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# 12 Public hospitals interpretative material

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The Public hospitals interpretative material is supporting material and includes explanations of why indicators have been chosen, and wherever possible, a link to the stated objectives of the service. It includes indicator definitions, technical details defining how the indicator is

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measured and guidance on how the indicator is to be interpreted, including caveats and the indicator's completeness and comparability status.

Further information on the Report on Government Services including other reported service areas, the glossary and list of abbreviations is available at <https://www.pc.gov.au/research/ongoing/report-on-government-services>.

## 12.1 Indicators

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

The comparability of performance indicator results is shaded in indicator interpretation boxes, figures and data tables as follows:

- Data are comparable (subject to caveats) across jurisdictions and over time.
- Data are either not comparable (subject to caveats) within jurisdictions over time or are not comparable across jurisdictions or both.

The completeness of performance indicator results is shaded in indicator interpretation boxes, figures and data tables as follows:

- Data are complete (subject to caveats) for the current reporting period. All required data are available for all jurisdictions.
- Data are incomplete for the current reporting period. At least some data were not available.

## Outputs

Outputs are the actual services delivered (while outcomes are the impact of these services on the status of an individual or group) (see section 1). Output information is also critical for equitable, efficient and effective management of government services.

## Equity

### Access — Equity of access by special needs groups

'Equity of access by special needs groups' is an indicator of governments' objective to provide hospital services in an equitable manner (box 12.1).

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### **Box 12.1      Equity of access by special needs groups**

'Equity of access by special needs groups' is measured for the special needs group of people living in remote and very remote areas and is defined as the percentage of people who delayed going to hospital due to distance from hospital, by region.

Similar rates across regions can indicate equity of access to hospital services across regions.

Data are not yet available for reporting against this measure.

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## **Effectiveness**

### **Access — Emergency department waiting times**

'Emergency department waiting times' is an indicator of governments' objective to provide timely and accessible services to all (box 12.2).

## Box 12.2 Emergency department waiting times

'Emergency department waiting times' is defined by the following two measures:

- Emergency department waiting times by triage category, 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. 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.
- Proportion of patients staying for four hours or less, is defined as the proportion of presentations to public hospital emergency departments where the time from presentation to admission, transfer or discharge is less than or equal to four hours. It is a measure of the duration of the emergency department service rather than a waiting time for emergency department care.

High or increasing proportions for both measures are desirable.

The comparability of emergency department waiting times data across jurisdictions can be influenced by differences in data coverage 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 12A.13).

Data reported for both measures are:

- not comparable across jurisdictions, but are comparable (subject to caveats) within jurisdictions over time
- complete (subject to caveats) for the current reporting period. All required 2019-20 data are available for all jurisdictions.

## Access — Waiting times for admitted patient services

'Waiting times for admitted patient services' is an indicator of governments' objective to provide timely and accessible services to all (box 12.3).

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### Box 12.3 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
- Presentations to emergency departments with a length of stay of 4 hours or less ending in admission.

Data reported for these three measures are:

- not comparable across jurisdictions, but are comparable (subject to caveats) within jurisdictions over time
- complete (subject to caveats) for the current reporting period. All required 2019-20 data are available for all jurisdictions.

#### *Overall elective surgery waiting times*

'Overall elective surgery waiting times' are calculated by comparing the date patients are added to a waiting list with the date they were 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. Patients on waiting lists who were not subsequently admitted are excluded.

For overall elective surgery waiting times, a low or decreasing number of days waited are desirable. 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, with the time waited on the first list included in the waiting time reported in NSW, WA, 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.

#### *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. In general, at the time of being placed on the public hospital waiting list, a clinical assessment is made of the urgency with which the patient requires elective surgery. The clinical urgency categories are:

- Category 1 — procedures that are clinically indicated within 30 days
- Category 2 — procedures that are clinically indicated within 90 days
- Category 3 — procedures that are clinically indicated within 365 days.

The term 'extended wait' is used for patients in categories 1, 2 and 3 waiting longer than specified times (30 days, 90 days and 365 days respectively).

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### Box 12.3 (continued)

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 considered. 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.

*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' is defined as the proportion of presentations to public hospital emergency departments where the time from presentation to admission to hospital is less than or equal to 4 hours.

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.

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## Access — Elective surgery waiting list turn over

'Elective surgery waiting list turn over' is an indicator of government's objective to provide timely and accessible services to all (box 12.4).

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### Box 12.4 **Elective surgery waiting list turn over**

'Elective surgery waiting list turn over' is defined as the number of additions to, and removals from, public hospital elective surgery waiting lists. It is measured as the number of people removed from public hospital elective surgery waiting lists following admission for surgery during the reference year, divided by the number of people added to public hospital elective surgery waiting lists during the same year, multiplied by 100.

The number of people removed from public hospital elective surgery waiting lists following admission for surgery includes elective and emergency admissions. For context, the total number of removals from elective surgery waiting lists are also reported. Other reasons for removal include; patient not contactable or died, patient treated elsewhere, surgery not required or declined, transferred to another hospital's waiting list, and not reported.

When interpreting these data, 100 per cent indicates that an equal number of patients were added to public hospital elective surgery waiting lists as were removed following admission for surgery during the reporting period (therefore the number of patients on the waiting list will be largely unchanged). A figure less than 100 per cent indicates that more patients were added to public hospital elective surgery waiting lists than were removed following admission for surgery during the reporting period (therefore the number of patients on the waiting list will have increased).

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#### Box 12.4 (continued)

A higher and increasing per cent of patient turn over is desirable as it indicates the public hospital system is keeping pace with demand for elective surgery.

Data for this indicator are:

- not comparable across jurisdictions, but are comparable (subject to caveats) within jurisdictions over time
- complete (subject to caveats) for the current reporting period. All required 2019-20 data are available for all jurisdictions.

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#### Appropriateness — Appropriateness of hospital services

‘Appropriateness of hospital services’ is an indicator of government’s objective to provide care that is appropriate and responsive to the needs of individuals throughout their lifespan and communities (box 12.5).

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#### Box 12.5 **Appropriateness of hospital services**

‘Appropriateness of hospital services’ is yet to be defined.

This indicator has been identified for development and future reporting.

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## Quality — Safety — Accreditation

‘Accreditation’ is an indicator of governments’ objective to provide public hospital services that are high quality and safe (box 12.6).

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### Box 12.6     **Accreditation**

‘Accreditation’ is defined by the proportion of hospitals accredited to the National Safety and Quality Health Service standards.

It is mandatory for all hospitals and day procedure services to be accredited to the Standards. Health service organisations must demonstrate that they meet all of the requirements in the Standards to achieve accreditation. Reaccreditation against the Standards is required every three years. The standards are:

- Clinical governance
- Partnering with consumers
- Preventing and controlling healthcare-associated infection
- Medication safety
- Comprehensive care
- Communicating for safety
- Blood management
- Recognising and responding to acute deterioration.

A high or increasing rate of accreditation is desirable. Accreditation against the Standards is evidence that a hospital has been able to demonstrate compliance with the Standards. It does not mean that an accredited hospital will always provide high quality and safe care. This indicator should be interpreted in conjunction with other indicators of public hospital quality and safety.

Data are not available for reporting against this indicator.

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## Quality — Safety — Adverse events in public hospitals

‘Adverse events in public hospitals’ is an indicator of governments’ objective to provide public hospital services that are high quality and safe (box 12.7). Sentinel events, which are a subset of adverse events that result in death or very serious harm to the patient, are reported as a separate output indicator.

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### Box 12.7 Adverse events in public hospitals

'Adverse events in public hospitals' is defined by the following three measures:

- Selected healthcare-associated infections
- Adverse events treated in hospitals
- Falls resulting in patient harm in hospitals.

#### *Selected healthcare-associated infections*

'Selected healthcare-associated infections' is the number of *Staphylococcus aureus* (including Methicillin-resistant *Staphylococcus aureus* [MRSA]) bacteraemia (SAB) patient episodes associated with public hospitals (admitted and non-admitted patients), expressed as a rate per 10 000 patient days for public hospitals.

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 less than or equal to 48 hours after admission to hospital and the patient episode of SAB meets at least one of the following criteria:

- 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
- SAB was diagnosed within 48 hours of a related invasive instrumentation or incision
- SAB is associated with neutropenia contributed to by cytotoxic therapy. Neutropenia is defined as at least two separate calendar days with values of absolute neutrophil count (ANC) or total white blood cell count  $<500 \text{ cell/mm}^3 (0.5 \times 10^9/\text{L})$  on or within a seven-day time period which includes the date the positive blood specimen was collected (Day 1), the three calendar days before and the three calendar days after.

Cases where a known previous positive test has been obtained within the last 14 days are excluded. Patient days for unqualified newborns, hospital boarders and posthumous organ procurement are excluded.

A low or decreasing rate of selected healthcare-associated infections is desirable.

Data reported for this measure are:

- not comparable across jurisdictions, but are comparable (subject to caveats) within jurisdictions over time
- complete (subject to caveats) for the current reporting period. All required 2019-20 data are available for all jurisdictions.

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**Box 12.7** (continued)

*Adverse events treated in hospitals*

'Adverse events treated in hospitals' are incidents in which harm resulted to a person during hospitalisation and 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 hospitalisation. Hospital separations data include information on diagnoses and place of occurrence that can indicate that an adverse event was treated and/or occurred during the hospitalisation, but some adverse events are not identifiable using these codes.

Low or decreasing adverse events treated in hospitals are 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 2018-19 data are available for all jurisdictions.

*Falls resulting in patient harm in hospitals*

'Falls resulting in patient harm in hospitals' is defined as the number of separations with an external cause code for fall and a place of occurrence of health service area, expressed as a rate per 1000 hospital separations. It is not possible to determine if the place of occurrence was a public hospital, only that it was a health service area.

A low or decreasing rate of falls resulting in patient harm 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 2018-19 data are available for all jurisdictions.
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## Quality — Safety — Sentinel events

'Sentinel events' is an indicator of governments' objective to deliver public hospital services that are high quality and safe (box 12.8). Sentinel events are a subset of adverse events that result in death or very serious harm to the patient. Adverse events are reported as a separate output indicator.

### Box 12.8     **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.

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 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 associated with pregnancy, birth or the puerperium.
8. Infant discharged to the wrong family.

A low or decreasing number of sentinel events is desirable.

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.

Changes in the number of sentinel events reported over time do not necessarily mean that Australian public hospitals have become more or less safe, but might reflect improvements in incident reporting mechanisms, organisational cultural change, and/or an increasing number of hospital admissions (these data are reported as numbers rather than rates). Trends need to be monitored to establish the underlying reasons.

Data reported for this measure are:

- not comparable across jurisdictions, but are comparable (subject to caveats) within jurisdictions over time
- complete (subject to caveats) for the current reporting period. All required 2018-19 data are available for all jurisdictions.

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## Quality — Responsiveness — Patient satisfaction

‘Patient satisfaction’ provides a proxy measure of governments’ objective to deliver services that are responsive to individuals throughout their lifespan and communities (box 12.9).

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### Box 12.9     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 for their own health reporting that the emergency department doctors, specialists or nurses ‘always’ or ‘often’:
  - listened carefully to them
  - showed respect to them
  - spent enough time with them
- Proportion of people who were admitted to hospital in the last 12 months reporting that the hospital doctors, specialists or nurses ‘always’ or ‘often’:
  - listened carefully to them
  - showed respect to them
  - spent enough time with them.

A high or increasing proportion of patients who were satisfied is desirable, as it suggests the hospital care was of high quality and better met the expectations and needs of patients.

Data reported for these measures are:

- █ comparable (subject to caveats) across jurisdictions and over time.
- █ complete (subject to caveats) for the current reporting period. All required 2019-20 data are available for all jurisdictions.

The ABS Patient Experience Survey of people aged 15 years and over does not include people living in discrete Indigenous communities, which affects the representativeness of the NT results. Approximately 20 per cent of the resident population of the NT live in discrete Indigenous communities.

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## Quality — Continuity — Continuity of care

'Continuity of care' is an indicator of government's objective to provide care that is well co-ordinated to ensure continuity of care where more than one service type, and/or ongoing service provision is required (box 12.10).

### Box 12.10    **Continuity of care**

'Continuity of care' is defined by four measures:

- the number of hospital patients with complex needs for which a discharge plan is provided within 5 days of discharge divided by all hospital patients with complex care needs expressed as a rate per 1000 separations
- the proportion of patients reporting that their usual GP, or others in their usual place of care, did not seem informed of their follow up needs or medication changes after the last time they went to a hospital emergency department
- the proportion of patients reporting that their usual GP, or others in their usual place of care, did not seem informed of their follow up needs or medication changes after the last time they were admitted to hospital
- the proportion of patients who reported that arrangements were not made by their hospital for any services needed after leaving hospital when last admitted.

High or increasing rates of discharge plans provided to patients with complex care needs within 5 days is desirable. While it is desirable for discharge plans to be provided to patients, the indicator does not provide any information on whether the discharge plan was carried out or whether it was effective in improving patient outcomes.

Low or decreasing proportions of patients reporting that their GP, or others in their usual place of care, did not seem informed of their follow up needs or medication changes after the last time they went to a hospital emergency department or were admitted to hospital are desirable. A low or decreasing proportion of patients reporting that arrangements were not made by their hospital for any services needed after leaving hospital when last admitted is desirable.

Data are not yet available for reporting against these measures. However, summary data from the 2016 ABS survey of health care are available to report as contextual information for measures 2–4 for people aged 45 years and over in table 12A.51.

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## Quality — Continuity — Selected unplanned hospital readmission rates

‘Selected unplanned hospital readmission rates’ is an indicator of governments’ objective to provide public hospital services that are of high quality and well-coordinated to ensure continuity of care (box 12.11).

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### Box 12.11    **Selected unplanned hospital readmission rates**

‘Selected unplanned hospital readmission rates’ is defined as the rate at which patients unexpectedly return to the same hospital within 28 days for further treatment where the original admission involved one of a selected set of procedures, and the readmission is identified as a post-operative complication. It is expressed as a rate per 1000 separations in which one of the selected surgical procedures was performed. The indicator is an underestimate of all possible unplanned/unexpected readmissions.

The 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.

Low or decreasing rates of unplanned readmissions are desirable. Conversely, high or increasing rates 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 measure are:

- not comparable across jurisdictions, but are comparable (subject to caveats) within jurisdictions over time
  - complete (subject to caveats) for the current reporting period. All required 2018-19 data are available for all jurisdictions.
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## Sustainability — Workforce sustainability

‘Workforce sustainability’ is an indicator of governments’ objective to provide sustainable public hospital services (box 12.12).

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### Box 12.12    **Workforce sustainability**

‘Workforce sustainability’ reports age profiles for the nursing and midwifery workforce and the medical practitioner workforce. It shows the proportions of registered nurses and midwives, and medical practitioners in ten year age brackets, by jurisdiction and by region.

High or increasing proportions of the workforce that are new entrants and/or low or decreasing proportions of the workforce that are close to retirement is desirable.

All nurses, 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 measure are:

- comparable (subject to caveats) across jurisdictions and over time.
  - complete (subject to caveats) for the current reporting period. All required 2019 data are available for all jurisdictions.
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## Efficiency

### Cost per admitted patient separation

‘Cost per admitted patient separation’ is an indicator of governments’ objective to deliver services in an efficient manner (box 12.13).

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### Box 12.13 Cost per admitted patient separation

'Cost per admitted patient separation' is defined by the following two measures:

- Recurrent cost per weighted separation
- Capital cost per weighted separation.

A low or decreasing recurrent cost per weighted separation or capital cost per weighted 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.

#### *Recurrent cost per weighted separation*

'Recurrent cost per weighted separation' is the average cost of providing care for an admitted patient (overnight stay or same day) adjusted for casemix. Casemix adjustment takes account of variation in the relative complexity of the patient's clinical condition and of the hospital services provided, but not other influences on length of stay.

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 2018-19 data are available for all jurisdictions.

#### *Capital cost per weighted separation*

'Capital cost per weighted separation' is calculated as the user cost of capital (calculated as 8 per cent of the value of non-current physical assets including buildings and equipment but excluding land) plus depreciation, divided by the number of weighted separations.

This measure allows the full cost of hospital services to be considered. 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:

- not comparable across jurisdictions, but are comparable (subject to caveats) within jurisdictions over time
- complete (subject to caveats) for the current reporting period. All required 2018-19 data are available for all jurisdictions.

The 'Relative stay index' can provide useful context for interpreting the cost per separation indicator as the length of stay per separation can influence cost. The 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. 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. The relative stay index for public hospitals is reported in table 12A.61.

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## Recurrent cost per non-admitted patient

'Recurrent cost per non-admitted patient' is an indicator of governments' objective to deliver services in an efficient manner (box 12.14).

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### Box 12.14 Recurrent cost per non-admitted patient

'Recurrent cost per non-admitted patient' is defined by the following two measures:

- Average cost per non-admitted acute emergency department presentation
- Average cost per non-admitted service event.

A low or decreasing recurrent cost per non-admitted patient 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.

Data reported for both measures are:

- comparable (subject to caveats) across jurisdictions and over time.
- complete (subject to caveats) for the current reporting period. All required 2018-19 data are available for all jurisdictions.

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## Outcomes

Outcomes are the impact of services on the status of an individual or group (see section 1).

### Avoidable mortality in hospitals

'Avoidable mortality in hospitals' is an indicator of governments' objective to alleviate or manage illness and the effects of injury (box 12.15).

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### Box 12.15 Avoidable mortality in hospitals

'Avoidable mortality in hospitals' is defined as death in low-mortality diagnostic related groups (DRGs) expressed as a rate.

Low or decreasing rates of avoidable mortality in hospitals indicate more successful management of illness and the effects of injury.

Data are not yet available for reporting against this measure. Table 12.1 provides an overview of the review mechanisms in place across states and territories for examining in-hospital deaths in low-mortality DRGs.

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**Table 12.1 Overview of review mechanisms across states and territories for in-hospital deaths in low-mortality DRGs**

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| NSW        | <p>NSW reports publicly on selected mortality in hospitals data. The report 'Mortality following hospitalisation for seven clinical conditions' provides information on patient deaths within 30 days of admission across 73 public hospitals for seven clinical conditions during the period July 2015 to June 2018 (<a href="http://www.bhi.nsw.gov.au/__data/assets/pdf_file/0007/557827/BHI_Mortality_2015-2018_REPORT.pdf">http://www.bhi.nsw.gov.au/__data/assets/pdf_file/0007/557827/BHI_Mortality_2015-2018_REPORT.pdf</a>). The seven clinical conditions are: acute myocardial infarction, ischaemic stroke, haemorrhagic stroke, congestive heart failure, pneumonia, chronic obstructive pulmonary disease, and hip fracture surgery. Together these conditions account for approximately 11 per cent of acute emergency hospitalisations for people aged 15 years and over in NSW, and approximately 28 per cent of in-hospital deaths following acute emergency hospitalisation. The NSW Bureau of Health Information uses 30-day risk-standardised mortality ratios (RSMRs) to assess mortality in hospital. The RSMRs take into account the volume of patients treated and key patient risk factors beyond the control of a hospital. However, not all relevant risk factors are recorded, such as sociological and environmental factors, so while results are useful for trend analysis and a guide for further investigation, they are not suitable for direct performance comparisons. A ratio of less than 1.0 indicates that mortality is lower than expected in a given hospital, while a ratio of greater than 1.0 indicates that mortality is higher than expected in a given hospital. Three years of data are used to create stable, reliable estimates of performance. Rates are also reported per 100 hospitalisations for each of the seven clinical conditions.</p> |
| Victoria   | <p>Victoria does not report publicly on these data. However, Victoria reports internally on five indicators based on the Core Hospital-Based Outcome Indicator (CHBOI) specifications published by the Australian Commission on Safety and Quality in Health Care (ACSQHC); Hospital Standardised Mortality Ratio and In-hospital Mortality (for Stroke, Fractured Neck-of-Femur, Acute Myocardial Infarction and Pneumonia). Outliers for these indicators are reviewed on a regular basis by Safer Care Victoria, the Department of Health and Human Services and respective health services as part of the performance monitoring process. In addition, the Victorian Perioperative Consultative Council oversees, reviews and analyses cases of perioperative mortality and morbidity in Victoria.</p> <p>Victoria also reports internally on four in-hospital mortality indicators (for Stroke, Fractured Neck of Femur, Acute Myocardial Infarction and Pneumonia) via the Victorian Agency for Health Information Private Hospitals Quality and Safety Report.</p> <p>The Victorian Agency for Health Information (VAHI) previously reported on deaths in low mortality DRGs based on the CHBOI specifications. Following further methodological review during 2018-19, an updated indicator has been defined and re-introduced for internal reporting as part of the Boards Quality and Safety Report. The calculation is restricted to acute-care separations where the DRG is classified as a low-mortality DRG, which is defined as a DRG with a national mortality rate of less than 0.5 per cent over the previous 3 years, as at the time of calculation.</p>   |
| Queensland | <p>Queensland does not report publicly on these data. Queensland Hospital and Health Services undertake 'outlier' reviews of in-hospital deaths which are reviewed by a statewide committee to ensure the review is thorough and actions are identified for any issues found. The need for review is identified through monitoring condition or procedure specific indicators (AMI, Heart Failure, Stroke, Fractured Neck of Femur and Pneumonia) and system-wide mortality indicators i.e. low-mortality DRG and hospital standard mortality ratio (HSMR). In addition, morbidity and mortality meetings are held at a local level. Further, Quality Assurance Committees (QAC) identify common issues across the state to identify lessons learnt and/or recommendations for consideration statewide and locally. Other QACs e.g. Queensland Audit of Surgical Mortality provide individual feedback to practitioners to improve individual performance.</p>  |

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**Table 12.1** (continued)

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| South Australia              | SA does not report publicly on these data. For internal mortality analysis, SA uses national Core hospital based outcome indicators (CHBOI) developed by the ACSQHC. Examples include: monitoring Hospital standardised mortality ratios (HSMR) (included as a key performance indicator in service agreements) and monitoring CHBOI condition-specific mortality measures (fractured neck of femur, stroke, AMI and pneumonia).   |
| Tasmania                     | Tasmania does not report publicly on these data. Tasmania uses Diagnosis Standardised Mortality Ratios as used by Health Round Table for reporting within hospitals ( <a href="https://www.healthroundtable.org/Join-Us/Core-Services/Mortality-Comparisons">https://www.healthroundtable.org/Join-Us/Core-Services/Mortality-Comparisons</a> ). Tasmania also uses Core hospital-based outcome indicators of safety and quality (CHBOI). This reporting system has included in-hospital mortality and unplanned/unexpected hospital re-admissions, as developed by the ACSQHC. These indicators are designed as screening tools for internal safety and quality improvement, and they are not intended to be used as performance measures.  |
| Australian Capital Territory | The ACT does not report publicly on these data. Mortality information from Canberra Health Services (CHS) is collated by the Health Round Table (HRT) and includes deaths in low mortality DRGs and is defined by the ACSQHC and adopted by IHPA. These may not necessarily be avoidable when investigated. Sentinel events are reported to ACT Health Directorate for inclusion in IHPA reporting. There is no specific policy on the review of deaths though the CHS has an Incident Management Procedure. Mortality data published by HRT however is only available to the hospital concerned, and although benchmarking can occur sites are not identified. There is a formal death review committee that focuses on children and young people and another that focuses on maternal and perinatal deaths. The ACT Children and Young People Death Review Committee reviews all deaths of children and young people aged from birth to 18 years. This committee reports annually to the Minister for Children, Youth and Families and the statistics are published here: <a href="https://www.childdeathcommittee.act.gov.au/publications">https://www.childdeathcommittee.act.gov.au/publications</a> . The ACT Maternal and Perinatal Mortality Committee reviews all deaths of women who died while pregnant or up to 42 days post-partum and all deaths of fetuses from 20 weeks gestation and babies up to 28 days of life. Maternal death information is included in national reports but is not published specifically for the ACT due to the very small number of deaths in the ACT. The perinatal death rate is published annually here: <a href="https://health.act.gov.au/about-our-health-system/data-and-publications/healthstats/statistics-and-indicators/perinatal">https://health.act.gov.au/about-our-health-system/data-and-publications/healthstats/statistics-and-indicators/perinatal</a> and a detailed report is provided by the Committee to the ACT Chief Health Officer and published every five years <a href="https://health.act.gov.au/about-our-health-system/data-and-publications/healthstats/epidemiology-publications">https://health.act.gov.au/about-our-health-system/data-and-publications/healthstats/epidemiology-publications</a> . |
| Norther Territory            | The NT does not report publicly on these data. The NT uses national Core hospital based outcome indicators (CHBOIs) developed by the ACSQHC. CHBOI 1 - Hospital Standardised Mortality Ratio (HSMR); CHBOI 2 - Death in low-mortality Diagnosis Related Groups (DRGs); CHBOI 3: Condition Specific Mortality Measures. These data are included in the internal NT Health Patient Quality and Safety Surveillance Quarterly Report. The NT also provides data on coronial recommendations, Incident Severity Rating 1 events (ISR1s), and national sentinel events.   |

Sources: State and Territory governments (unpublished).

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## 12.2 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 Australian Council on Healthcare Standards Evaluation and Quality Improvement Program, the Australian Quality Council (now known as Business Excellence Australia), the Quality

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|   | Improvement Council, the International Organisation for Standardization 9000 Quality Management System or other equivalent programs.  |
| <b>Acute care</b>   | Clinical services provided to 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.  |
| <b>Admitted patient</b>   | A patient who undergoes a hospital's admission process to receive treatment and/or care. This treatment and/or care is provided over a period of time and can occur in hospital and/or in the person's home (for hospital-in-the-home patients).  |
| <b>Allied health (non-admitted)</b>                                       | 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.   |
| <b>AR-DRG</b>   | 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.  |
| <b>Casemix adjusted</b>   | 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.  |
| <b>Casemix adjusted separations</b>                                       | The number of separations adjusted to account for differences across hospitals in the complexity of episodes of care.   |
| <b>Community health services</b>  | Health services for individuals and groups delivered in a community setting, rather than via hospitals or private facilities.   |
| <b>Comparability</b>  | Data are considered comparable if (subject to caveats) they can be used to inform an assessment of comparative performance. Typically, data are considered comparable when they are collected in the same way and in accordance with the same definitions. For comparable indicators or measures, significant differences in reported results allow an assessment of differences in performance, rather than being the result of anomalies in the data. |
| <b>Completeness</b>   | Data are considered complete if all required data are available for all jurisdictions that provide the service.   |
| <b>Cost of capital</b>  | 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.  |
| <b>Elective surgery waiting times</b>                                     | 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.  |
| <b>Emergency department waiting time to commencement of clinical care</b> | 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.   |
| <b>Emergency department waiting times to admission</b>                    | The time elapsed for each patient from presentation to the emergency department to admission to hospital.   |
| <b>ICD-10-AM</b>  | The Australian modification of the International Standard Classification of Diseases and Related Health Conditions. This is the current classification of diagnoses in Australia.   |

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| <b>Hospital boarder</b>                  | A person who is receiving food and/or accommodation but for whom the hospital does not accept responsibility for treatment and/or care.  |
| <b>Length of stay</b>                    | The period from admission to separation less any days spent away from the hospital (leave days).   |
| <b>Medicare</b>                          | 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.  |
| <b>Newborn qualification status</b>      | <p>A newborn qualification status is assigned to each patient day within a newborn episode of care.</p> <p>A newborn patient day is qualified if the infant meets at least one of the following criteria:</p> <ul style="list-style-type: none"> <li>• is the second or subsequent live born infant of a multiple birth, whose mother is currently an admitted patient</li> <li>• 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</li> <li>• is admitted to, or remains in hospital without its mother.</li> </ul> <p>A newborn patient day is unqualified if the infant does not meet any of the above criteria.</p> <p>The day on which a change in qualification status occurs is counted as a day of the new qualification status.</p> <p>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.</p> |
| <b>Nursing and midwifery workforce</b>   | Registered nurses, enrolled nurses and midwives who are employed in nursing and/or midwifery in Australia excluding those on extended leave.   |
| <b>Medical practitioner workforce</b>    | Registered medical practitioners who are employed in medicine in Australia excluding those on extended leave.  |
| <b>Non-acute care</b>                    | Includes maintenance care and newborn care (where the newborn does not require acute care).  |
| <b>Non-admitted occasions of service</b> | 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.   |
| <b>Non-admitted patient</b>              | 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.  |
| <b>Peer group(s)</b>                     | <p>Peer groups are used to categorise similar hospitals with shared characteristics. Categorising hospitals in peer groups allows for valid comparisons to be made across similar hospitals providing similar services.</p> <p>The peer groups are:</p> <ul style="list-style-type: none"> <li>• Acute public hospitals</li> <li>• Acute private hospitals</li> <li>• Very small hospitals</li> <li>• Women's and children's hospitals</li> <li>• Early parenting centres</li> <li>• Drug and alcohol hospitals</li> <li>• Psychiatric hospitals</li> </ul>  |

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|  | <ul style="list-style-type: none"> <li>• Other acute specialised hospitals</li> <li>• Same day hospitals</li> <li>• Sub- and non-acute hospitals</li> <li>• Outpatient hospitals</li> <li>• Unpeered hospitals</li> </ul> <p>For further details on hospital peer groups, see AIHW (2015) <i>Australian hospital peer groups</i>, Health services series no. 66. Cat no. HSW 170. Canberra: AIHW (<a href="https://www.aihw.gov.au/getmedia/79e7d756-7cfe-49bf-b8c0-0bbb0daa2430/14825.pdf.aspx?inline=true">https://www.aihw.gov.au/getmedia/79e7d756-7cfe-49bf-b8c0-0bbb0daa2430/14825.pdf.aspx?inline=true</a>).</p> |
| <b>Posthumous organ procurement</b>          | An activity undertaken by hospitals in which human tissue is procured for the purpose of transplantation from a donor who has been declared brain dead.   |
| <b>Public hospital</b>                       | 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).   |
| <b>Real expenditure</b>                      | Actual expenditure adjusted for changes in prices.  |
| <b>Relative stay index</b>                   | 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.   |
| <b>Same day patients</b>                     | A patient whose admission date is the same as the separation date.  |
| <b>Sentinel events</b>                       | Adverse events that cause serious harm to patients and that have the potential to undermine public confidence in the healthcare system.   |
| <b>Separation</b>                            | 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, acute to rehabilitation). Includes admitted patients who receive same day procedures (for example, dialysis).  |
| <b>Service event</b>                         | An interaction between one or more health-care provider(s) with one non-admitted patient, which must contain therapeutic/clinical content and result in dated entry in the patient's medical record.  |
| <b>Subacute care</b>                         | <p>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.</p> <p>Subacute care comprises the defined care types of rehabilitation, palliative care, geriatric evaluation and management and psychogeriatric care.</p>  |
| <b>Triage category</b>                       | <p>The urgency of the patient's need for medical and nursing care:</p> <p>category 1 — resuscitation (immediate within seconds)</p> <p>category 2 — emergency (within 10 minutes)</p> <p>category 3 — urgent (within 30 minutes)</p> <p>category 4 — semi-urgent (within 60 minutes)</p> <p>category 5 — non-urgent (within 120 minutes).</p>   |
| <b>Urgency category for elective surgery</b> | 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.   |

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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.