9 Public hospitals

Public hospitals are important providers of government funded health care services in Australia. A key objective of government 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, regardless of geographic location. Public hospitals provide a range of services, including:

- acute care services to admitted patients
- sub-acute and non-acute services to admitted patients (for example, rehabilitation or palliative care, or long stay maintenance care)
- emergency, outpatient and other services to non-admitted patients[1]
- mental health services, including services provided to admitted patients by designated psychiatric/psychogeriatric units
- public health services
- teaching and research activities.

The public hospitals chapter focuses on acute care 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 acute care services to admitted patients, have the most reliable data available. Some data in the chapter include sub-acute and non-acute care services where they cannot yet be separately identified from acute care. In some instances, stand-alone psychiatric hospitals are also included, although their role is diminishing in accordance with the National Mental Health Strategy. Under the 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 'Health management' (chapter 11). Significant improvements in the reporting of public hospitals in this Report are fetal, neonatal and perinatal death rates are now reported by Indigenous status. Some common health terms relating to hospitals are defined in box 9.1.

[1] Other services to non-admitted patients include community health services such as baby clinics and immunisation units, district nursing services and other outreach services (AIHW 2001).

Box 9.1 **Some common terms relating to hospitals**

Patients

admitted patient: a patient who has undergone a formal admission process in a public hospital to begin an episode of care. Admitted patients may receive acute, sub-acute or non-acute care services.

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.

Types of care

Classification of care depends on the principal clinical intent of the care received.

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.

sub-acute and non-acute care: clinical services provided to patients suffering from chronic illnesses or recovering from such illnesses. Services include rehabilitation, planned geriatric care, palliative care, geriatric care evaluation and management, and services for nursing home patients. Clinical services delivered by designated psychogeriatric units, designated rehabilitation units and mothercraft services are considered non-acute.

Hospital outputs

separation: an episode of care that can be 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 care to rehabilitation). Admitted patients who receive same day procedures (for example, renal dialysis) are included in separation statistics.

casemix-adjusted separations: the number of separations adjusted to account for differences across hospitals in the complexity of their episodes of care. Casemix adjustment is an important step to achieving comparable measures of efficiency across hospitals and jurisdictions.

non-admitted occasions of service: clinical services provided by hospitals to non-admitted patients. Services may 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.

(Continued on next page)

Box 9.1 **(Continued)**

Other common health terms

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 versions 4.1 and 4.2 are based on the ICD-10-AM classification.

ICD-10-AM (the Australian modification of the International Standard Classification of Diseases and Related Health Problems): the current classification of diagnoses and procedures, replacing the earlier ICD-9-CM.

Source: DHAC (1998); NCCH (1998); NHDC (2001, 2003); 2005 Report, pp. 9.3-9.4.

Indigenous data in the public hospitals chapter

The public hospitals chapter in the *Report on Government Services 2005* (2005 Report) contains the following data items on Indigenous people:

- Number of separations in public and private hospitals, 2002-03
- Separation rates, public hospitals, 2002-03
- Standardised Hospital Separation Ratios for selected conditions, by gender, 2002-03
- Fetal, neonatal and perinatal death rates, 2002.

Supporting tables

Supporting tables for data within the public hospitals chapter of the compendium are contained in the attachment to the compendium. These tables are identified in references throughout this chapter by an 'A' suffix (for example, table 9A.3 is table 3 in the public hospitals attachment to the compendium). As the data are directly sourced from the 2005 Report, the compendium also notes where the original table, figure or text in the 2005 Report can be found. For example, where the compendium refers to '2005 Report, p. 9.15' this is page 15 of chapter 9 of the 2005 Report, and '2005 Report, 9A.2' is attachment table 2 of attachment 9 of the 2005 Report.

Separation rates for Indigenous patients

Public hospitals have a significant influence on the equity of the overall health care system. While access to public hospital services is important to the community in general, it is

particularly so for population groups such as Indigenous people who may have difficulty in accessing alternative services, such as those provided by private hospitals.

Data on Indigenous people are limited by the accuracy and extent to which Indigenous people are identified in hospital records. Identification varies across states and territories. In 1998, a pilot study in 11 hospitals found that the accuracy with which a person's Indigenous status was recorded varied greatly from hospital to hospital, ranging from 55 per cent to 100 per cent (ATSIHWIU 1999). The quality of data improved from 2000-01 because all jurisdictions used consistent categories and definitions for Indigenous status from that year. Nevertheless, the quality of data for 2002-03 is considered acceptable only for SA, WA and the NT (AIHW 2004). In addition, difficulties in estimating the size of the Indigenous population limit the comparability of data over time.

In 2002-03, separations for Indigenous people accounted for around 3.0 per cent of total separations in 2002-03 and 4.7 per cent of separations in public hospitals (table 9.1), but the Indigenous population made up only around 2.4 per cent of the total population. Most Indigenous separations (96 per cent) occurred in public hospitals. The low proportion of private hospital separations for Indigenous people may be due partly to a lower proportion of Indigenous patients being correctly identified in private hospitals and partly to this group's lower use of private hospitals. Data in table 9.1 need to be interpreted with care given that only data from WA, SA and the NT are considered to be of acceptable quality (AIHW 2004).

Table 9.1 **Separations, by Indigenous status and hospital sector, 2002-03[a]**

	NSW	*Vic*	*Qld*	*WA*	*SA*	*Tas*	*ACT*	*NT*	*Aust*
Public hospital separations ('000)									
Indigenous [b]	37.9	9.2	51.7	37.2	13.1	1.8	1.4	41.9	194.3
Non-Indigenous	1245.3	1140.7	638.2	330.6	345.5	73.0	60.2	26.1	3859.6
Not reported	7.9	0.0	12.3	0.0	9.3	5.4	2.1	0.2	37.1
Total	**1291.2**	**1149.8**	**702.2**	**367.8**	**367.9**	**80.2**	**63.7**	**68.1**	**4091.0**
Private hospital separations ('000)									
Indigenous [b]	0.4	0.3	3.6	3.9	0.2	na	na	na	8.6
Non-Indigenous	707.6	650.8	465.0	276.7	207.3	na	na	na	2360.2
Not reported	1.0	0.0	133.5	0.0	4.3	na	na	na	194.0
Total	**709.0**	**651.1**	**602.2**	**280.6**	**211.7**	**na**	**na**	**na**	**2562.8**
Separations in public hospitals as a proportion of separations in all hospitals (%)									
Indigenous [b]	99	97	94	91	99	na	na	na	96
Non-Indigenous	64	64	58	54	63	na	na	na	62

a Excludes separations for which the care type was reported as 'newborn with no qualified days' and records for hospital boarders and posthumous organ procurement. **b** Identification of Indigenous patients is not considered complete and completeness varies across jurisdictions. The AIHW advised that only data from WA, SA and the NT are of acceptable quality. **na** Not available.

Source: AIHW (2004); table 9A.1; 2005 Report, p. 9.11, table 9.1.

In 2002-03, on an age standardised basis, 657.2 separations (including same day separations) for Indigenous patients were reported per 1000 Indigenous people in public hospitals (tables 9.2 and 9A.2). This rate was markedly higher than the corresponding rate for the total population of 205.7 per 1000. Public hospital separation rates for Indigenous patients were highest in the NT (1223.3 per 1000 Indigenous people) (table 9.2). Incomplete identification of Indigenous people limits the validity of comparisons over time, as well as across jurisdictions.

Information about the conditions for which Indigenous people are hospitalised is presented in figures 9.1 and 9.2. These data do not signal the performance of hospitals, but reflect a range of factors, such as: the spectrum of public, primary care and post-hospital care available; Indigenous access to this care as well as hospital services; social and physical infrastructure services for Indigenous people; and differences in the complexity, incidence and prevalence of disease between the Indigenous and non-Indigenous populations.

Standardised hospital separation ratios are calculated by dividing Indigenous separations by expected separations. Expected separations are calculated as the product of the all Australian separation rates and the Indigenous population. They illustrate differences between the rates of Indigenous hospital admissions and those of the total Australian population, accounting for differences in age distributions. Ratios are presented for six major conditions: circulatory diseases, injury and poisoning, respiratory diseases and lung cancer, diabetes, tympanoplasty associated with otitis media, and mental health conditions and selected associated ICD-9-CM and ICD-10-CM codes (tables 9A.3 and 9A.4).

Table 9.2 **Estimates of public hospital separations per 1000 people, by reported Indigenous status[a, b]**

	NSW	*Vic*	*Qld*	*WA*	*SA*	*Tas*	*ACT*[c]	*NT*	*Aust*
1998-99									
Indigenous	337.3	344.0	594.6	809.8	673.1	22.9	27.3	920.5	557.1
Total population	199.5	207.7	209.1	204.0	232.3	170.5	212.8	359.6	207.1
1999-2000									
Indigenous	363.4	413.1	708.3	868.9	875.5	132.2	1461.7	1105.0	652.4
Total population	192.1	211.7	205.0	202.0	232.6	160.1	219.2	372.9	204.6
2000-01									
Indigenous	403.8	461.4	671.6	852.2	772.6	110.6	858.0	1031.6	637.5
Total population	187.9	213.6	195.5	199.7	228.8	150.5	217.0	370.9	201.1
2001-02									
Indigenous	361.1	416.0	676.5	752.7	743.6	139.4	982.8	1129.6	614.3
Total population	188.6	222.5	192.5	190.7	229.7	165.0	216.3	394.3	202.8
2002-03									
Indigenous	406.7	476.0	685.2	809.4	788.1	173.1	1200.0	1223.3	657.2
Total population	190.2	231.3	189.4	195.4	231.0	164.5	219.7	422.5	205.7

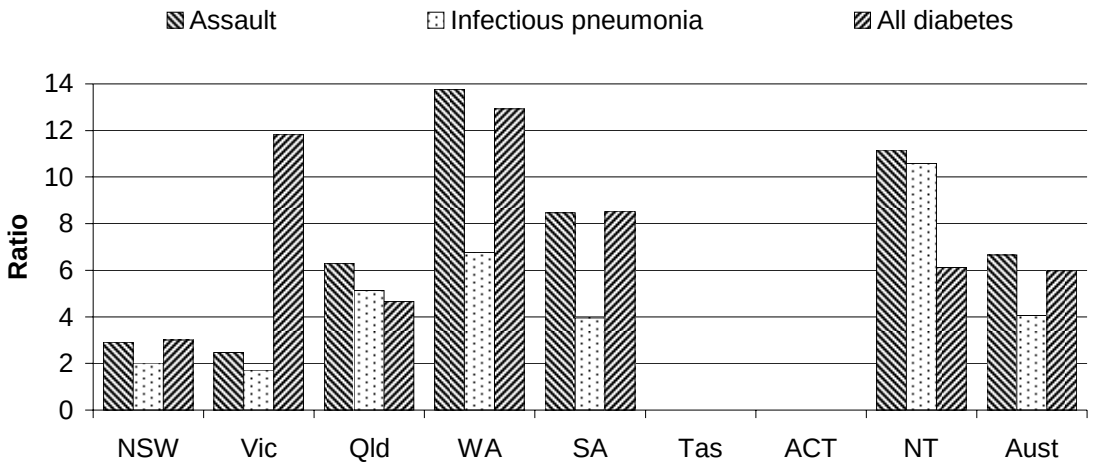
a The rates are directly age standardised to the Australian population at 30 June 2001. **b** Identification of Aboriginal and Torres Strait Islander patients is not considered complete and completeness varies across jurisdictions. The AIHW advised that only data from WA, SA and the NT are of acceptable quality. **c** Rates reported for Indigenous people in the ACT are subject to variability, given the small Indigenous population in the jurisdiction. A high proportion of separations were for maintenance renal dialysis episodes attributable to a small number of people.

Source: AIHW (unpublished); AIHW (2004); table 9A.2; 2005 Report, p. 9.12, table 9.2.

In 2002-03, there was a marked difference between the separation rates for Indigenous males and those of all males for assault (separation rates for Indigenous males were 6.7 times higher than for all males), all diabetes[2] (separation rates for Indigenous males were 6.0 times higher than for all males), and infectious pneumonia (separation rates for Indigenous males were 4.1 times higher than for all males) (figure 9.1). While the 2002-03 standardised rates for rheumatic heart disease for Indigenous males also appeared to be markedly higher than for the total male population, the number of separations for Indigenous males with this condition was very small (table 9A.3).

2 'All diabetes' refers to separations with either a principal or additional diagnosis of diabetes.

Figure 9.1 **Ratio of age standardised hospital separation rates, Indigenous males to all males, by selected conditions, 2002-03[a, b, c, d, e]**



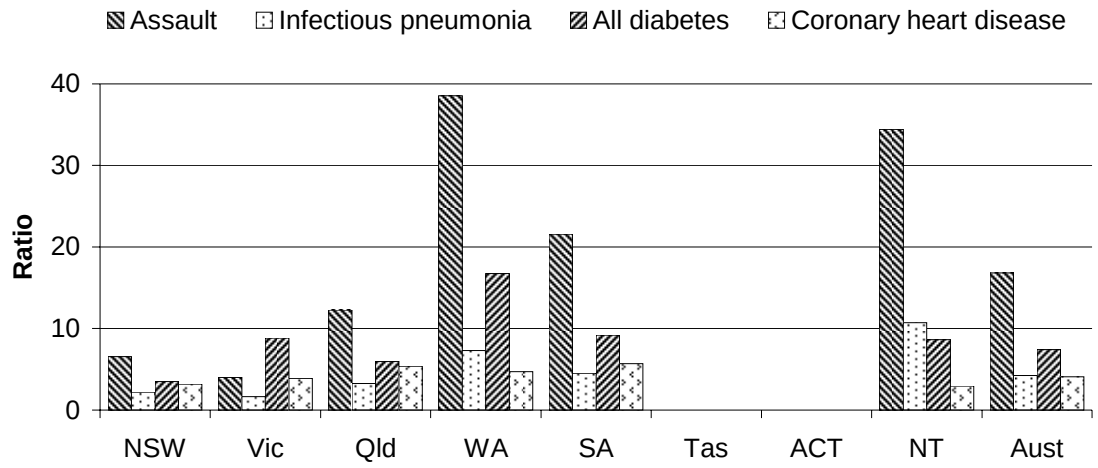
a The ratios are indirectly age standardised using the Census based estimated resident population of Indigenous males at 30 June 2001, the hospital separation rates for Australian males aged 0–74 years for 2000-01 and the male population at 30 June 2001. **b** Identification of Aboriginal and Torres Strait Islander patients is not considered to be complete and completeness varies among jurisdictions. The variation in the number of Indigenous separations per 1000 Indigenous population across the states and territories suggests variation in the proportion of Indigenous persons who were identified as such in the hospital morbidity data collections and/or in the total population. **c** Data for Tasmania and the ACT are not available, given the small size of the Indigenous population in those jurisdictions. **d** 'All diabetes' refers to separations with either a principal or additional diagnosis of diabetes. **e** These data do not signal the performance of hospitals, but reflect a range of factors such as: the spectrum of public, primary care and post-hospital care available; Indigenous access to this care as well as hospital services; social and physical infrastructure services for Indigenous people; and differences in the complexity, incidence and prevalence of disease between the Indigenous and non-Indigenous populations (see appendix A).

Source: AIHW (unpublished); table 9A.3; 2005 Report, p. 9.13, figure 9.8.

In 2002-03, separation rates for Indigenous females were markedly higher than those for all females for: assault (16.8 times higher); all diabetes[3] (7.4 times higher); infectious pneumonia (4.3 times higher) and coronary heart disease (4.1 times higher) (figure 9.2). While the standardised rates for rheumatic heart disease, substance use disorder and tympanoplasty associated with otitis media for Indigenous females also appeared markedly higher than for all females, the number of separations for these conditions was very small (table 9A.4).

3 'All diabetes' refers to separations with either a principal or additional diagnosis of diabetes.

Figure 9.2 **Ratio of age standardised hospital separation rates, Indigenous females to all females, by selected conditions, 2002-03[a, b, c, d, e]**



a The ratios are indirectly age standardised using the Census based estimated resident population of Indigenous males at 30 June 2001, the hospital separation rates for Australian males aged 0–74 years for 2000-01 and the male population at 30 June 2001. **b** Identification of Aboriginal and Torres Strait Islander patients is not considered to be complete and completeness varies among jurisdictions. The variation in the number of Indigenous separations per 1000 Indigenous population across the states and territories suggests variation in the proportion of Indigenous persons who were identified as such in the hospital morbidity data collections and/or in the total population. **c** Data for Tasmania and the ACT are not available, given the small size of the Indigenous population in those jurisdictions. **d** 'All diabetes' refers to separations with either a principal or additional diagnosis of diabetes. **e** These data do not signal the performance of hospitals, but reflect a range of factors such as: the spectrum of public, primary care and post-hospital care available; Indigenous access to this care as well as hospital services; social and physical infrastructure services for Indigenous people; and differences in the complexity, incidence and prevalence of disease between the Indigenous and non-Indigenous populations (see 2005 Report, appendix A).

Source: AIHW (unpublished); table 9A.4; 2005 Report, p. 9.14, figure 9.9.

This year, the performance framework for public hospitals has been revised to exclude 'separation rates by target group' as an indicator. The data item was previously included in the public hospitals framework as an indicator of equity of access, comparing separation rates for Indigenous people with those for all Australians. These data have been removed as an indicator because separation rates by Indigenous status do not reflect the performance of public hospitals, but of the health system more generally in addressing the complexity, incidence and prevalence of disease amongst Indigenous Australians. Differences between hospital separation rates for Indigenous and non-Indigenous people highlight differences between the health profiles of the two populations, differences in their access to the range of health services available (primary and community health services, and hospitals), and differences in aspects of their environmental health (see Health preface).

Maternity services — outcomes

Fetal death rate

The Steering Committee has identified the 'fetal death rate' as an indicator of the outcomes of maternity services (box 9.2). The data for this indicator is provided on a comparable basis.

Box 9.2 **Fetal death rate**

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 rate of fetal deaths is expressed per 1000 total births.

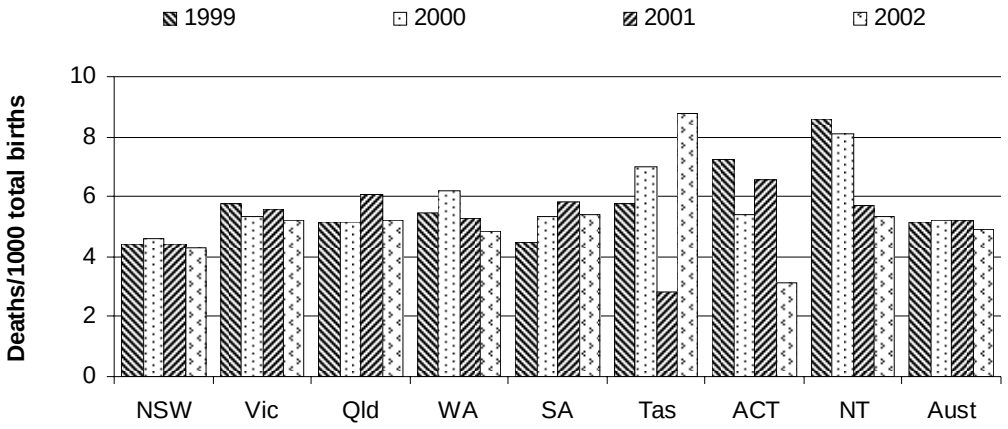
'Fetal death rate' is reported as an indicator because maternity services for admitted patients have some potential to reduce the likelihood of fetal deaths. This potential is limited, however, and other factors (such as the health of mothers and the progress of pregnancy before hospital admission) are also important.

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), by State or Territory of usual residence of the mother. Low fetal death rates may indicate high quality 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.

Differences in the 'fetal death rate' between jurisdictions are likely to be due to factors outside the control of maternity services for admitted patients. To the extent that the health system influences fetal death rates, the health services that may have an influence include outpatient services, general practice services and maternity services.

In 2002, the national 'fetal death rate' was 4.9 per 1000 births. Across jurisdictions it was highest in Tasmania (8.8 deaths per 1000 births) and lowest in the ACT (3.2 deaths per 1000 births) (figure 9.3). The national 'fetal death rate' for babies of Indigenous mothers in 2002 was 6.6 per 1000 births (table 9A.5).

Figure 9.3 **Fetal death rate[a, b]**



a Statistics relate to the number of deaths registered — not those that occurred — in the years shown. The ABS estimates that about 5–6 per cent of deaths occurring in one year are not registered until the following year or later. These data may differ, therefore, from other published sources (such as AIHW or State and Territory government publications). **b** Rates fluctuate as a result of a low incidence of fetal deaths.

Source: ABS (unpublished); table 9A.5; 2005 Report, p. 9.73, figure 9.25.

Neonatal death rate

The Steering Committee has identified the 'neonatal death rate' as an indicator of the outcomes of maternity services (box 9.3). The data for this indicator is provided on a comparable basis.

Box 9.3 **Neonatal death rate**

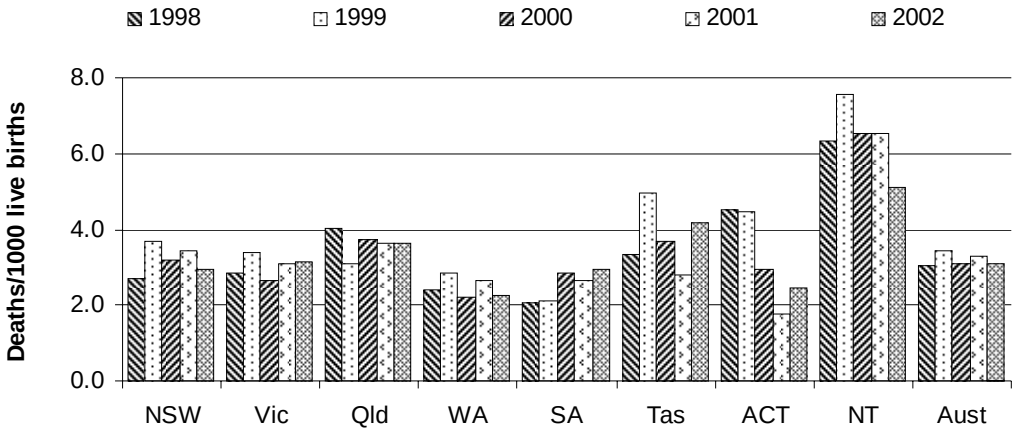
As for fetal deaths, a range of factors contribute to neonatal deaths. The influence of maternity services for admitted patients, however, is greater for neonatal deaths than for fetal deaths, through the management of labour and the care of sick and premature babies.

Neonatal death is the death of a live born infant within 28 days of birth (see section 9.5 of the 2005 Report 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 in which the mother usually resides. This indicator is reported by the Indigenous status of the mother.

Low 'neonatal death rates' may indicate high quality maternity services. The rate tends to be higher among premature babies, so a lower neonatal death rate may also indicate a lower percentage of pre-term births.

In 2002, the national 'neonatal death rate' was 3.1 deaths per 1000 live births. Across jurisdictions, the rate was highest in the NT (5.1 deaths per 1000 live births) and lowest in WA (2.2 deaths per 1000 live births) (figure 9.4). The national 'neonatal death rate' for babies of Indigenous mothers in 2002 was 4.8 per 1000 births (table 9A.7).

Figure 9.4 **Neonatal death rate[a, b]**



a Statistics relate to the number of deaths registered — not those that occurred — in the years shown. The ABS estimates that about 5–6 per cent of deaths occurring in one year are not registered until the following year or later. These data may differ, therefore, from other published sources (such as AIHW or State and Territory government publications). **b** Annual rates fluctuate as a result of a low incidence of neonatal deaths.

Source: ABS (unpublished); table 9A.7; 2005 Report, p. 9.75, figure 9.26.

Perinatal death rate

The Steering Committee has identified the 'perinatal death rate' as an indicator of the outcomes of maternity services (box 9.4) The data for this indicator is provided on a comparable basis.

Box 9.4 **Perinatal death rate**

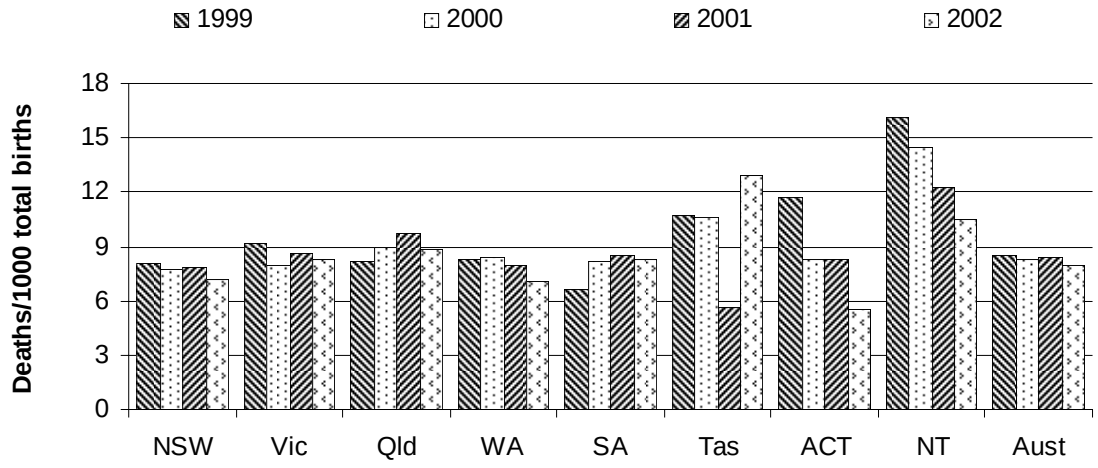
A perinatal death is a fetal or neonatal death (boxes 9.2 and 9.3). The caveats that apply to fetal and neonatal death rates also apply to perinatal death rates.

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) in each jurisdiction. It is expressed per 1000 total births. This indicator is reported by the Indigenous status of the mother.

In 2002, the national 'perinatal death rate' was 8.0 deaths per 1000 total births. Across jurisdictions, the rate was highest in Tasmania (12.9 deaths per 1000 total births) and lowest in the ACT (5.6 deaths per 1000 total births) (figure 9.5). The national 'perinatal

death rate' for babies of Indigenous mothers was 11.3 deaths per 1000 total births (table 9A.6).

Figure 9.5 **Perinatal death rate[a, b]**



a Statistics relate to the number of deaths registered — not those that occurred — in the years shown. The ABS estimates that about 5–6 per cent of deaths occurring in one year are not registered until the following year or later. These data may differ, therefore, from other published sources (such as AIHW or State and Territory government publications). **b** Annual rates fluctuate as a result of a low incidence of perinatal deaths.

Source: ABS (unpublished); table 9A.8; 2005 Report, p. 9.76, figure 9.27.

Future directions in performance reporting

Priorities for future reporting on public hospitals and maternity services include improving the comprehensiveness of reporting by filling in gaps in the performance indicator frameworks. Important gaps in reporting for public hospitals include indicators of outcomes, indicators of equity of access to services for special needs groups (particularly Indigenous people), indicators of continuity of care and indicators of sustainability. Gaps in the maternity services framework include three aspects of quality — responsiveness, capability and continuity — and the effectiveness subdimension of sustainability.

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