Hospital Quarterly

Technical Supplement

Emergency department measures

January to March 2016

Contents

Summary

This technical supplement describes the methods and technical terms used to calculate NSW public hospital emergency department (ED) activity and performance measures reported in the Bureau of Health Information (BHI) *Hospital Quarterly* report. Recent changes to methods are also described.

ED information in *Hospital Quarterly* is based on analyses of attendance data in the Emergency Department Data Collection (EDDC). Data are extracted from the centralised data warehouse, the Health Information Exchange (HIE), administered by the NSW Ministry of Health.

The activity and performance measures reported in *Hospital Quarterly* are currently based on 130 hospital EDs which have had an electronic records system in place and reliable data in the EDDC for five or more quarters. These 130 EDs comprise the 'NSW totals' reported in *Hospital Quarterly*. They account for approximately 95% of all ED presentations in NSW and 98% of records in the EDDC.

EDs are reported individually for hospitals in principal referral, major or district peer groups (A1, A2, A3, B, C1 and C2). A total of 80 EDs met the reporting criteria.

Percentage of patients who started treatment within clinically recommended timeframes

Performance measures reporting the percentage of patients who started treatment within clinically recommended timeframes for each triage category and overall are included in *Hospital Quarterly*, January to March 2016.

Time to treatment is measured from presentation time (the earlier of arrival and triage time) to the start of clinical treatment by a doctor or nurse.

Arrival time was used for 99.6% of records.

The clinically recommended maximum waiting times for triage categories from the Australasian College of Emergency Medicine are (Reference 8):

T1: Resuscitation	2 minutes
T2: Emergency	10 minutes
T3: Urgent	30 minutes
T4: Semi-urgent	60 minutes
T5: Non-urgent	120 minutes

Inclusion of transfer of care data from additional hospitals

In *Hospital Quarterly*, January to March 2016, transfer of care data have been included for four additional hospitals. Data for these hospitals is now included from April 2013:

- St Vincent's Hospital, Darlinghurst

- The Children's Hospital at Westmead

- Deniliquin Health Service

- Hawkesbury District Health Services (public hospital services only)

In the January to March 2016 quarter, the additional hospitals increased the total number of ambulance arrivals reported for NSW by 6,510 (5% of the NSW total). Results for transfer of care in previous issues of *Hospital Quarterly* therefore cannot be compared with *Hospital Quarterly*, January to March 2016, onwards.

Inclusion of the additional hospitals did not affect NSW results for median and 95th percentile times for transfer of care, or the percentage of patients whose care was transferred from ambulance to ED staff within 30 minutes. The effects of the changes on local health district (LHD) and peer group results are shown in Appendix tables 3-6.

Sydney and Sydney Eye hospitals

Sydney Hospital and Sydney Eye Hospital are reported jointly for all quarters in *Hospital Quarterly*, January to March 2016, since these hospitals now function as one hospital and are co-located with a joint ED. This change has no effect on counts of patients, or on aggregate results for NSW, peer groups or LHDs, but has the effect of reducing the number of EDs individually reported from 81 to 80.

Inclusion of additional EDs in *Hospital Quarterly*

EDs are eligible to be included in *Hospital Quarterly* once five or more quarters of reliable electronic data become available in the EDDC.

When a new ED is added to *Hospital Quarterly*, its data for the four preceding quarters are also included in the report. All the additional EDs which have been included over time in *Hospital Quarterly* are EDs from peer groups C1, C2 or smaller (community and multi-purpose service peer groups).

Inclusion of additional EDs in *Hospital Quarterly* increases the number of presentations reported statewide, and may affect performance measures by changing the denominator for various metrics. In order to make fair comparisons with the same quarter in the previous year, data in *Hospital Quarterly* for January to March 2016 are based on recalculated denominators that include the additional EDs for five quarters. This means that

measures reported in the current edition may differ slightly from previous editions of the report.

Comparisons of presentations and performance over longer intervals, for example, the same quarter two years ago, will however be affected by changes in the number of EDs being reported. Therefore caution is advised when interpreting any comparisons that span more than five consecutive quarters.

The Appendix includes tables and figures showing the effect of inclusion on additional EDs. Table 1 lists the EDs included in *Hospital Quarterly*, by quarter, since 2010. Figure 1 and Table 2 show the effect on total presentations reported.

Changeover to a new records system

EDs in NSW have progressively replaced historic information systems with more contemporary electronic record systems. Changeover to a new electronic system may impact the completeness and reliability of data input or extraction from local systems to the HIE for periods longer than one quarter.

At a facility level, during a changeover period, the only information from the EDDC reported by BHI is the total number of ED presentations. For aggregated NSW reporting (for example, for NSW, LHDs or peer groups), data from affected hospitals are included in total counts but are excluded from calculation of all performance measures.

Activity and performance measures

This section contains the definitions used for calculating measures of ED activity and performance reported in *Hospital Quarterly*.

In the following definitions, numbers in brackets indicate the HIE database field code used to identify records by ED visit type or mode of separation (as appropriate). The arrival date and time field is used to select records from the HIE for each quarter. Unless explicitly stated, records with incomplete information in the fields required for a calculation are excluded.

All presentations

'All presentations' is the count of every record in the ED visit database of the HIE. This count includes presentations of all ED visit types including emergency presentations, planned return visits, pre-arranged admissions, some outpatient visits, private referrals, persons pronounced dead on arrival and patients in transit. This count excludes records entered in error (mode of separation = 99), telehealth and eHealth presentations (ED visit type = 12), and presentations by patients who are already admitted to the same hospital (ED visit type = 13).

Records are assigned to quarters of the year using the arrival date and time field.

Emergency presentations

'Emergency presentations' are records in the ED visit database of the HIE of presentations with an ED visit type of emergency (1), an unplanned return visit for a continuing condition (3) or disaster (11). Emergency presentations in *Hospital Quarterly* are reported by triage category.

Records with missing or invalid information for triage category are excluded from reported counts of emergency presentations.

Emergency presentations by quarter

The time series graphs in *Hospital Quarterly* present the number of emergency presentations to an ED during each quarter for the past 21 quarters.

All presentations by mode of separation

Presentations are reported based on the mode of separation field: treated and discharged, treated and admitted to hospital, left without, or before, completing treatment, transferred to another hospital and other modes of separation. Records with a missing mode of separation are included in the 'other' cohort.

The mode of separation cohorts are:

- Treated and discharged – presentations with mode of separation: departed with treatment complete (4)

- Treated and admitted to hospital – presentations with modes of separation: admitted to a ward/inpatient unit (1), admitted and discharged as an inpatient within ED (2), admitted and died in ED (3), admitted to a critical care ward (10), admitted via an operating theatre (11) or admitted – left at own risk (13)

- Left without, or before completing, treatment – presentations with modes of separation: departed, did not wait (6) and departed – left at their own risk (7). Patients who 'did not wait' were triaged, but left the ED before treatment was commenced. Patients who 'left at their own risk' were triaged and treatment was begun by a clinician or nurse, but the patient left prior to completing their treatment.

- Transferred to another hospital – presentations with mode of separation: transferred to another hospital (5) or admitted and then transferred to another hospital (12)

- Other – presentations with modes of separation: dead on arrival (8) or departed for another clinical service location (9). Presentations with missing mode of separation are also included in this cohort.

Presentation time

Presentation time is the earlier of the following fields in the emergency visit database of the HIE:

- Arrival time – the date and time the patient presented at the ED

- Triage time – the date and time when the patient was assessed by a triage nurse.

If triage time is more than 12 hours before arrival time, then the triage time field is considered an error and presentation time is set equal to arrival time.

Treatment time

Treatment time is the earlier of the following fields in the ED visit database of the HIE:

- First seen by clinician time – the date and time when the patient is first seen by a medical officer and has a physical examination or treatment performed that is relevant to their presenting problem(s)

- First seen by nurse time – the date and time when the patient is first seen by a nurse and has an assessment or treatment performed that is relevant to their presenting problem(s).

If either 'first seen by clinician time' or 'first seen by nurse time' is more than 12 hours before presentation time or more than 31 days after presentation time, then that field is considered an error and is excluded from calculations. If both 'first seen by clinician time' and 'first seen by nurse time' are more than 12 hours before presentation time or more than 31 days after presentation time, then treatment time for that record is considered an error and excluded from calculations. If treatment time is earlier than presentation time, but 12 hours or less before presentation time, then time from presentation until treatment is set to zero.

Ready for departure time

Ready for departure time is the date and time when the assessment and initial treatment of the person is completed such that if home arrangements of the person (including transport) were available, the person could leave the ED. It is recorded in the ready for departure time field in the emergency visit database in the HIE. If the time recorded for ready for departure is before presentation time or more than 31 days after presentation time, then that departure time field is considered an error and treated as missing. If the time recorded for ready for departure time is missing or is later than the time recorded for actual departure time, then actual departure time is used in calculations. If both ready for departure time and actual departure time are missing, the record is excluded from calculations that use ready for departure time.

Actual departure time

Actual departure time is the date and time at which the patient physically leaves the ED as recorded in the actual departure time field in the emergency visit database in the HIE. If the time recorded for actual departure is before presentation time or more than 31 days after presentation time, then the actual departure time field is treated as missing and the record is excluded from calculations that use actual departure time.

Time from presentation to starting treatment

Time from presentation to starting treatment is calculated as the difference between presentation time and treatment time. It is reported by triage category for emergency presentations. Records with an ED visit type of Emergency (1), Unplanned return visit for a continuing condition (3) and Disaster (11) are included. Records with a mode of separation of Did not wait for treatment (6), Dead on Arrival (8) or Departed for other Clinical Service Location (9) are excluded, since patients in these categories do not receive clinical treatment in the ED.

If treatment time is more than 12 hours before presentation time or more than 31 days after presentation time, then that time from presentation until treatment is considered an error and set to missing. If treatment time is before presentation time by 12 hours or less, then time from presentation until treatment is set to zero.

Records with a missing treatment time are excluded from calculations that use treatment time.

BHI does not report time from presentation to starting treatment for patients in triage category 1, since BHI considers that waiting time measures are not informative for these patients. Recording of presentation, triage and treatment time for patients who should be assessed or treated within two minutes (triage 1) is unlikely to be recorded precisely enough to report against a two-minute benchmark, particularly when clinicians are focused on providing immediate and essential care (Reference 7).

Time spent in the ED

Time spent in the ED is calculated as the difference between presentation time and departure time. Departure time is defined as:

- Actual departure time – for all patients other than those who were treated and discharged

- Ready for departure time – for patients who were treated and discharged.

If the time recorded for actual departure is before presentation time, or more than 31 days after presentation time, then that departure time field is considered an error and treated as missing.

If the time recorded for ready for departure time is missing, is before presentation time or more than 31 days after presentation time, or is later than the time recorded for actual departure time, then actual departure time is used in calculations.

Records with missing time to departure are excluded from calculations that use time to departure.

Median

The median is a statistical measure of the midpoint of the waiting times distribution. This measure is used in *Hospital Quarterly* to describe time from presentation until treatment and time spent in the ED. The median is the time by which half of patients started treatment or left the ED. The other half of patients took equal to or longer than this time. BHI uses the data for each patient and the empirical distribution function with averaging to compute the median in SAS©5. Results are rounded to the nearest whole minute for reporting.

95th percentile

The 95th percentile is a statistical measure of the waiting time distribution. It is used in *Hospital Quarterly* to describe time from presentation until treatment, and time spent in the ED. The 95th percentile is the time by which 95% of patients started treatment or left the ED. The final 5% of patients took equal to or longer than this time. BHI uses the data for each patient and the empirical distribution function with averaging to compute the 95th percentile in SAS©5. Results are rounded to the nearest whole minute for reporting.

Percentage of patients who started treatment within clinically recommended timeframes

This percentage is calculated as the number of presentations where the time from presentation to treatment was less than, or equal to, the clinically recommended time as a percentage of the total number of presentations.

A patient started treatment within the clinically recommended timeframe if the time from presentation to the start of clinical treatment is less than, or equal to, the maximum waiting times recommended in the Australasian College of Emergency Medicine policy on the Australasian Triage Scale (Reference 8).

AUSTRALASIAN TRIAGE SCALE CATEGORY	TREATMENT ACUITY (Maximum waiting time for medical assessment and treatment)	PERFORANCE INDICATOR THRESHOLD
Triage 1: Resuscitation	Immediate	100%
Triage 2: Emergency	10 minutes	80%
Triage 3: Urgent	30 minutes	75%
Triage 4: Semi-urgent	60 minutes	70%
Triage 5: Non-urgent	120 minutes	70%

The percentage is reported for emergency patients with a triage category of 2 to 5. It is reported by triage category, and for these triage categories combined.

Calculation of the time elapsed is described in more detail in the sections Presentation time, Treatment time, and Time from presentation to starting treatment.

Percentage of patients who started treatment, by time

The distribution curve in *Hospital Quarterly* shows the cumulative percentage of emergency presentations by minutes from presentation until treatment by triage category. The cumulative percentage is computed by summing the proportions of patients whose treatment started in one minute intervals of time elapsed since presentation within each triage category.

Emergency patients who received treatment are patients with visit type = 1, 3 or 11 and mode of separation = 1, 2, 3, 4, 5, 7, 10, 11, 12 and 13. This cohort only includes patients who had a valid triage category and treatment time. Calculation of the time elapsed is described in the section Time from presentation to starting treatment.

If the cumulative distribution does not reach 100%, it indicates that some patients in that triage category waited longer than the maximum time shown on the horizontal axis for their treatment to start.

Percentage of patients who spent four hours or less in the ED

The percentage of patients who spent four hours or less in the ED is calculated as the number of patients with time from presentation to leaving the ED of four hours or less as a percentage of the total number of patients.

Records with missing time to departure are excluded from calculations of percentage leaving the ED within four hours.

Percentage of patients by time spent in the ED

The distribution curve in *Hospital Quarterly* shows the cumulative percentage of patients and time spent in the ED by the number of hours from presentation until leaving the ED. The cumulative percentage is computed by summing the percentage of patients and time spent in the ED in one minute intervals of time elapsed from presentation to departure. Records that do not have a valid time from presentation to departure are excluded from calculation. Calculation of the time elapsed is described in the section Time from presentation to leaving the ED.

If the cumulative distribution does not reach 100%, it indicates that some patients waited longer than the maximum time shown on the horizontal axis to leave the ED.

Percentage of patients by time spent in the ED and mode of separation

The distribution curve in *Hospital Quarterly* shows the cumulative percentage of patients by the number of hours spent in the ED by mode of separation. The cumulative percentage is computed by summing the percentage of patients and time spent in the ED in one minute intervals of time elapsed from presentation to departure for each mode of separation. Records that do not have a valid departure time are excluded from calculation. Calculation of the time elapsed is described in the section Time spent in the ED.

If the cumulative distribution does not reach 100%, it indicates that some patients in that mode of separation waited longer than the maximum time shown on the horizontal axis of the graph, to leave the ED.

Arrivals by ambulance and transfer of care time

Data for calculating number of ambulance arrivals and transfer of care time are downloaded from the Transfer of Care Reporting System (TCRS) portal. The TCRS incorporates data drawn from the NSW Ambulance information system and from the EDDC.

Overall results for NSW, peer group and LHD use records for patients arriving at hospitals with an ED which is included in *Hospital Quarterly* and has records in the TCRS. The TCRS does not include all hospitals with EDs which are reported in *Hospital Quarterly*. Records in the TCRS for any hospitals where the EDs are not reported in *Hospital Quarterly* are excluded from all calculations of ambulance arrivals and transfer of care time.

Ambulance arrivals is the count of all cases recorded in the TCRS as arriving at a hospital with an ED which is included in *Hospital Quarterly*. Ambulance arrivals include all emergency and priority medical patients transported by ambulance.

Transfer of care time is the time from arrival of patients at the ED by ambulance and transfer of responsibility for their care from ambulance to ED staff in an ED treatment zone. Transfer of care time can only be calculated for matched records. These are records where the ambulance incident

number and date can be identified in both the NSW Ambulance data and the ED data. Records which cannot be matched are excluded from all calculations that use transfer of care time.

If the time recorded for transfer of care is earlier than ambulance arrival time, then transfer of care time is calculated starting from ED triage time. If the time of transfer of care is earlier than both arrival and triage time, then transfer of care time is set to missing and the record is excluded from all calculations requiring transfer of care time.

Transfer of care performance is reported as:

- Median time for transfer of care (minutes)

- 95th percentile time for transfer of care (minutes)

- Percentage of ambulance arrivals with transfer of care time within 30 minutes. The denominator for the percentage is the number of matched records with a valid transfer of care time.

Transfer of care performance is not reported for hospitals with less than 50 matched records in the quarter. Records from these hospitals are excluded from calculation of performance measures.

Caution is advised when interpreting performance results for hospitals where transfer of care could not be calculated for more than 30% of total records because records were not matched or transfer of care time was missing.

For more information, see *Spotlight on Measurement: Measuring transfer of care from the ambulance to the emergency department* available at bhi.nsw.gov.au

Appendix

About this appendix

This appendix details the effect of including additional EDs on measures of activity and performance reported in *Hospital Quarterly*.

Table 1 lists additional EDs included in *Hospital Quarterly*, by quarter, since 2010.

Measures of activity

Number of ED presentations

Appendix figure 1 shows the increments in the number of presentations by quarter and cohort for NSW.

Table 2 shows the effect of including additional EDs on the number of presentations reported in *Hospital Quarterly*:

- Total number of EDs (cumulative) included in *Hospital Quarterly*

- Total number of ED presentations reported in *Hospital Quarterly*

- Number of EDs added in the most recent cohort

- Total number of ED presentations added by the most recent cohort

- The percentage increase in ED presentations compared to the number of presentations that would have been reported had the most recent cohort not been included.

Arrivals by ambulance and transfer of care time

In *Hospital Quarterly*, January to March 2016, ambulance transfer of care data are included for four additional EDs (data from April to June, 2013):

- St Vincent's Hospital, Darlinghurst

- The Children's Hospital, Westmead

- Deniliquin Health Service

- Hawkesbury District Health Services (public hospital services only)

Tables 3 to 6 shows the effect of the additional EDs on

- The number of ambulance arrivals reported in *Hospital Quarterly*, January to March 2016

- Median and 95th percentile times to transfer of care

- Percentage of ambulance arrivals whose care was transferred within 30 minutes.
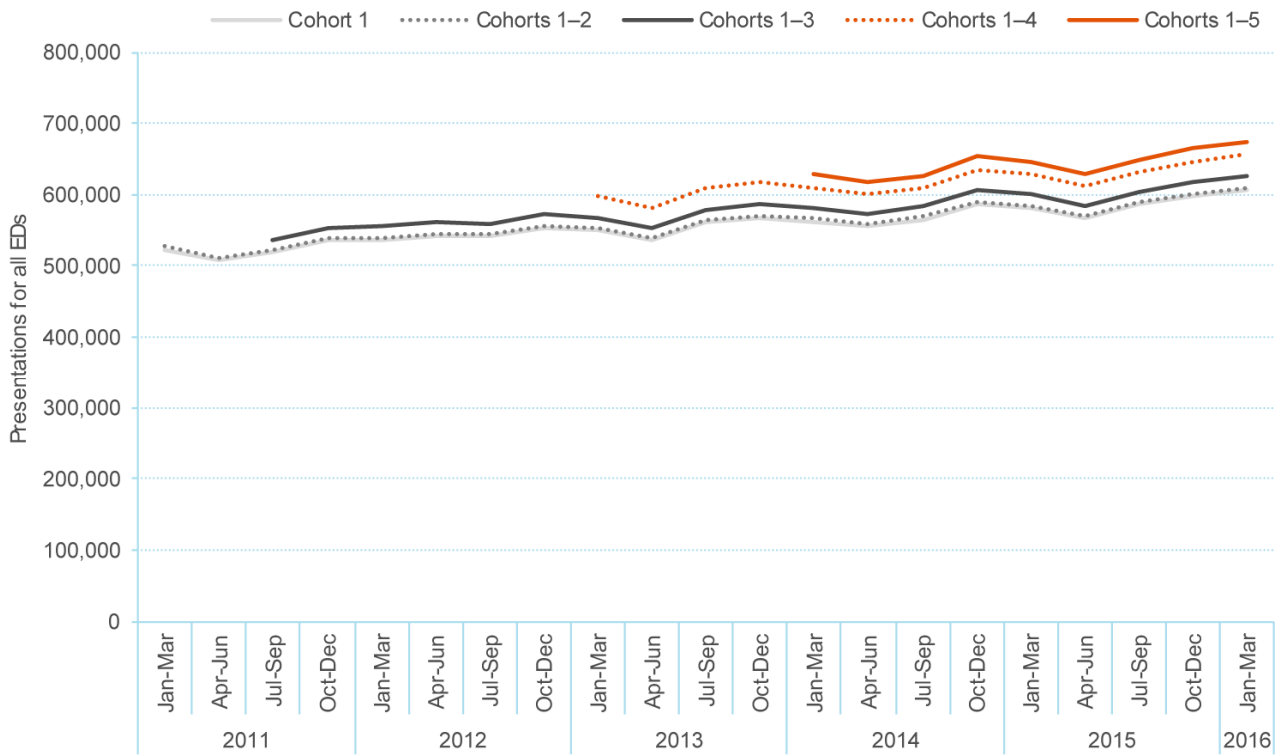
Appendix table 1: Emergency departments added to *Hospital Quarterly*, by quarter

First quarter of data starts	Emergency department	Local health district	Peer group
Cohort 1			
up to January to March 2010			
Cohort 2			
July to September 2010	Bega District Hospital†	Southern NSW	C1
Cohort 3			
July to September 2011	Ballina District Hospital	Northern NSW	C2
July to September 2011	Byron District Hospital	Northern NSW	D1b
July to September 2011	Casino and District Memorial Hospital	Northern NSW	C2
July to September 2011	Maclean District Hospital	Northern NSW	C2
July to September 2011	Mullumbimby & District War Memorial Hospital	Northern NSW	D1b
Cohort 4			
January to March 2013	Barham Health Service	Murrumbidgee	D2
January to March 2013	Boorowa Health Service	Murrumbidgee	F3
January to March 2013	Corowa Health Service	Murrumbidgee	D1a
January to March 2013	Culcairn Multi-Purpose Service	Murrumbidgee	F3
January to March 2013	Deniliquin Health Service	Murrumbidgee	C2
January to March 2013	Finley Health Service	Murrumbidgee	D1b
January to March 2013	Gundagai Health Service	Murrumbidgee	D2
January to March 2013	Hay Health Service	Murrumbidgee	D2
January to March 2013	Hillston Health Service	Murrumbidgee	D2
January to March 2013	Jerilderie Multi-Purpose Service	Murrumbidgee	F3
January to March 2013	Lake Cargelligo Multi-Purpose Service	Murrumbidgee	F3
January to March 2013	Lockhart Health Service	Murrumbidgee	D2
January to March 2013	Murrumburrah-Harden Health Service	Murrumbidgee	D1b
January to March 2013	Temora Health Service	Murrumbidgee	D1a
January to March 2013	Tumbarumba Multi-Purpose Service	Murrumbidgee	F3
January to March 2013	Tumut Health Service	Murrumbidgee	C2
January to March 2013	Wyalong Health Service	Murrumbidgee	D1b

Appendix table 1: Emergency departments added to *Hospital Quarterly*, by quarter

First quarter of data starts	Emergency department	Local health district	Peer group
January to March 2013	Young Health Service	Murrumbidgee	C2
January to March 2013	Macksville District Hospital	Mid North Coast	C2
January to March 2013	Kyogle Multi-Purpose Service	Northern NSW	F3
January to March 2013	Bateman's Bay District Hospital	Southern NSW	C2
January to March 2013	Moruya District Hospital	Southern NSW	C2
January to March 2013	Queanbeyan Health Service	Southern NSW	C2
January to March 2014	Batlow/Adelong Multi-Purpose Service	Murrumbidgee	F3
Cohort 5			
January to March 2014	Berrigan Multi-Purpose Service	Murrumbidgee	F3
January to March 2014	Coolamon Multi-Purpose Service	Murrumbidgee	F3
January to March 2014	Cootamundra Health Service	Murrumbidgee	D1a
January to March 2014	Holbrook Health Service	Murrumbidgee	D1b
January to March 2014	Junee Multi-Purpose Service	Murrumbidgee	F3
January to March 2014	Narrandera Health Service	Murrumbidgee	D1a
January to March 2014	Bellinger River District Hospital	Mid North Coast	C2
January to March 2014	Dorrigo Plateau Multi-Purpose Service	Mid North Coast	F3
January to March 2014	Crookwell Health Service	Southern NSW	D2
January to March 2014	Yass Health Service	Southern NSW	D1b
January to March 2014	Forbes District Hospital	Western NSW	C2
January to March 2014	Mudgee District Hospital	Western NSW	C2
January to March 2014	Parkes District Hospital	Western NSW	C2

(†) Bega District ED underwent a reporting system change during July to September 2010. Starting with *Hospital Quarterly*, October to December 2011, presentation counts are included in activity measures for NSW, Peer group C1 and SNSWLHD from July to September 2010, and times are included in performance measures for NSW, peer group C1 and SNSWLHD from October to December 2010.

Appendix figure 1: Effect of including additional emergency departments on presentations, by quarter, NSW

Appendix table 2: Effect of including additional emergency departments on presentations, by quarter, NSW

NSW	Number of EDs included	Total presentations	Number of most recently included EDs	Presentations for most recently included EDs	Change in total presentations from most recently added (%)
Cohorts 1 and 2					
January to March 2011	88	52,6661			
April to June 2011	88	51,2032			
Cohort 3					
July to September 2011	93	536,808	5	14,663	2.8%
October to December 2011	93	554,494	5	16,102	3.0%
January to March 2012	93	555,334	5	15,334	2.8%
April to June 2012	93	560,446	5	14,698	2.7%
July to September 2012	93	557,980	5	14,204	2.6%
October to December 2012	93	572,540	5	15,745	2.8%
Cohort 4					
January to March 2013	116	598,275	23	30,378	5.3%
April to June 2013	116	581,786	23	28,247	5.1%
July to September 2013	116	607,956	23	29,228	5.1%
October to December 2013	116	617,436	23	30,917	5.3%
Cohort 5					
January to March 2014	130	627,588	14	17,152	2.8%
April to June 2014	130	616,750	14	16,705	2.8%
July to September 2014	130	626,924	14	16,575	2.7%
October to December 2014	130	652,943	14	17,065	2.7%
January to March 2015	130	645,542	14	16,611	2.6%
April to June 2015	130	628,691	14	16,905	2.8%
July to September 2015	130	648,826	14	16,749	2.6%
October to December 2015	130	664,915	14	17,762	2.7%
January to March 2016	130	672,483	14	16,616	2.5%

Appendix table 3: Effect of adding four hospitals in total number of ambulance arrivals for NSW, from April 2013 to March 2016, *Hospital Quarterly*, January to March 2016

Quarter	Number of ambulance arrivals including four additional hospitals	Number of ambulance arrivals excluding four additional hospitals	Number of additional ambulance arrivals	Change (%)
April to June 2013	141,313	134,813	6,500	5%
July to September 2013	149,332	142,595	6,737	5%
October to December 2013	147,254	140,478	6,776	5%
January to March 2014	144,987	138,392	6,595	5%
April to June 2014	143,169	136,578	6,591	5%
July to September 2014	152,502	145,693	6,809	5%
October to December 2014	147,530	140,727	6,803	5%
January to March 2015	143,703	137,021	6,682	5%
April to June 2015	145,009	138,486	6,523	5%
July to September 2015	148,114	141,322	6,792	5%
October to December 2015	143,141	136,390	6,751	5%
January to March 2016	142,922	136,412	6,510	5%

Appendix table 4: Effect of adding four hospitals in total number of ambulance arrivals, median, 95th percentile transfer of care time and percentage of patients whose care was transferred within 30 minutes for NSW, *Hospital Quarterly*, January to March 2016

NSW	Measure including four additional hospitals	Measure excluding four additional hospitals	Change
Number of arrivals	142,922	136,412	5%
Median time	12 mins	12 mins	Unchanged
95th percentile time	42 mins	42 mins	Unchanged
Percentage whose care was transferred within 30 minutes	91%	91%	Unchanged

Effect of adding four hospitals in total number of ambulance arrivals, median, 95th percentile transfer of care time and percentage of patients whose care was transferred within 30 minutes for affected peer groups, *Hospital Quarterly*, January to March 2016

Peer group		Measure including four additional hospitals	Measure excluding four additional hospitals	Change
Principal referral, A1 peer group	Number of arrivals	63,264	59,258	7%
	Median time	12 mins	12 mins	Unchanged
	95th percentile time	41 mins	40 mins	+1 min
	Percentage whose care was transferred within 30 minutes	91%	91%	Unchanged
Principal referral, A2 peer group	Number of arrivals	1852	715	159%
	Median time	7 mins	9 mins	-2 mins
	95th percentile time	18 mins	18 mins	Unchanged
	Percentage whose care was transferred within 30 minutes	99%	100%	-1 percentage point
District group 1, C1 peer group	Number of arrivals	13,674	12,586	9%
	Median time	12 mins	11 mins	+1 min
	95th percentile time	36 mins	36 mins	Unchanged
	Percentage whose care was transferred within 30 minutes	92%	93%	-1 percentage point
District group 2, C2 peer group	Number of arrivals	10,335	10,056	3%
	Median time	12 mins	12 mins	Unchanged
	95th percentile time	42 mins	41 mins	+1 min
	Percentage whose care was transferred within 30 minutes	89%	89%	Unchanged

Appendix table 6: Effect of adding four hospitals in total number of ambulance arrivals, median, 95th percentile transfer of care time and percentage of patients whose care was transferred within 30 minutes for affected LHDs, *Hospital Quarterly*, January to March 2016

Local Health District		Measure including four additional hospitals	Measure excluding four additional hospitals	Change
Murrumbidgee LHD	Number of arrivals	4744	4465	6%
	Median time	15 mins	15 mins	Unchanged
	95th percentile time	1h 56m	1h 56m	Unchanged
	Percentage whose care was transferred within 30 minutes	75%	75%	Unchanged
Nepean Blue Mountains LHD	Number of arrivals	7722	6634	16%
	Median time	12 mins	11 mins	1 min
	95th percentile time	43 mins	46 mins	-3 mins
	Percentage whose care was transferred within 30 minutes	89%	89%	Unchanged
St Vincent's Health Network	Number of arrivals	4006	0	NA
	Median time	13 mins	NA	NA
	95th percentile time	51 mins	NA	NA
	Percentage whose care was transferred within 30 minutes	86%	NA	NA
Sydney Children's Network	Number of arrivals	1852	715	159%
	Median time	7 mins	9 mins	-2
	95th percentile time	18 mins	18 mins	Unchanged
	Percentage whose care was transferred within 30 minutes	99%	100%	-1 percentage point

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About the Bureau of Health Information

The Bureau of Health Information (BHI) is a board-governed organisation that provides independent information about the performance of the NSW public healthcare system.

BHI was established in 2009 to provide system-wide support through transparent reporting.

BHI supports the accountability of the healthcare system by providing regular and detailed information to the community, government and healthcare professionals. This in turn supports quality improvement by highlighting how well the healthcare system is functioning and where there are opportunities to improve.

BHI manages the NSW Patient Survey Program, gathering information from patients about their experiences in public hospitals and other healthcare facilities.

BHI publishes a range of reports and tools that provide relevant, accurate and impartial information about how the health system is measuring up in terms of:

- Accessibility – healthcare when and where needed

- Appropriateness – the right healthcare, the right way

- Effectiveness – making a difference for patients

- Efficiency – value for money

- Equity – health for all, healthcare that's fair

- Sustainability – caring for the future.

BHI's work relies on the efforts of a wide range of healthcare, data and policy experts. All of our assessment efforts leverage the work of hospital coders, analysts, technicians and healthcare providers who gather, codify and report data. Our public reporting of performance information is enabled and enhanced by the infrastructure, expertise and stewardship provided by colleagues from NSW Health and its pillar organisations.

bhi.nsw.gov.au

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