

Indicator 3.13 Hysterectomy rates

Indicator definition

Description: Separation rates for hysterectomies.

Numerator: Number of acute hospital separations with hysterectomy for women aged 15–69 years.

Denominator: Number of women aged 15–69 years by relevant area of residence.

Presentation: Age-standardised rate per 100,000 population, standardised to the June 2001 Australian population.

Rationale and evidence

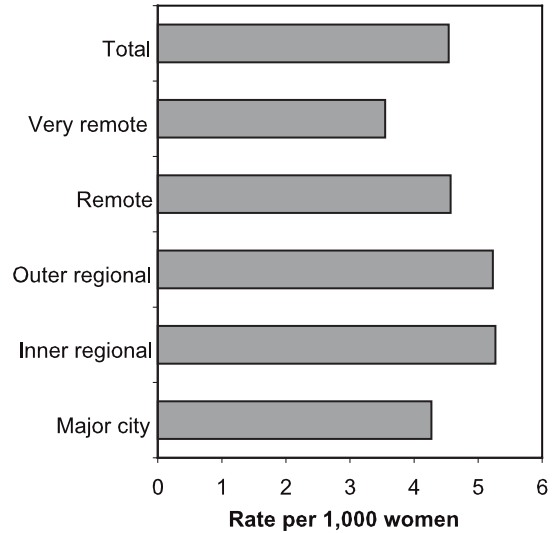
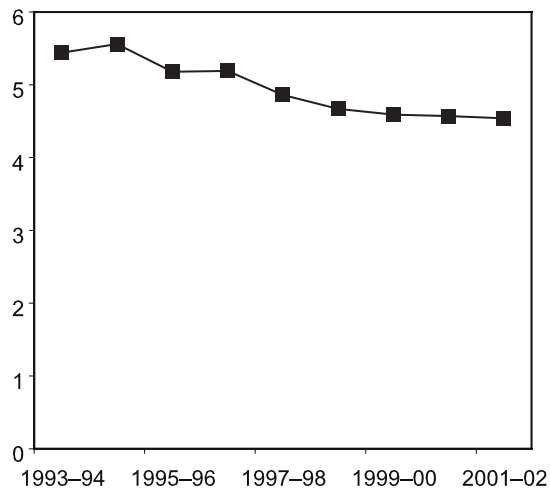
Hysterectomy involves the partial or full removal of the uterus. It is one of the most common surgical procedures performed in Australian hospitals. Just under one in ten women will undergo a hysterectomy by the age of 40 years and around one in five will undergo a hysterectomy before the age of 50 years (Graham et al. 2001). The procedure is usually performed to treat a range of conditions including recurrent uterine bleeding, chronic pelvic pain, or menopause, usually in some combination. Hysterectomies can also be performed to treat genital cancer or in cases of trauma.

Although there is no nationally agreed appropriate hysterectomy rate, it is believed that hysterectomies could be overused. Several studies have shown that the variation in hysterectomy rates between regions cannot be explained by the underlying patterns of disease (AHRQ 2002).

What the data show

- In 2001–02, there were 4.54 hysterectomies performed for every 1,000 Australian women aged 15–69 years.
- Hysterectomy rates have declined by around 20% since 1993–94.
- Hysterectomy rates were highest for women aged 40–49 years.
- The hysterectomy rate was highest in inner regional (5.27 per 1000 women aged 15–69 years) and outer regional (5.23) areas. Rates were slightly lower than the national average for major cities (4.27) and remote areas (4.57). Rates were lowest for the most remote regions (3.55).
- Hysterectomy rates were significantly lower for women in the most advantaged socioeconomic areas (4.04 per 1000 women aged 15–69 years).
- Rates vary between jurisdictions, with the highest rates reported for South Australia and the lowest for the Northern Territory and New South Wales.
- Analysis by a number of state and territory health authorities has shown considerable variation in rates between regions within jurisdictions. This evidence of variation in use of hysterectomies between regions is a starting point for further investigation and analysis.

Rate per 1,000 women



Source: AIHW (2003b).

Notes

1. Age-standardised to the June 2001 Australian population. Rate expressed as separations per 1,000 women aged 15–69 years.
2. Hysterectomies are identified using the following ICD-10-AM codes: hysterectomy blocks [1268], [1269], codes 90450-00 and 90450-01. It is important to note that this analysis includes the following hysterectomies that other analyses such as studies by the US Agency for Healthcare Research and Quality exclude: (1) women undergoing hysterectomy for malignancy of the cervix, uterus, ovary and/or fallopian tube; and (2) women where the principal diagnosis is (a) lower abdominal trauma or (b) pregnancy, childbirth or puerperium.
3. ASGC remoteness category—see Appendix 4 for map of Australia showing remoteness categories.

Figure 3.13(a): Hospital hysterectomy separation rate, women aged 15–69 years, Australia, 1993–94 to 2001–02

Figure 3.13(b): Hospital separations for hysterectomies, by Remoteness Area of usual residence, women aged 15–69 years, 2001–02

Indicator 3.14 Hospital costs

Indicator definition

Description: Average cost per casemix-adjusted separation for public acute care hospitals.

Numerator: Total admitted patient costs reported for public acute care hospitals. Costs are calculated by multiplying total reported costs by the admitted patient fraction (IFRAC) reported for each hospital.

Denominator: Total casemix-adjusted separations reported for public acute care hospitals. Separations include all care types, including those other than acute. Newborns with no qualified days are excluded, along with records that do not relate to admitted patients (boarders and posthumous organ procurement).

Presentation: Cost per casemix-adjusted separation.

Rationale and evidence

The cost per casemix-adjusted separation is a measure of the average cost of admitted patient care and as such can be taken as a measure of the relative technical efficiency of hospitals. The measure of hospital outputs is weighted for differences in the casemix of hospitals, which takes account of a major criticism of approaches that compare average costs per separation. Casemix weightings are based on the Australian refined DRGs (AR-DRGs) and on previous DRG versions.

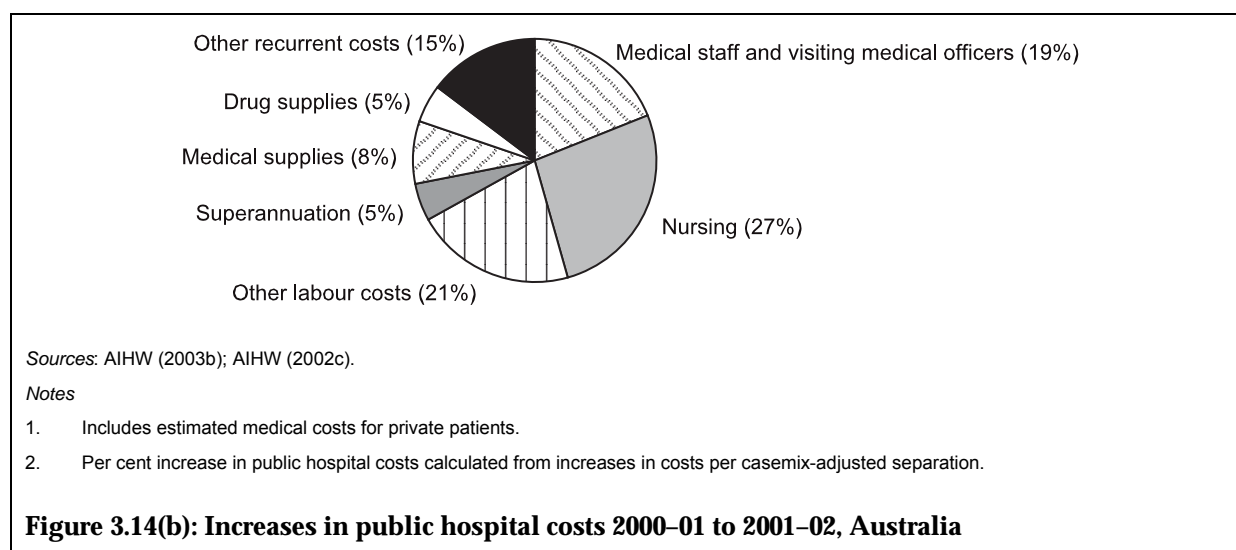
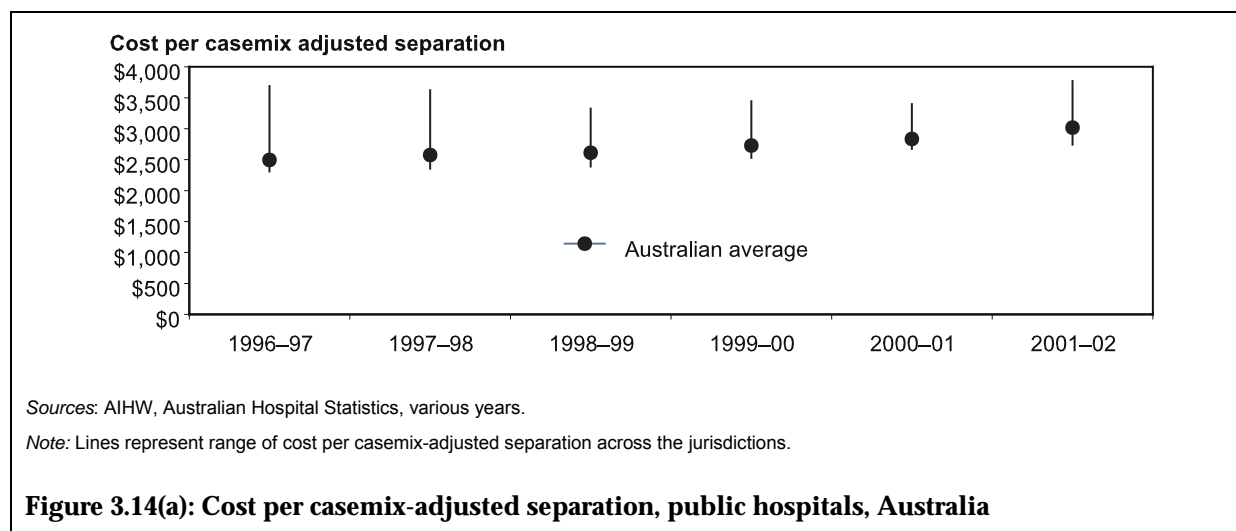
DRGs are a relatively poor measure of outputs for non-acute and psychiatric services and even though these services account for a small proportion of acute hospital outputs, caution should be applied in interpreting results related to DRGs. Because casemix weights change from year to year, caution should also be applied in interpreting time series. Care needs to be taken to allow for differences between jurisdictions in counting rules, financial reporting methods, treatment of particular expenditure items and allocation of overhead costs. Differences in the scope of services delivered by hospitals may reduce their comparability. For example, some jurisdictions admit patients who may be treated as non-admitted patients in other jurisdictions. The measure is sensitive to differences between jurisdictions in input prices, particularly differences in salary and wage levels for key health staff categories, which may mask underlying differences in the productivity of hospitals.

What the data show

- The average cost per casemix-adjusted separation for 2001–02 was \$3,017. This represents an increase of 7.6% on the previous year. Increases in the costs of medical staff and visiting medical officers, nursing and medical supplies accounted for a major share of the increase in costs compared with the previous year.
- The cost per casemix-adjusted separation has increased over time from \$2,496 in 1996–97 to \$3,017 in 2001–02, an average annual increase of 3.9%.
- Employee-related costs (including visiting medical officers) account for 72% of recurrent costs. Nursing is the largest single cost component, accounting for 27% of costs, followed

by medical costs. Medical and drug supplies are the largest component of non-labour-related costs, accounting for 48% of non-labour costs.

- In 2001–02, the cost per casemix-adjusted separation was highest in the Australian Capital Territory (\$3,769) and the Northern Territory (\$3,709), and lowest in Queensland (\$2,741) and South Australia (\$2,898).



Indicator related to:

3.15 Length of stay in hospital

Indicator 3.15 Length of stay in hospital

Indicator definition

- Description:** Relative stay index (RSI) by medical surgical and other DRGs.
- Numerator:** Number of actual patient days for acute care separations.
- Denominator:** Expected number of patient days, given the DRG mix for a particular hospital, and other factors influencing length of stay.
- Presentation:** Ratio of the average length of stay for each jurisdiction to the total Australian average length of stay (casemix adjusted).

Rationale and evidence

The average length of hospital stay per separation is a measure of the efficiency of acute care hospitals. However, because hospitals and jurisdictions vary in terms of their casemix, (i.e. the mix of patients within DRGs), it is appropriate to adjust length of stay measures to account for casemix.

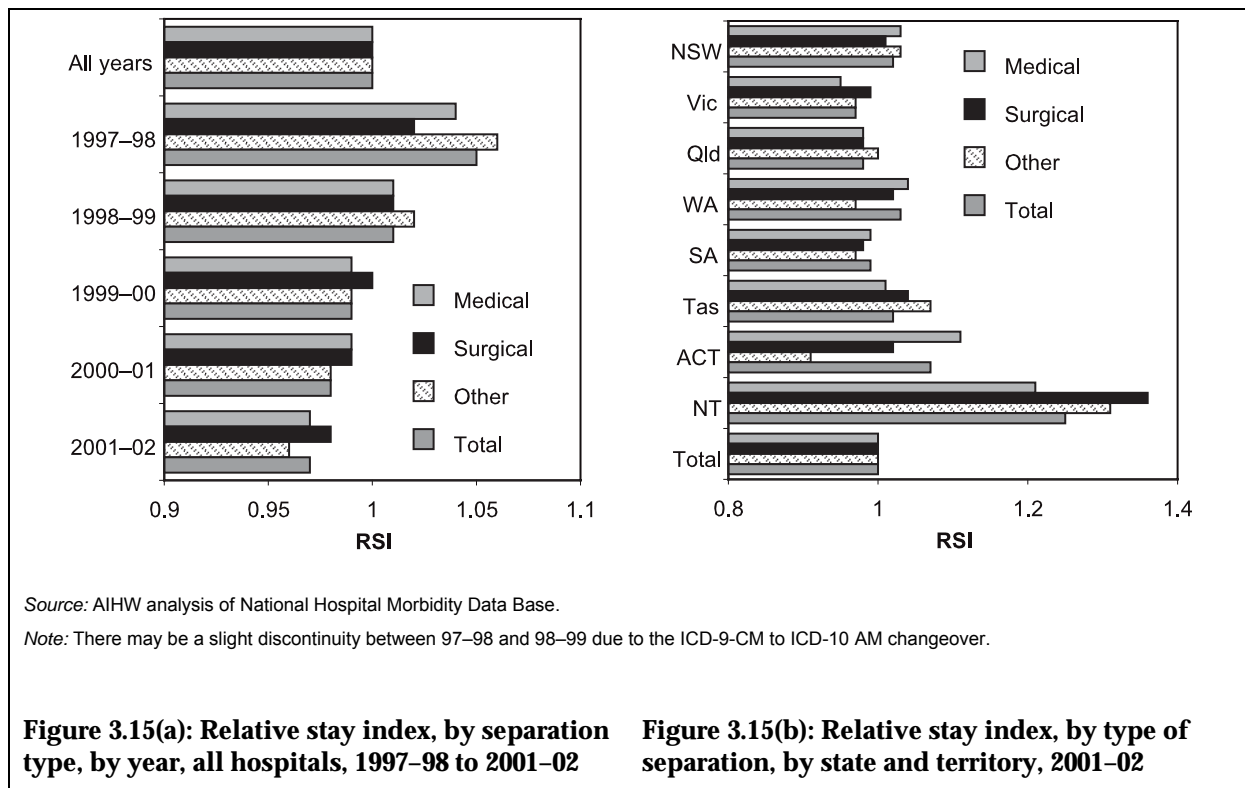
An RSI compares the actual length of stay in a hospital to the expected length of stay. An RSI rating of > 1 indicates that the average length of stay is longer than would be expected given the jurisdiction's or hospital's casemix distribution. An RSI rating of < 1 indicates that the number of patient days used was less than would have been expected. There are two different RSI calculation methods used. The indirect method uses the casemix and age distribution of the jurisdiction or hospital to estimate the expected stay. Calculated in this way, RSI is not directly comparable between cells in the table (Appendix 2) as each cell is a comparison of the cell with the average. The direct method adjusts the casemix of the jurisdiction or hospital to the national casemix, allowing cells to be directly comparable. The RSIs presented here are calculated using the direct standardisation method.

Some caution needs to be applied in interpreting these indices. Despite the approach used for adjusting for casemix, there may be other factors that contribute to the resulting indices. For example, there are DRGs that are predominantly performed in the public sector in some States and Territories, which are generally associated with more complex emergency surgical and medical cases.

What the data show

- There are variations between jurisdictions and between the public and private sectors in the RSI for 2001–02.
- For surgical separations, the directly standardised RSI was 1.02 for public hospitals (longer lengths of stay than expected) and 0.97 for private hospitals (lower lengths of stay than expected). Within the public sector, Queensland had the lowest RSI for surgical separations at 0.99.
- Between 1997–98 and 2001–02 there was a fall in the directly standardised RSI for both the public and private sectors for medical and surgical separations. On a casemix adjusted basis, the average length of stay in private hospitals fell by 11% for surgical separations and 6% for medical separations. In public hospitals the average length of stay fell by 8% for surgical separations and 7% for medical separations.

- For medical separations, the directly standardised RSI is 0.98 for public hospitals and 1.13 for private hospitals. Within the public sector, Queensland had the lowest directly standardised RSI for medical separations at 0.91.



Indicator related to:

3.14 Hospital costs

Indicator 3.16 Waiting times in emergency departments

Indicator definition

Description: Percentage of patients who are treated within national benchmarks for waiting in public hospital emergency departments for each triage category.

Numerator: Presentations to public hospital emergency departments that were treated within benchmarks for each triage category.

Denominator: All presentations to public hospital emergency departments for each triage category.

Presentation: Proportion of patients presenting to emergency departments who are treated within national benchmarks for waiting for each triage category, by state and territory.

Rationale and evidence

Emergency departments in public hospitals play a key role in ensuring that the public hospital system is able to manage emergency patients requiring rapid treatment and also less urgent cases where community-based medical care is not appropriate or not available.

Patients attending emergency departments should be treated within an appropriate time. All patients attending public hospital emergency departments are assessed and are assigned a triage category, which reflects the urgency with which treatment should commence. The appropriate time for commencing treatment decreases as the urgency of the triage category increases. Within Australia, benchmarks for the commencement of treatment have been identified for each triage category (AIHW 2001c). The benchmarks are as follows:

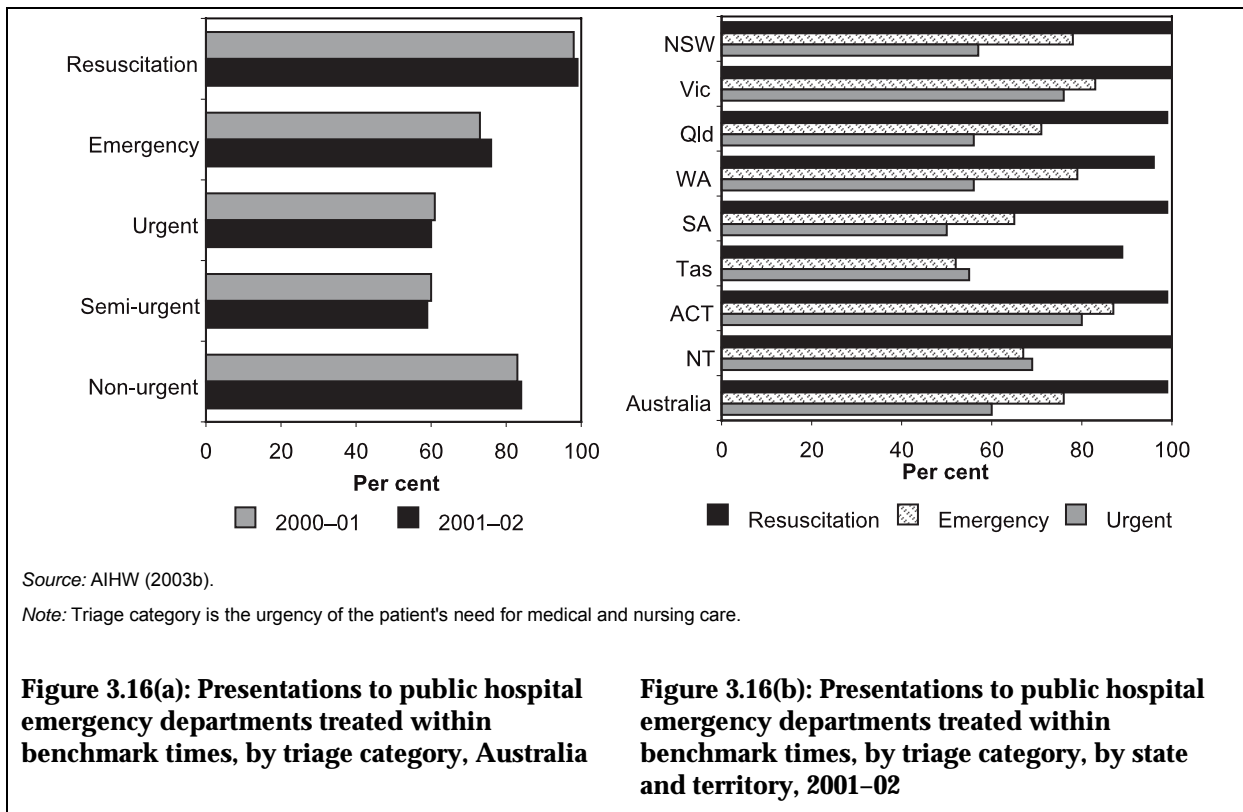
- triage category 1: patient needs resuscitation seen immediately
- triage category 2: emergency seen within 10 minutes
- triage category 3: urgent seen within 30 minutes
- triage category 4: semi-urgent seen within 60 minutes
- triage category 5: non-urgent seen within 120 minutes

This indicator measures the extent to which these benchmarks have been achieved.

What the data show

- In 2001–02, over 99% of patients requiring resuscitation were seen immediately, and 76% of patients requiring emergency treatment were seen within 10 minutes. This was a slight improvement over the previous year for resuscitation and emergency patients.
- In 2001–02, 60% of patients requiring urgent treatment were seen within 30 minutes, 59% of patients requiring semi-urgent treatment were seen within 60 minutes and 84% of patients requiring non-urgent treatment were seen within 120 minutes. There was deterioration over the previous year for these triage categories.

- There is variability between jurisdictions in the achievement of the benchmarks for triage categories 2–5, which may reflect variation in coverage, how waiting times are calculated, triage categorisation and the types of patients that present to emergency departments.



Indicator related to:

- 3.17 Bulk billing for non-referred (GP) attendances
- 3.18 Availability of GP services

Indicator 3.17 Bulk billing for non-referred (GP) attendances

Indicator definition

Description: Proportion of non-referred (GP) attendances that are bulk-billed (or direct-billed) under the Medicare program.

Numerator: Number of non-referred (GP) attendances that are bulk-billed.

Denominator: Total number of non-referred (GP) attendances.

Presentation: Proportion.

Rationale and evidence

Accessibility to medical services can be considered across a number of dimensions such as affordability, and availability of services in terms of when and how readily they can be obtained by patients. This indicator considers accessibility from an affordability perspective.

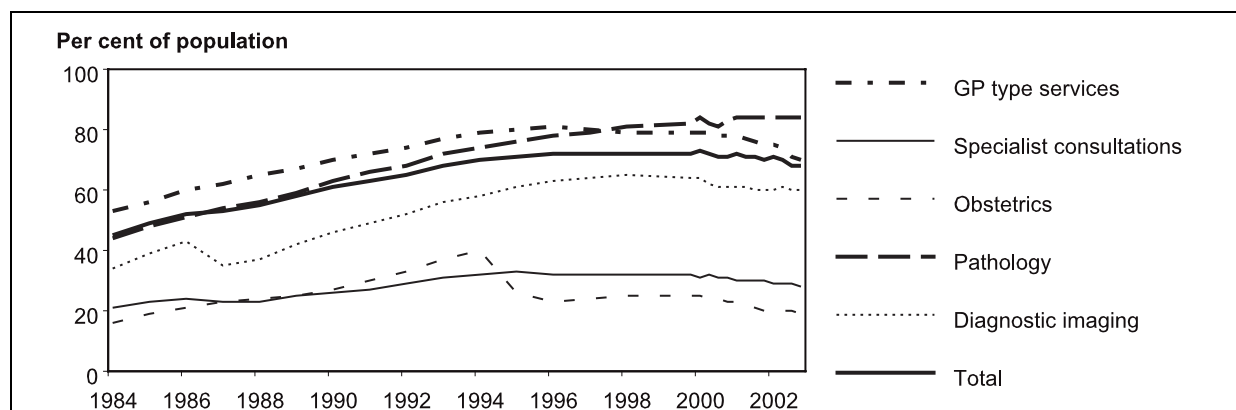
Where GP services are bulk-billed, the Medicare rebate is accepted as the full cost of the medical service. In contrast, patient-billed services involve an out-of-pocket cost that needs to be met by the patient.

Changes in the level of bulk billing do not, in isolation, provide a clear indicator of affordability of, or access to GP services. Factors that affect the interpretation of this indicator are included in the technical notes in Appendix 3.

What the data show

- In 2002–03, 70% of non-referred (gp) attendances were bulk-billed. While this rate remained high compared to the 53% proportion it was in 1984–85, it had decreased from the peak (80.6%) reached in 1996–97.
- The number of non-referred (GP) attendances that were bulk-billed declined from 82.6 million in 1996–97 to 67.3 million in 2002–03. The total number of non-referred (GP) attendances (those not bulk-billed as well as those bulk-billed) also declined, from 103.1 million in 1997–98 to 96.9 million.
- While the level of bulk billing for diagnostic imaging services increased from 1984–85 to 1998–99 and then decreased thereafter, the level of bulk-billing for obstetrics peaked in 1994–95. Bulk billing for specialist attendances increased from 21% in 1984–85 to 33% in 1995–96 and was 27% in June 2003. Bulk billing for pathology has increased continuously from 44% in 1984–85 to 84% in June 2003. The overall level of bulk billing across all services under the Medicare program was 67.8% in 2002–2003.
- At 90%, bulk billing for non-referred attendances remained high for the 10% of population living in the most disadvantaged areas, dropped with increasing socioeconomic status for the three groups that follow to 70% for the fourth decile. It rose again for the fifth, sixth and seventh deciles to 77%. The eighth and ninth deciles had a 74% bulk-billing rate. The least disadvantaged group had, through the whole period, the lowest rate of bulk billing – 66% in 2001–02.

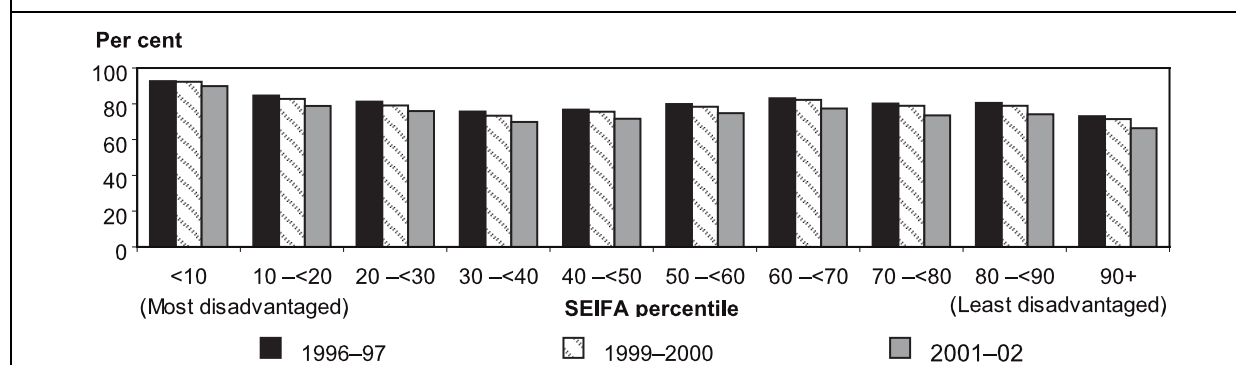
- Between 1996–97 and 2001–02, bulk billing for non-referred attendances declined across the socioeconomic spectrum, irrespective of socioeconomic status.
- Bulk billing for non-referred attendances declined in capital cities, other urban areas and all rural areas. However, it showed an upward trend in remote centres until 2000–01 before declining and remained unchanged in other remote areas (Table A3.17(c)).
- The average patient contribution per service (out of hospital only) in current price terms, for patient-billed non-referred (GP) attendances increased from just under \$9 in 1996–97, the peak year for bulk billing, to \$12.91 in 2002–03.



Source: Commonwealth Department of Health and Ageing (2002b); Australian Government Department of Health and Ageing web site, <www.health.gov.au/haf/medstats/btabs.htm>.

Note: GP type services include non-referred attendances and enhanced primary care (EPC).

Figure 3.17(a): Bulk billing of medical services, Australia, 1984–85 to December 2002



Source: Australian Government Department of Health and Ageing (unpub.)

Notes

1. The socioeconomic status of people was measured by the average Socioeconomic Index for Areas (SEIFA) score for the postcode of their area. Post office box postcodes were not represented. As a result, the totals may differ slightly from other published statistics.
2. The categories are in decreasing order of disadvantage: <10 represents the 10% most disadvantaged areas as measured by SEIFA. 90+ represents the 10% least disadvantaged.

Figure 3.17(b): Bulk billing of non-referred services, by relative index of socioeconomic disadvantage, Australia, 1996–97, 1999–2000, 2001–02

Indicator 3.18 Availability of general practitioner services

Indicator definition

Description: Availability of GP services on a full-time workload equivalent (FWE) basis.

Numerator: Full-time workload equivalent: FWE is calculated for each GP by dividing the GP's Medicare billing by the mean billing of full-time GPs.

Denominator: Population by relevant area.

Presentation: Rate per 100,000 population.

Rationale and evidence

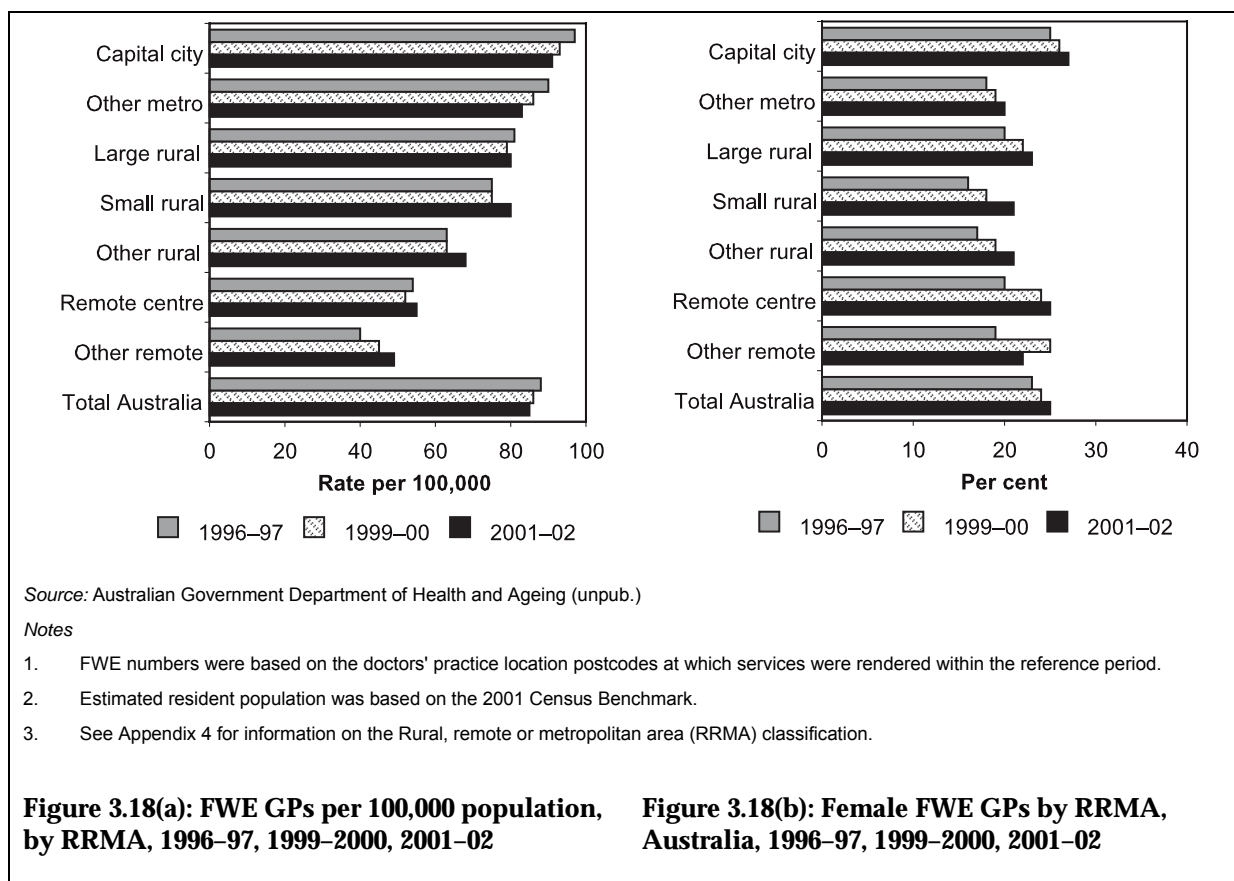
GPs are often the first point of contact for health services. Their availability, therefore, reflects accessibility to health services, particularly to primary care.

At the end of 2001-02, there were 24,307 non-specialist medical practitioners who claimed MBS benefits. This figure provides an estimate of the stock of GPs who bill Medicare but does not account for large variations in the number of services provided, and gives the same weight to full-time, part-time and casual GPs. A standardised measure is used to estimate the workforce supply of GPs. The FWE adjusts for the partial contribution of casual and part-time GPs, and the contribution of GPs who work more than the average full-time doctor does. At the end of 2001-02, there were 16,736 FWE GPs in Australia.

The billing threshold for included GPs was \$82,415 in 2001-02. These thresholds were \$71,940 and \$75,585 for 1996-97 and 1999-2000, respectively.

What the data show

- Between 1996-97 and 2001-02, the number of FWE GPs in rural and remote areas increased by 11.4% (from 3,596 to 4,005 FWE GPs). The greatest increase was in other remote areas (23.6%) and the least was in large rural centres (6.2%).
- A comparison of the data between these two years shows that the distribution of GPs in 2001-02 is becoming less uneven across the RRMA's.
- Between 1996-97 and 2001-02, the number of FWE GPs per 100,000 population has decreased marginally for Australia overall, from 88 to 85.
- In 2001-02, availability remained highest in capital cities and lowest in other remote areas. The number of FWE GPs per 100,000 population appears to be increasing in rural areas.
- Female GPs currently represent 35% of GPs, but only 25% of GP workload as measured by FWE. This reflects the high rate of part-time and casual workforce participation amongst female doctors.
- Like the rest of the Australian workforce, the GP workforce is getting older on average. In 2001-02 GPs aged 55 and older represented 26% of FWE GPs in Australia.
- From 2004 there will be an additional 234 medical school places bonded to areas of workforce shortage and 150 GP registrars trained each year.



Indicator related to:

- 3.07 Potentially preventable hospitalisations
- 3.16 Waiting times in emergency departments
- 3.17 Bulk billing for non-referred (GP) attendances

Indicator 3.19 Access to elective surgery

Indicator definition

Description: Median waiting time for access to elective surgery – from the date they were added to the waiting list to the date they were admitted.

Presentation: The median waiting time by state and territory. Days on which the patient was not ready for care are omitted. For patients transferred from a waiting list managed by one hospital to that managed by another, the time waited on the first list is not generally included.

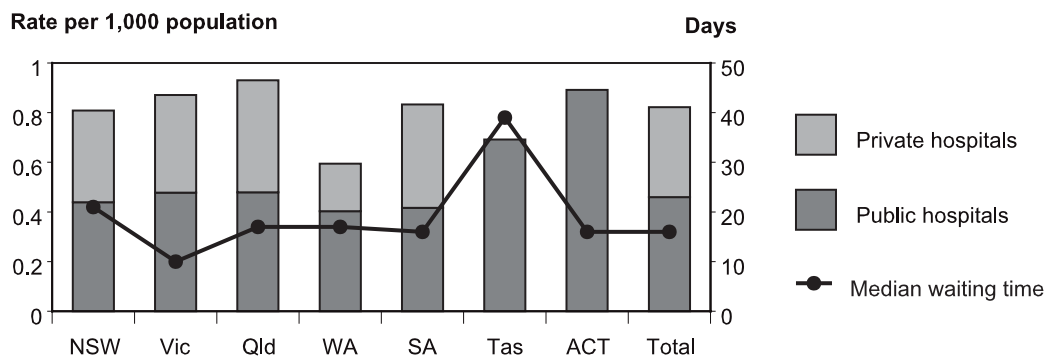
Rationale and evidence

These indicators track median waiting times and separation rates for three surgical procedures: coronary artery bypass grafts, hip replacements and knee replacements.

Differing rates suggest variable access and could reflect unmet need.

What the data show

- The median waiting time for coronary artery bypass surgery was 16 days nationally in 2001–02. This varied between jurisdictions, from 10 days in Victoria to 39 days in Tasmania.
- Hospital separation rates for coronary artery bypass surgery also varied between jurisdictions. Jurisdictions with higher surgery rates did not necessarily have lower median waiting times. Coronary artery bypass surgery is one procedure for achieving revascularisation. Angioplasty procedures are increasingly used as an alternative. However, waiting times for medical procedures such as angioplasty are not included in national data collected for elective surgery waiting times.
- Nationally, the median waiting time for total hip replacement was 96 days. The median varied between jurisdictions from 56 days in Queensland to 264 days in Tasmania. Age-standardised separation rates also varied between jurisdictions. Again, jurisdictions with higher surgery rates did not necessarily have lower median waiting times. Queensland had the lowest waiting times but also had one of the lowest separation rates. In comparison, Tasmania had the highest median waiting time and the second highest separation rate.
- A similar picture emerges for total knee replacement. The median waiting time was 131 days nationally, with significant variation between jurisdictions. Jurisdictions with comparatively higher separation rates did not necessarily achieve lower waiting times.



Note: The coronary artery by-pass procedure is not performed in the Northern Territory.

Figure 3.19(a): Surgery rates and waiting times for coronary artery by-pass, by state and territory, 2001-02

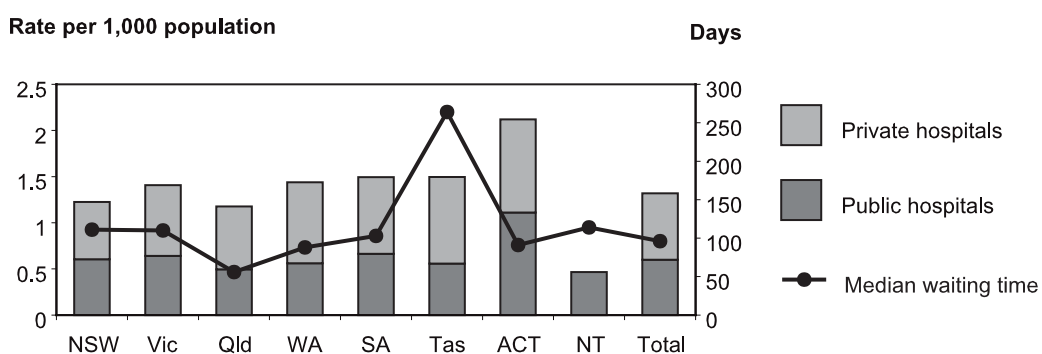


Figure 3.19(b): Surgery rates and waiting times for total hip replacement, by state and territory, 2001-02

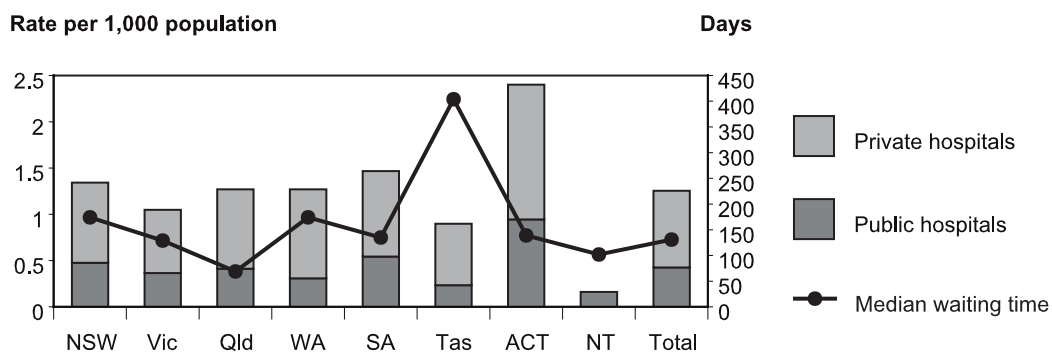


Figure 3.19(c): Surgery rates and waiting times for total knee replacement, by state and territory, 2001-02

Source: AIHW (2003b).

Note: Rate expressed as public and private hospital separations per 1,000 persons resident in that jurisdiction. Age-standardised to the June 2001 Australian population. Victoria reported that for 2001-2002, private hospital separations were underestimated by up to 9%.

Indicator related to:

1.01 Incidence of heart attacks

1.03 Severe or profound core activity limitation

3.08 Survival following acute coronary heart disease event