. The extent of differences in classification practices can be inferred from the variation in the proportion of same day separations across jurisdictions for certain conditions or treatments. This is particularly true of medical separations. Significant variation across jurisdictions in the proportion of same day medical separations was evident in 2011-12 (figure 10.8). Lower jurisdictional variation is likely in admission practices for surgical procedures, as reflected by the lower variability in the proportion of same day surgical separations.

Figure 10.8 Proportion of medical, surgical and total separations that were same day, public (non-psychiatric) hospitals, 2011-12a

|  |
| --- |
| Figure 10.8 Proportion of medical, surgical and total separations that were same day, public (non-psychiatric) hospitals, 2011-12  More details can be found within the text surrounding this image. |

a ‘Total’ includes medical, surgical, chemotherapy, radiotherapy, renal dialysis and ‘other’ separations based on AR-DRG version 6.0x categories.

*Source*: AIHW (unpublished), National Hospital Morbidity Database; table 10A.8.

People aged 55 years and over accounted for half of the separations in public hospitals (52.1 per cent) in 2011-12, even though they accounted for only 25.2 per cent of the estimated resident population at 30 June 2011 (table 10A.9 and AIHW 2013a).

The 10 AR‑DRGs that accounted for the most overnight acute separations in public hospitals (18.0 per cent of all overnight acute separations recorded) in 2011-12 are shown in table 10A.14. ‘Giving birth by vaginal delivery without catastrophic or severe complications or comorbidities’ accounted for the most overnight acute separations (3.9 per cent) followed by ‘Chest pain’ (2.3 per cent).

The 10 AR‑DRGs that accounted for the most patient days (16.6 per cent of all patient days recorded) in 2011-12 are shown in table 10A.15. ‘Schizophrenia disorders with mental health legal status’ accounted for the largest number of patient days (3.1 per cent), followed by ‘Major affective disorders for those aged less than 70 years without catastrophic or severe complications or comorbidities’ (2.1 per cent) (table 10A.15).

#### Admitted patient care for Indigenous Australians

The completeness of Indigenous identification in hospital admitted patient data varies across states and territories. Efforts to improve Indigenous identification are ongoing. In 2011-12, on an age standardised basis, 877.4 public hospital separations (including same day separations) for Indigenous Australians were reported per 1000 Indigenous Australians. This rate was markedly higher than the corresponding rate of 236.4 per 1000 for all Australians (figure 10.9).

Figure 10.9 Estimates of public hospital separations, by Indigenous status of patient, 2011-12a, b

|  |
| --- |
| Figure 10.9 Estimates of public hospital separations, by Indigenous status of patient, 2011-12  More details can be found within the text surrounding this image. |

a The rates are directly age standardised to the Australian population at 30 June 2001. b Identification of Indigenous Australians is incomplete and completeness varies across jurisdictions.

*Source*: AIHW (unpublished), National Hospital Morbidity Database; table 10A.11.

Hospital episodes of care involving dialysis accounted for a large portion of same day separations, particularly for Indigenous Australians. The hospitalisation rate for Indigenous Australians for dialysis was 12 times as high as the rate for non‑Indigenous Australians. When dialysis is excluded, the hospitalisation rate for Indigenous Australians in 2011-12 (138.9 per 1000 of the population) was less than that for non‑Indigenous Australians (168.6 per 1000 of the population) (AIHW 2013a).

In 2011-12, separations for Indigenous Australians accounted for around 4.0 per cent of total separations and 6.1 per cent of separations in public hospitals in NSW, Victoria, Queensland, WA, SA and the NT combined (table 10A.10). Indigenous Australians made up only around 3 per cent of the population nationally, although this rate varied significantly from 0.8 per cent in Victoria to 29.1 per cent in the NT (tables 2A.2 and 2A.15). Most separations involving Indigenous Australians (92.0 per cent) in these jurisdictions occurred in public hospitals (table 10A.10).

#### Non-admitted patient services

A total of 53.1 million individual occasions of service were provided to non‑admitted patients in public acute hospitals in 2011-12 (table 10.1). In addition, public hospitals delivered 303 931 group sessions during this time (a group session is defined as a service provided to two or more patients, excluding services provided to two or more family members) (table 10A.16). In public acute hospitals in 2011-12, accident and emergency services comprised 14.7 per cent of all individual occasions of service to non-admitted patients. ‘Other medical, surgical and obstetric services’ (23.1 per cent), ‘pathology services’ (19.3 per cent) and ‘pharmacy’ (10.6 per cent) were other common types of non-admitted patient care (table 10.1).

Table 10.1 Non-admitted patient occasions of service, by type of non‑admitted patient care, public acute hospitals, 2011-12a

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | NSW | Vic | Qld | WA | SA | Tas | ACT | NTb | Aust |
| Occasions of service for the most common types of non-admitted patient care as a proportion of all occasions of service for non-admitted patients (%) | | | | | | | | | |
| Accident and emergency | 10.5 | 23.5 | 15.3 | 16.0 | 24.4 | 30.7 | 7.2 | 25.3 | 14.7 |
| Pathology | 16.5 | 12.9 | 36.1 | 11.3 | .. | .. | 32.9 | 21.8 | 19.3 |
| Radiology and organ imaging | 3.7 | 9.6 | 9.3 | 7.9 | 10.8 | .. | 3.7 | 16.0 | 6.5 |
| Pharmacyc | 17.5 | 6.8 | 5.5 | 4.3 | .. | .. | 2.4 | 6.2 | 10.6 |
| Other medical/surgical/ obstetric | 22.1 | 25.3 | 24.2 | 15.4 | 44.1 | 44.2 | 12.6 | 28.3 | 23.1 |
| Mental health | 4.2 | na | 0.3 | 1.4 | 0.8 | 0.5 | 15.8 | .. | 2.7 |
| Dental | 1.7 | 0.3 | .. | 0.2 | 0.3 | – | .. | .. | 0.9 |
| Allied health | 2.7 | 16.3 | 5.5 | 22.4 | 7.7 | 20.5 | 1.2 | 2.3 | 7.6 |
| Other non-admitted |  |  |  |  |  |  |  |  |  |
| Community health | 6.8 | 0.2 | 1.1 | 16.3 | 0.1 | 4.1 | 24.0 | .. | 5.9 |
| District nursingd | 6.5 | 3.6 | 1.1 | 2.5 | 0.3 | .. | .. | .. | 4.0 |
| **Most common occasions of service (%)** | **92.3** | **98.5** | **98.4** | **97.9** | **88.6** | **100.0** | **99.8** | **100.0** | **95.3** |
| **Total occasions of service (’000)** | **24 062** | **7 061** | **11 188** | **5 895** | **2 199** | **504** | **1 643** | **572** | **53 125** |

a Individual non-admitted patient care services. Excludes group sessions. Reporting arrangements vary significantly across jurisdictions. b Radiology data for the NT are underestimated and pathology data relate to only three of the five hospitals. c Justice Health in NSW reported a large number of occasions of service that may not be typical of pharmacy. d Justice Health in NSW reported a large number of occasions of service that may not be typical of district nursing. – Nil or rounded to zero. **..** Not applicable. **na** Not available.

*Source*: AIHW (2013), *Australian Hospital Statistics 2011-12,* Health Services Series No. 50, Cat no. HSE 134; table 10A.16.

There is considerable variation among states and territories and across reporting years in the way in which non-admitted patient occasions of service are collected. Differing admission practices across states and territories also lead to variation among jurisdictions in the services reported (AIHW 2013a).

#### Staff

In 2011-12, nurses comprised the single largest group of full time equivalent (FTE) staff employed in public hospitals (5.5 per 1000 people) (figure 10.10). Comparing data on FTE staff across jurisdictions should be undertaken with care, because these data are affected by differences across jurisdictions in the recording and classifying of staff. The outsourcing of services with a large labour related component (for example, food services and domestic services) can have a large impact on hospital staffing figures and can explain some of the differences in FTE staff in some staffing categories across jurisdictions (AIHW 2011).

Figure 10.10 Average FTE staff per 1000 people, public hospitals,   
2011-12**a, b, c, d, e**

|  |
| --- |
| Figure 10.10 Average FTE staff per 1000 people, public hospitals, 2011-12  More details can be found within the text surrounding this image. |

a ‘Other staff’ include diagnostic and allied health professionals, other personal care staff, administrative and clerical staff, and domestic and other staff. b Staff per 1000 people are calculated from ABS population data at 31 December 2011 (table 2A.2). Estimated Resident Populations (ERPs) to June 2011 used to derive rates are revised to the ABS’ final 2011 Census rebased ERPs. The final ERP replaces the preliminary 2006 Census based ERPs used in the 2013 Report. ERP data from December 2011 are first preliminary estimates based on the 2011 Census. See Chapter 2 (tables 2A.1-2) for details. c For Victoria, FTEs can be slightly understated. d Queensland pathology services staff employed by the State pathology service are not included. e Data for two small Tasmanian hospitals are not included.

*Source* AIHW (2013), *Australian Hospital Statistics 2011-12,* Health Services Series No. 50, Cat no. HSE 134; ABS (unpublished), Australian Demographic Statistics, December Quarter 2011, Cat. no. 3101.0; tables 10A.12 and 2A.2.

## 10.2 Framework of performance indicators for public hospitals

Performance is reported against objectives that are common to public hospitals in all jurisdictions (box 10.1). The Health sector overview explains the performance indicator framework for health services as a whole, including the subdimensions of quality and sustainability that have been added to the standard Review framework.

COAG has agreed six National Agreements to enhance accountability to the public for the outcomes achieved or outputs delivered by a range of government services (see chapter 1 for more detail on reforms to federal financial relations).

The National Healthcare Agreement (NHA) covers the area of health and aged care, and health indicators in the National Indigenous Reform Agreement (NIRA) establish specific outcomes for reducing the level of disadvantage experienced by Indigenous Australians. Both agreements include sets of performance indicators, for which the Steering Committee collates performance information for analysis by the COAG Reform Council (CRC). Performance indicators reported in this chapter are aligned with the health performance indicators in the NHA. The NHA was reviewed in 2011, 2012 and 2013, resulting in changes that have been reflected in this Report, as relevant.

|  |
| --- |
| Box 10.1 Objectives for public hospitals |
| The common government objectives for public hospitals are to provide acute and specialist services that are:   * safe and of high quality * appropriate and responsive to individual needs * affordable, timely and accessible * equitably and efficiently delivered. |
|  |
|  |

The performance indicator framework provides information on equity, efficiency and effectiveness, and distinguishes the outputs and outcomes of public hospital services (figure 10.11). The performance indicator framework shows which data are comparable in the 2014 Report. For data that are not considered directly comparable, the text includes relevant caveats and supporting commentary. Chapter 1 discusses data comparability from a Report-wide perspective (see section 1.6).

The Report’s statistical context chapter contains data that may assist in interpreting the performance indicators presented in this chapter. These data cover a range of demographic and geographic characteristics, including age profile, geographic distribution of the population, income levels, education levels, tenure of dwellings and cultural heritage (including Indigenous and ethnic status) (chapter 2).

Figure 10.11 Public hospitals performance indicator framework

|  |
| --- |
| Figure 10.11 Public hospitals performance indicator framework  More details can be found within the text surrounding this image. |

Data quality information (DQI) is being progressively introduced for all indicators in the Report. The purpose of DQI is to provide structured and consistent information about quality aspects of data used to report on performance indicators. DQI in this Report cover the seven dimensions in the ABS’ data quality framework (institutional environment, relevance, timeliness, accuracy, coherence, accessibility and interpretability) in addition to dimensions that define and describe performance indicators in a consistent manner, and key data gaps and issues identified by the Steering Committee. All DQI for the 2014 Report can be found at www.pc.gov.au/gsp/reports/rogs/2014.

## 10.3 Key performance indicator results for public hospitals

Different delivery contexts, locations and types of client can affect the equity, effectiveness and efficiency of health services.

As discussed in section 10.1, public hospitals provide a range of services to admitted patients, including some sub­acute and non­acute services such as rehabilitation and palliative care. The extent to which these sub­acute and non­acute treatments can be identified and excluded from the data differs across jurisdictions. Similarly, psychiatric treatments are provided in public (non‑psychiatric) hospitals at different rates across jurisdictions.

### Outputs

Outputs are the services delivered (while outcomes are the impact of these services on the status of an individual or group) (see chapter 1, section 1.5).

### Equity — access

Equity indicators measure how well a service is meeting the needs of certain groups in society (see chapter 1). Public hospitals have a significant influence on the equity of the overall healthcare system. While access to public hospital services is important to the community in general, it is particularly important for people of low socioeconomic status (and others) who can have difficulty in accessing alternative services, such as those provided by private hospitals.

#### Equity of access by special needs groups

‘Equity of access by special needs groups’ is an indicator of governments’ objective to provide accessible services (box 10.2).

|  |
| --- |
| Box 10.2 Equity of access by special needs groups |
| ‘Equity of access by special needs groups’ measures the performance of agencies providing services for three identified special needs groups: Indigenous Australians; people living in communities outside the capital cities (that is, people living in other metropolitan areas, or rural and remote communities); and people from a culturally and linguistically diverse group.  Equity of access by special needs groups has been identified as a key area for development in future Reports. Data for the emergency department waiting times and waiting times for admitted patient services indicators are reported by Indigenous status and remoteness. |
|  |
|  |

### Effectiveness — access

#### Emergency department waiting times

‘Emergency department waiting times’ is an indicator of governments’ objective to provide accessible services (box 10.3).

|  |
| --- |
| Box 10.3 Emergency department waiting times |
| ‘Emergency department waiting times' is defined as the proportion of patients seen within the benchmarks set by the Australasian Triage Scale. The Australasian Triage Scale is a scale for rating clinical urgency, designed for use in hospital-based emergency services in Australia and New Zealand.  These waiting times are measured using the nationally agreed method of calculation to subtract the time at which the patient presents at the emergency department (that is, the time at which the patient is clerically registered or triaged, whichever occurs earlier) from the time of commencement of service by a treating medical officer or nurse. Patients who do not wait for care after being triaged or clerically registered are excluded from the data.  The benchmarks, set according to triage category, are as follows:   * triage category 1: need for resuscitation — patients seen immediately * triage category 2: emergency — patients seen within 10 minutes * triage category 3: urgent — patients seen within 30 minutes * triage category 4: semi-urgent — patients seen within 60 minutes * triage category 5: non-urgent — patients seen within 120 minutes (HDSC 2008). |
| (Continued next page) |
|  |
|  |

|  |
| --- |
| Box 10.3 (Continued) |
| A high or increasing proportion of patients seen within the benchmarks set for each triage category is desirable.  Data reported for this indicator are:   * comparable (subject to caveats) within jurisdictions over time but are not comparable across jurisdictions * complete (subject to caveats) for the current reporting period. All required 2012-13 data are available for all jurisdictions.   Information about data quality for this indicator is at www.pc.gov.au/gsp/reports/rogs/2014. |
|  |
|  |

The comparability of emergency department waiting times data across jurisdictions can be influenced by differences in data coverage (table 10.2) and clinical practices — in particular, the allocation of cases to urgency categories. The proportion of patients in each triage category who were subsequently admitted can indicate the comparability of triage categorisations across jurisdictions and thus the comparability of the waiting times data (table 10A.17).

Nationally, in 2012-13, 100 per cent of patients in triage category 1 were seen within the clinically appropriate timeframe, and 82 per cent of patients in triage category 2 were seen within the clinically appropriate timeframe. For all triage categories combined, 73 per cent of patients were seen within triage category timeframes (table 10.2). Emergency department waiting times for peer group A and B hospitals are reported in table 10A.18.

Emergency department waiting times by Indigenous status, remoteness and socioeconomic status, for peer group A and B hospitals are reported in the attachment (tables 10A.19–10A.21). Nationally, there was little difference between Indigenous and non-Indigenous Australians in the percentages of patients treated within national benchmarks across the triage categories, although there were variations across states and territories for some triage categories (table 10A.19). At the national level, there was variation in waiting times across triage categories by remoteness, although there was less variation for the most serious category, resuscitation (table 10A.20). There was little difference in waiting times across triage categories by socioeconomic status on a national basis (table 10A.21).

Under the National Partnership Agreement on Improving Public Health Services (NPA), an Expert Panel reviewed the implementation of emergency department and elective surgery targets. Fifteen recommendations were made, which were approved by COAG and are incorporated into the revised NPA signed by all jurisdictions in August 2011. Recommendations included the adoption of a new National Emergency Access Target (NEAT) that replaced the concept of ‘clinically appropriate’ with a revised target of 90 per cent of patients leaving the emergency department within four hours of presentation — either by admission, transfer to another hospital, or discharge.

Reporting against interim targets for the new National Emergency Access Target (NEAT) commenced on 1 January 2012. This target must be met by 1 January 2015.

Table 10.2 Emergency department patients seen within triage category timeframes, public hospitals (per cent)**a**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Triage category | NSW | Vic | Qld | WA | SA | Tas | ACT | NT | Aust |
| 2011-12 |  |  |  |  |  |  |  |  |  |
| 1 — Resuscitationb | 100 | 100 | 100 | 99 | 100 | 100 | 100 | 100 | 100 |
| 2 — Emergency | 82 | 83 | 82 | 76 | 79 | 77 | 76 | 64 | 80 |
| 3 — Urgent | 71 | 72 | 63 | 52 | 70 | 64 | 50 | 49 | 66 |
| 4 — Semi-urgent | 74 | 67 | 69 | 67 | 77 | 71 | 47 | 49 | 70 |
| 5 — Non-urgent | 89 | 87 | 90 | 94 | 92 | 88 | 81 | 89 | 89 |
| **Total** | **76** | **72** | **69** | **65** | **76** | **71** | **55** | **54** | **72** |
| Data coveragec | 88 | 91 | 72 | 78 | 80 | 92 | 100 | 100 | 84 |
| 2012-13 |  |  |  |  |  |  |  |  |  |
| 1 — Resuscitationb | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| 2 — Emergency | 83 | 84 | 84 | 81 | 75 | 83 | 74 | 66 | 82 |
| 3 — Urgent | 73 | 72 | 68 | 52 | 66 | 65 | 43 | 52 | 68 |
| 4 — Semi-urgent | 77 | 68 | 74 | 67 | 78 | 70 | 46 | 52 | 72 |
| 5 — Non-urgent | 92 | 87 | 92 | 93 | 92 | 90 | 79 | 89 | 91 |
| **Total** | **78** | **73** | **74** | **66** | **75** | **71** | **51** | **57** | **73** |
| Data coveragec | na | na | na | na | na | na | na | na | na |

a Percentages are derived from all hospitals that reported to the Non-admitted Patient Emergency Department Care Database, including all principal referral and specialist women's and children's hospitals, large hospitals and public hospitals that were classified to other peer groups. b Resuscitation patients whose waiting time for treatment was less than or equal to two minutes are considered to have been seen on time. c Data coverage is estimated as the number of occasions of service with waiting times data divided by the number of emergency department occasions of service. This can underestimate coverage because some occasions of service are for other than emergency presentations. For some jurisdictions, the number of emergency department occasions of service reported to the Non-admitted Patient Emergency Department Care Database exceeded the number of accident and emergency occasions of service reported to the National Public Hospital Establishments Database. For these jurisdictions the coverage has been estimated as 100 per cent. **na** Not available.

*Source*: AIHW (2013), *Australian hospital statistics 2012–13: emergency department care*, Health services series no. 52. Cat. no. HSE 142. Canberra; AIHW (2012), *Australian hospital statistics 2011‑12: emergency department care*, Health services series no. 45. Cat. no. HSE 126. Canberra; table 10A.17.

#### Waiting times for admitted patient services

‘Waiting times for admitted patient services’ is an indicator of governments’ objective to provide accessible services (box 10.4). Elective surgery patients who wait longer are likely to suffer discomfort and inconvenience, and more urgent patients can experience poor health outcomes as a result of extended waits.

|  |
| --- |
| Box 10.4 Waiting times for admitted patient services |
| ‘Waiting times for admitted patient services’ is defined by the following three measures:   * Overall elective surgery waiting times * Elective surgery waiting times by clinical urgency category * Waiting times for admission following emergency department care.   Overall elective surgery waiting times  ‘Overall elective surgery waiting times’ are calculated by comparing the date on which patients are added to a waiting list with the date on which they are admitted. Days on which the patient was not ready for care are excluded. ‘Overall waiting times’ are presented as the number of days within which 50 per cent of patients are admitted and the number of days within which 90 per cent of patients are admitted. The proportion of patients who waited more than 12 months is also shown.  For overall elective surgery waiting times, a low or decreasing number of days waited at the 50th and 90th percentiles, and a low or decreasing proportion of people waiting more than 365 days are desirable.  Data reported for this measure are:   * comparable (subject to caveats) within jurisdictions over time but are not comparable across jurisdictions * complete (subject to caveats) for the current reporting period. All required 2012-13 data are available for all jurisdictions.   Information about data quality for this measure is at www.pc.gov.au/gsp/reports/rogs/2014.  Elective surgery waiting times by clinical urgency category  ‘Elective surgery waiting times by clinical urgency category’ reports the proportion of patients who were admitted from waiting lists after an extended wait. The three generally accepted clinical urgency categories for elective surgery are:   * category 1 — admission is desirable within 30 days for a condition that has the potential to deteriorate quickly to the point that it may become an emergency   (Continued on next page) |
|  |
|  |
| Box 10.4 (Continued) |
| * category 2 — admission is desirable within 90 days for a condition causing some pain, dysfunction or disability but which is not likely to deteriorate quickly or become an emergency * category 3 — admission at some time in the future is acceptable for a condition causing minimal or no pain, dysfunction or disability, which is unlikely to deteriorate quickly and which does not have the potential to become an emergency. The desirable timeframe for this category is admission within 365 days.   The term ‘extended wait’ is used for category 3 patients waiting longer than 12 months for elective surgery, as well as for category 1 and 2 patients waiting more than the agreed desirable waiting times of 30 days and 90 days respectively.  For elective surgery waiting times by clinical urgency category, a low or decreasing proportion of patients who have experienced extended waits at admission is desirable. However, variation in the way patients are classified to urgency categories should be taken into account. Rather than comparing jurisdictions, the results for individual jurisdictions should be viewed in the context of the proportions of patients assigned to each of the three urgency categories (table 10.3).  Data reported for this measure are:   * comparable (subject to caveats) within jurisdictions over time but are not comparable across jurisdictions * complete (subject to caveats) for the current reporting period. All required 2011‑12 data are available for all jurisdictions.   Information about data quality for this measure is at www.pc.gov.au/gsp/reports/rogs/2014.  Presentations to emergency departments with a length of stay of 4 hours or less ending in admission  ‘Presentations to emergency departments with a length of stay of 4 hours or less ending in admission’ reports the Proportion of presentations to emergency departments with a length of stay of 4 hours or less ending in admission. Length of stay is calculated as the length of time between presentation to the emergency department and physical departure.  A high or increasing proportion of presentations to emergency departments with a length of stay of 4 hours or less ending in admission is desirable.  Data reported for this measure are:   * comparable (subject to caveats) within jurisdictions over time but are not comparable across jurisdictions * complete (subject to caveats) for the current reporting period. All required 2012‑13 data are available for all jurisdictions.   Information about data quality for this measure is at www.pc.gov.au/gsp/reports/rogs/2014. |
|  |
|  |

##### Overall elective surgery waiting times

Elective surgery waiting times data are provided for waiting lists managed by public acute hospitals. The data collection covers most public hospitals that undertake elective surgery, and in 2012-13 covered 93 per cent of separations for elective surgery in public acute hospitals (table 10A.22).

Patients on waiting lists who were not subsequently admitted to hospital are excluded. Patients can be removed from waiting lists because they no longer need the surgery, die, are treated at another location, decline to have the surgery, or cannot be contacted by the hospital (AIHW 2013c). In 2012-13, 13.3 per cent of patients who were removed from waiting lists were removed for reasons other than elective or emergency admission (AIHW 2013c).

Comparisons across jurisdictions should be made with caution, due to differences in clinical practices and classification of patients across Australia. The measures are also affected by variations across jurisdictions in the method used to calculate waiting times for patients who transferred from a waiting list managed by one hospital to a waiting list managed by another hospital. For patients who were transferred from a waiting list managed by one hospital to that managed by another, the time waited on the first list is included in the waiting time reported in NSW, SA and the NT. This approach can have the effect of increasing the apparent waiting times for admissions in these jurisdictions compared with other jurisdictions (AIHW 2013c).

Nationally in 2012-13, 50 per cent of patients were admitted within 36 days and 90 per cent of patients were admitted within 265 days. The proportion of patients who waited more than a year was 2.7 per cent. Nationally, waiting times at the 50th percentile increased by three days between 2008-09 and 2012-13, from 33 to 36 days. However, there were different trends for different jurisdictions and for different sized hospitals over that period (figure 10.12 and table 10A.22).

Figure 10.12 Waiting times for elective surgery, public hospitals

|  |
| --- |
| Figure 10.12 Waiting times for elective surgery, public hospitals  Days waited at the 50th percentile  More details can be found within the text surrounding this image.Figure 10.12 Waiting times for elective surgery, public hospitals  Days waited at the 90th percentile  More details can be found within the text surrounding this image.Figure 10.12 Waiting times for electrive surgery, public hospitals  Percentage who waited more than 365 days  More details can be found within the text surrounding this image. |

*Source*: AIHW (various years), *Australian Hospital Statistics*, Health Services Series, Cat nos. HSE 71, 84, 107, 117 and 134; AIHW (2013), *Australian hospital statistics 2012–13*: *elective surgery waiting times*. Health services series no. 51. Cat. no. HSE 140; table 10A.22.

Attachment 10A includes data on elective surgery waiting times by hospital peer group, specialty of surgeon and indicator procedure. It also includes waiting times by Indigenous status, remoteness and socioeconomic status   
(tables 10A.22–10A.27). Nationally, Indigenous Australians had longer waiting times for elective surgery than non‑Indigenous Australians at the 50th percentile and 90th percentile (table 10A.24). Those living in regional areas had longer waiting times than those in major cities at the 50th and 90th percentiles at the national level (table 10A.25). Elective surgery waiting times tended to increase with social disadvantage at the 50th and 90th percentiles on a national basis (table 10A.26).

##### Elective surgery waiting times by clinical urgency category

Elective surgery waiting times by urgency category data not only provide an indication of the extent to which patients are seen within a clinically desirable time, but also draw attention to the variation in the way in which patients are classified across jurisdictions. Jurisdictional differences in the classification of patients by urgency category in 2011-12 are shown in table 10.3. The states and territories with lower proportions of patients in category 1 tended to have smaller proportions of patients in this category who were ‘not seen on time’. NSW, Victoria and the ACT, for example, had the lowest proportions of patients in category 1 and also had low proportions of patients in category 1 who had extended waits (tables 10.3, 10A.28, 10A.30 and 10A.40).

The system of urgency categorisation for elective surgery in public hospitals is important to ensure that priority is given to patients according to their needs. While elective surgery waiting times by urgency category are not comparable across jurisdictions, this measure has the advantage of providing an indication of the extent to which patients are seen within a clinically desirable time period according to the urgency category to which they have been assigned.

Under the National Partnership Agreement on Improving Public Health Services (NPA), an Expert Panel reviewed the implementation of emergency department and elective surgery targets. Fifteen recommendations were made, which were approved by COAG and are incorporated into the revised NPA signed by all jurisdictions in August 2011.

Reporting against interim targets for the new National Elective Surgery Target (NEST) commenced on 1 January 2012. The NEST requires that at its conclusion, 100 per cent of patients be treated within clinically recommended time across all urgency categories through two complementary strategies (NEST Part 1 and NEST Part 2) containing three targets. NEST Part 1 is a stepped improvement in patients seen within the clinically recommended time. NEST Part 2 is a stepped reduction in patients who have already waited longer than the clinically recommended time, and additionally requires that each year the 10 per cent of patients who have waited the longest in each jurisdiction must have their surgery.

The AIHW, with the Royal Australasian College of Surgeons, submitted a proposal to Health Ministers in December 2012 for nationally agreed elective surgery urgency category definitions, including consistent treatment of patients ‘not ready for care’. This was endorsed by Health Ministers, and NSW is now leading work on nation-wide implementation of the recommendations outlined in the proposal.

Table 10.3 Classification of elective surgery patients, by clinical urgency category, 2011-12 (per cent)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | NSW | Vic | Qld | WA | SA | Tas | ACT | NT |
| Patients on waiting lists | | | | | | | | |
| Category 1 | 2.8 | 3.5 | 8.9 | 5.5 | 5.0 | 6.2 | 3.5 | 4.7 |
| Category 2 | 16.4 | 46.6 | 47.1 | 31.0 | 23.0 | 52.5 | 47.2 | 42.9 |
| Category 3 | 80.8 | 49.9 | 44.0 | 63.5 | 72.0 | 41.3 | 49.3 | 52.4 |
| **Total** | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Patients admitted from waiting lists | | | | | | | | |
| Category 1 | 25.5 | 30.3 | 40.0 | 23.4 | 27.1 | 39.0 | 30.2 | 38.8 |
| Category 2 | 33.2 | 46.9 | 44.6 | 34.8 | 33.3 | 44.0 | 48.6 | 41.4 |
| Category 3 | 41.3 | 22.8 | 15.4 | 41.8 | 39.6 | 17.0 | 21.2 | 19.8 |
| **Total** | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

*Source*: State and Territory governments (unpublished).

Reporting of elective surgery waiting times by clinical urgency category includes the proportions of patients with extended waits at admission. The proportions of patients on waiting lists who already had an extended wait are reported in tables 10A.28, 10A.30, 10A.32, 10A.34, 10A.36, 10A.38, 10A.40 and 10A.42. The proportion of patients on waiting lists who already had an extended wait at the date of the census does not represent the completed waiting times of patients. This is represented by the proportion of patients with extended waits at admission.

Of patients admitted from waiting lists in NSW in 2011-12:

* 25.5 per cent were classified to category 1, of whom 6.3 per cent had an extended wait
* 33.2 per cent were classified to category 2, of whom 9.8 per cent had an extended wait
* 41.3 per cent were classified to category 3, of whom 8.4 per cent had an extended wait.

Overall in NSW, 8.3 per cent of all patients experienced extended waits (table 10.3 and table 10A.28).

Of patients admitted from waiting lists in Victoria in 2011-12:

* 30.3 per cent were classified to category 1, of whom zero per cent had an extended wait
* 46.9 per cent were classified to category 2, of whom 27.7 per cent had an extended wait
* 22.8 per cent were classified to category 3, of whom 8.5 per cent had an extended wait.

Overall in Victoria, 14.9 per cent of all patients experienced extended waits (table 10.3 and table 10A.30).

Of patients admitted from waiting lists in Queensland in 2011-12:

* 40.0 per cent were classified to category 1, of whom 12.3 per cent had an extended wait
* 44.6 per cent were classified to category 2, of whom 22.5 per cent had an extended wait
* 15.4 per cent were classified to category 3, of whom 10.2 per cent had an extended wait.

Overall in Queensland, 16.5 per cent of all patients experienced extended waits (table 10.3 and table 10A.32).

Of patients admitted from waiting lists in WA in 2011-12:

* 23.4 per cent were classified to category 1, of whom 15.4 per cent had an extended wait
* 34.8 per cent were classified to category 2, of whom 17.4 per cent had an extended wait
* 41.8 per cent were classified to category 3, of whom 3.5 per cent had an extended wait.

Overall in WA, 11.1 per cent of all patients experienced extended waits (table 10.3 and table 10A.34).

Of patients admitted from waiting lists in SA in 2011-12:

* 27.1 per cent were classified to category 1, of whom 9.9 per cent had an extended wait
* 33.3 per cent were classified to category 2, of whom 16.8 per cent had an extended wait
* 39.6 per cent were classified to category 3, of whom 3.9 per cent had an extended wait.

Overall in SA, 7.8 per cent of all patients experienced extended waits (table 10.3 and table 10A.36).

Of patients admitted from waiting lists in Tasmania in 2011-12:

* 39.0 per cent were classified to category 1, of whom 24.0 per cent had an extended wait
* 44.0 per cent were classified to category 2, of whom 40.0 per cent had an extended wait
* 17.0 per cent were classified to category 3, of whom 28.0 per cent had an extended wait.

Overall in Tasmania, 32.0 per cent of all patients experienced extended waits (table 10.3 and table 10A.38).

Of patients admitted from waiting lists in the ACT in 2011-12:

* 30.2 per cent were classified to category 1, of whom 2.5 per cent had an extended wait
* 48.6 per cent were classified to category 2, of whom 49.3 per cent had an extended wait
* 21.2 per cent were classified to category 3, of whom 14.7 per cent had an extended wait.

Overall in the ACT, 27.9 per cent of all patients experienced extended waits (table 10.3 and table 10A.40).

Of patients admitted from waiting lists in NT in 2011-12:

* 38.8 per cent were classified to category 1, of whom 16.1 per cent had an extended wait
* 41.4 per cent were classified to category 2, of whom 32.8 per cent had an extended wait
* 19.8 per cent were classified to category 3, of whom 16.3 per cent had an extended wait.

Overall in the NT, 23.0 per cent of all patients experienced extended waits (table 10.3 and table 10A.42).

All jurisdictions also provided data on urgency category waiting times by clinical specialty (tables 10A.29, 10A.31, 10A.33, 10A.35, 10A.37, 10A.39, 10A.41 and 10A.43).

##### Presentations to emergency departments with a length of stay of 4 hours or less ending in admission

This measure is reported for the first time this year. Nationally in 2012-13, 36 per cent of those who presented to an emergency department waited 4 hours or less to be admitted to hospital. Nationally the percentage waiting 4 hours or less to be admitted was 52 per cent of patients requiring resuscitation, 39 per cent of emergency patients and 34 per cent of urgent patients. Waiting times improved for all triage categories from 2011-12 to 2012-13 on a national basis (table 10.4).

Table 10.4 Proportion of presentations to emergency departments with a length of stay of 4 hours or less ending in admission, public hospitals**a, b, c, d**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Triage category | NSW | Vic | Qld | WA | SA | Tas | ACT | NT | Aust |
| 2011-12 |  |  |  |  |  |  |  |  |  |
| 1 — Resuscitation | 44 | 53 | 43 | 61 | 53 | 62 | 61 | 53 | 49 |
| 2 — Emergency | 25 | 35 | 24 | 54 | 36 | 30 | 41 | 28 | 32 |
| 3 — Urgent | 21 | 29 | 20 | 50 | 33 | 21 | 28 | 28 | 27 |
| 4 — Semi-urgent | 23 | 30 | 25 | 51 | 37 | 24 | 27 | 29 | 29 |
| 5 — Non-urgent | 43 | 53 | 46 | 62 | 52 | 43 | 44 | 60 | 48 |
| **Total**d | **24** | **31** | **23** | **52** | **36** | **25** | **32** | **29** | **29** |
| 2012-13 |  |  |  |  |  |  |  |  |  |
| 1 — Resuscitation | 44 | 56 | 54 | 59 | 55 | 56 | 62 | 48 | 52 |
| 2 — Emergency | 32 | 44 | 40 | 52 | 41 | 32 | 40 | 23 | 39 |
| 3 — Urgent | 27 | 36 | 39 | 43 | 38 | 22 | 24 | 23 | 34 |
| 4 — Semi-urgent | 30 | 36 | 45 | 45 | 43 | 24 | 28 | 24 | 35 |
| 5 — Non-urgent | 53 | 53 | 62 | 55 | 61 | 47 | 40 | 50 | 54 |
| **Total**d | **30** | **38** | **41** | **46** | **41** | **25** | **29** | **24** | **36** |

a Includes presentations for all types of visit. b Length of stay is calculated as the length of time between presentation to the emergency department and physical departure. c Data are for all hospitals. d Total includes presentations for which the triage category was not reported.

*Source*: AIHW (2013), *Australian hospital statistics 2012–13: emergency department care*, Health services series no. 52. Cat. no. HSE 142. Canberra; AIHW (2012), *Australian hospital statistics 2011–12: emergency department care*, Health services series no. 45. Cat. no. HSE 126. Canberra; table 10A.44.

Data on emergency department presentations for non-admitted patients may be affected by variations in reporting practices across states and territories and over time. The comparability of emergency department waiting times data across jurisdictions can be influenced by differences in data coverage (table 10.2) and clinical practices — in particular, the allocation of cases to urgency categories.

Data in table 10.4 are for all hospitals. Data for ‘Principal referral and specialist women’s and children’s’ hospitals and ‘Large hospitals’ are presented in table 10A.44. Nationally in 2012-13 a higher proportion of patients were admitted within 4 hours or less in large hospitals than in principal referral and specialist women’s and children’s hospitals for all triage categories, except resuscitation, which had broadly similar admission rates (table 10A.44).

### Effectiveness — appropriateness

#### Separation rates for selected procedures

‘Separation rates for selected procedures’ is an indicator of the appropriateness of hospital services (box 10.5).

|  |
| --- |
| Box 10.5 Separation rates for selected procedures |
| ‘Separation rates for selected procedures’ is defined as separations per 1000 people for certain procedures in public hospitals. The procedures are selected for their frequency, for sometimes being elective and discretionary, and because alternative treatments are sometimes available.  Higher/lower or increasing/decreasing rates are not necessarily associated with inappropriate care. However, large jurisdictional variations in rates for particular procedures can require investigation to determine whether service levels are appropriate.  Care needs to be taken when interpreting the differences in the separation rates for the selected procedures. Variations in rates can be attributable to variations in the prevalence of the conditions being treated, or to differences in clinical practice across states and territories. Higher rates can be acceptable for certain conditions and not for others. Higher rates of angioplasties, for example, can represent appropriate levels of care, whereas higher rates of hysterectomies or tonsillectomies can represent an over‑reliance on procedures. Some of the selected procedures, such as angioplasty and coronary artery bypass graft, are alternative treatment options for people diagnosed with similar conditions.  (Continued on next page) |
|  |
|  |

|  |
| --- |
| Box 10.5 (Continued) |
| Data reported for this indicator are:   * comparable (subject to caveats) across jurisdictions and over time * complete (subject to caveats) for the current reporting period. All required 2011-12 data are available for all jurisdictions.   Information about data quality for this indicator is at www.pc.gov.au/gsp/reports/rogs/2014. |
|  |
|  |

The separation rates for selected procedures reported here reflect the activities of the public health system. For all procedures, separation rates varied across jurisdictions (table 10.5).

Table 10.5 Separations for selected procedures per 1000 people, public hospitals, 2011-12**a**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | NSW | Vic | Qld | WA | SA | Tas | ACT | NT | Total |
| Procedure |  |  |  |  |  |  |  |  |  |
| Cataract extraction | 2.6 | 3.1 | 1.6 | 4.3 | 3.5 | 1.3 | 3.5 | 5.1 | 2.7 |
| Cholecystectomy | 1.4 | 1.4 | 1.2 | 1.1 | 1.4 | 1.4 | 1.4 | 1.2 | 1.3 |
| Coronary angioplasty | 0.9 | 0.8 | 0.8 | 0.9 | 1.0 | 1.0 | 1.9 | .. | 0.9 |
| Coronary artery bypass graft | 0.3 | 0.3 | 0.3 | 0.2 | 0.3 | 0.4 | 0.6 | .. | 0.3 |
| Cystoscopy | 1.6 | 2.8 | 2.0 | 3.0 | 2.6 | 1.5 | 2.4 | 1.7 | 2.2 |
| Haemorrhoidectomy | 1.0 | 0.8 | 0.4 | 0.5 | 0.5 | 0.7 | 0.4 | 0.9 | 0.7 |
| Hip replacement | 0.7 | 0.7 | 0.5 | 0.8 | 0.7 | 0.6 | 1.0 | 0.6 | 0.6 |
| Hysterectomy, females aged 15–69 years | 1.0 | 1.1 | 1.0 | 1.1 | 1.3 | 1.1 | 0.7 | 0.8 | 1.0 |
| Inguinal herniorrhaphy | 1.0 | 1.0 | 0.8 | 0.9 | 1.0 | 1.1 | 0.9 | 0.9 | 1.0 |
| Knee replacement | 0.7 | 0.5 | 0.5 | 0.7 | 0.6 | 0.3 | 0.9 | 0.4 | 0.6 |
| Myringotomy (with insertion of tube) | 0.5 | 0.8 | 0.7 | 0.7 | 1.3 | 0.6 | 0.8 | 0.6 | 0.7 |
| Prostatectomy | 0.9 | 1.1 | 0.8 | 0.8 | 1.0 | 0.8 | 0.9 | 1.0 | 0.9 |
| Septoplasty | 0.3 | 0.5 | 0.2 | 0.2 | 0.4 | 0.1 | 0.4 | 0.1 | 0.3 |
| Tonsillectomy | 0.9 | 1.2 | 0.9 | 1.0 | 1.3 | 0.8 | 1.0 | 0.7 | 1.0 |
| Varicose veins, stripping and ligation | 0.2 | 0.3 | 0.1 | 0.1 | 0.3 | 0.1 | 0.6 | 0.2 | 0.2 |

a Rates are standardised to the Australian population as at 30 June 2001 and are calculated for the total population for all procedures except prostatectomy (rates calculated for the male population only) and hysterectomy (rates calculated for females aged 15–69 years). **..** Not applicable.

*Source*: AIHW (2013), *Australian Hospital Statistics 2011-12,* Health Services Series No. 50, Cat no. HSE 134; table 10A.45.

Data for private hospitals are reported in table 10A.45. Table 10A.45 also reports selected separations for all hospitals by Indigenous status, remoteness and socioeconomic status. Table 10A.46 reports additional information for the selected separations for all hospitals such as numbers of separations and the standardised separation rate ratio.

### Effectiveness — quality

There is no single definition of quality in healthcare, but the Australian Commission on Safety and Quality in Health Care (ACSQHC) has defined quality as ‘the extent to which the properties of a service or product produce a desired outcome’ (Runciman 2006). No single indicator can measure quality across all providers. An alternative approach is to identify and report on aspects of quality of care. The aspects of quality recognised in the performance indicator framework are safety, responsiveness and continuity. This Report includes indicators of safety, but no indicators have yet been developed for responsiveness or continuity.

Various governments publicly report performance indicators for service quality of public hospitals. Some have adopted the same indicators reported in this chapter. For example:

* The Australian Government’s MyHospitals website, which is managed by the National Health Performance Authority, reports *staphylococcus aureus* bacteraemia (SAB) infections as counts and rates per 10 000 occupied bed days for most public hospitals and a number of private hospitals.
* In NSW, reporting of surgical site infection rates for hip and knee surgery is mandatory for public hospitals.
* Victorian hospitals are required to publish annual quality of care reports that include safety and quality indicators for infection control, medication errors, falls monitoring and prevention, pressure wound monitoring and prevention, patient satisfaction and consumer participation in health care decision making.
* Queensland Health publishes regular online public hospitals performance, which among other measures, includes patient experience results.
* Both the WA and Tasmanian health departments’ annual reports include information on unplanned re‑admission rates and WA also includes a section on patient evaluation of health services.
* SA Health publishes an annual patient safety report, which provides a summary of the types of incidents that occurred in public hospitals and a comprehensive overview of the major patient safety programs being conducted by SA Health. It links the programs to the safety issues identified by analysis of data from the incident management system (Safety Learning System), Coronial recommendations and other sources, to help explain what actions are being taken to address these safety issues. A Measuring Consumer Experience SA Public Hospital Inpatient Annual Report, which details the key findings from the SA Consumer Experience Surveillance System, is also published.
* ACT Health publishes quarterly reports that include data on unplanned readmissions, unplanned returns to operating theatre and hospital acquired infection rates. Information about quality and safety activities and consumer feedback management is also included in an annual report.
* The NT Health Department Annual Report publishes information on unplanned re‑admission rates after discharge for acute mental health episodes.

#### Safety

Improving patient safety is an important issue for all hospitals. Studies on medical errors have indicated that adverse healthcare related events occur in public hospitals in Australia and internationally, and that their incidence is potentially high (for example Eshani *et al*. 2006). These adverse events can result in serious consequences for individual patients, and the associated costs to individuals and the health care system can be considerable (Van den Bos et al. 2011).

#### Safety — unplanned hospital readmission rates

‘Unplanned hospital readmission rates’ is an indicator of governments’ objective to provide public hospital services that are safe and of high quality (box 10.6). Patients might be re-admitted unexpectedly if the initial care or treatment was ineffective or unsatisfactory, if post discharge planning was inadequate, or for reasons outside the control of the hospital (for example poor post-discharge care).

|  |
| --- |
| Box 10.6 Unplanned hospital readmission rates |
| ‘Unplanned hospital readmission rates’ is defined as the rate at which patients unexpectedly return to hospital within 28 days for further treatment of the same condition. It is calculated as the number of separations that were unplanned or unexpected readmissions to the same hospital following a separation in which a selected surgical procedure was performed and which occurred within 28 days of the previous date of separation, expressed per 1000 separations in which one of the selected surgical procedures was performed. Selected surgical procedures are knee replacement, hip replacement, tonsillectomy and adenoidectomy, hysterectomy, prostatectomy, cataract surgery and appendectomy. Unplanned readmissions are those having a principal diagnosis of a post-operative adverse event for which a specified ICD-10-AM diagnosis code has been assigned.  (Continued on next page) |
|  |
|  |

|  |
| --- |
| Box 10.6 (Continued) |
| Low or decreasing rates for this indicator are desirable. Conversely, high rates for this indicator suggest the quality of care provided by hospitals, or post-discharge care or planning, should be examined, because there may be scope for improvement.  Data reported for this indicator are:   * comparable (subject to caveats) within jurisdictions over time but are not comparable across jurisdictions * complete (subject to caveats) for the current reporting period. All required 2011-12 data are available for all jurisdictions.   Information about data quality for this indicator is at www.pc.gov.au/gsp/reports/rogs/2014. |
|  |
|  |

Unplanned readmission rates are not adjusted for casemix or patient risk factors, which can vary across hospitals and across jurisdictions. Unplanned hospital readmission rates in public hospitals in 2011-12 are reported in table 10.6. Unplanned hospital readmission rates are reported by hospital peer group, Indigenous status, remoteness and socioeconomic status in table 10A.48.

Table 10.6 Unplanned hospital readmission rates, per 1000 separations, 2011-12

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | NSW | Vic | Qld | WAa | SA | Tas | ACT | NT | Totala |
| *Surgical procedure prior to separation* | | | | | | | | | |
| Knee replacement | 18.5 | 19.1 | 26.9 | 17.4 | 17.7 | np | np | np | 20.0 |
| Hip replacement | 17.7 | 17.4 | 14.2 | 22.5 | 23.7 | np | np | np | 17.7 |
| Tonsillectomy and Adenoidectomy | 24.8 | 23.7 | 32.6 | 33.3 | 33.7 | 60.6 | 18.3 | np | 27.8 |
| Hysterectomy | 27.9 | 32.4 | 33.2 | 31.5 | 28.1 | 28.1 | np | np | 30.9 |
| Prostatectomy | 22.7 | 26.4 | 36.3 | 50.3 | 25.9 | np | np | np | 27.2 |
| Cataract surgery | 2.8 | 3.2 | 4.0 | 2.6 | 3.3 | 7.2 | – | np | 3.2 |
| Appendicectomy | 23.5 | 24.5 | 20.4 | 31.3 | 36.0 | 29.8 | 26.3 | 49.6 | 24.7 |

a Total rates for Australia do not include WA. For all jurisdictions except WA, this indicator is calculated by the AIHW using data from the National Hospital Morbidity Database, based on the national minimum data set for Admitted patient care. For WA, the indicator was calculated and supplied by WA Health and was not independently verified by the AIHW. **np**Not published. – Nil or rounder to zero.

*Source*: AIHW (unpublished) Admitted Patient Care National Minimum Data Set; WA Health (unpublished); table 10A.47.

There are some difficulties in identifying re‑admissions that were unplanned. The indicator is likely to be an under-estimate because:

* it identifies only those patients re-admitted to the same hospital, so does not include patients who go to another hospital
* episodes of non-admitted patient care provided in outpatient clinics or emergency departments which may have been related to a previous admission are not included
* the unplanned and/or unexpected readmissions are limited to those having a principal diagnosis of a post-operative adverse event. This does not include all possible unplanned/unexpected readmissions.

#### Safety — hospital accreditation

‘Accreditation’ is an indicator of governments’ objective to provide public hospital services that are of high quality (box 10.7).

|  |
| --- |
| Box 10.7 Accreditation |
| ‘Accreditation’ is defined as the number of beds in accredited hospitals as a percentage of total beds. ‘Accreditation’ signifies professional and national recognition awarded to hospitals and other healthcare facilities that meet defined industry standards. Public hospitals can seek accreditation through a number of agencies. These agencies are accredited through the Joint Accreditation System of Australia and New Zealand or the International Society for Quality in Healthcare. Jurisdictions apply specific criteria to determine which accreditation programs are suitable. Quality programs require hospitals to demonstrate continual adherence to quality improvement standards to gain and retain accreditation.  A high or increasing rate of accreditation is desirable. However, it is not possible to draw conclusions about the quality of care in those hospitals that do not have accreditation. Until 1 January 2013 public hospital accreditation was voluntary in all jurisdictions except Victoria and Queensland, where it is mandatory for all public hospitals (excluding those that provide only dental or mothercraft services).  Data reported for this indicator are:   * comparable (subject to caveats) across jurisdictions and over time * complete (subject to caveats) for the current reporting period. All required 2011‑12 data are available for all jurisdictions.   Information about data quality for this indicator is at www.pc.gov.au/gsp/reports/rogs/2014. |
|  |
|  |

Data for this indicator are shown in figure 10.13. Australian Health Ministers have mandated accreditation in all public and private hospitals and day procedure services in Australia. From 1 January 2013, health services will be assessed to the National Safety and Quality Health Service (NSQHS) Standards by accrediting agencies approved by the ACSQHC. There are currently 10 accrediting agencies with approval listed on the ACSQHC website. By 2016 it is anticipated all Australian hospitals will have been accredited to all 10 NSQHS Standards.

Figure 10.13 Proportion of accredited beds, public hospitalsa, b

|  |
| --- |
| Figure 10.13 Proportion of accredited beds, public hospitals  More details can be found within the text surrounding this image. |

a Where average available beds for the year were not available, bed numbers at 30 June were used. b Includes psychiatric hospitals.

*Source*: AIHW (various years), *Australian Hospital Statistics,* Health Services Series, Cat nos. HSE 71, 84, 107, 117 and 134; table 10A.49.

#### Safety — adverse events in public hospitals

‘Adverse events in public hospitals’ is an indicator of governments’ objective to provide public hospital services that are safe and of high quality (box 10.8). Adverse events in public hospitals can result in serious consequences for individual patients, place a significant burden on the health system and are influenced by the safety of hospital practices and procedures. Sentinel events, which are a subset of adverse events that result in death or very serious harm to the patient, are reported separately in this chapter as an outcome indicator.

|  |
| --- |
| Box 10.8 Adverse events in public hospitals |
| ‘Adverse events in public hospitals’ is defined by the following two measures:   * healthcare-associated infections * adverse events treated in hospitals.   Healthcare-associated infections  Healthcare-associated infections is the number of *Staphylococcus aureus* (including Methicillin-resistant *Staphylococcus aureus* [MRSA]) bacteraemia (SAB) patient episodes associated with public hospitals, expressed as a rate per 10 000 patient days for public hospitals reporting for the SAB indicator.  A patient episode of SAB is defined as a positive blood culture for SAB. Only the first isolate per patient is counted, unless at least 14 days has passed without a positive blood culture, after which an additional episode is recorded.  SAB is considered to be healthcare-associated if the first positive blood culture is collected more than 48 hours after hospital admission or less than 48 hours after discharge, or if the first positive blood culture is collected 48 hours or less after admission and one or more of the following key clinical criteria was met for the patient‑episode of SAB:   * SAB is a complication of the presence of an indwelling medical device * SAB occurs within 30 days of a surgical procedure where the SAB is related to the surgical site * an invasive instrumentation or incision related to the SAB was performed within 48 hours * SAB is associated with neutropenia (<1x109/L) contributed to by cytotoxic therapy.   Cases where a known previous blood culture has been obtained within the last 14 days are excluded. Patient days for unqualified newborns are included. Patient days for hospital boarders and posthumous organ procurement are excluded.  A low or decreasing healthcare-associated infections rate is desirable.  Data reported for this measure are:   * comparable (subject to caveats) within jurisdictions over time but are not comparable across jurisdictions * complete (subject to caveats) for the current reporting period. All required 2012‑13 data are available for all jurisdictions.   Information about data quality for this measure is at www.pc.gov.au/gsp/reports/rogs/2014.  (Continued on next page) |
|  |
|  |

|  |
| --- |
| Box 10.8 (Continued) |
| Adverse events treated in hospitals  Adverse events treated in hospitals are incidents in which harm resulted to a person during hospitalisation. They are measured by separations that had an adverse event including infections, falls resulting in injuries and problems with medication and medical devices that occurred during a hospitalisation. Hospitalisation is identified by 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.  Low or decreasing adverse events treated in hospitals is desirable.  Data reported for this measure are:   * comparable (subject to caveats) across jurisdictions and over time * complete (subject to caveats) for the current reporting period. All required 2011‑12 data are available for all jurisdictions.   Data quality information for this measure is under development. |
|  |
|  |

##### Safety — healthcare-associated infections

Healthcare-associated infections in public hospitals per 10 000 patient days is reported in figure 10.14.

Figure 10.14 Healthcare-associated infections, public hospitals**a, b**

|  |
| --- |
| Figure 10.14 Healthcare-associated infections, public hospitals  More details can be found within the text surrounding this image. |

a Comprises both Methicillin resistant *Staphylococcus aureus* and Methicillin sensitive *Staphylococcus aureus*. b The SAB patient episodes were associated with both admitted patient care and with non-admitted patient care (including emergency departments and outpatient clinics). The comparability of the SAB rates across jurisdictions and over time is limited, because of coverage differences and because the count of patient days reflects the amount of admitted patient activity, but does not necessarily reflect the amount of non‑admitted patient activity.

*Source*: AIHW unpublished; table 10A.50.

##### Safety — adverse events treated in hospitals

In 2011-12, 6.1 per cent of separations in public hospitals reported an ICD-10-AM code indicating an adverse event (table 10.7). Around 55.3 per cent of separations with an adverse event reported procedures causing abnormal reactions/complications, and 37.6 per cent reported adverse effects of drugs, medicaments and biological substances (table 10A.51). Data for 2010-11 are reported in table 10A.51.

Table 10.7 Separations with an adverse event, per 100 separations, public hospitals, 2011-12**a, b**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | NSW | Vic | Qld | WA | SA | Tas | ACT | NT | Aust |
| External cause of injury and poisoning | | | | | | | | | |
| Adverse effects of drugs, medicaments and biological substances | | | | | | | | | |
|  | 2.4 | 2.1 | 2.1 | 2.3 | 2.5 | 2.4 | 2.2 | 0.9 | 2.2 |
| Misadventures to patients during surgical and medical care | | | | | | | | | |
|  | 0.2 | 0.3 | 0.3 | 0.3 | 0.2 | 0.4 | 0.3 | 0.1 | 0.3 |
| Procedures causing abnormal reactions/complications | | | | | | | | | |
|  | 3.2 | 3.3 | 3.3 | 3.2 | 3.5 | 4.5 | 3.5 | 2.0 | 3.3 |
| Other external causes of adverse events | | | | | | | | | |
|  | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 |
| Place of occurrence of injury and poisoning: Health service area | | | | | | | | | |
|  | 6.1 | 5.9 | 5.9 | 5.9 | 6.5 | 7.6 | 6.1 | 3.0 | 6.0 |
| Diagnoses | | | | | | | | | |
| Selected post-procedural disorders | | | | | | | | | |
|  | 0.9 | 0.7 | 0.8 | 0.8 | 1.1 | 1.2 | 1.1 | 0.4 | 0.8 |
| Haemorrhage and haematoma complicating a procedure | | | | | | | | | |
|  | 0.5 | 0.5 | 0.4 | 0.5 | 0.4 | 0.5 | 0.5 | 0.3 | 0.5 |
| Infection following a procedure | | | | | | | | | |
|  | 0.5 | 0.4 | 0.5 | 0.4 | 0.4 | 0.5 | 0.4 | 0.4 | 0.4 |
| Complications of internal prosthetic devices | | | | | | | | | |
|  | 1.2 | 1.3 | 1.3 | 1.1 | 1.2 | 1.2 | 1.4 | 0.8 | 1.2 |
| Other diagnoses of complications of medical and surgical care | | | | | | | | | |
|  | 0.7 | 1.1 | 0.8 | 0.8 | 0.8 | 1.1 | 0.7 | 0.6 | 0.8 |
| **Total (any of the above)**c | | | | | | | | | |
|  | **6.3** | **6.1** | **6.0** | **6.0** | **6.7** | **7.7** | **6.3** | **3.2** | **6.1** |
| **Adverse events for overnight separations** | | | | | | | | | |
|  | **10.1** | **11.8** | **10.1** | **10.7** | **10.7** | **12.0** | **11.9** | **7.9** | **10.7** |

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 Age standardised rate. c 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 an adverse event.

*Source*: AIHW (unpublished), National Hospital Morbidity Database; table 10A.51.

A separation may be recorded against more than one category in table 10.7, as some adverse events are reported as diagnoses and others as external causes or places of occurrence (of the injury or poisoning).

These data 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.

Some adverse events are not identifiable using the codes for an adverse event or a place of occurrence of hospital. Some other diagnosis codes may suggest that an adverse event has occurred when it has not.

#### Responsiveness

The Steering Committee has identified the responsiveness of public hospitals as an area for development in future Reports.

#### Continuity — continuity of care

‘Continuity of care’ is an indicator of governments’ objective to provide public hospital services that are of high quality (box 10.9).

|  |
| --- |
| Box 10.9 Continuity of care |
| ‘Continuity of care’ measures the provision of uninterrupted, timely, coordinated healthcare, interventions and actions across programs, practitioners and organisations.  Continuity of care has been identified as a key area for development in future Reports. |
|  |
|  |

### Sustainability

#### Workforce sustainability

‘Workforce sustainability’ is an indicator of governments’ objective to provide sustainable public hospital services (box 10.10). Labour, particularly nurses and medical practitioners, is the most significant and costly resource used in providing public hospital services (figure 10.21), and the sustainability of the workforce helps determine whether sustainability problems might arise in the future delivery of public hospital services.

The sustainability of the public hospital workforce is affected by a number of factors; in particular, whether the number of new entrants are sufficient to maintain the existing workforce, and the proportion of the workforce that is close to retirement.

|  |
| --- |
| Box 10.10 Workforce sustainability |
| ‘Workforce sustainability’ reports age profiles for nurse and medical practitioner workforces. It shows the proportions of registered nurses and medical practitioners in ten year age brackets, by jurisdiction and by region.  A high or increasing proportion of the workforce that are new entrants and/or a low or decreasing proportion of the workforce that is close to retirement is desirable.  All nurses (including midwives) and medical practitioners in the workforce are included in these measures as crude indicators of the potential respective workforces for public hospitals.  These measures are not a substitute for a full workforce analysis that allows for migration, trends in full-time work and expected demand increases. They can, however, indicate that further attention should be given to workforce sustainability for public hospitals.  Data reported for this indicator are:   * comparable (subject to caveats) across jurisdictions and over time * complete (subject to caveats) for the current reporting period. All required 2012 data are available for all jurisdictions.   Information about data quality for this indicator is at www.pc.gov.au/gsp/reports/rogs/2014. |
|  |
|  |

The age profile of the nursing workforce (which includes midwives) for 2012 for each jurisdiction is shown in figure 10.15. Nursing workforce data by remoteness area for 2012 are shown in figure 10.16.

Figure 10.15 Nursing workforce, by age group, 2012a, b

|  |
| --- |
| Figure 10.15 Nursing workforce, by age group, 2012  More details can be found within the text surrounding this image. |

a Includes registered and enrolled nurses (including midwives) who are employed in nursing, nurses who are registered but on extended leave and nurses who are registered and looking for work in nursing. b State and territory is derived from state and territory of main job where available; otherwise state and territory of principal practice is used as a proxy. If principal practice details are unavailable, state and territory of residence is used. Records with no information on all three locations are coded to ‘Not stated’.

*Source*: AIHW (unpublished) National Health Workforce Data Set; table 10A.53.

Figure 10.16 Nursing workforce, by age group and remoteness area, 2012a, b

|  |
| --- |
| Figure 10.16 Nursing workforce, by age group and remoteness area, 2012  More details can be found within the text surrounding this image. |

a Includes registered and enrolled nurses (including midwives) who are employed in nursing, nurses who are registered but on extended leave and nurses who are registered and looking for work in nursing. b Remote and very remote areas include migratory areas.

*Source*: AIHW (unpublished) National Health Workforce DataSet; table 10A.52.

The age profile of the medical practitioner workforce in 2012 for each jurisdiction is shown in figure 10.17. Medical practitioner workforce data for 2012 by remoteness area are shown in figure 10.18.

Figure 10.17 Medical practitioner workforce, by age group, 2012a, b

|  |
| --- |
| Figure 10.17 Medical practitioner workforce, by age group, 2012  More details can be found within the text surrounding this image. |

a Includes employed medical practitioners, registered medical practitioners on extended leave and registered medical practitioners looking for work in medicine. b State and territory is derived from state and territory of main job where available; otherwise state and territory of principal practice is used as a proxy. If principal practice details are unavailable, state and territory of residence is used. Records with no information on all three locations are coded to ‘Not stated’.

*Source*: AIHW (unpublished) National Health Workforce Data Set; table 10A.55.

Figure 10.18 Medical practitioner workforce, by age group and remoteness area, 2012a, b

|  |
| --- |
| Figure 10.18 Medical practitioner workforce, by age group and remoteness area, 2012  More details can be found within the text surrounding this image. |

a Includes employed medical practitioners, registered medical practitioners on extended leave and registered medical practitioners looking for work in medicine. b Remote and very remote areas include migratory areas.

*Source*: AIHW (unpublished) National Health Workforce Data Set; table 10A.54.

### Efficiency

Two approaches to measuring the efficiency of public hospital services are included in this Report: the ‘cost per casemix-adjusted unit of output’ (the unit cost) and the ‘casemix-adjusted relative length of stay index’. Length of stay is correlated with costs at aggregate levels of reporting.

The Steering Committee’s approach is to report the full costs of a service where they are available. Where the full costs of a service cannot be accurately measured, the Steering Committee seeks to report estimated costs that are comparable. Where differences in comparability remain, the differences are documented. The Steering Committee has identified financial reporting issues that have affected the accuracy and comparability of unit costs for acute care services. These include the treatment of payroll tax, superannuation, depreciation and the user cost of capital associated with buildings and equipment. A number of issues remain to further improve the quality of these estimates.

Costs associated with non-current physical assets (such as depreciation and the user cost of capital) are potentially important components of the total costs of many services delivered by government agencies. Differences in the techniques for measuring non-current physical assets (such as valuation methods) can reduce the comparability of cost estimates across jurisdictions. In response to concerns regarding data comparability, the Steering Committee initiated a study, reported in *Asset Measurement in the Costing of Government Services* (SCRCSSP 2001). The study examined the extent to which differences in asset measurement techniques applied by participating agencies can affect the comparability of reported unit costs.

The results reported in the study for public hospitals indicate that different methods of asset measurement could lead to quite large variations in reported capital costs. However, considered in the context of total unit costs, the differences created by these asset measurement effects were relatively small, because capital costs represent a small proportion of total cost (although the differences can affect cost rankings across jurisdictions). A key message from the study was that the adoption of nationally uniform accounting standards across all service areas would be a desirable outcome.

Care needs to be taken, therefore, in comparing unit costs across jurisdictions. Differences in counting rules, the treatment of various expenditure items (for example, superannuation) and the allocation of overhead costs have the potential to affect such comparisons. In addition, differences in the use of salary packaging can allow hospitals to lower their wage bills (and thus State or Territory government expenditure) while maintaining the after-tax income of their staff. No data were available for reporting on the effect of salary packaging and any variation in its use across jurisdictions.

#### Cost per casemix-adjusted separation

‘Cost per casemix-adjusted separation’ is an indicator of governments’ objective to deliver services in a cost effective manner (box 10.11).

|  |
| --- |
| Box 10.11 Cost per casemix-adjusted separation |
| ‘Cost per casemix-adjusted separation’ is defined by the following two measures:   * Recurrent cost per casemix-adjusted separation is the average cost of providing care for an admitted patient (overnight stay or same day) adjusted with AR‑DRG cost weights for the relative complexity of the patient’s clinical condition and of the hospital services provided (AIHW 2000). * This measure includes overnight stays, same day separations, private patient separations in public hospitals and private patient recurrent costs. It excludes non‑acute hospitals, mothercraft hospitals, multipurpose hospitals, multipurpose services, hospices, rehabilitation hospitals, psychiatric hospitals and hospitals in the ‘unpeered and other’ peer groups. The data exclude expenditure on non‑admitted patient care, the user cost of capital and depreciation, and research costs. * All admitted patient separations and their costs are included, and most separations are for acute care. Cost weights are not available for admitted patients who received non‑acute care (4.7 per cent of total separations in 2011‑12 (table 10A.13)), so the acute care cost weights are applied to non‑acute separations. The admitted patient cost proportion is an estimate only. * Some jurisdictions have developed experimental cost estimates for acute, non‑psychiatric patients, which are reported here. Separations for non‑acute patients and psychiatric acute care patients are excluded from these estimates because AR‑DRG cost weights are a poor predictor of these separations. * Data reported for this measure are: * comparable (subject to caveats) within jurisdictions over time but are not comparable across jurisdictions * complete (subject to caveats) for the current reporting period. All required 2011‑12 data are available for all jurisdictions.   (Continued on next page) |
|  |
|  |

|  |
| --- |
| Box 10.11 (Continued) |
| * Total cost per casemix‑adjusted separation is the recurrent cost per casemix-adjusted separation plus the capital costs per casemix-adjusted separation. Recurrent costs include labour and material costs, and capital costs include depreciation and the user cost of capital for buildings and equipment. This measure allows the full cost of hospital services to be considered. The hospitals included in this measure are the same as for recurrent cost per casemix-adjusted separation. * Depreciation is defined as the cost of consuming an asset’s services. It is measured by the reduction in value of an asset over the financial year. The user cost of capital is the opportunity cost of the capital invested in an asset, and is equivalent to the return foregone from not using the funds to deliver other services or to retire debt. Interest payments represent a user cost of capital, so are deducted from capital costs to avoid double counting. * Data reported for this measure are: * comparable (subject to caveats) within jurisdictions over time but are not comparable across jurisdictions * complete (subject to caveats) for the current reporting period. All required 2011‑12 data are available for all jurisdictions.   A low or decreasing cost per casemix-adjusted separation can reflect more efficient service delivery in public hospitals. However, this indicator needs to be viewed in the context of the set of performance indicators as a whole, as decreasing cost could also be associated with decreasing quality and effectiveness.  Information about data quality for this indicator is at www.pc.gov.au/gsp/reports/rogs/2014. |
|  |
|  |

##### Recurrent cost per casemix-adjusted separation

‘Recurrent cost per casemix-adjusted separation’ data are presented in figure 10.19.

Figure 10.19 Recurrent cost per casemix-adjusted separation, 2011-12a, b, c, d

|  |
| --- |
| Figure 10.19 Recurrent cost per casemix-adjusted separation, 2011-12  More details can be found within the text surrounding this image. |

a Excludes depreciation and the user cost of capital, spending on non-admitted patient care and research costs. b Casemix-adjusted separations are the product of total separations and average cost weight. Average cost weights are from the National Hospital Cost Data Collection, based on acute and unspecified separations and newborn episodes of care with qualified days, using the 2008-09 AR-DRG v 5.2 cost weights. c Excludes separations for which the care type was reported as ‘newborn with no qualified days’, and records for hospital boarders and posthumous organ procurement. d Psychiatric hospitals, drug and alcohol services, mothercraft hospitals, unpeered and other hospitals, hospices, rehabilitation facilities, small non-acute hospitals and multi‑purpose services are excluded from these data. 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.

*Source*: AIHW (2013), *Australian Hospital Statistics 2011-12,* Health Services Series No. 50, Cat no. HSE 134; table 10A.56.

Experimental estimates of ‘recurrent cost per casemix-adjusted separation’ for acute non‑psychiatric patients are reported for NSW, Victoria and WA (figure 10.20). (These estimates relate to a subset of the selected public hospitals reported in figure 10.19 and are not available for other jurisdictions.) The experimental estimates aim to overcome the need to apply cost weights for acute care to non‑acute care separations (box 10.11). The effect of restricting the analysis to acute, non‑psychiatric admitted patients was to decrease the estimated recurrent cost per casemix adjusted separation for the subset of hospitals by 5.6 per cent for NSW, 14.0 per cent for Victoria and 4.1 per cent for WA (AIHW 2013a).

Figure 10.20 Recurrent cost per acute non-psychiatric casemix-adjusted separation, subset of hospitals, 2011-12a, b, c, d

|  |
| --- |
| Figure 10.20 Recurrent cost per acute non-psychiatric casemix-adjusted separation, subset of hospitals, 2011-12  More details can be found within the text surrounding this image. |

a Excludes psychiatric hospitals, subacute, non-acute and unpeered hospitals. This subset excludes hospitals where the inpatient fraction was equal to the acute inpatient fraction and more than 1000 non‑acute patient days were recorded. Also excludes hospitals where the apparent cost of non‑acute patients exceeded $1000 per day and more than $1 million of apparent expenditure on non-acute patients days was reported. b Separations are those where the care type is acute, newborn with qualified days, or not reported. Psychiatric separations are those with psychiatric care days. c Average cost weight from the National Hospital Cost Data Collection, based on acute, newborn with at least one qualified day, or not reported, using the 2008-09 AR‑DRG version 5.2 cost weights. d These estimates are not available for Queensland, SA, Tasmania, the ACT or the NT.

*Source*: AIHW (2013), *Australian Hospital Statistics 2011-12,* Health Services Series No. 50, Cat no. HSE 134; table 10A.56.

Recurrent cost per casemix-adjusted separation is affected by differences in the mix of admitted patient services produced by hospitals in each jurisdiction. Hospitals have been categorised by ‘peer groups’ to enable those with similar activities to be compared. The public hospital peer groups include ‘Principal referral and Specialist women’s and children’s hospitals’, ‘Large hospitals’, ‘Medium hospitals’ and ‘Small acute hospitals’.

The dominant peer classification is the ‘Principal referral and Specialist women’s and children’s’ category. The 90 hospitals in this group had an average of 45 440 separations each at an average cost of $5222 per separation (table 10A.57 and table 10.8). Data for each of the hospital peer groups are presented in table 10.8. Detailed data for all peer groups are presented in table 10A.57.

Table 10.8 Recurrent cost per casemix-adjusted separation, by hospital peer group, 2011-12a, b, c

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | NSW | Vic | Qld | WA | SA | Tas | ACT | NT | Aust |
| Hospital peer group |  |  |  |  |  |  |  |  |  |
| Principal referral and Specialist women’s and children’s | 5 337 | 4 670 | 5 355 | 5 738 | 5 287 | 5 777 | 6 384 | 5 967 | 5 222 |
| Large | 5 003 | 4 593 | 3 973 | 5 149 | 5 051 | 7 390 | .. | .. | 4 912 |
| Medium | 4 964 | 4 945 | 4 645 | 5 399 | 5 208 | 6 406 | .. | .. | 5 025 |
| Small acute | 5 931 | 5 947 | 5 065 | 8 259 | 4 884 | 7 514 | .. | 6 424 | 6 171 |
| **All hospitals**d | **5 280** | **4 693** | **5 246** | **5 733** | **5 251** | **6 033** | **6 384** | **6 017** | **5 204** |

a Data exclude depreciation and the user cost of capital, spending on non‑admitted patient care and research costs. b 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. c Separations for which the care type was reported as newborn with no qualified days, and records for hospital boarders and posthumous organ procurement have been excluded. d Includes all hospitals in this cost per casemix‑adjusted analysis. .. Not applicable.

*Source*: AIHW (2013), *Australian Hospital Statistics 2011-12,* Health Services Series No. 50, Cat no. HSE 134; table 10A.57.

##### Total cost per casemix-adjusted separation

Total cost includes both the recurrent costs (as discussed above) and the capital costs associated with hospital services. Results for this measure in 2011-12 are reported in figure 10.21. Labour costs accounted for the majority of costs in most jurisdictions. The user cost of capital for land is not included in figure 10.21 but is reported in table 10A.58.

Figure 10.21 Total cost per casemix-adjusted separation, public hospitals, 2011-12a, b, c

|  |
| --- |
| Figure 10.21 Total cost per casemix-adjusted separation, public hospitals, 2011-12  More details can be found within the text surrounding this image. |

a Labour includes medical and non-medical labour costs. Material includes other non-labour recurrent costs, such as repairs and maintenance (table 10A.56). b Capital cost includes depreciation and the user cost of capital for buildings and equipment that is associated with the delivery of admitted patient services in the public hospitals as described in the data for recurrent cost per casemix-adjusted separation. Capital cost excludes the user cost of capital associated with land (reported in table 10A.58). c Variation across jurisdictions in the collection of capital related data suggests the data are only indicative. The capital cost per casemix‑adjusted separation is equal to the capital cost adjusted by the inpatient fraction, divided by the number of casemix-adjusted separations.

*Source*: AIHW (2013), *Australian Hospital Statistics 2011-12,* Health Services Series No. 50, Cat no. HSE 134; State and Territory governments (unpublished); tables 10A.56 and 10A.58.

#### Relative stay index

‘Relative stay index’ is an indicator of governments’ objective to deliver services efficiently (box 10.12). Data for this indicator are reported in figure 10.22. The relative stay index is reported by funding source and by medical, surgical and other AR DRGs in tables 10A.59 and 10A.60 respectively.

|  |
| --- |
| Box 10.12 Relative stay index |
| ‘Relative stay index’ is defined as the actual number of acute care patient days divided by the expected number of acute care patient days, adjusted for casemix. Casemix adjustment allows comparisons to take account of variation in types of service provided but not other influences on length of stay, such as the Indigenous status of the patient. Acute care separations only are included. Section 10.8 contains a more detailed definition outlining exclusions from the index.  (Continued on next page) |
|  |
|  |

|  |
| --- |
| Box 10.12 (Continued) |
| The relative stay index for Australia for all hospitals (public and private) is one. A relative stay index greater than one indicates that average length of patient stay is higher than expected given the jurisdiction’s casemix distribution. A relative stay index of less than one indicates that the number of bed days used was less than expected. A low or decreasing relative stay index is desirable if it is not associated with poorer health outcomes or significant extra costs outside the hospital systems (for example, in‑home care).  States and territories vary in their thresholds for classifying patients as either same day admitted patients or outpatients. These variations affect the relative stay index.  Data reported for this measure are:   * comparable (subject to caveats) across jurisdictions and over time * complete (subject to caveats) for the current reporting period. All required 2011‑12 data are available for all jurisdictions.   Information about data quality for this indicator is at www.pc.gov.au/gsp/reports/rogs/2014. |
|  |
|  |

Figure 10.22 Relative stay index, public hospitals, 2011-12a, b

|  |
| --- |
| Figure 10.22 Relative stay index, public hospitals, 2011-12  More details can be found within the text surrounding this image. |

a Separations exclude newborns with unqualified days, organ procurement posthumous and hospital boarders. b The relative stay index is based on all hospitals and is estimated using the indirect standardisation method and AR-DRG version 6.0x. The indirectly standardised relative stay index is not strictly comparable between jurisdictions but is a comparison of the jurisdiction with the national average based on the casemix of the jurisdiction.

*Source*: AIHW (2013), *Australian Hospital Statistics 2011-12,* Health Services Series No. 50, Cat no. HSE 134; table 10A.59.

#### Recurrent cost per non-admitted occasion of service

‘Recurrent cost per non-admitted occasion of service’ is an indicator of governments’ objective to deliver services in a cost effective manner (box 10.13).

|  |
| --- |
| Box 10.13 Recurrent cost per non-admitted occasion of service |
| ‘Recurrent cost per non‑admitted occasion of service’ is defined as the proportion of recurrent expenditure allocated to patients who were not admitted, divided by the total number of non‑admitted patient occasions of service in public hospitals. Occasions of service include examinations, consultations, treatments or other services provided to patients in each functional unit of a hospital. Non‑admitted occasions of service (including emergency department presentations and outpatient services) account for a significant proportion of hospital expenditure.  A low or decreasing recurrent cost per non‑admitted occasion of service can reflect more efficient service delivery in public hospitals. However, this indicator should be viewed in the context of the set of performance indicators as a whole, as decreasing cost could also be associated with decreasing quality and effectiveness. This indicator does not adjust for the complexity of service — for example, a simple urine glucose test is treated equally with a complete biochemical analysis of all body fluids (AIHW 2000).  Data reported for this indicator are:   * comparable (subject to caveats) within jurisdictions over time but are not comparable across jurisdictions * incomplete for the current reporting period. All required data were not available for Victoria, Queensland and the NT.   Information about data quality for this indicator is at www.pc.gov.au/gsp/reports/rogs/2014. |
|  |
|  |

These data are not comparable across jurisdictions. Reporting categories vary across jurisdictions, and further inconsistencies arise as a result of differences in outsourcing practices. In some cases, for example, outsourced occasions of service can be included in expenditure on non‑admitted services, but not in the count of occasions of service. Jurisdictions able to supply 2011-12 data for this indicator reported the following results for non‑admitted patient services:

* In NSW, the emergency department cost per occasion of service was $265 for 2.4 million occasions, the outpatient cost per occasion of service was $102 for 17.3 million occasions and the overall cost per occasion of service (emergency plus outpatient plus other) was $120 for 22.8 million occasions (table 10A.61).
* In WA, the emergency department cost per occasion of service was $535 for 976 000 occasions, the outpatient cost per occasion of service was $283 for 1.6 million occasions and the overall cost per occasion of service (emergency plus outpatient plus other) was $379 for 2.6 million occasions (table 10A.62).
* In SA, the emergency department cost per occasion of service was $455 for 608 000 occasions, the outpatient cost per occasion of service was $314 for 1.6 million occasions and the overall cost per occasion of service (emergency plus outpatient) was $353 for 2.2 million occasions (table 10A.63).
* In Tasmania, the emergency department cost per occasion of service was $451 for 125 000 occasions. The outpatient cost per occasion of service was $268 for 481 000 occasions. An overall cost per occasion of service was not available (table 10A.64).
* In the ACT, the emergency department cost per occasion of service was $839 for 119 000 occasions, the outpatient cost per occasion of service was $338 for 340 000 occasions and the overall cost per occasion of service (emergency plus outpatient) was $463 for 459 000 occasions (table 10A.65).

Given the lack of a nationally consistent non-admitted patient classification system, this Report includes national data from the Independent Hospital Pricing Authority’s National Hospital Cost Data Collection (NHCDC). The NHCDC collects data across a sample of hospitals that is expanding over time. The sample for each jurisdiction is not necessarily representative, because hospitals contribute data on a voluntary basis. The NHCDC data are affected by differences in costing and admission practices across jurisdictions and hospitals. Therefore, an estimation process has been carried out to create representative national activity figures from the sample data. In addition, the purpose of the NHCDC is to calculate between‑DRG cost weights, not to compare the efficiency of hospitals.

Emergency department data were contributed by 228 public hospitals. These data suggest that the cost per emergency department presentation for the public hospitals sector in 2010-11 was $498 per presentation for 5.5 million presentations (table 10A.66). The cost per presentation for emergency departments by triage class are shown in table 10A.67. Cost per non-admitted clinic occasion of service data were provided by 203 public hospitals with an average cost of $340 per occasion of service for 8.1 million occasions of service (table 10A.68).

### Outcomes

Outcomes are the impact of services on the status of an individual or group (while outputs are the services delivered) (see chapter 1, section 1.5).

#### Patient satisfaction

‘Patient satisfaction’ provides a proxy measure of governments’ objective to deliver services that are high quality and responsive to individual patient needs (box 10.14). Patient satisfaction surveys are different from other sources of hospital quality data, because they provide information on hospital quality from the patient’s perspective. Surveys can be useful for obtaining information on patient views of both clinical and non-clinical hospital care (such as whether patients feel they were treated with respect and provided with appropriate information regarding their treatment).

|  |
| --- |
| Box 10.14 Patient satisfaction |
| ‘Patient satisfaction’ is defined by the following six measures for the purposes of this report:   * Proportion of people who went to an emergency department in the last 12 months reporting the emergency department doctors, specialists or nurses always or often listened carefully to them * Proportion of people who went to an emergency department in the last 12 months reporting the emergency department doctors, specialists or nurses always or often showed respect to them * Proportion of people who went to an emergency department in the last 12 months reporting the emergency department doctors, specialists or nurses always or often spent enough time with them * Proportion of people who were admitted to hospital in the last 12 months reporting the hospital doctors, specialists or nurses always or often listened carefully to them * Proportion of people who were admitted to hospital in the last 12 months reporting the hospital doctors, specialists or nurses always or often showed respect to them * Proportion of people who were admitted to hospital in the last 12 months reporting the hospital doctors, specialists or nurses always or often spent enough time with them.   A high or increasing proportion of patients who were satisfied is desirable, because it suggests the hospital care received was of high quality and better met the expectations and needs of patients.  Data reported for this indicator are:   * comparable (subject to caveats) across jurisdictions and over time * complete (subject to caveats) for the current reporting period. All required 2012‑13 data are available for all jurisdictions.   Descriptive information on patient surveys undertaken by states and territories is also reported. The descriptive information includes the survey time period, method, sample size, response rate and a selection of results where available. Information on how jurisdictions have used patient satisfaction surveys to improve public hospital quality in recent years is also reported. If public hospitals respond to patient views and modify services, service quality can be improved to better meet patients’ needs. As State and Territory based surveys differ in content, timing and scope across jurisdictions, it is not possible to compare their results nationally.  Information about data quality for this indicator is at www.pc.gov.au/gsp/reports/rogs/2014. |
|  |
|  |

Patient satisfaction data for emergency department and admitted hospital patients are reported in table 10.9. Relative standard errors and confidence intervals are reported in attachment tables 10A.69—10A.76. These tables also report patient satisfaction by remoteness.

Table 10.9 Patient satisfaction, hospitals, 2012-13**a**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | NSW | Vic | Qld | WA | SA | Tas | ACT | NT | Aust |
| Emergency department patients | | | | | | | | | |
| Proportion of people who went to an emergency department in the last 12 months reporting the ED doctors, specialists or nurses always or often listened carefully to them | | | | | | | | | |
| Doctors or specialists | 85.0 | 83.4 | 84.0 | 84.7 | 83.4 | 81.3 | 82.5 | 87.6 | 84.2 |
| Nurses | 87.6 | 89.8 | 90.1 | 90.9 | 87.4 | 89.6 | 83.5 | 90.5 | 89.1 |
| Proportion of people who went to an emergency department in the last 12 months reporting the ED doctors, specialists or nurses always or often showed respect to them | | | | | | | | | |
| Doctors or specialists | 86.4 | 84.7 | 85.5 | 87.2 | 84.8 | 83.3 | 82.6 | 88.4 | 85.7 |
| Nurses | 88.5 | 91.1 | 90.2 | 92.4 | 89.6 | 90.3 | 86.7 | 90.2 | 90.1 |
| Proportion of people who went to an emergency department in the last 12 months reporting the ED doctors, specialists or nurses always or often spent enough time with them | | | | | | | | | |
| Doctors or specialists | 81.0 | 79.9 | 80.7 | 83.1 | 79.5 | 74.9 | 75.3 | 85.0 | 80.7 |
| Nurses | 85.2 | 85.6 | 87.5 | 90.4 | 86.6 | 84.3 | 80.8 | 89.5 | 86.4 |
| Admitted hospital patients | | | | | | | | | |
| Proportion of people who were admitted to hospital in the last 12 months reporting the hospital doctors, specialists or nurses always or often listened carefully to them | | | | | | | | | |
| Doctors or specialists | 91.3 | 89.5 | 87.1 | 90.8 | 89.5 | 85.9 | 89.3 | 81.5 | 89.5 |
| Nurses | 90.5 | 92.1 | 91.8 | 92.0 | 90.8 | 89.9 | 89.8 | 86.9 | 91.2 |
| Proportion of people who were admitted to hospital in the last 12 months reporting the hospital doctors, specialists or nurses always or often showed respect to them | | | | | | | | | |
| Doctors or specialists | 91.5 | 89.3 | 88.4 | 92.6 | 90.2 | 86.2 | 91.2 | 81.3 | 90.2 |
| Nurses | 92.2 | 91.1 | 91.4 | 93.0 | 91.7 | 88.4 | 90.6 | 87.6 | 91.5 |
| Proportion of people who were admitted to hospital in the last 12 months reporting the hospital doctors, specialists or nurses always or often spent enough time with them | | | | | | | | | |
| Doctors or specialists | 87.5 | 85.6 | 85.8 | 87.2 | 84.0 | 84.7 | 85.4 | 80.3 | 86.2 |
| Nurses | 88.5 | 89.0 | 89.2 | 91.8 | 87.7 | 86.5 | 85.3 | 85.8 | 88.9 |

a Rates are age standardised to the 2001 estimated resident population (5 year ranges). ED=Emergency department.

*Source*: ABS (unpublished) *Patient Experience Survey 2012-13*, tables 10A.69–10A.76.

##### State and territory based survey data

State and Territory survey approaches differed markedly across jurisdictions, so it is not possible to compare results:

* All jurisdictions provided details of surveys conducted in 2012 and/or 2013, with the exception of Tasmania and the NT, which did not update survey details for this Report.
* The length of time that surveys were conducted varied from a 12 month period to a two month period.
* Queensland, WA and SA, used Computer Assisted Telephone Interviewing, while other jurisdictions used a combination of mail and internet surveys.
* Most jurisdictions surveyed admitted and non-admitted patients. One jurisdiction surveyed emergency departments only.
* Sample sizes varied from 26 800 to around 500 patients.

More information on the survey methods and results are in tables 10A.77–10A.84.

All jurisdictions reported that they use survey results in some way to improve services. All jurisdictions provide survey results or feedback to hospitals. Most jurisdictions have a formalised approach to prioritising the areas in need of improvement identified by the surveys and then implementing quality improvements. More information on how survey results are used to improve services are in tables 10A.77–10A.84.

#### Sentinel events

‘Sentinel events’ is an indicator of governments’ objective to deliver public hospital services that are safe and of high quality (box 10.15). Sentinel events can indicate hospital system and process deficiencies that compromise quality and safety. Sentinel events are a subset of adverse events that result in death or very serious harm to the patient. Adverse events are reported elsewhere in this chapter as an output indicator.

|  |
| --- |
| Box 10.15 Sentinel events |
| ‘Sentinel events’ is defined as the number of reported adverse events that occur because of hospital system and process deficiencies, and which result in the death of, or serious harm to, a patient. Sentinel events occur relatively infrequently and are independent of a patient’s condition. Sentinel events have the potential to seriously undermine public confidence in the healthcare system.  Australian health ministers have agreed on a national core set of sentinel events for which all public hospitals are required to provide data. The eight nationally agreed core sentinel events are:   1. Procedures involving the wrong patient or body part resulting in death or major permanent loss of function. 2. Suicide of a patient in an inpatient unit. 3. Retained instruments or other material after surgery requiring re-operation or further surgical procedure. 4. Intravascular gas embolism resulting in death or neurological damage. 5. Haemolytic blood transfusion reaction resulting from ABO (blood group) incompatibility. 6. Medication error leading to the death of a patient reasonably believed to be due to incorrect administration of drugs. 7. Maternal death or serious morbidity associated with labour or delivery. 8. Infant discharged to the wrong family.   A low or decreasing number of sentinel events is desirable.  Over time, an increase in the number of sentinel events reported might reflect improvements in incident reporting mechanisms and organisational cultural change, rather than an increase in the frequency of such events. However, trends need to be monitored to establish whether this is the underlying reason.  Data reported for this indicator are:   * comparable (subject to caveats) within jurisdictions over time but are not comparable across jurisdictions * complete (subject to caveats) for the current reporting period. All required 2011‑12 data are available for all jurisdictions.   Data quality information for this indicator is under development. |
|  |
|  |

Sentinel event programs have been implemented by all State and Territory governments. The purpose of these programs is to facilitate a safe environment for patients by reducing the frequency of these events. The programs are not punitive, and are designed to facilitate self reporting of errors so that the underlying causes of the events can be examined, and action taken to reduce the risk of these events re‑occurring.

In 2007 the AIHW, in conjunction with the ACSQHC, published a report that included national sentinel events data for 2004‑05 (AIHW and ACSQHC 2007). The report identified that reporting practices differ across jurisdictions and, as a result, the data are not comparable across jurisdictions.

Numbers of sentinel events for 2011-12 are reported below. Data for 2007-08 to 2010-11 are reported in tables 10A.85 to 10A.92. Australian totals are reported in table 10A.93. As larger states and territories will tend to have more sentinel events than smaller jurisdictions, the numbers of separations and individual occasions of service are also presented to provide context.

In NSW public hospitals in 2011-12, there was a total of 38 sentinel events (table 10A.85) compared to around 1.7 million separations (table 10A.6) and around 24.0 million individual occasions of service (table 10A.16). The sentinel events comprised:

* one procedure involving the wrong patient or body part resulting in death or major permanent loss of function
* 20 suicides of a patient in an inpatient unit
* 14 retained instruments or other material after surgery requiring re-operation or further surgical procedure
* one haemolytic blood transfusion reaction resulting from ABO (blood group) incompatibility
* one medication error leading to the death of a patient reasonably believed to be due to incorrect administration of drugs
* one maternal death or serious morbidity associated with labour or delivery (table 10A.85).

In Victorian public hospitals in 2011-12, there was a total of 20 sentinel events (table 10A.86) compared to around 1.5 million separations (table 10A.6) and around 7.0 million individual occasions of service (table 10A.16). The sentinel events comprised:

* one procedure involving the wrong patient or body part resulting in death or major permanent loss of function
* 8 suicides of a patient in an inpatient unit
* 7 retained instruments or other material after surgery requiring re-operation or further surgical procedure
* 4 medication errors leading to the death of a patient reasonably believed to be due to incorrect administration of drugs (table 10A.86).

In Queensland public hospitals in 2011-12, there was a total of 11 sentinel events (table 10A.87) compared to around 1.0 million separations (table 10A.6) and around 11.2 million individual occasions of service (table 10A.16). The sentinel events comprised:

* one procedure involving the wrong patient or body part resulting in death or major permanent loss of function
* one suicide of a patient in an inpatient unit
* 5 retained instruments or other material after surgery requiring re-operation or further surgical procedure
* four maternal deaths or serious morbidity associated with labour or delivery (table 10A87).

In WA public hospitals in 2011-12, there was a total of 11 sentinel events (table 10A.88) compared to around 588 000 separations (table 10A.6) and around 5.9 million individual occasions of service (table 10A.16). The sentinel events comprised:

* one procedure involving the wrong patient or body part resulting in death or major permanent loss of function
* 5 suicides of a patient in an inpatient unit
* 3 retained instruments or other material after surgery requiring re-operation or further surgical procedure
* two maternal deaths or serious morbidity associated with labour or delivery (table 10A.88).

In SA public hospitals in 2011-12, there was a total of 23 sentinel events (table 10A.89) compared to around 407 000 separations (table 10A.6) and around 2.2 million individual occasions of service (table 10A.16). The sentinel events comprised:

* 5 retained instruments or other material after surgery requiring re-operation or further surgical procedure
* one medication error leading to the death of a patient reasonably believed to be due to incorrect administration of drugs
* 17 maternal deaths or serious morbidity associated with labour or delivery (table 10A.89)[[1]](#footnote-1).

In Tasmanian public hospitals in 2011-12, there was one sentinel event (table 10A.90) compared to around 100 000 separations (table 10A.6) and around 504 000 individual occasions of service (table 10A.16). The sentinel event was a retained instrument or other material after surgery requiring re-operation or further surgical procedure (table 10A.90).

In ACT public hospitals in 2011-12, there was a total of three sentinel events (table 10A.91) compared to around 97 000 separations (table 10A.6) and around 1.6  million individual occasions of service (table 10A.16). ACT sentinel events were not reported by category due to confidentiality concerns.

In the NT public hospitals in 2011-12, there were no reported sentinel events (table 10A.92) compared to around 113 000 separations (table 10A.6) and around 572 000 individual occasions of service (table 10A.16).

#### Mortality in hospitals

‘Mortality in hospitals’ is an indicator of governments’ objective to deliver public hospital services that are safe and of high quality (box 10.16).

|  |
| --- |
| Box 10.16 Mortality in hospitals |
| ‘Mortality in hospitals’ is defined by the following three measures:   * Hospital standardised mortality ratio * Death in low-mortality diagnostic related groups * In-hospital mortality rates.   Mortality in hospitals has been identified as a key area for development in future Reports. |
|  |
|  |

## 10.4 Profile of maternity services

Maternity services (defined as AR-DRGs relating to pregnancy, childbirth and the puerperium, and newborns and other neonates) accounted for 8.4 per cent of total acute separations in public hospitals (table 10A.95) and around 10.7 per cent of the total cost of all acute separations in public hospitals in 2011-12 (table 10A.94). Figure 10.23 shows the rate of acute separations per 1000 people for maternity services across jurisdictions in 2011-12.

Figure 10.23 Separation rates for maternity services, public hospitals,   
2011-12a, b, c, d

|  |
| --- |
| Figure 10.23 Separation rates for maternity services, public hospitals, 2011-12  More details can be found within the text surrounding this image. |

a The puerperium refers to the period of confinement immediately after labour (around six weeks). b Newborns and other neonates include babies aged less than 28 days or babies aged less than one year with admission weight of less than 2500 grams.c Includes separations for which the type of episode of care was reported as 'acute', or 'newborn with qualified patient days'. d Estimated Resident Populations (ERPs) to June 2011 used to derive rates are revised to the ABS’ final 2011 Census rebased ERPs. The final ERP replaces the preliminary 2006 Census based ERPs used in the 2013 Report. ERP data from December 2011 are first preliminary estimates based on the 2011 Census. See Chapter 2 (tables 2A.1-2) for details.

*Source*: AIHW (2013), *Australian Hospital Statistics 2011-12,* Health Services Series No. 50, Cat no. HSE 134; ABS (unpublished), Australian Demographic Statistics, December Quarter 2011, Cat. no. 3101.0; tables 2A.2 and 10A.95.

In Australian public hospitals in 2011-12, 41.4 per cent of the separations for pregnancy, childbirth and the puerperium had a DRG of vaginal delivery (tables 10A.95 and 10A.96). In the context of all AR‑DRGs in public hospitals, vaginal deliveries comprised the largest number of overnight acute separations (3.9 per cent of all separations) (table 10A.14). The cost of vaginal deliveries was $753.2 million in 2011-12 (table 10A.96).

The complexity of maternity services is partly related to the mother’s age at the time of giving birth. The mean age of mothers giving birth varied across jurisdictions (table 10.10).

Table 10.10 Mean age of mothers at time of giving birth, public hospitals

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | *NSW* | *Vic*a | *Qld* | *WA*b | *SA*c | *Tas* | *ACT*d | *NT* |
| 2008 |  |  |  |  |  |  |  |  |
| First birth | 27.9 | 27.7 | 25.5 | 26.0 | 26.9 | 27.0 | 28.0 | 24.5 |
| Second birth | 30.2 | 30.0 | 28.1 | 28.6 | 29.5 | 29.6 | 30.2 | 26.4 |
| Third birth | 31.5 | 31.5 | 29.7 | 30.1 | 31.0 | 31.7 | 31.9 | 28.5 |
| All births | 29.8 | 29.6 | 27.9 | 28.2 | 29.1 | 29.2 | 29.8 | 26.8 |
| 2009 |  |  |  |  |  |  |  |  |
| First birth | 27.9 | 28.2 | 25.6 | 26.2 | 27.0 | 24.9 | 28.0 | 24.2 |
| Second birth | 30.4 | 30.7 | 28.3 | 28.6 | 29.6 | 27.7 | 30.5 | 26.8 |
| Third birth | 31.6 | 32.0 | 29.8 | 30.1 | 31.1 | 29.0 | 31.4 | 28.6 |
| All births | 29.9 | 30.1 | 28.0 | 28.3 | 29.1 | 27.3 | 29.8 | 26.9 |
| 2010 |  |  |  |  |  |  |  |  |
| First birth | 28.2 | 28.2 | 25.6 | 26.3 | 27.1 | 26.3 | 28.0 | 24.6 |
| Second birth | 30.3 | 30.7 | 28.2 | 28.8 | 29.6 | 28.6 | 30.4 | 27.1 |
| Third birth | 31.6 | 32.0 | 29.8 | 30.3 | 31.3 | 29.9 | 31.9 | 28.9 |
| All births | 29.9 | 30.1 | 28.0 | 28.4 | 29.2 | 28.8 | 29.9 | 27.0 |
| 2011 |  |  |  |  |  |  |  |  |
| First birth | 28.2 | 27.9 | 25.9 | 26.5 | 27.3 | 26.9 | 28.4 | 24.7 |
| Second birth | 30.4 | 30.2 | 28.2 | 28.8 | 29.8 | 29.4 | 30.6 | 27.2 |
| Third birth | 31.6 | 31.7 | 30.1 | 30.4 | 31.3 | 30.4 | 32.2 | 28.7 |
| All births | 29.9 | 29.7 | 28.1 | 28.5 | 29.3 | 28.9 | 30.0 | 27.1 |
| 2012 |  |  |  |  |  |  |  |  |
| First birth | 27.8 | 28.2 | 26.0 | 26.6 | 27.3 | na | 28.5 | 24.8 |
| Second birth | 30.3 | 30.1 | 28.4 | 28.9 | 29.8 | na | 30.9 | 27.4 |
| Third birth | 31.5 | 31.4 | 29.9 | 30.3 | 31.3 | na | 32.0 | 28.8 |
| All births | 29.5 | 29.6 | 28.2 | 28.5 | 29.3 | na | 30.1 | 27.2 |

a Data for Victoria for 2012 are preliminary. b Data for WA for 2012 are preliminary. c Data for SA for 2012 are preliminary. d ACT 2012 data are preliminary. Care must be taken when interpreting percentages as these data include both ACT and non-ACT residents where the birth occurred in the ACT. **na** Not available.

*Source*: State and Territory governments (unpublished).

## 10.5 Framework of performance indicators for maternity services

The performance indicator framework provides information on equity, efficiency and effectiveness, and distinguishes the outputs and outcomes of maternity services (figure 10.24). The performance indicator framework shows which data are comparable in the 2014 Report. For data that are not considered directly comparable, the text includes relevant caveats and supporting commentary. Chapter 1 discusses data comparability from a Report-wide perspective (see section 1.6). The Health sector overview explains the performance indicator framework for health services as a whole, including the subdimensions of quality and sustainability that have been added to the standard Review framework.

The Report’s statistical context chapter contains data that may assist in interpreting the performance indicators presented in this chapter. These data cover a range of demographic and geographic characteristics, including age profile, geographic distribution of the population, income levels, education levels, tenure of dwellings and cultural heritage (including Indigenous and ethnic status) (chapter 2).

Figure 10.24 Maternity services performance indicator framework

|  |
| --- |
| Figure 10.24 Maternity services performance indicator framework  More details can be found within the text surrounding this image. |

Data quality information (DQI) is being progressively introduced for all indicators in the Report. The purpose of DQI is to provide structured and consistent information about quality aspects of data used to report on performance indicators. DQI in this Report cover the seven dimensions in the ABS’ data quality framework (institutional environment, relevance, timeliness, accuracy, coherence, accessibility and interpretability) in addition to dimensions that define and describe performance indicators in a consistent manner, and key data gaps and issues identified by the Steering Committee. All DQI for the 2014 Report can be found at www.pc.gov.au/gsp/reports/rogs/2014.

## 10.6 Key performance indicator results for maternity services

### Outputs

Outputs are the services delivered (while outcomes are the impact of these services on the status of an individual or group) (see chapter 1, section 1.5).

### Equity — access

The Steering Committee has identified equity of access as an area for development in future Reports. Equity of access indicators will measure access to maternity services by special needs groups such as Indigenous Australians or people in rural and remote areas.

**Effectiveness — access**

The Steering Committee has identified the effectiveness of access to maternity services as an area for development in future Reports. Effectiveness of access indicators will measure access to appropriate services for the population as a whole, particularly in terms of affordability and/or timeliness.

**Effectiveness — appropriateness**

#### Caesareans and inductions for selected primiparae

‘Caesareans for selected primiparae’ and ‘Inductions for selected primiparae’ are indicators of the appropriateness of maternity services in public hospitals (box 10.17).

|  |
| --- |
| Box 10.17 Caesareans and inductions for selected primiparae**a** |
| ‘Caesareans and inductions for selected primiparae’ are defined as the number of inductions or caesareans for the selected primiparaea divided respectively by the number of the selected primiparae who gave birth.  High intervention rates can indicate a need for investigation, although labour inductions and birth by caesarean section are interventions that are appropriate in some circumstances, depending on the health and wellbeing of mothers and babies.  Rates are reported for women aged between 25 and 29 years who have had no previous deliveries, with a vertex presentation (that is, the crown of the baby’s head is at the lower segment of the mother’s uterus) and a gestation length of 37 to 41 weeks. This group is considered to be low risk parturientsb, so caesarean or induction rates should be low in their population.  Data reported for this indicator are:   * comparable (subject to caveats) within jurisdictions over time but are not comparable across jurisdictions * incomplete for the current reporting period. All required data were not available for Tasmania.   Information about data quality for this indicator is at www.pc.gov.au/gsp/reports/rogs/2014.  aPrimiparae refers to a woman who has given birth to a liveborn or stillborn infant for the first time. b Parturient means ‘about to give birth’. |
|  |
|  |

Caesarean rates for selected primiparae in public hospitals are reported in figure 10.25. Induction rates for selected primiparae in public hospitals are reported in figure 10.26. Caesarean and induction rates for private hospitals are shown in table 10A.97 for comparison. They are higher than the rate for public hospitals in almost all jurisdictions for which data are available. Data for all jurisdictions for earlier years are included in tables 10A.98–10A.105.

Figure 10.25 Caesareans for selected primiparae, public hospitalsa, b, c, d, e, f

|  |
| --- |
| Figure 10.25 Caesareans for selected primiparae, public hospitals  More details can be found within the text surrounding this image. |

a Data for 2012 for Victoria are preliminary. b Data for WA for 2012 are preliminary. c Data for SA for 2012 are preliminary. d Data for Tasmania are not available. e ACT data are preliminary. Care must be taken when interpreting percentages as these data include both ACT and non-ACT residents where the birth occurred in the ACT. f Total includes only jurisdictions for which data are available.

*Source*: State and Territory governments (unpublished); tables 10A.98–10A.105.

Figure 10.26 Inductions for selected primiparae, public hospitalsa, b, c, d, e, f

|  |
| --- |
| Figure 10.26 Inductions for selected primiparae, public hospitals  More details can be found within the text surrounding this image. |

a Data for 2012 for Victoria are preliminary. b Data for WA for 2012 are preliminary. c Data for SA for 2012 are preliminary. d Data for 2012 for Tasmania are not available. e ACT data are preliminary. Care must be taken when interpreting percentages as these data include both ACT and non-ACT residents where the birth occurred in the ACT. f Total includes only jurisdictions for which data are available.

*Source*: State and Territory governments (unpublished); tables 10A.98–10A.105.

#### Instrumental vaginal births

‘Instrumental vaginal births’ is an indicator of the appropriateness of maternity services (box 10.18). This indicator is reported for the first time this year.

|  |
| --- |
| Box 10.18 Instrumental vaginal births |
| ‘Instrumental vaginal births’ is defined as the number of instrumental vaginal births as a percentage of total births. Instrumental vaginal births includes forceps and vacuum extraction. The indicator is calculated for women aged 20 to 34 years, with a singleton baby positioned with the head towards the cervix at the onset of labour born between 37 and 41 weeks gestation.  While low or decreasing instrumental vaginal births can be desirable, a high rate does not necessarily indicate inappropriate care. Reasons for instrumental vaginal births often include:   * the first baby/birth of the mother * the baby was becoming distressed during birth * the baby was not moving down through the birth canal * there was a medical reason why the mother should or could not push.   In these cases the use of instruments is often necessary and appropriate and can often have a better outcome for mother and baby than a caesarean section. A low or decreasing rate of instrumental vaginal births could be undesirable in situations such as this if there is a corresponding increase in the rate of caesarean sections.  Data reported for this indicator are:   * comparable (subject to caveats) across jurisdictions and over time * incomplete for the current reporting period. All required data were not available for Tasmania.   Information about data quality for this indicator is at www.pc.gov.au/gsp/reports/rogs/2014. |
|  |
|  |

In 2011 across Australia, close to a quarter of women giving birth for the first time gave birth with the assistance of instruments. In contrast 48.2 per cent gave birth without the use of instruments and 27.0 per cent had a caesarean section. There was significant variation between states and territories (figure 10.27).

Figure 10.27 Method of birth for selected women giving birth for the first time, 2011**a, b, c**

|  |
| --- |
| Figure 10.27 Method of birth for selected women giving birth for the first time, 2011  More details can be found within the text surrounding this image. |

a 'Selection criteria: women aged 20 to 34 years, with a singleton baby positioned with head towards the cervix at the onset of labour born between 37 and 41 weeks gestation. b 'Provisional data were provided by Victoria for this table. c Caesarean section data for Tasmania not published as presentations were only recorded for vaginal births.

*Data source*: AIHW (unpublished) National Perinatal Data Collection; table 10A.106.

#### Vaginal delivery following previous caesarean

‘Vaginal delivery following a previous caesarean’ is an indicator of the appropriateness of maternity services in public hospitals (box 10.19).

|  |
| --- |
| Box 10.19 Vaginal delivery following a previous caesarean |
| ‘Vaginal delivery following a previous caesarean’ is defined as the percentage of multiparousa mothers who have had a previous caesarean, whose current method of birth was either an instrumental or non-instrumental vaginal delivery.  Interpretation of this indicator is ambiguous. There is ongoing debate about the relative risk to both mother and baby of a repeat caesarean section compared with a vaginal birth following a previous caesarean. Low rates of vaginal birth following a previous caesarean may warrant investigation, or on the other hand, they can indicate appropriate clinical caution. When interpreting this indicator, emphasis needs to be given to the potential for improvement.  a Multiparous means woman who has given birth from at least two pregnancies that each resulted in a live birth or stillbirth.  (Continued on next page) |
|  |
|  |

|  |
| --- |
| Box 10.19 (Continued) |
| Data reported for this indicator are:   * comparable (subject to caveats) across jurisdictions and over time * complete (subject to caveats) for the current reporting period. All required 2011 data are available for all jurisdictions.   Information about data quality for this indicator is at www.pc.gov.au/gsp/reports/rogs/2014. |
|  |
|  |

Nationally in 2011, of women that had a previous caesarean section, 15.9 per cent had either an instrumental or non‑instrumental vaginal delivery as their current method of birth, while 84.1 per cent had another caesarean section (figure 10.28 and table 10A.107).

Figure 10.28 Women who had a vaginal birth after previous caesarean section**a, b, c, d, e**

|  |
| --- |
| Figure 10.28 Women who had a vaginal birth after previous caesarean section  More details can be found within the text surrounding this image. |

a Vaginal birth comprises both instrumental and non-instrumental vaginal births. b For multiple births, the method of birth of the first born baby was used. c For NSW, Victoria, WA and the NT non-instrumental vaginal birth includes all women who had a vaginal breech birth, whether or not instruments were used. For the remaining jurisdictions, vaginal breech births are only included where instruments were not used. d Instrumental vaginal birth includes forceps and vacuum extraction. e Care must be taken when interpreting percentages as these data include both ACT and non-ACT residents where the birth occurred in the ACT. Between 2007 and 2011, around 15 per cent of women who gave birth in the ACT were non-residents of the ACT.

*Source*: Li, Z., McNally, L., Hilder, L. and Sullivan, EA. (various years), *Australia’s mothers and babies,* Perinatal statistics series Cat nos. PER 50, 52 and 56; table 10A.107.

### Effectiveness — quality

The performance indicator framework for maternity services identifies three subdimensions of quality for health services: safety; responsiveness and continuity. For maternity services in this Report, data are reported against the subdimension of safety only. Other subdimensions of quality have been identified by the Steering Committee for future development.

#### Safety — perineal status after vaginal birth

‘Perineal status after vaginal birth’ is an indicator of governments’ objective to provide safe and high quality services (box 10.20). Perineal lacerations caused by childbirth are painful, take time to heal and can result in ongoing discomfort and debilitating conditions such as faecal incontinence.

|  |
| --- |
| Box 10.20 Perineal status after vaginal birth |
| ‘Perineal status after vaginal birth’ is defined as the state of the perineum following a vaginal birth (HDSC 2008). A third or fourth degree laceration is a perineal laceration or rupture (or tear following episiotomy) extending to, or beyond, the anal sphincter (see section 10.8 for definitions) (NCCH 2008). It is measured by the proportion of women giving birth with third or fourth degree lacerations to their perineum following vaginal birth.  A low or decreasing rate of women giving birth with third or fourth degree lacerations after vaginal birth is desirable. Maternity services staff aim to minimise lacerations, particularly more severe lacerations (third and fourth degree), through labour management practices. Severe lacerations (third and fourth degree laceration) of the perineum are not avoidable in all cases and so safe labour management is associated with a low (rather than zero) proportion of third or fourth degree lacerations.  Data reported for this indicator are:   * comparable (subject to caveats) across jurisdictions and over time * complete (subject to caveats) for the current reporting period. All required 2011 data are available for all jurisdictions.   Information about data quality for this indicator is at www.pc.gov.au/gsp/reports/rogs/2014. |
|  |
|  |

The proportion of mothers with third or fourth degree lacerations to their perineum following vaginal births is shown in figure 10.29. More information on perineal status after vaginal birth (including the proportion of mothers with intact perineum following vaginal births) is contained in table 10A.108.

Figure 10.29 Perineal status — mothers with third or fourth degree lacerations after vaginal birthsa, b, c

|  |
| --- |
| Figure 10.29 Perineal status — mothers with third or fourth degree lacerations after vaginal births  More details can be found within the text surrounding this image. |

a For multiple births, the perineal status after birth of the first child was used. b Data include all women who gave birth vaginally, including births in public hospitals, private hospitals and outside of hospital, such as homebirths.c Care must be taken when interpreting percentages as these data include both ACT and non-ACT residents where the birth occurred in the ACT. Between 2007 and 2011, around 15 per cent of women who gave birth in the ACT were non-residents of the ACT.

*Source:* Li, Z., McNally, L., Hilder, L. and Sullivan, EA. (various years), *Australia’s mothers and babies,* Perinatal statistics series Cat nos. PER 22, 48, 50, 52 and 56; table 10A.108.

#### Responsiveness, continuity

The Steering Committee has identified the responsiveness and continuity of care of maternity services as an area for development in future Reports.

### Efficiency — sustainability

The Steering Committee has identified the sustainability of maternity services as an area for development in future Reports.

### Efficiency

#### Recurrent cost per maternity separation

‘Recurrent cost per maternity separation’ is an indicator of governments’ objective to deliver cost effective services (box 10.21).

|  |
| --- |
| Box 10.21 Recurrent cost per maternity separation |
| ‘Recurrent cost per maternity separation’ is presented for the two AR‑DRGs that account for the largest number of maternity patient days: caesarean delivery without catastrophic or severe complications and comorbidities; and vaginal delivery without catastrophic or severe complications and comorbidities.  Low or decreasing recurrent costs per maternity separation can reflect high or increasing efficiency in providing maternity services to admitted patients. However, this is only likely to be the case where the low cost maternity services are provided at equal or superior effectiveness.  Data reported for this indicator are:   * comparable (subject to caveats) within some jurisdictions over time but are not comparable across jurisdictions or over time for other jurisdictions (see caveats in attachment tables for specific jurisdictions) * complete (subject to caveats) for the current reporting period. All required 2010‑11 data are available for all jurisdictions.   Data quality information for this indicator is under development. |
|  |
|  |

Data are reported for the two most common maternity AR‑DRGs: caesarean delivery without catastrophic or severe complications and comorbidities; and vaginal delivery without catastrophic or severe complications and comorbidities (figure 10.30). Data for a number of other maternity related AR‑DRGs are shown in table 10A.109. Data are sourced from the NHCDC. The NHCDC is a voluntary annual collection, the purpose of which is to calculate DRG cost weights. The samples are not necessarily representative of the set of hospitals in each jurisdiction. An estimation process has been carried out to create representative national activity figures from the sample data.

Figure 10.30 Estimated average cost per separation for selected maternity related AR‑DRGs, public hospitals, 2010-11a, b, c

|  |
| --- |
| Figure 10.30 Estimated average cost per separation for selected maternity related AR DRGs, public hospitals, 2010-11  More details can be found within the text surrounding this image. |

a Includes AR-DRG O01C caesarean delivery without catastrophic or severe complications and comorbidities and AR-DRG O60B vaginal delivery without catastrophic or severe complications and comorbidities. b Average cost is affected by a number of factors including admission practices, sample size, remoteness and the types of hospital contributing to the collection. Caution must be used in making direct comparisons between jurisdictions, because of differences in hospital costing systems. c Average cost for Queensland for O01C caesarean delivery was zero.

*Source*: IHPA (unpublished), *National Hospital Cost Data Collection*; table 10A.109.

#### Mother’s average length of stay

‘Mother’s average length of stay’ is an indicator of governments’ objective to deliver services efficiently (box 10.22).

|  |
| --- |
| Box 10.22 Mother’s average length of stay |
| ‘Mother’s average length of stay’ is defined as the total number of patient days for the selected maternity AR-DRG, divided by the number of separations for that AR‑DRG.  Shorter stays for mothers reduce hospital costs but whether they represent genuine efficiency improvements depends on a number of factors. Shorter stays can, for example, have an adverse effect on the health of some mothers and result in additional costs for in-home care and potential readmissions. The indicator is not adjusted for multiple births born vaginally and without complications but requiring a longer stay to manage breastfeeding.  Data reported for this indicator are:   * comparable (subject to caveats) across jurisdictions and over time * complete (subject to caveats) for the current reporting period. All required 2011‑12 data are available for all jurisdictions.   Data quality information for this indicator is under development. |
|  |
|  |

Data are reported for two selected maternity AR‑DRGs: caesarean delivery without catastrophic or severe complications and comorbidities; and vaginal delivery single uncomplicated. Data are sourced from the AIHW Admitted patient collection for the first time this year for this indicator. In previous reports, data for this indicator were sourced from the NHCDC, hence data this year are not comparable with previous reports (figure 10.31).

Figure 10.31 Average length of stay for selected maternity-related AR‑DRGs, public hospitals, 2011-12a

|  |
| --- |
| Figure 10.31 Average length of stay for selected maternity-related AR DRGs, public hospitals, 2011-12  More details can be found within the text surrounding this image. |

a Includes AR-DRG O01C caesarean delivery without catastrophic or severe complications and comorbidities and AR-DRG O60C vaginal delivery single uncomplicated.

*Source:* AIHW (2013), *Australian Hospital Statistics 2011-12*, Health Services Series No. 50, Cat no. HSE 134; table 10A.110.

### Outcomes

Outcomes are the impact of services on the status of an individual or group (while outputs are the services delivered) (see chapter 1, section 1.5).

#### Baby’s Apgar score

‘Baby’s Apgar score at five minutes’ is an indicator of governments’ objective to deliver maternity services that are safe and of high quality (box 10.23). The future health of babies with lower Apgar scores is often poorer than those with higher scores.

|  |
| --- |
| Box 10.23 Baby’s Apgar score at five minutes |
| Baby’s Apgar score at five minutes is defined as the number of live births with an Apgar score of less than 4, at 5 minutes post-delivery, as a proportion of the total number of live births by specified birthweight categories. The Apgar score is a numerical score that indicates a baby’s condition shortly after birth. Apgar scores are based on an assessment of the baby’s heart rate, breathing, colour, muscle tone and reflex irritability. Between 0 and 2 points are given for each of these five characteristics and the total score is between 0 and 10. The Apgar score is routinely assessed at 1 and 5 minutes after birth, and subsequently at 5 minute intervals if it is still low at 5 minutes (Day *et al*. 1999).  A high or increasing Apgar score is desirable.  Low Apgar scores (defined as less than 4) are strongly associated with babies’ birthweights being low. The management of labour in hospitals does not usually affect birthweights, but can affect the prevalence of low Apgar scores for babies with similar birthweights. Apgar scores can therefore indicate relative performance within birthweight categories, although factors other than hospital maternity services can influence Apgar scores within birthweight categories — for example antenatal care, multiple births and socioeconomic factors.  Data reported for this indicator are:   * comparable (subject to caveats) within jurisdictions over time but are not comparable across jurisdictions * incomplete for the current reporting period. All required data were not available for Tasmania.   Information about data quality for this indicator is at www.pc.gov.au/gsp/reports/rogs/2014. |
|  |
|  |

‘Low’ (less than 4) Apgar scores for babies by birthweight category are contained in table 10.11. The full range of Apgar scores for 2003 to 2012 are reported in table 10A.111.

Table 10.11 Live births with an Apgar score of less than 4, 5 minutes post‑delivery, public hospitals, 2012

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Birthweight (grams) | Unit | NSW | Vica | Qld | WAb | SAc | Tas | ACTd | NT |
| Less than 1500 | no. | 913 | 658 | 588 | 295 | 227 | na | 81 | 44 |
| Low Apgar | % | 17.7 | 17.5 | 17.0 | 4.1 | 12.7 | na | 12.4 | np |
| 1500-1999 | no. | 1 364 | 754 | 638 | 311 | 281 | na | 80 | 47 |
| Low Apgar | % | 1.3 | 1.1 | 2.2 | 1.3 | 0.8 | na | – | np |
| 2000-2499 | no. | 3 630 | 2 253 | 1 884 | 873 | 742 | na | 212 | 188 |
| Low Apgar | % | 0.7 | 0.6 | 0.6 | 0.5 | 0.1 | na | 0.5 | np |
| 2500 and over | no. | 73 524 | 52 201 | 41 475 | 18 090 | 14 239 | na | 4 206 | 2 896 |
| Low Apgar | % | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | na | 0.2 | 0.3 |

a Data for Victoria are preliminary. b Data for WA are preliminary. c Data for SA are preliminary. d ACT data are preliminary. Care must be taken when interpreting percentages as these data include both ACT and non-ACT residents where the birth occurred in the ACT. **na** Not available. – Nil or rounded to zero. **np** Not published.

*Source*: State and Territory governments (unpublished); table 10A.111.

#### Perinatal death rate

‘Perinatal death rate’ is an indicator of governments’ objective to deliver maternity services that are safe and of high quality (box 10.24).

|  |
| --- |
| Box 10.24 Perinatal death rate |
| ‘Perinatal death rate’ is defined by the following three measures:   * Fetal death (stillbirth) is the birth of a child who did not at any time after delivery breathe or show any other evidence of life, such as a heartbeat. Fetal deaths by definition include only infants weighing at least 400 grams or of a gestational age of at least 20 weeks. The fetal death rate is calculated as the number of fetal deaths divided by the total number of births (live births and fetal deaths combined). The rate of fetal deaths is expressed per 1000 total births, by State or Territory of usual residence of the mother * Neonatal death is the death of a live born infant within 28 days of birth (see section 10.8 for a definition of a live birth). The neonatal death rate is calculated as the number of neonatal deaths divided by the number of live births registered. The rate of neonatal deaths is expressed per 1000 live births, by State or Territory of usual residence of the mother. * A perinatal death is a fetal or neonatal death. The perinatal death rate is calculated as the number of perinatal deaths divided by the total number of births (live births registered and fetal deaths combined). It is expressed per 1000 total births, by State or Territory of usual residence of the mother.   Low or decreasing death rates are desirable and can indicate high quality maternity services. The neonatal death rate tends to be higher among premature babies, so a lower neonatal death rate can also indicate a lower percentage of pre-term births.  Differences in the fetal death rate between jurisdictions are likely to be due to factors outside the control of admitted patient maternity services (such as the health of mothers and the progress of pregnancy before hospital admission). To the extent that the health system influences fetal death rates, the health services that can have an influence include outpatient services, general practice services and maternity services. In jurisdictions where the number of fetal deaths is low, small annual fluctuations in the number affect the annual rate of fetal deaths.  As for fetal deaths, a range of factors contribute to neonatal deaths. However, the influence of maternity services for admitted patients is greater for neonatal deaths than for fetal deaths, through the management of labour and the care of sick and premature babies.  Data reported for this indicator are:   * comparable (subject to caveats) across jurisdictions and over time * incomplete for the current reporting period. All required Indigenous data were not available for Victoria, Tasmania and the ACT.   Information about data quality for this indicator is at www.pc.gov.au/gsp/reports/rogs/2014. |
|  |
|  |

##### Fetal death rate

Fetal death rates are reported in figure 10.32. Nationally, fetal death rates have generally been steady over the period 2007–2011. National time series for fetal death rates for the period 1999 to 2011 are included in table 10A.114.

Figure 10.32 Fetal death ratea, b, c

|  |
| --- |
| Figure 10.32 Fetal death rate  More details can be found within the text surrounding this image. |

a Annual rates fluctuate (in particular, for smaller jurisdictions) as a result of a low incidence of fetal deaths and small populations. b Some fetal deaths occurring in WA could be the result of termination of pregnancy at 20 weeks gestation or more. c The ACT and Australian total exclude stillbirth data which were not received or processed by the ABS in time for the finalisation of the 2008 reference year. According to scope rules, these 2008 data were included in the 2010 reference year. The data therefore shows a decline in 2008 and an increase in 2010 which is not related to any actual significant change in fetal death rates.

*Source*: ABS (unpublished) *Perinatal deaths, Australia*, Cat. no. 3304.0; table 10A.112.

Fetal deaths data by the Indigenous status of the mother are available for NSW, Queensland, WA, SA and the NT only. These five states and territories are considered to have adequate levels of Indigenous identification in mortality data (ABS 2004). For three of the five jurisdictions for which data are available, the fetal death rates for Indigenous Australians are higher than those for non‑Indigenous Australians (figure 10.33).

Figure 10.33 Fetal death rate by Indigenous status of mother 2007–2011a

|  |
| --- |
| Figure 10.33 Fetal death rate by Indigenous status of mother 2007–2011  More details can be found within the text surrounding this image. |

a Data are reported individually by jurisdiction of residence for NSW, Queensland, WA, SA and the NT only. These jurisdictions have evidence of sufficient levels of identification and sufficient numbers of deaths. The total relates to those jurisdictions for which data are published. Data are not available for other jurisdictions.

*Source*: ABS (unpublished*) Perinatal deaths, Australia*, Cat. no. 3304.0; table 10A.116.

##### Neonatal death rate

Neonatal death rates are reported in figure 10.34. Nationally, neonatal death rates have declined slightly over the period 2007–2011. National time series for neonatal death rates for the period 1999 to 2011 are included in table 10A.114.

Neonatal deaths data by the Indigenous status of the mother are available for NSW, Queensland, WA, SA and the NT only. These five states and territories are considered to have adequate levels of Indigenous identification in mortality data (ABS 2004). In the jurisdictions for which data are available, the neonatal death rates for Indigenous Australians are higher than those for non-Indigenous Australians (figure 10.35).

Figure 10.34 Neonatal death ratea

|  |
| --- |
| Figure 10.34 Neonatal death rate  More details can be found within the text surrounding this image. |

a Annual rates fluctuate (in particular, for smaller jurisdictions) as a result of a low incidence of neonatal deaths and small populations.

*Source*: ABS (unpublished*) Perinatal deaths, Australia*, Cat. no. 3304.0; table 10A.113.

Figure 10.35 Neonatal death rate by Indigenous status of mother   
2007–2011a

|  |
| --- |
| Figure 10.35 Neonatal death rate by Indigenous status of mother 2007-2011  More details can be found within the text surrounding this image. |

a Data are reported individually by jurisdiction of residence for NSW, Queensland, WA, SA and the NT only. These jurisdictions have evidence of sufficient levels of identification and sufficient numbers of deaths. The total relates to those jurisdictions for which data are published. Data are not available for other jurisdictions.

*Source*: ABS (unpublished*) Perinatal deaths, Australia*, Cat. no. 3304.0; table 10A.116.

##### Perinatal death rate

Perinatal death rates are shown in figure 10.36. National time series for perinatal death rates for the period 1999 to 2011 are included in table 10A.114.

Figure 10.36 Perinatal death ratea, b

|  |
| --- |
| Figure 10.36 Perinatal death rate  More details can be found within the text surrounding this image. |

a Annual rates fluctuate (in particular, for smaller jurisdictions) as a result of a low incidence of perinatal deaths. b The ACT and Australian total may exclude stillbirth data which were not received or processed by the ABS in time for the finalisation of the 2008 reference year. According to scope rules, these 2008 data were included in the 2010 reference year. The data therefore shows a decline in 2008 and an increase in 2010 which is not related to any actual significant change in fetal death rates.

*Source*: ABS (unpublished*) Perinatal deaths, Australia*, Cat. no. 3304.0; table 10A.115.

Perinatal deaths data by the Indigenous status of the mother are available for NSW, Queensland, WA, SA and the NT only. These five states and territories are considered to have adequate levels of Indigenous identification in mortality data (ABS 2004). In three of the jurisdictions for which data are available, perinatal death rates for Indigenous Australians are higher than those for non‑Indigenous Australians (figure 10.37).

Figure 10.37 Perinatal death rate by Indigenous status of mother   
2007–2011a

|  |
| --- |
| Figure 10.37 Perinatal death rate by Indigenous status of mother  2007–2011  More details can be found within the text surrounding this image. |

a Data are reported individually by jurisdiction of residence for NSW, Queensland, WA, SA and the NT only. These jurisdictions have evidence of sufficient levels of identification and sufficient numbers of deaths. The total relates to those jurisdictions for which data are published. Data are not available for other jurisdictions.

*Source*: ABS (unpublished*) Perinatal deaths, Australia*, Cat. no. 3304.0; table 10A.116.

## Future directions in performance reporting

Priorities for future reporting on public hospitals and maternity services include the following:

* Improving the comprehensiveness of reporting by filling in gaps in the performance indicator frameworks. Important gaps in reporting for public hospitals include indicators of equity of access to services for special needs groups, and indicators of continuity of care. Gaps in the maternity services framework include equity of access, effectiveness of access, two aspects of quality — responsiveness and continuity — and the efficiency subdimension of sustainability.
* Improving currently reported indicators for public hospitals and maternity services where data are not complete or not directly comparable. There is scope to improve reporting of the quality and access dimensions of the public hospitals framework, and the output indicators for maternity services.
* Improving the reporting of elective surgery waiting times by urgency category to achieve greater comparability across jurisdictions and improving timeliness of the data.
* Improving the reporting of quality and safety indicators in both the public hospitals’ and maternity services’ frameworks.
* Improving the quality of data on Indigenous Australians. Work on improving Indigenous identification in hospital admitted patient data across states and territories is ongoing.

## 10.8 Definitions of key terms

|  |  |
| --- | --- |
| **Accreditation** | Professional recognition awarded to hospitals and other healthcare facilities that meet defined industry standards. Public hospitals can seek accreditation through the ACHS Evaluation and Quality Improvement Program, the Australian Quality Council (now known as Business Excellence Australia), the Quality Improvement Council, the International Organisation for Standardization 9000 Quality Management System or other equivalent programs. |
| **Acute care** | Clinical services provided to admitted or non-admitted patients, including managing labour, curing illness or treating injury, performing surgery, relieving symptoms and/or reducing the severity of illness or injury, and performing diagnostic and therapeutic procedures. Most episodes involve a relatively short hospital stay. |
| **Admitted patient** | A patient who has undergone a formal admission process in a public hospital to begin an episode of care. Admitted patients can receive acute, subacute or non‑acute care services. |
| **Admitted patient cost proportion** | The ratio of admitted patient costs to total hospital costs, also known as the inpatient fraction. |
| **Allied health (non‑admitted)** | Occasions of service to non-admitted patients at units/clinics providing treatment/counselling to patients. These include units providing physiotherapy, speech therapy, family planning, dietary advice, optometry and occupational therapy. |
| **Apgar score** | Numerical score used to evaluate a baby’s condition after birth. The definition of the reported indicator is the number of babies born with an Apgar score of 3 or lower at 5 minutes post delivery, as a proportion of the total number of babies born. Excludes fetal deaths in utero before commencement of labour. |
| **AR-DRG** | Australian Refined Diagnosis Related Group - a patient classification system that hospitals use to match their patient services (hospital procedures and diagnoses) with their resource needs. AR-DRG version 6.0x is based on the ICD-10-AM classification. |
| **Australian Classification of Health Interventions (ACHI)** | ACHI is the Australian classification of health interventions. |
| **Average length of stay** | The mean length of stay for all patient episodes, calculated by dividing total occupied bed days by total episodes of care. |
| **Caesarean section** | Operative birth through an incision into abdomen and uterus. |
| **Casemix adjusted** | Adjustment of data on cases treated to account for the number and type of cases. Cases are sorted by AR‑DRG into categories of patients with similar clinical conditions and requiring similar hospital services. Casemix adjustment is an important step to achieving comparable measures of efficiency across hospitals and jurisdictions. |
| **Casemix adjusted separations** | The number of separations adjusted to account for differences across hospitals in the complexity of episodes of care. |
| **Catastrophic** | An acute or prolonged illness usually considered to be life threatening or with the threat of serious residual disability. Treatment can be radical and is frequently costly. |
| **Community health services** | Health services for individuals and groups delivered in a community setting, rather than via hospitals or private facilities. |
| **Cost of capital** | The return foregone on the next best investment, estimated at a rate of 8 per cent of the depreciated replacement value of buildings, equipment and land. Also called the ‘opportunity cost’ of capital. |
| **Cost per casemix adjusted separation** | Recurrent expenditure multiplied by the inpatient fraction and divided by the total number of casemix-adjusted separations plus estimated private patient medical costs. |
| **Cost per non‑admitted occasion of service** | Recurrent expenditure divided by the inpatient fraction and divided by the total number of non‑admitted occasions of service. |
| **Elective surgery waiting times** | Elective surgery waiting times are calculated by comparing the date on which patients are added to a waiting list with the date on which they are admitted for the awaited procedure. Days on which the patient was not ready for care are excluded. |
| **Emergency department waiting time to commencement of clinical care** | The time elapsed for each patient from presentation to the emergency department (that is, the time at which the patient is clerically registered or triaged, whichever occurs earlier) to the commencement of service by a treating medical officer or nurse. |
| **Emergency department waiting times to admission** | The time elapsed for each patient from presentation to the emergency department to admission to hospital. |
| **Episiotomy** | A surgical incision into the perineum and vagina that attempts to control trauma while widening the vaginal opening to expedite birth of the infant or provide better access for application of forceps or vacuum cup to the fetus. |
| **Fetal death** | Delivery of a child who did not at any time after delivery breathe or show any other evidence of life, such as a heartbeat. Excludes infants that weigh less than 400 grams or that are of a gestational age of less than 20 weeks. |
| **Fetal death rate** | The number of fetal deaths divided by the total number of births (that is, by live births registered and fetal deaths combined). |
| **General practice** | The organisational structure with one or more GPs and other staff such as practice nurses. A general practice provides and supervises healthcare for a ‘population' of patients and can include services for specific populations, such as women’s health or Indigenous health. |
| **ICD-10-AM** | The Australian modification of the International Standard Classification of Diseases and Related Health Conditions. This is the current classification of diagnoses in Australia. |
| **Hospital boarder** | A person who is receiving food and/or accommodation but for whom the hospital does not accept responsibility for treatment and/or care. |
| **Inpatient fraction** | The ratio of admitted patient costs to total hospital costs, also known as the admitted patient cost proportion. |
| **Labour cost per casemix-adjusted separation** | Salary and wages plus visiting medical officer payments, multiplied by the inpatient fraction, divided by the number of casemix-adjusted separations. |
| **Length of stay** | The period from admission to separation less any days spent away from the hospital (leave days). |
| **Live birth** | Birth of a child who, after delivery, breathes or shows any other evidence of life, such as a heartbeat. Includes all registered live births regardless of birthweight. |
| **Medicare** | Australian Government funding of private medical and optometrical services (under the Medicare Benefits Schedule). Sometimes defined to include other forms of Australian Government funding such as subsidisation of selected pharmaceuticals (under the Pharmaceutical Benefits Scheme) and public hospital funding (under the Australian Health Care Agreements), which provides public hospital services free of charge to public patients. |
| **Mortality rate** | The number of deaths per 100 000 people. |
| **Neonatal death** | Death of a live born infant within 28 days of birth. Defined in Australia as the death of an infant that weighs at least 400 grams or that is of a gestational age of at least 20 weeks. |
| **Neonatal death rate** | Neonatal deaths divided by the number of live births registered. |
| **Newborn qualification status** | A newborn qualification status is assigned to each patient day within a newborn episode of care.  A newborn patient day is qualified if the infant meets at least one of the following criteria:   * is the second or subsequent live born infant of a multiple birth, whose mother is currently an admitted patient, * is admitted to an intensive care facility in a hospital, being a facility approved by the Commonwealth Minister for the purpose of the provision of special care, * is admitted to, or remains in hospital without its mother.   A newborn patient day is unqualified if the infant does not meet any of the above criteria.  The day on which a change in qualification status occurs is counted as a day of the new qualification status.  If there is more than one qualification status in a single day, the day is counted as a day of the final qualification status for that day. |
| **Nursing workforce** | Registered and enrolled nurses who are employed in nursing, on extended leave or looking for work in nursing. |
| **Medical practitioner workforce** | Registered medical practitioners who are employed as medical practitioners, on extended leave or looking for work as a medical practitioner. |
| **Multiparous** | A woman who has given birth from at least two pregnancies that each resulted in a live birth or stillbirth. |
| **Non-acute care** | Includes maintenance care and newborn care (where the newborn does not require acute care). |
| **Non-admitted occasions of service** | Occasion of examination, consultation, treatment or other service provided to a non-admitted patient in a functional unit of a health service establishment. Services can include emergency department visits, outpatient services (such as pathology, radiology and imaging, and allied health services, including speech therapy and family planning) and other services to non-admitted patients. Hospital non-admitted occasions of service are not yet recorded consistently across states and territories, and relative differences in the complexity of services provided are not yet documented. |
| **Non-admitted patient** | A patient who has not undergone a formal admission process, but who may receive care through an emergency department, outpatient or other non-admitted service. |
| **Perinatal death** | Fetal death or neonatal death of an infant that weighs at least 400 grams or that is of a gestational age of at least 20 weeks. |
| **Perinatal death rate** | Perinatal deaths divided by the total number of births (that is, live births registered and fetal deaths combined). |
| **Perineal laceration (third or fourth degree)** | A ‘third degree’ laceration or rupture during birth (or a tear following episiotomy) involves the anal sphincter, rectovaginal septum and sphincter NOS. A ‘fourth degree’ laceration, rupture or tear also involves the anal mucosa and rectal mucosa (NCCH 2008). |
| **Perineal status** | The state of the perineum following a birth. |
| **Primary care** | Essential healthcare based on practical, scientifically sound and socially acceptable methods made universally accessible to individuals and families in the community. |
| **Primipara** | A woman who has given birth to a liveborn or stillborn infant for the first time. |
| **Public hospital** | A hospital that provides free treatment and accommodation to eligible admitted persons who elect to be treated as public patients. It also provides free services to eligible non-admitted patients and can provide (and charge for) treatment and accommodation services to private patients. Charges to non-admitted patients and admitted patients on discharge can be levied in accordance with the Australian Health Care Agreements (for example, aids and appliances). |
| **Puerperium** | The time in the woman's perinatal period between the birth and up to 42 days after the birth. |
| **Real expenditure** | Actual expenditure adjusted for changes in prices. |
| **Relative stay index** | The actual number of patient days for acute care separations in selected AR–DRGs divided by the expected number of patient days adjusted for casemix. Includes acute care separations only. Excludes: patients who died or were transferred within 2 days of admission, or separations with length of stay greater than 120 days, AR-DRGs which are for ‘rehabilitation’, AR-DRGs which are predominantly same day (such as R63Z chemotherapy and L61Z admit for renal dialysis), AR DRGs which have a length of stay component in the definition, and error AR-DRGs. |
| **Same day patients** | A patient whose admission date is the same as the separation date. |
| **Sentinel events** | Adverse events that cause serious harm to patients and that have the potential to undermine public confidence in the healthcare system. |
| **Separation** | A total hospital stay (from admission to discharge, transfer or death) or a portion of a hospital stay beginning or ending in a change in the type of care for an admitted patient (for example, from acute to rehabilitation). Includes admitted patients who receive same day procedures (for example, renal dialysis). |
| **Separation rate** | Hospital separations per 1000 people or 100 000 people. |
| **Selected primiparae** | Primiparae with no previous deliveries, aged 25–29 years, singleton, vertex presentation and gestation of 37–41 weeks (inclusive). |
| **Subacute care** | Specialised multidisciplinary care in which the primary need for care is optimisation of the patient’s functioning and quality of life. A person’s functioning may relate to their whole body or a body part, the whole person, or the whole person in a social context, and to impairment of a body function or structure, activity limitation and/or participation restriction.  Subacute care comprises the defined care types of rehabilitation, palliative care, geriatric evaluation and management and psychogeriatric care. |
| **Triage category** | The urgency of the patient’s need for medical and nursing care:  category 1 — resuscitation (immediate within seconds)  category 2 — emergency (within 10 minutes)  category 3 — urgent (within 30 minutes)  category 4 — semi-urgent (within 60 minutes)  category 5 — non-urgent (within 120 minutes). |
| **Urgency category for elective surgery** | Category 1 patients — admission within 30 days is desirable for a condition that has the potential to deteriorate quickly to the point that it can become an emergency.  Category 2 patients — admission within 90 days is desirable for a condition that is causing some pain, dysfunction or disability, but that is not likely to deteriorate quickly or become an emergency.  Category 3 patients — admission at some time in the future is acceptable for a condition causing minimal or no pain, dysfunction or disability, that is unlikely to deteriorate quickly and that does not have the potential to become an emergency. |

## 10.9 List of attachment tables

Attachment tables are identified in references throughout this chapter by a ‘10A’ prefix (for example, table 10A.1). Attachment tables are available from the Review website (www.pc.gov.au/gsp).

|  |  |
| --- | --- |
| **Table 10A.1** | Recurrent expenditure, public hospitals (including psychiatric hospitals), (2011-12 dollars, million) |
| **Table 10A.2** | Recurrent expenditure, public hospital services, by source of funding, (2011-12 dollars) |
| **Table 10A.3** | Recurrent expenditure per person, public hospitals (including psychiatric) (2011-12 dollars) |
| **Table 10A.4** | Public hospitals (including psychiatric hospitals) by hospital size |
| **Table 10A.5** | Available beds per 1000 people, by region, public hospitals (including psychiatric) (number) |
| **Table 10A.6** | Summary of separations, public hospitals |
| **Table 10A.7** | Separations, public (non-psychiatric) hospitals |
| **Table 10A.8** | Separations, public (non-psychiatric) hospitals |
| **Table 10A.9** | Separations in public hospitals, by age group |
| **Table 10A.10** | Separations by hospital sector and Indigenous status of patient |
| **Table 10A.11** | Separations per 1000 people, by Indigenous status of patient (number) |
| **Table 10A.12** | Average full time equivalent (FTE) staff per 1000 persons, public hospitals (including psychiatric hospitals) |
| **Table 10A.13** | Separations, by type of episode of care, public hospitals (including psychiatric), 2011-12 |
| **Table 10A.14** | Australian refined diagnosis related groups (AR-DRGs) version 6.0x with the highest number of overnight acute separations, public hospitals, 2011-12 |
| **Table 10A.15** | Top 10 AR-DRGs (version 6.0x) with the most patient days, excluding same day separations, public hospitals, 2011-12 |
| **Table 10A.16** | Non-admitted patient occasions of service, by type of non-admitted patient care, public hospitals, 2011-12 |
| **Table 10A.17** | Emergency department waiting times, by triage category, public hospitals |
| **Table 10A.18** | Patients treated within national benchmarks for emergency department waiting time, by hospital peer group, by State and Territory |
| **Table 10A.19** | Patients treated within national benchmarks for emergency department waiting time, by Indigenous status, by State and Territory |
| **Table 10A.20** | Patients treated within national benchmarks for emergency department waiting time, by remoteness, by State and Territory |
| **Table 10A.21** | Patients treated within national benchmarks for emergency department waiting time, by State and Territory, by SEIFA IRSD quintiles |
| **Table 10A.22** | Elective surgery waiting times for patients admitted from waiting lists, by hospital peer group, public hospitals |
| **Table 10A.23** | Elective surgery waiting times, by specialty of surgeon |
| **Table 10A.24** | Waiting times for elective surgery in public hospitals, by Indigenous status and procedure, by State and Territory (days) |
| **Table 10A.25** | Waiting times for elective surgery in public hospitals, by State and Territory, by remoteness area (days) |
| **Table 10A.26** | Waiting times for elective surgery in public hospitals, by State and Territory, by SEIFA IRSD quintiles (days) |
| **Table 10A.27** | Elective surgery waiting times, by indicator procedure |
| **Table 10A.28** | NSW elective surgery waiting times by clinical urgency category, public hospitals (per cent) |
| **Table 10A.29** | NSW elective surgery waiting times, public hospitals, by clinical urgency category and surgical specialty, 2011-12 |
| **Table 10A.30** | Victorian elective surgery waiting times by clinical urgency category, public hospitals (per cent) |
| **Table 10A.31** | Victorian elective surgery waiting times, public hospitals, by clinical urgency category and surgical specialty, 2011-12 |
| **Table 10A.32** | Queensland elective surgery waiting times, by clinical urgency category, public hospitals (per cent) |
| **Table 10A.33** | Queensland elective surgery waiting times, public hospitals, by clinical urgency category and surgical specialty, 2011-12 |
| **Table 10A.34** | WA elective surgery waiting times, by clinical urgency category, public hospitals (per cent) |
| **Table 10A.35** | WA elective surgery waiting times, public hospitals, by clinical urgency category and surgical specialty, 2011-12 |
| **Table 10A.36** | SA elective surgery waiting times, by clinical urgency category, public hospitals |
| **Table 10A.37** | SA elective surgery waiting times, public hospitals, by clinical urgency category and surgical specialty, 2011-12 |
| **Table 10A.38** | Tasmanian elective surgery waiting times, by clinical urgency category, public hospitals |
| **Table 10A.39** | Tasmania elective surgery waiting times, public hospitals, by clinical urgency category and surgical specialty, 2011-12 |
| **Table 10A.40** | ACT elective surgery waiting times, by clinical urgency category, public hospitals |
| **Table 10A.41** | ACT elective surgery waiting times, public hospitals, by clinical urgency category and surgical specialty, 2011-12 |
| **Table 10A.42** | NT elective surgery waiting times, by clinical urgency category, public hospitals |
| **Table 10A.43** | NT elective surgery waiting times, public hospitals, by clinical urgency category and surgical specialty, 2011-12 |
| **Table 10A.44** | Proportion of presentations to emergency departments with a length of stay of 4 hours or less ending in admission, public hospitals |
| **Table 10A.45** | Separation statistics for selected hospital procedures per 1000 people, all hospitals 2011-12 |
| **Table 10A.46** | Separation statistics for selected hospital procedures, all hospitals, 2011-12 |
| **Table 10A.47** | Unplanned hospital readmissions rates |
| **Table 10A.48** | Unplanned hospital readmission rates, by Indigenous status, hospital peer group, remoteness and SEIFA IRSD quintiles, 2011-12 |
| **Table 10A.49** | Proportion of accredited beds in public hospitals (per cent) |
| **Table 10A.50** | Episodes of Staphylococcus aureus (including MRSA) bacteraemia (SAB) in acute care hospitals, by MRSA and MSSA |
| **Table 10A.51** | Separations with an adverse event, public hospitals |
| **Table 10A.52** | Nursing workforce (includes midwives), by age group and remoteness area |
| **Table 10A.53** | Nursing workforce (includes midwives), by age group . |
| **Table 10A.54** | Medical practitioner workforce, by age group and remoteness area |
| **Table 10A.55** | Medical practitioner workforce, by age group |
| **Table 10A.56** | Recurrent cost per casemix-adjusted separation, selected public acute hospitals 2011-12 |
| **Table 10A.57** | Costs and utilisation by hospital peer group, public hospitals, 2011-12 |
| **Table 10A.58** | Capital cost per casemix-adjusted separation — indicative estimates for inpatient services at major public acute hospitals, 2011-12 |
| **Table 10A.59** | Relative stay index for patients in public hospitals, by funding source, 2011-12 |
| **Table 10A.60** | Relative stay index, indirectly standardised, patients in public hospitals, by medical, surgical and other type of diagnosis related group 2011-12 |
| **Table 10A.61** | NSW recurrent cost per non-admitted patient occasion of service, public hospitals |
| **Table 10A.62** | WA recurrent cost per non-admitted patient occasion of service, public hospitals |
| **Table 10A.63** | SA recurrent cost per non-admitted patient occasion of service, public hospitals |
| **Table 10A.64** | Tasmania recurrent cost per non-admitted patient occasion of service, public hospitals |
| **Table 10A.65** | ACT recurrent cost per non-admitted patient occasion of service, public hospitals |
| **Table 10A.66** | Emergency department number of presentations and actual average cost per presentation |
| **Table 10A.67** | Emergency department presentation by Urgency Related Groupings (URG) codes - presentations and average cost per presentation |
| **Table 10A.68** | Non-admitted clinic number of occassions of service and actual average cost per occasion of service |
| **Table 10A.69** | Proportion of persons who went to an emergency department in the last 12 months reporting the ED doctors or specialists always or often: listened carefully, showed respect, and spent enough time with them, by State and Territory, by remoteness, 2012-13 |
| **Table 10A.70** | Proportion of persons who went to an emergency department in the last 12 months reporting the ED doctors or specialists always or often: listened carefully, showed respect, and spent enough time with them, by remoteness, 2012-13 |
| **Table 10A.71** | Proportion of persons who went to an emergency department in the last 12 months reporting the ED nurses always or often: listened carefully, showed respect, and spent enough time with them, by remoteness, by State and Territory, 2012-13 |
| **Table 10A.72** | Proportion of persons who went to an emergency department in the last 12 months reporting the ED nurses always or often: listened carefully, showed respect, and spent enough time with them, by remoteness, 2012-13 |
| **Table 10A.73** | Proportion of persons who were admitted to hospital in the last 12 months reporting the hospital doctors or specialists always or often: listened carefully, showed respect, and spent enough time with them, by remoteness, by State and Territory, 2012-13 |
| **Table 10A.74** | Proportion of persons who were admitted to hospital in the last 12 months reporting the hospital doctors or specialists always or often: listened carefully, showed respect, and spent enough time with them, by remoteness, 2012-13 |
| **Table 10A.75** | Proportion of persons who were admitted to hospital in the last 12 months reporting the hospital nurses always or often: listened carefully, showed respect, and spent enough time with them, by State and Territory, by remoteness, 2012-13 |
| **Table 10A.76** | Proportion of persons who were admitted to hospital in the last 12 months reporting the hospital nurses always or often: listened carefully, showed respect, and spent enough time with them, by remoteness, 2012-13 |
| **Table 10A.77** | NSW patient evaluation of hospital services |
| **Table 10A.78** | Victorian patient evaluation of hospital services |
| **Table 10A.79** | Queensland patient evaluation of hospital services |
| **Table 10A.80** | WA patient evaluation of hospital services |
| **Table 10A.81** | SA patient evaluation of hospital services |
| **Table 10A.82** | Tasmanian patient evaluation of hospital services |
| **Table 10A.83** | ACT patient evaluation of hospital services |
| **Table 10A.84** | NT patient evaluation of hospital services |
| **Table 10A.85** | NSW selected sentinel events (number) |
| **Table 10A.86** | Victoria selected sentinel events (number) |
| **Table 10A.87** | Queensland selected sentinel events (number) |
| **Table 10A.88** | WA selected sentinel events (number) |
| **Table 10A.89** | SA selected sentinel events (number) |
| **Table 10A.90** | Tasmania selected sentinel events (number) |
| **Table 10A.91** | ACT selected sentinel events (number) |
| **Table 10A.92** | NT selected sentinel events (number) |
| **Table 10A.93** | Australia selected sentinel events (number) |
| **Table 10A.94** | Separations, same day separations, patient days, average length of stay and costs for MDC 14 and MDC 15, public hospitals, Australia, 2011-12 |
| **Table 10A.95** | Separations by major diagnostic category (AR-DRGs) version 6.0, public hospitals, 2011-12 |
| **Table 10A.96** | 10 Diagnosis related groups with highest cost, by volume, public hospitals, Australia, 2011-12 |
| **Table 10A.97** | Intervention rates for selected primiparae, 2012 |
| **Table 10A.98** | Intervention rates for selected primiparae, NSW |
| **Table 10A.99** | Intervention rates for selected primiparae, Victoria |
| **Table 10A.100** | Intervention rates for selected primiparae, Queensland |
| **Table 10A.101** | Intervention rates for selected primiparae, WA |
| **Table 10A.102** | Intervention rates for selected primiparae, SA |
| **Table 10A.103** | Intervention rates for selected primiparae, Tasmania |
| **Table 10A.104** | Intervention rates for selected primiparae, ACT |
| **Table 10A.105** | Intervention rates for selected primiparae, NT |
| **Table 10A.106** | Method of birth for selected women giving birth for the first time, 2011 |
| **Table 10A.107** | Multiparous mothers who have had a previous caesarean section by current method of birth |
| **Table 10A.108** | Perineal status after vaginal births |
| **Table 10A.109** | Separations, patient days, ALOS and estimated cost per separation for selected maternity AR-DRG (version 6.0x) in selected public hospitals |
| **Table 10A.110** | Average length of stay for selected maternity AR-DRG (version 6.0x) 2011-12 |
| **Table 10A.111** | Baby's Apgar scores at five minutes, by birthweight, public hospitals |
| **Table 10A.112** | Fetal deaths |
| **Table 10A.113** | Neonatal deaths |
| **Table 10A.114** | Neonatal, fetal and perinatal death rates, Australia |
| **Table 10A.115** | Perinatal deaths |
| **Table 10A.116** | Perinatal, neonatal and fetal deaths |

## 10.10 References

ABS (Australian Bureau of Statistics) 2004, *Deaths, Australia 2003*, Cat. no. 3302.0, Canberra.

AHMAC (Australian Health Ministers’ Advisory Council) 2012, *The Aboriginal and Torres Strait Islander Health Performance Framework 2012 Report*, AHMAC, Canberra.

AIHW (Australian Institute of Health and Welfare) 2000, 2001, 2006, 2009, 2010, 2011, 2012, 2013a *Australian Hospital Statistics*, Cat. nos HSE 11, 14, 41, 71, 84, 107, 117 and 134, AIHW, Canberra.

—— 2013b, *Health expenditure Australia 2011–12*, Health and Welfare Expenditure Series No. 50, Cat. no. HWE 59. Canberra, AIHW.

—— 2013c, *Australian hospital statistics 2012–13*: elective surgery waiting times. Health services series no. 51. Cat. no. HSE 140. Canberra: AIHW.

AIHW (Australian Institute of Health and Welfare) and ACSQHC (Australian Commission on Safety and Quality in Health Care) 2007, *Sentinel events in Australian public hospitals 2004–05*, Cat. no. HSE. 51 Canberra: AIHW.

Day, P., Sullivan, E.A., Ford, J. and Lancaster, P. 1999, *Australia’s Mothers and Babies 1997*, AIHW Cat. no. PER 12, AIHW NPSU, Sydney.

Eshani, J., Jackson, T., Duckett, J., 2006, ‘*The incidence and cost of adverse events in Victorian hospitals 2003-04*’, The Medical Journal of Australia, Vol 184, No.11, pp 551-555.

HDSC (Health Data Standards Committee) 2012, *National health data dictionary. Version 16.* Cat. no. HWI 119. AIHW, Canberra.

Li, Z., McNally, L., Hilder, L. and Sullivan, EA., 2008, 2009, 2010, 2011 and 2012, *Australia’s mothers and babies,* Cat. no. PER 22, 48, 50, 52 and 56; Sydney, AIHW National Perinatal Epidemiology and Statistics Unit.

NCCH (National Centre for Classification in Health) 2008, *The International Statistical Classification of Diseases and Related Health Problems, 10th Revision*, Australian Modification, 6th edition (ICD-10-AM), Sydney.

Runciman W. 2006, The Safety and Quality of Health Care: Where Are We Now?, *Medical Journal of Australia*; vol. 184, no. 10: S41-S43.

SCRCSSP (Steering Committee for the Review of Commonwealth/State Service Provision) 2001, *Asset Measurement in the Costing of Government Services*, Productivity Commission, Canberra.

Van Den Bos, J., Rustagi, K., Gray, T., Halford, M,. Ziemkiewicz,. E. and Shreve, J., 2011, *The $17.1 Billion Problem: The Annual Cost Of Measurable Medical Errors,* Health Affairs, 30, no.4: 596-603.

1. In the category of maternal death or serious morbidity associated with labour or delivery, 14 related to post-partum haemorrhage >1500mls, three to fourth degree tear’s and three to other classifications of serious morbidity. [↑](#footnote-ref-1)