



Technical Supplement:

Measures of admitted patient activity

Hospital Quarterly: April to June 2010

Summary

This supplement to the Bureau of Health Information's recurrent public hospital performance reports describes the methods and technical terms used to compute descriptive statistics and performance indicators reported in *Hospital Quarterly*. Due to the technical nature of this narrative, it is intended for audiences interested in the creation of health information.

Until March 2010, the NSW Department of Health published the *Quarterly Hospital Performance Report* which presented a selection of measures for admitted patient activity in NSW public hospitals.* These performance indicators are now reported by the Bureau of Health Information in the *Hospital Quarterly* report.

Admitted patient data is extracted from a centralised data warehouse administered by the NSW Department of Health called the Health Information Exchange (HIE). These records are held in the Episode ATS (Admissions, Transfers and Separations) database. Public hospital records of admitted patients are uploaded from each facility's patient administration systems to the HIE weekly, via centralised area health service information systems. Most facilities submit admitted patient records to the area health service information systems daily to allow sufficient time to identify and correct errors in accordance with data quality assurance procedures.

The Department of Health also conducts regular data quality assurance procedures and requires corrected data be resubmitted by the end of the month following the initial submission. Currently, 279 separate facilities that submit admitted patient data to the HIE are included in the admitted patient activity measures in *Hospital Quarterly*.

The Bureau of Health Information used SAS# V9.1.3™ for the statistical analysis of data for the *Hospital Quarterly*.

* New South Wales Health. *Monthly Hospital Performance Reports January 2008 to March 2010* [Internet] [cited 2010 August 23]. Available from www.health.nsw.gov.au/reports/reports.asp

SAS Institute. *The SAS System for Windows version 9.1.3*. Cary (NC): SAS Institute; 2005.

Activity indicators

This section contains details about the definitions used for the calculations of measures of admitted patient activity reported in the *Hospital Quarterly: April to June 2010*.

Total episodes
The count of all records with an episode end date in the defined period.
Planned episodes
The count of all recorded admissions with an emergency status of 'non-emergency/planned' or 'regular same-day planned admission'.
Unplanned / other episodes
The count of all recorded admissions with an emergency status of 'emergency', 'urgency not assigned' or 'maternity/newborn'.
Babies born
The count of records with source of referral of 'born in hospital'; it is a subset of unplanned episodes.
Acute episodes
The count of records with episode of care type values of 1 (acute care) and 5 (newborn care) - see Glossary: Care type.
Acute same day episodes
The count of acute episode records with an episode start date equal to the episode end date.
Acute overnight episodes
The count of the acute episode records with an episode start date earlier (not equal) to the episode end date.
Total acute bed days
The sum of bed days for all acute episodes with an episode end date within the defined period. Total acute bed days for an overnight episode is the difference, in days, between the episode start date and the episode end date, minus the number of episode leave days recorded. Same day episodes count as one bed day.
Average length of stay
The mean of total bed days for all acute episodes with an episode end date in the defined period.

Glossary

Admission(s) – refers to the process, using registration procedures, under which a person is accepted by a hospital or an area or district health service facility as an inpatient.

Acute episode – a period of time when patients receive hospital care that is considered short-term and requiring immediate care. Acute episodes can be care types 1 or 5 which are described by METeOR* as:

- Type 1 episodes are where “the principal clinical intent is to do one or more of the following: manage labour (obstetric), cure illness or provide definitive treatment of injury, perform surgery, relieve symptoms of illness or injury (excluding palliative care), reduce severity of illness or injury, protect against exacerbation and/or complication of an illness and/or injury which could threaten life or normal functions, or perform diagnostic or therapeutic procedures”.
- Type 5 is defined as “care and/or accommodation to a patient born in the hospital or who is nine days old or less at the time of admission”.

Average length of stay – the total number of days for all admissions (same day and overnight) divided by the number of admissions. See also length of stay.

Care type – the type of service provided by the hospital. The ten possible care types (as defined in the HIE) are:

1. Acute care
2. Rehabilitation care
3. Palliative care
4. Maintenance care
5. Newborn care
6. Other care
7. Geriatric evaluation and management
8. Psychogeriatric care
9. Organ procurement – posthumous
10. Hospital boarder

Episode of care – defined as a period of admitted patient care characterised by a single care type. A change of care type starts a new episode of care.

Episode start date – refers to the point in time that an episode of care begins. An episode of care commences with a formal admission or a change in care type.

* Australian Institute of Health and Welfare. *METeOR: Metadata Online Registry* [Computer Software] [cited 2010 September 9]. Available from www.meteor.aihw.gov.au

Episode end date – refers to the point in time that an episode of care ceases. An episode of care ceases with a formal discharge, death, or a change in care type.

Episode leave day – when a patient leaves a facility to return at a later date for continuation of care (the episode of care does not end).

Health Information Exchange (HIE) – better known by the abbreviation HIE, this is a store of health records and information.

Length of stay – is defined, for an overnight patient, as the number of days between the episode start date and the episode end date, less the number of episode leave days. The length of stay of a same day episode is one day.

Other admission – refers to an admission that is neither a planned admission or an unplanned admission. It includes admissions for normal delivery (obstetric), admissions which begin with the birth of the patient (or when it was intended that the birth occur in the hospital) and admissions which commence shortly after the birth of the patient. It also includes planned readmissions for the patient to receive limited care or treatment for a current condition, for example, dialysis or chemotherapy.

Overnight episode – any episode where a patient is admitted to a public hospital and stays one or more nights before being discharged. For the purposes of this report, all overnight admissions reported are for acute episodes only.

Planned episode – refers to an admission of a patient which, in the opinion of the treating clinician, is necessary and for which admission can be delayed for 24 hours. Planned episodes include elective surgery as well as regular planned same-day episodes, such as renal dialysis and chemotherapy.

Same day episode – an episode where a patient is admitted to a public hospital, receives treatment and is discharged on the same calendar day. For the purposes of this report, all same day admissions reported are for acute episodes only.

Total acute bed days – number of hospital beds in a given period of time that were occupied by acute patients. For overnight admissions, bed days refer to the number of days between admission and discharge, excluding any leave days. Same day episodes count as one bed day.

Unplanned admission – an unplanned admission is an admission to a hospital ward that was not arranged prior to admission.

About the Bureau

The Bureau of Health Information was established in 2009 as an independent, board-governed organisation established by the NSW Government to be the leading source of information on the performance of the public health system in NSW.

Our Mission

The Bureau provides the community, healthcare professionals and the NSW Parliament with timely, accurate and comparable information about the performance of the NSW public health system in ways that enhance the system's accountability and inform efforts to increase its beneficial impact on the health and well being of people in NSW.

The Bureau of Health Information is a statutory health corporation. The conclusions in this report are those of the Bureau of Health Information and no official endorsement by the NSW Minister for Health, the NSW Department of Health or any other NSW statutory health corporation is intended or should be inferred.

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