Technical Supplement

measures of admitted patient activity

Hospital Quarterly: July to September 2010

Bureau of Health Information

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.

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 NSW 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. For the 2009-10 financial year, there were 230 separate facilities that submitted admitted patient data to the HIE and are included in the admitted patient activity measures in the *Hospital Quarterly* reports.

The cohort for admitted patients has changed between publication of the first and second *Hospital Quarterly*. Additional information can be found in Appendix 1, pages 4 and 5.

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

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

** The 'babies born' calculation uses data from the Episode table of HIE.

Admitted patient activity

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

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
All episodes with an episode end date in the defined period minus planned episodes.
Babies born
The count of records with source of referral of 'born in hospital'; it is a subset of unplanned episodes. Unlike all other fields in the admitted patient dataset, babies born uses the Episode table of the Health Information Exchange.
Acute episodes
The count of records with episode of care type values of 1 (acute care) and 5 (newborn care) - see Glossary: Acute episode.
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.

Appendix 1: **Cohort definitions for admitted patients**

In *Hospital Quarterly: Performance of NSW Public Hospitals, April to June 2010*, the Bureau calculated admitted patient activity without applying any filter for facility type or for episode of care type. In October 2010, the Bureau was advised by the NSW Department of Health that admitted patient activity should only include a select group of facilities. Specifically, as shown in Table 1, the only facility codes included are:

- individuals admitted to public hospitals (facility code H)
- privately managed public contract hospitals (code C)
- public multi-purpose services (code M)
- public psychiatric hospitals (code S).

We were also advised that this list should also exclude those individuals with episode of care related to being a hospital boarder who does not meet the criteria of an admitted patient (code 0), non-admitted patient activity reported via a patient administration system (code 6) and donors admitted for procurement of human transplant organs (code 9).

The net effect of the new cohort definition is to lower the number of episodes reported for all admitted patient data fields in future *Hospital Quarterly* reports (Table 2). The Bureau has judged that the group of patients now reported on are a more appropriate group to measure admitted patient episode activity and will apply this definition in its reports.

Table 1: Facility and episode of care codes included in the new and historic definitions for the admitted patient cohort

	Historic definition (HQ1)	New definition (HQ2)
Facility types included	All (only C, H, M, O, R, S facilities had patients)	C, H, M, S
Episodes of care included	All (0, 1, 2, 3, 4, 5, 6, 7, 8, 9)	1, 2, 3, 4, 6, 7, 8

Table 2: Effect of two different cohort definitions on counts of admitted patient activity, by facility code, July to September 2010 data (excluding episode of care = 0, 6 and 9)

	Facility type							
	C	H	M	O	R	S	HQ1 totals*	HQ2 totals*
Total episodes	76	410,326	3,372	1	41	1,667	415,483	415,441
Planned	5	174,728	596		31	135	175,495	175,464
Unplanned	71	235,598	2,776	1	10	1,532	239,988	239,977
Babies born	-	18,038	3	-	-	-	18,041	18,041
Acute episodes	68	396,260	3,211	1	3	1,429	400,972	400,968
Same day	18	174,618	995	1	-	43	175,675	175,674
Overnight	50	221,642	2,216	-	3	1,386	225,297	225,294
Total acute bed days	244	1,346,846	12,157	1	646	38,129	1,398,023	1,397,376
Average length of stay (days)	3.6	3.4	3.8	1.0	215.3	26.7	3.5	3.5

Note: HQ1 definition totals refers to the method used to calculate the cohort for admitted patient activity in *Hospital Quarterly: Performance of NSW Public Hospitals April to June 2010*. HQ2 definition totals refers to the method used to calculate the cohort for admitted patient activity in *Hospital Quarterly: Performance of NSW Public Hospitals July to September 2010*.

Babies born

Following dialogue with the NSW Department of Health, the definition used for calculation of 'babies born' has changed between publication of the Bureau's first and second *Hospital Quarterly* reports.

In *Hospital Quarterly: Performance of NSW Public Hospitals, April to June 2010*, the Episode ATS table of HIE was used for calculation of all fields. For *Hospital Quarterly: Performance of NSW Public Hospitals, July to September 2010* onwards, the Bureau will use the Episode table of HIE and apply a second filter so that only those patients with an age=0 on the Stay table of HIE are included in the calculation (Table 3).

Table 3: Effect of changing data source for babies born counts in admitted patient activity, July to September 2010 data

	Jul-Sep 2008	Oct-Dec 2008	Jan-Mar 2009	Apr-Jun 2009	Jul-Sep 2009	Oct-Dec 2009	Jan-Mar 2009	Apr-Jun 2010	Jul-Sep 2009
Babies Born (Episode ATS)	18,296	17,965	17,594	17,460	18,068	17,832	17,573	18,111	18,225
Babies Born (Episode)	18,094	17,742	17,423	17,227	17,835	17,662	17,393	17,928	18,041

About the Bureau

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Technical Supplement

measures of elective surgery activity and performance

Hospital Quarterly: July to September 2010

Bureau of Health Information

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.

The elective surgery component of the *Hospital Quarterly* report is based on analyses of data extracted from the central data warehouse, the Waiting List Collection On-line System (WLCOS). This system is described in greater detail in the *Data quality assessment: elective surgery information systems for public patients at NSW hospitals* supplement at www.bhi.nsw.gov.au

The Bureau reports three activity and performance indicators:

- number of patients who received an elective, or planned surgery
- the percentage of patients admitted within the recommended timeframe
- the median waiting time in days.

More detail is provided in the following section (*Activity and performance indicators*) and the online glossary (www.bhi.nsw.gov.au). Indicators are presented by hospital, area health service and for NSW.

The Bureau uses SAS* V9.1.3™ for the statistical analysis of data for *Hospital Quarterly*.

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

Activity and performance indicators

The Bureau reports elective surgery waiting list activity using counts of patients who were admitted for their surgery within a reporting period. This information is presented by urgency category for the current quarter and as a time series over all quarters for the past five years.

Only patients who have been admitted for surgery are included in the analysis of these indicators.

This section contains details about the definitions used for the calculations of measures of elective surgery activity.

Patients who received elective surgery by urgency category

This indicator includes a count of patients who were removed from the waiting list because they were a routine admission for surgery, or an admission for surgery contracted to a private hospital or private day procedure centre. The count does not include emergency admissions or admissions contracted to another public hospital.

Patients are reassigned by their surgeon to a clinical priority or urgency category according to rules described in the NSW Department of Health's *Waiting Time and Elective Patient Management Policy* described at www.health.nsw.gov.au/policies/pd/2009/PD2009_018.html. That document was developed 'to promote clinically appropriate, consistent & equitable management of elective patients and waiting lists in public hospitals across NSW'.

These surgical urgency categories are used across Australia as defined by the AIHW National Health Data Committee and described at www.meteor.aihw.gov.au

WLCOS uses alphabetical codes to define surgical priority categories; 'A' is urgent, 'B' is semi-urgent, 'C' is non-urgent and 'D' is not ready for care. When reporting by surgical urgency category, if a patient is coded as 'D' (not ready for care) when removed from the waiting list, one of the three valid urgency categories must replace this code. The urgency category used is the next most recent coding of A or B or C that the patient was recorded as. Additional information about 'not ready for care' days can be found in Appendix 1, pages 5 to 7.

When reporting on surgical waiting times, numeric codes are used for urgency category and these are interchangeable with the alphabetical coding used in this document; 1 = A, 2 = B, 3 = C and 4 = D.

Patients admitted within the recommended timeframe

This indicator provides the proportion of patients admitted within the recommended timeframe for each of the elective surgery urgency categories, presented at hospital, peer group, area health service and state level. It includes only those records which have all the following information:

- a valid Removal Date
- are coded as 'S' for Elec Surg
- are coded as '1' or '8' for Removal Status.

Percent of patients admitted within the recommended timeframe, by urgency category

The numerator is the number of patients admitted to hospital for their elective surgery within the clinically recommended timeframe, i.e. in 30 days or less for category A patients, 90 days or less for category B patients and 365 days or less for category C patients. The denominator is the total number of patients admitted for elective surgery in each urgency category.

Percent of patients admitted within the recommended timeframe, all urgency categories

The numerator is the sum of the number of urgency category A patients admitted in 30 days or less plus the number of urgency category B patients admitted in 90 days or less plus the number of urgency category C patients admitted in 365 days or less. The denominator is the sum of all patients admitted from urgency category A plus all patients admitted from urgency category B plus all patients admitted from urgency category C.

Percentage of patients who received elective surgery by waiting time (cumulative)

The number of 'ready for care' days that NSW patients waited for their surgery, presented as the cumulative percentage of patients who received elective surgery by the number of days 'ready for care' (up to 420 days). Ready for care is calculated by the difference (in days) from List Date to Removal Date minus the number of days 'not ready for care' for clinical or personal reasons.

Median waiting time

Includes only those patient electronic records which have a Removal Date, are coded as 'S' for Elec Surg and are coded as '1' or '8' for Removal Status. If the Flag Urgency for a patient is set to 'D' (not ready for care), then the wait time variable for calculation is Ready for Care Days; otherwise the wait time variable is Commonwealth Waiting Time. Median Waiting Time is the median of the appropriate wait time variable for each of the three urgency categories.

Appendix 1: **Hospitals with a high percentage of category 3 patients waiting one day or less to be treated**

Patients are provided with a List Date when added to WLOCS and a Removal Date when they are taken off the list. At the most simplistic level, the time between these two dates is the waiting period for that patient. Patients can also be recorded as 'not ready for care' due to either clinical reasons (patient too ill, doctor sets a minimum period between operations, etc) or personal reasons (patient away on holiday, etc). Any days that the patient is recorded as being 'not ready for care' days are subtracted from the total waiting time of each patient.

The Bureau noted that at some NSW public hospitals, a high percentage of category 3 patients had 'not ready for care days' equal to the total length of time they had been on the waiting list. This resulted in those patients having a waiting time of one day or less. Across the largest hospitals on WLCOS, the proportion of category 3 patients who had one day or less total waiting time ranged from 0-30% of patients.* In the July to September 2010 quarter, 16 hospitals recorded that 10% or greater of their category 3 patients waited one day or less for admission to hospital (Table 1).

The Bureau has investigated the effect on median waiting times for hospitals with high percentages of category 3 patients waiting one day or less for admission. This has the effect of reducing median waiting time for patients undergoing elective surgery at these hospitals. In interpreting the performance indicators for category 3 patients at these hospitals, caution is advised as this may result in unfair or inequitable comparisons.

Additional detail about 'not ready to care' days can be found on page 8 of this supplement. This information is duplicated in *Hospital Quarterly, July to September 2010*.

* Including all 83 hospitals on WLCOS from the principal referral, paediatric specialist, ungrouped acute / tertiary referral, major metropolitan, major non-metropolitan and district groups 1 and 2 peer groups.

Table 1: Hospitals with a high percentage of category 3 patients waiting one day or less to be admitted, July to September 2010

	Patients treated on time		Median waiting time (days)		
	Category 3 patients	Waiting time < 1 day (%)	Category 1	Category 2	Category 3
Campbelltown Hospital	599	30	20	64	204
Royal Prince Alfred Hospital	695	29	7	14	13
Concord Hospital	1125	23	9	46	79
Gosford Hospital	672	23	15	57	280
Liverpool Hospital	698	21	12	56	171
The Tweed Hospital	366	20	17	55	165
Hawkesbury Private Hospital - Public Contract Services	100	19	15	65	327
The Children's Hospital at Westmead	754	18	5	47	60
Port Macquarie Base Hospital	291	17	15	62	224
Griffith Base Hospital	120	15	21	63	324
Murwillumbah District Hospital	254	15	22	62	304
Bathurst Base Hospital	150	13	11	51	216
Dubbo Base Hospital	418	13	8	22	86
St Vincent's Hospital, Darlinghurst	300	12	4	47	107
Hornsby and Ku-Ring-Gai Hospital	353	12	6	27	89
Orange Base Hospital	406	12	8	62	350
Wyong Hospital	400	9	12	45	232
Canterbury Hospital	283	8	12	55	265
Manly District Hospital	108	8	6	33	62
Royal North Shore Hospital	515	8	6	46	118
Bowral and District Hospital	197	8	16	35	71
Mona Vale and District Hospital	269	7	4	15	30
Bankstown / Lidcombe Hospital	669	7	14	62	168
Ryde Hospital	168	5	12	35	146
Maclean District Hospital	20	5	13	43	26
Lismore Base Hospital	415	5	10	54	280
Broken Hill Base Hospital	91	4	14	61	218
Lithgow Health Service	116	4	18	56	307
Shoalhaven and District Memorial Hospital	492	4	14	55	306
Fairfield Hospital	451	4	12	40	306
Sydney Children's Hospital	353	4	7	21	78
Coffs Harbour Base Hospital	539	3	18	81	354
Blue Mountains District Anzac Memorial Hospital	50	2	14	53	224
Wollongong Hospital	524	2	11	62	105
Westmead Hospital (all units)	460	2	9	43	112
Moruya District Hospital	72	1	8	28	96
RPAH Institute of Rheumatology & Orthopaedics	315	1	5	23	28
Grafton Base Hospital	175	1	10	44	283
John Hunter Hospital	736	1	11	47	209
Bega District Hospital	117	1	22	74	329

	Patients treated on time		Median waiting time (days)		
	Category 3 patients	Waiting time < 1 day (%)	Category 1	Category 2	Category 3
Royal Hospital for Women	117	1	7	36	84
St George Hospital	251	1	14	56	183
Belmont Hospital	281	1	20	53	247
Blacktown Hospital	340	1	11	44	140
Mount Druitt Hospital	254	0	11	58	274
Shellharbour Hospital	566	0	21	63	201
Nepean Hospital	799	0	8	66	352
Armidale and New England Hospital	152	0	21	67	317
Auburn Hospital	327	0	12	71	236
Ballina District Hospital	62	0	10	39	86
Bateman's Bay District Hospital	134	0	26	49	337
Bulli District Hospital	75	0	8	40	246
Calvary Mater Newcastle	47	0	17	57	159
Casino and District Memorial Hospital	117	0	8	35	77
Cessnock District Hospital	97	0	10	13	40
Cooma Health Service	35	0	17	54	111
Cowra District Hospital	51	0	7	37	56
Deniliquin Health Service	27	0	14	80	242
Forbes District Hospital	60	0	19	28	279
Goulburn Base Hospital	214	0	14	35	198
Gunnedah District Hospital	39	0	8	36	51
Inverell District Hospital	28	0	13	49	191
Kempsey Hospital	201	0	27	48	125
Kurri Kurri District Hospital	233	0	10	78	252
Macksville District Hospital	88	0	24	54	304
Maitland Hospital	275	0	17	56	154
Manning Base Hospital	420	0	20	66	266
Milton and Ulladulla Hospital	12	0	5	40	43
Moree District Hospital	48	0	6	29	66
Mudgee District Hospital	68	0	21	57	320
Muswellbrook District Hospital	63	0	1	12	19
Narrabri District Hospital	8	0	6	18	128
Pambula District Hospital	13	0	8	57	285
Parkes District Hospital	26	0	3	54	21
Prince of Wales Hospital	408	0	13	42	234
Queanbeyan Health Service	94	0	17	62	206
Singleton District Hospital	89	0	7	20	26
Sutherland Hospital	292	0	15	56	268
Sydney/Sydney Eye Hospital	634	0	12	42	207
Tamworth Base Hospital	387	0	13	50	168
Tumut Health Service	27	0	14	70	42
Wagga Wagga Base Hospital	560	0	21	56	324
Young Health Service	28	0	28	71	49

Waiting times of less than one day (taken from *Hospital Quarterly, July to September 2010*)

All hospitals have some patients in each urgency category who were recorded as waiting one day or less to be admitted for surgery. The percentage of urgent (category 1), semi-urgent (category 2) and non-urgent (category 3) patients who waited one day or less are 10%, 2% and 8% respectively. In some hospitals, a substantial percentage of patients recorded as waiting one day or less were coded as 'not ready for care' for the entire period they were on the waiting list.

Patients can be appropriately coded as 'not ready for care' for either clinical reasons (patient unfit for surgery, staged operations, etc) or personal reasons (patient away on holiday, work commitment, etc). We found that these patients were most commonly waiting for gynaecological or urological (bladder and urine tract) surgery, removal of pins or plates or cataract removal. High numbers of these procedures were concentrated in a small number of hospitals.

Listing a patient as 'not ready for care' for clinical reasons may be due to booking the patient for a 'staged' surgery. A staged surgery is where there is a clinically appropriate interval before the procedure can occur and, as the patient either cannot or should not undergo the procedure any sooner, they are not technically waiting for surgery. Examples of this include:

- Fractured bones sometimes require metal pins and / or plates to hold the bones in place while they heal. Until the bone is healed, the pins / plates are not be removed and the patient is coded as 'not ready for care'

- In-vitro fertilisation (IVF) may require egg harvesting after a course of hormones. A woman would be listed as 'not ready for care' while she underwent the hormone therapy in preparation for the procedure.

Hospitals with specialties requiring staged surgery tend to have a higher percentage of patients with very short wait times. This has the effect of reducing median waiting time for patients undergoing elective surgery at these hospitals. Comparisons between these hospitals and those hospitals that perform few staged procedures may result in unfair or inequitable comparisons.

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Technical Supplement

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Hospital Quarterly: July to September 2010

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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.

The emergency department component of the *Hospital Quarterly* report is based on analyses of emergency department attendance data extracted from a centralised data warehouse administered by the NSW Department of Health called the Health Information Exchange (HIE). Further information on the data collection process can be found in the *Data quality assessment: information systems in NSW emergency departments* at www.bhi.nsw.gov.au

There are 189 emergency departments in NSW. The activity and performance measures reported in the *Hospital Quarterly* reports are currently based on 87 hospital emergency departments which have computerised patient information systems in place for two or more years. These 87 emergency departments comprise the NSW totals reported in *Hospital Quarterly* and account for approximately 85% of all emergency department attendances in NSW.

Progressively, emergency departments are replacing historic information systems with more contemporary systems. Records from hospitals implementing these new information systems have been excluded from the calculation of state level, hospital peer group level and area health service level performance statistics.

At a facility level, only the fields of all attendances and off stretcher time performance are presented for hospitals undergoing a system update in the current quarter. For the quarter following implementation, a cautionary note is displayed next to potentially affected results.

The Bureau provides individual performance profiles for 66 of the 87 emergency departments which have an electronic records system in place for two or more years. These 66 emergency departments are those located at principal referral, major acute and district peer group hospitals in NSW.

Prior to June 2010, the NSW Department of Health reported on the activity and performance of NSW public hospital emergency departments with a selection of indicators. The Bureau is now tasked with reporting these indicators for NSW public hospitals, which include:

- All attendances
- Emergency admissions
- Triage performance
  (for each triage category)
- Emergency admission performance
- Off stretcher time.

In addition to these historical measures, the Bureau reports additional information about emergency attendances. Emergency attendances are a subset of all attendances and include those with visit types classified as emergency or re-presentation for a continuing condition.

Emergency attendances comprise the bulk of all attendances to NSW public hospital emergency departments. The Bureau's *Hospital Quarterly* reports provide information about:

- How long patients wait to receive treatment after being triaged
- How long those patients who were admitted to hospital waited in the emergency department (from the time of triage) before arrival on a ward, an operating suite or critical care area
- How long non-admitted patients spent in the emergency department (from the time of triage) before being discharged or transferred to another hospital
- How patients conclude their emergency department journey before, during or after completing treatment.

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

A data quality assessment of information systems in NSW emergency departments is available at www.bhi.nsw.gov.au

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

Activity and performance indicators

This section contains details about the definitions used for the calculations of measures of emergency department activity and performance reported in the Hospital Quarterly reports.

Numbers in brackets in the following definitions indicate the HIE database field code used to identify records by emergency department visit type or mode of separation (as appropriate).

Attendances / all attendances

All attendances is a count of all records in the emergency department visit database of the HIE. This count includes all records of attendances regardless of emergency department visit type and includes planned return visits, pre-arranged admissions, outpatient clinic visits, private referrals, persons pronounced dead on arrival and patients in transit in addition to emergency presentations. Records are not excluded based on any other fields with missing or invalid data.

Admissions from the emergency department

Admissions from the emergency department is a count of all records in the emergency department visit database of the HIE with a mode of separation recorded as admitted to a ward (1), admitted to a critical care ward (10) and admitted via an operating theatre (11). No records are excluded on the basis of any other fields with missing or invalid data.

Emergency attendances by triage category

Emergency attendances are the count of all records from the emergency department visit database of the HIE with an emergency department visit type of emergency (1) or re-presentation for a continuing condition (3). Emergency attendances in the *Hospital Quarterly* reports are reported by triage category. Records with missing or invalid information for emergency department visit type or triage category are excluded from this count. Patients coded as pre-arranged admissions (with ED workup) were included in this count in the April to June 2010 report but excluded from this cohort from the July to September 2010 report onwards.

Triage (or arrival) to treatment performance indicator

Triage performance is computed as the percentage of patients in a triage category for whom treatment commenced within the recommended waiting time for that triage category. The denominator is defined as all emergency department attendances in a triage category, excluding patients with a mode of separation of 6, 8 and 9 (Departed: Did not wait, Dead on arrival and Departed: for other clinical service location, respectively). The numerator is the number of emergency attendances in a triage category (excluding patients with a mode of separation of 6, 8 and 9) with a waiting time less than or equal to the recommended waiting time for that triage category. Triage to start of treatment is measured from arrival time if triage time is missing. Records with missing or invalid information for triage category, triage time, or treatment time fields are excluded from both the numerator and denominator. For additional detail see Appendix 1, pages 8 to 12.

Emergency admission performance indicator

Emergency Admission Performance (EAP) is computed as the percentage of all admissions from the emergency department who were admitted to hospital within eight hours. The denominator is the count of all records that were an emergency attendance (visit type 1 or 3) and were admitted to hospital. The numerator is a count of emergency attendance records who were admitted (patients with a mode of separation = 1, 2, 3, 10 or 11) and had a difference between arrival in the emergency department and actual departure time of less than or equal to eight hours. For the purposes of EAP, triage time is used for arrival time in the emergency department or, if triage time is missing, arrival time is used. Records with missing or invalid information in arrival time (triage or arrival time), mode of separation, or actual departure time are excluded from both the numerator and denominator. For additional detail see Appendix 1, pages 13 to 16.

Off stretcher time performance indicator

Off Stretcher Time (OST) is the time in minutes between the time of arrival of an emergency patient by ambulance and the time they are transferred to the care of the emergency department. The denominator is all off stretcher cases, which include all emergency and priority medical patients transported by ambulance and delivered to an emergency department. The numerator is all off stretcher cases transferred to the care of an emergency department within 30 minutes of arrival at the emergency department.

Data for this measure is provided by the NSW Ambulance Service and records the time of transfer as entered by ambulance officers using a dashboard console.

Emergency attendances by triage category and mode of separation

Counts of emergency department attendances are reported by triage category for three cohorts, defined by how they leave the emergency department. The reported total count is the sum of these three cohorts (listed below). The reported percentages are the count of records in a cohort in a triage category divided by the total count for that cohort. Records with missing information for triage category or mode of separation are excluded for all cohorts.

- The treated and admitted to hospital cohort includes emergency department records with a mode of separation of admitted to a ward (1), admitted to a critical care ward (10) and admitted via an operating theatre (11)
- The treated and discharged or transferred cohort includes emergency attendances with modes of separation of departed with treatment complete (4), treated then transferred to another hospital without admission (5) and treated and transferred for admission at another facility (12)
- Patients who left without, or before completing treatment include attendances with modes of separation of departed, did not wait (6) and departed, left at their own risk (7). Attendances that ‘did not wait’ were triaged but left the emergency department before treatment was commenced. Attendances that ‘left at their own risk’ were triaged and treatment was begun by a clinician, but the patient left prior to completion of their treatment.

Cumulative distribution: time from triage to treatment

This type of graph presents the percentage of patients who received treatment by time and triage category. It shows the cumulative distribution of triaged emergency attendances by the number of minutes that elapse between triage time and the start of treatment by a healthcare professional. The cumulative percentage is computed by taking the number of patients treated by each minute since triage to a triage category and dividing by the total number of patients triaged into that triage category. This cohort only includes patients who had a recorded triage category, triage time and treatment time.

A cumulative distribution that does not reach 100% by 180 minutes indicates that there were some patients in a triage category that waited longer than 180 minutes for treatment to commence.

Cumulative distribution: time from triage to admission

This type of graph presents the percentage of patients who were treated and admitted, by time and by triage category. It shows the cumulative distribution of emergency admissions by the number of hours that elapse between the triage of the patient and actual departure time of the patient. The cumulative percentage is computed by taking the number of patients admitted (patients with a mode of separation = 1, 2, 3, 10 or 11) from a triage category in six minute intervals of time elapsed since triage and dividing by the total number of patients admitted from that triage category. This cohort only includes patients who had a recorded triage category, triage (or arrival) time and actual departure time.

A cumulative distribution that does not reach 100% by 12 hours indicates that there were some patients in a triage category that waited longer than 12 hours to be admitted.

Cumulative distribution: time from triage to discharge or transfer

This type of graph presents the percentage of patients who were treated and discharged or treated and transferred by time and triage category without being admitted. It shows the cumulative distribution of non-admitted emergency attendances (patients with a mode of separation = 4, 5 or 12) with completed treatment by the number of hours that elapse between the triage of the patient and the actual departure time of the patient. The cumulative percentage is computed by taking the number of patients admitted from a triage category in six minute intervals of time elapsed since triage and dividing by the total number of patients discharged or transferred from that triage category. This cohort only includes patients who had a recorded triage category, triage (or arrival) time and actual departure time.

A cumulative distribution that does not reach 100% by 12 hours indicates that some patients in a triage category waited longer than 12 hours for their treatment to be completed and to leave the emergency department.

Time series: number of attendances by triage category

The time series graph presents the number of emergency attendances to an emergency department during each quarter for the past five years. Please refer to *Emergency attendances by triage category* definition above for a description of this cohort.

Appendix 1: **Changes in measurement of two performance indicators during the 2010/11 financial year**

The definitions for two performance indicators of emergency department care changed between publication of the first and second issues of *Hospital Quarterly*; time from triage to treatment and emergency admission performance (EAP).

In August 2010, the Demand and Performance Evaluation (DPE) Branch of the NSW Department of Health released an update of performance indicators[1] used as part of NSW Health's Performance Management Framework for the 2010/11 financial year. The historic definitions used by NSW Health were described in 2008[2] and all references in this supplement to 2008 measures refer to these definitions described in that document.

The Department of Heath advised that the changes to definitions were made as part of the ongoing commitment to align definitions used in NSW with the corresponding national definitions.Signing of the National Health and Hospital Network Agreement provided further impetus for consistent indicator definitions across jurisdictions, especially in relation to emergency department services where a new, 'total time spent in the emergency department' indicator is being progressively introduced from January 2011.

After consideration of these changes and analyses of how these would affect performance indicators, the Bureau decided to adopt all changes and implemented these for the reporting of data for *Hospital Quarterly, July to September 2010* onwards.

For each measure which has changed, this appendix compares the methods used in the calculation of the previous (2008) and current (2010) measure, provides data for the July to September 2010 quarter using both the previous and current definitions and summarises the net effect of the change.

1 New South Wales Health. *Key Performance Indicator Dictionary for the 2010/11 Area Health Service Performance Agreements. Sydney (NSW) [Internet] [cited 2010 Oct 15].* Available from www.internal.health.nsw.gov.au/data/collections/edc/H10%20 58765%20%20Definitions%20-%20Key%20Performance%20Indicator%20Dictionary%20for%20the%202010-11%20AHS%20 Performance%20Agreements.pdf

2 New South Wales Health. *Definitions for NSW State Health Plan Indicators; version 1*. 2008. Sydney (NSW).

Triage (or arrival) **to treatment performance indicator**

2008 definition:

Triage performance is computed as the percentage of patients in a triage category that were treated within the recommended waiting time for that triage category. The denominator is defined as all emergency attendances in a triage category, excluding patients with a mode of separation of 8 and 9 (Dead on arrival and Departed: for other clinical service location, respectively). The numerator is the number of emergency attendances in a triage category (excluding patients with a mode of separation of 8 and 9).

The numerator is the number of emergency attendances in a triage category with a waiting time less than or equal to the recommended waiting time for that triage category. Records with missing or invalid information for triage category, triage time, or treatment time fields are excluded from both the numerator and denominator.

2010 definition:

The new definition for triage performance is identical to the 2008 definition with the exceptions that triage to treatment time is measured from arrival time if triage time is missing and now excludes patients who did not wait for treatment (mode of separation = 6).

Table 1: Comparison of the two definitions of triage performance for July to September 2010 data

	Triage to treatment performance indicators, by triage category														
	T1 2008	T1 2010	T1 diff	T2 2008	T2 2010	T2 diff	T3 2008	T3 2010	T3 diff	T4 2008	T4 2010	T4 diff	T5 2008	T5 2010	T5 diff
New South Wales															
Total New South Wales	100%	100%	0%	82%	82%	0%	69%	69%	0%	72%	72%	0%	87%	87%	0%
Children's Hospital at Westmead															
Total Children's Hospital at Westmead	100%	100%	0%	100%	100%	0%	63%	63%	0%	68%	66%	-2%	75%	71%	-4%
Greater Southern															
Goulburn Base Hospital	100%	100%	0%	48%	48%	0%	57%	57%	0%	70%	71%	1%	89%	89%	0%
Griffith Base Hospital	100%	100%	0%	76%	76%	0%	59%	59%	0%	67%	68%	1%	83%	86%	3%
Wagga Wagga Base Hospital	100%	100%	0%	83%	83%	0%	75%	75%	0%	73%	74%	1%	88%	90%	2%
Total Greater Southern	100%	100%	0%	81%	81%	0%	69%	70%	1%	71%	72%	1%	87%	89%	2%

Triage to treatment performance indicators, by triage category

	T1 2008	T1 2010	T1 diff	T2 2008	T2 2010	T2 diff	T3 2008	T3 2010	T3 diff	T4 2008	T4 2010	T4 diff	T5 2008	T5 2010	T5 diff
Greater Western															
Bathurst Base Hospital	93%	93%	0%	57%	57%	0%	59%	59%	0%	65%	66%	1%	81%	84%	3%
Broken Hill Base Hospital	100%	100%	0%	78%	78%	0%	72%	72%	0%	81%	75%	-6%	96%	92%	-4%
Dubbo Base Hospital	100%	100%	0%	66%	66%	0%	59%	59%	0%	64%	64%	0%	85%	88%	3%
Orange Base Hospital	100%	100%	0%	56%	56%	0%	65%	65%	0%	66%	67%	1%	85%	86%	1%
Total **Greater Western**	100%	100%	0%	78%	78%	0%	72%	72%	0%	81%	75%	-6%	96%	92%	-4%
Hunter New England															
Armidale and New England Hospital	100%	100%	0%	73%	74%	1%	76%	76%	0%	81%	81%	0%	93%	94%	1%
Belmont Hospital	100%	100%	0%	87%	87%	0%	77%	77%	0%	77%	76%	-1%	87%	87%	0%
Calvary Mater Newcastle	100%	100%	0%	59%	58%	-1%	51%	50%	-1%	53%	52%	-1%	78%	78%	0%
Cessnock District Hospital	100%	100%	0%	95%	95%	0%	83%	83%	0%	87%	86%	-1%	99%	99%	0%
Gunnedah District Hospital	100%	100%	0%	100%	100%	0%	100%	100%	0%	100%	100%	0%	100%	100%	0%
Inverell District Hospital	83%	83%	0%	88%	89%	1%	71%	71%	0%	77%	76%	-1%	94%	94%	0%
John Hunter Hospital	100%	100%	0%	86%	86%	0%	72%	72%	0%	73%	71%	-2%	87%	86%	-1%
Kurri Kurri District Hospital	100%	100%	0%	87%	91%	4%	83%	81%	-2%	90%	89%	-1%	98%	97%	-1%
Maitland Hospital	100%	100%	0%	75%	75%	0%	66%	66%	0%	67%	67%	0%	88%	88%	0%
Manning Base Hospital	100%	100%	0%	86%	85%	-1%	57%	57%	0%	56%	56%	0%	85%	85%	0%
Moree District Hospital	100%	100%	0%	91%	91%	0%	94%	94%	0%	98%	98%	0%	100%	100%	0%
Muswellbrook District Hospital	100%	100%	0%	69%	67%	-2%	78%	76%	-2%	81%	79%	-2%	94%	94%	0%
Narrabri District Hospital	100%	100%	0%	100%	100%	0%	92%	92%	0%	93%	93%	0%	99%	99%	0%
Singleton District Hospital	100%	100%	0%	84%	84%	0%	77%	76%	-1%	80%	79%	-1%	99%	98%	-1%
Tamworth Base Hospital	100%	100%	0%	76%	76%	0%	62%	62%	0%	53%	53%	0%	78%	78%	0%
Other Hunter New England	100%	100%	0%	83%	82%	-1%	86%	86%	0%	91%	91%	0%	98%	98%	0%
Total **Hunter New England**	100%	100%	0%	80%	80%	0%	71%	71%	0%	74%	73%	-1%	91%	91%	0%

Triage to treatment performance indicators, by triage category

	T1 2008	T1 2010	T1 diff	T2 2008	T2 2010	T2 diff	T3 2008	T3 2010	T3 diff	T4 2008	T4 2010	T4 diff	T5 2008	T5 2010	T5 diff
North Coast															
Coffs Harbour Base Hospital**	100%	100%	0%	75%	75%	0%	43%	44%	1%	49%	50%	1%	69%	72%	3%
Grafton Base Hospital	100%	100%	0%	82%	82%	0%	56%	56%	0%	59%	60%	1%	80%	80%	0%
Kempsey Hospital	100%	100%	0%	60%	60%	0%	77%	77%	0%	84%	85%	1%	96%	96%	0%
Lismore Base Hospital	98%	98%	0%	83%	83%	0%	62%	63%	1%	64%	64%	0%	85%	85%	0%
Murwillumbah District Hospital	100%	100%	0%	100%	100%	0%	74%	74%	0%	77%	78%	1%	91%	92%	1%
Port Macquarie Base Hospital	100%	100%	0%	63%	63%	0%	53%	53%	0%	65%	65%	0%	86%	86%	0%
The Tweed Hospital	100%	100%	0%	63%	63%	0%	70%	70%	0%	80%	80%	0%	95%	95%	0%
Total **North Coast**	**100%**	**100%**	**0%**	**72%**	**72%**	**0%**	**61%**	**61%**	**0%**	**69%**	**69%**	**0%**	**86%**	**87%**	**1%**
Northern Sydney Central Coast															
Gosford Hospital	100%	100%	0%	67%	67%	0%	61%	61%	0%	59%	59%	0%	77%	78%	1%
Hornsby and Ku-Ring-Gai Hospital	100%	100%	0%	93%	93%	0%	81%	81%	0%	81%	81%	0%	90%	90%	0%
Manly District Hospital	100%	100%	0%	96%	96%	0%	94%	95%	1%	88%	89%	1%	94%	95%	1%
Mona Vale and District Hospital	100%	100%	0%	99%	99%	0%	85%	85%	0%	84%	84%	0%	95%	95%	0%
Royal North Shore Hospital	100%	100%	0%	91%	91%	0%	78%	78%	0%	85%	85%	0%	94%	94%	0%
Ryde Hospital	100%	100%	0%	93%	93%	0%	78%	79%	1%	73%	75%	2%	84%	87%	3%
Wyong Hospital	100%	100%	0%	67%	67%	0%	63%	63%	0%	64%	64%	0%	77%	77%	0%
Total **Northern Sydney Central Coast**	**100%**	**100%**	**0%**	**84%**	**84%**	**0%**	**75%**	**75%**	**0%**	**74%**	**74%**	**0%**	**84%**	**85%**	**1%**
South Eastern Sydney Illawarra															
Bulli District Hospital	.	.		100%	100%	0%	98%	98%	0%	98%	98%	0%	98%	99%	1%
Milton and Ulladulla Hospital	100%	100%	0%	97%	97%	0%	96%	96%	0%	92%	92%	0%	93%	94%	1%
Prince of Wales Hospital	100%	100%	0%	62%	62%	0%	36%	37%	1%	48%	49%	1%	70%	72%	2%
Shellharbour Hospital	100%	100%	0%	91%	91%	0%	77%	77%	0%	70%	71%	1%	90%	93%	3%
Shoalhaven and District Memorial Hospital	100%	100%	0%	94%	94%	0%	73%	74%	1%	70%	71%	1%	86%	88%	2%
St George Hospital	100%	100%	0%	79%	79%	0%	61%	61%	0%	66%	66%	0%	82%	82%	0%
St Vincent's Hospital, Darlinghurst	100%	100%	0%	100%	100%	0%	71%	71%	0%	75%	76%	1%	88%	92%	4%
Sutherland Hospital	100%	100%	0%	88%	88%	0%	74%	74%	0%	81%	81%	0%	92%	93%	1%

Triage to treatment performance indicators, by triage category

	T1 2008	T1 2010	T1 diff	T2 2008	T2 2010	T2 diff	T3 2008	T3 2010	T3 diff	T4 2008	T4 2010	T4 diff	T5 2008	T5 2010	T5 diff
Sydney Children's Hospital	100%	100%	0%	77%	77%	0%	70%	70%	0%	61%	61%	0%	86%	87%	1%
Sydney Eye Hospital	.	.		80%	80%	0%	98%	98%	0%	99%	99%	0%	99%	100%	1%
Sydney Hospital	100%	100%	0%	97%	97%	0%	87%	87%	0%	85%	85%	0%	95%	96%	1%
Wollongong Hospital	100%	100%	0%	91%	91%	0%	72%	72%	0%	67%	69%	2%	80%	83%	3%
Total **South Eastern Sydney Illawarra**	**100%**	**100%**	**0%**	**86%**	**86%**	**0%**	**66%**	**66%**	**0%**	**70%**	**71%**	**1%**	**90%**	**92%**	**2%**
Sydney South West															
Bankstown / Lidcombe Hospital	100%	100%	0%	100%	100%	0%	79%	79%	0%	87%	87%	0%	96%	96%	0%
Bowral and District Hospital	100%	100%	0%	74%	74%	0%	65%	65%	0%	73%	73%	0%	94%	94%	0%
Camden Hospital	100%	100%	0%	94%	94%	0%	93%	93%	0%	91%	91%	0%	98%	98%	0%
Campbelltown Hospital	100%	100%	0%	91%	91%	0%	80%	80%	0%	70%	71%	1%	91%	92%	1%
Canterbury Hospital	100%	100%	0%	89%	89%	0%	75%	76%	1%	69%	71%	2%	89%	93%	4%
Concord Hospital	100%	100%	0%	98%	98%	0%	77%	77%	0%	79%	79%	0%	97%	97%	0%
Fairfield Hospital	100%	100%	0%	76%	76%	0%	72%	72%	0%	73%	73%	0%	92%	93%	1%
Liverpool Hospital	100%	100%	0%	85%	85%	0%	81%	81%	0%	77%	77%	0%	92%	92%	0%
Royal Prince Alfred Hospital	100%	100%	0%	81%	81%	0%	69%	70%	1%	76%	76%	0%	89%	91%	2%
Total **Sydney South West**	**100%**	**100%**	**0%**	**88%**	**88%**	**0%**	**76%**	**77%**	**1%**	**76%**	**77%**	**1%**	**92%**	**93%**	**1%**
Sydney West															
Auburn Hospital	100%	100%	0%	63%	63%	0%	58%	58%	0%	51%	53%	2%	80%	82%	2%
Blacktown Hospital	100%	100%	0%	88%	88%	0%	69%	69%	0%	71%	71%	0%	82%	82%	0%
Blue Mountains District Anzac Memorial Hospital	100%	100%	0%	72%	72%	0%	70%	70%	0%	72%	73%	1%	90%	91%	1%
Hawkesbury District Health Service	100%	100%	0%	85%	85%	0%	90%	90%	0%	88%	88%	0%	95%	95%	0%
Lithgow Health Service	100%	100%	0%	79%	79%	0%	76%	77%	1%	83%	84%	1%	95%	94%	-1%
Mount Druitt Hospital	100%	100%	0%	78%	78%	0%	68%	69%	1%	60%	61%	1%	76%	78%	2%
Nepean Hospital	100%	100%	0%	83%	83%	0%	48%	48%	0%	59%	59%	0%	77%	78%	1%
Westmead Hospital (all units)	100%	100%	0%	74%	74%	0%	41%	41%	0%	48%	47%	-1%	71%	69%	-2%
Total **Sydney West**	**100%**	**100%**	**0%**	**78%**	**78%**	**0%**	**62%**	**62%**	**0%**	**62%**	**63%**	**1%**	**80%**	**80%**	**0%**

Table 2: Comparison of the two definitions of triage performance for July to September 2010 data for NSW, by quarter

	Jul-Sep 2008	Oct-Dec 2008	Jan-Mar 2009	Apr-Jun 2009	Jul-Sep 2009	Oct-Dec 2009	Jan-Mar 2010	Apr-Jun 2010	Jul-Sep 2010
Triage 1 2008	100%	100%	97%	100%	99%	99%	100%	100%	100%
Triage 1 2010	100%	100%	97%	100%	99%	99%	100%	100%	100%
T1 difference	0%	0%	0%	0%	0%	0%	0%	0%	0%
Triage 2 2008	82%	84%	81%	79%	79%	84%	84%	84%	82%
Triage 2 2010	82%	84%	81%	79%	79%	84%	84%	84%	82%
T2 difference	0%	0%	0%	0%	0%	0%	0%	0%	0%
Triage 3 2008	67%	69%	69%	68%	66%	73%	73%	74%	69%
Triage 3 2010	67%	69%	69%	68%	66%	73%	73%	74%	69%
T3 difference	0%	0%	0%	0%	0%	0%	0%	0%	0%
Triage 4 2008	72%	75%	74%	72%	69%	75%	74%	75%	72%
Triage 4 2010	72%	75%	74%	72%	70%	75%	75%	76%	72%
T4 difference	0%	0%	0%	0%	+1%	0%	+1%	+1%	0%
Triage 5 2008	89%	91%	90%	88%	87%	89%	89%	89%	87%
Triage 5 2010	89%	91%	90%	89%	87%	90%	89%	89%	87%
T5 difference	0%	0%	0%	+1%	0%	+1%	0%	0%	0%

Summary of effect:

The net effect of changing the definition for triage performance had only a slight effect on the figures at the state level from the July to September 2008 quarter to the July to September 2010 quarter. There was no change measured for triage groups 1 and 2 at a NSW level and small changes of 1% for triage groups 3, 4 and 5 in some quarters. The effect was more noticeable at a hospital level but only for the three least urgent triage categories.

Importantly, while the figures reported for each hospital may be different from those we have reported in the previous quarterly report, the Bureau has determined that this change in method has had only a small effect on total measurement and does not affect the care that patients received. The new definition is also more in line with the national definition and method of calculation recommended by the Australian Institute for Health and Welfare.

Action:

The new definition is accepted by the Bureau and will be applied from *Hospital Quarterly, July to September 2010* report onwards.

Emergency admission performance (EAP)

2008 definition:

EAP is computed as the percentage of all admissions from the emergency department who were admitted to hospital within eight hours. The denominator is the count of all records that were an emergency admission (visit type 1, 3 or 8). The numerator is a count of emergency admission records (patients with a mode of separation = 1, 10 or 11) with a difference between treatment time and actual departure time of less than or equal to eight hours. Records with missing or invalid information in triage category, mode of separation, treatment time or actual departure time are excluded from both the numerator and denominator.

2010 definition:

EAP is computed as the percentage of all admissions from the emergency department who were admitted to hospital within eight hours. The denominator is the count of all records that were an emergency attendance (visit type 1 or 3) and were admitted to hospital. The numerator is a count of emergency attendance records who were admitted (patients with a mode of separation = 1, 2, 3, 10 or 11) and had a difference between arrival in the emergency department and actual departure time of less than or equal to eight hours. For the purposes of EAP, triage time is used for arrival time in the emergency department or, if triage time is missing, arrival time is used.

For both definitions, any records with missing or invalid information in, mode of separation, triage (or arrival) time or actual departure time are excluded from both the numerator and denominator.

The targert for NSW of 80% of patients admitted within 8 hours remains unchanged despite the definition being modified for the cohort and the time period under review.

Table 3: Comparison of the two definitions of emergency admission performance for July to September 2010 data, by hospital and area health service

	2008 definition	2010 definition	Difference
New South Wales			
Total **New South Wales**	66%	61%	-5%
Children's Hospital at Westmead			
Total **Children's Hospital at Westmead**	71%	65%	-6%
Greater Southern			
Goulburn Base Hospital	90%	87%	-3%
Griffith Base Hospital	90%	87%	-3%
Wagga Wagga Base Hospital	66%	65%	-1%
Total **Greater Southern**	72%	71%	-1%
Greater Western			
Bathurst Base Hospital	60%	57%	-3%
Broken Hill Base Hospital	87%	80%	-7%
Dubbo Base Hospital	65%	58%	-7%
Orange Base Hospital	71%	63%	-8%
Total **Greater Western**	87%	80%	-7%
Hunter New England			
Armidale and New England Hospital	96%	97%	1%
Belmont Hospital	86%	81%	-5%
Calvary Mater Newcastle	61%	47%	-14%
Cessnock District Hospital	90%	85%	-5%
Gunnedah District Hospital	98%	99%	1%
Inverell District Hospital	94%	97%	3%
John Hunter Hospital	69%	62%	-7%
Kurri Kurri District Hospital	94%	91%	-3%
Maitland Hospital	68%	64%	-4%
Manning Base Hospital	82%	70%	-12%
Moree District Hospital	100%	100%	0%
Muswellbrook District Hospital	91%	95%	4%
Narrabri District Hospital	99%	99%	0%
Singleton District Hospital	98%	98%	0%
Tamworth Base Hospital	78%	70%	-8%
Other Hunter New England	93%	94%	1%
Total **Hunter New England**	77%	71%	-6%

	2008 definition	2010 definition	Difference
North Coast			
Coffs Harbour Base Hospital	47%	38%	-9%
Grafton Base Hospital	82%	78%	-4%
Kempsey Hospital	86%	84%	-2%
Lismore Base Hospital	54%	49%	-5%
Murwillumbah District Hospital	91%	88%	-3%
Port Macquarie Base Hospital	60%	55%	-5%
The Tweed Hospital	64%	60%	-4%
Total **North Coast**	62%	58%	-4%
Northern Sydney Central Coast			
Gosford Hospital	68%	60%	-8%
Hornsby and Ku-Ring-Gai Hospital	73%	70%	-3%
Manly District Hospital	76%	73%	-3%
Mona Vale and District Hospital	68%	69%	1%
Royal North Shore Hospital	67%	67%	0%
Ryde Hospital	69%	63%	-6%
Wyong Hospital	59%	52%	-7%
Total **Northern Sydney Central Coast**	68%	64%	-4%
South Eastern Sydney Illawarra			
Bulli District Hospital	94%	90%	-4%
Milton and Ulladulla Hospital	68%	58%	-10%
Prince of Wales Hospital	70%	58%	-12%
Shellharbour Hospital	66%	56%	-10%
Shoalhaven and District Memorial Hospital	59%	53%	-6%
St George Hospital	61%	57%	-4%
St Vincent's Hospital, Darlinghurst	60%	54%	-6%
Sutherland Hospital	84%	74%	-10%
Sydney Children's Hospital	99%	100%	1%
Sydney Eye Hospital	95%	93%	-2%
Sydney Hospital	61%	58%	-3%
Wollongong Hospital	65%	59%	-6%
Total **South Eastern Sydney Illawarra**	100%	100%	0%
Sydney South West			
Bankstown / Lidcombe Hospital	66%	62%	-4%
Bowral and District Hospital	80%	77%	-3%
Camden Hospital	*	89%	*
Campbelltown Hospital	62%	59%	-3%
Canterbury Hospital	80%	64%	-16%
Concord Hospital	73%	66%	-7%
Fairfield Hospital	86%	71%	-15%
Liverpool Hospital	53%	50%	-3%
Royal Prince Alfred Hospital	65%	59%	-6%
Total **Sydney South West**	65%	60%	-5%

	2008 definition	2010 definition	Difference
Sydney West			
Auburn Hospital	69%	72%	3%
Blacktown Hospital	41%	37%	-4%
Blue Mountains District Anzac Memorial Hospital	95%	94%	-1%
Hawkesbury District Health Service	83%	82%	-1%
Lithgow Health Service	91%	88%	-3%
Mount Druitt Hospital	79%	68%	-11%
Nepean Hospital	53%	45%	-8%
Westmead Hospital (all units)	47%	42%	-5%
Total **Sydney West**	57%	52%	-5%

Table 4: Comparison of the two definitions of emergency admission performance for July to September 2010 data for NSW, by quarter

	Jul-Sep 2008	Oct-Dec 2008	Jan-Mar 2009	Apr-Jun 2009	Jul-Sep 2009	Oct-Dec 2009	Jan-Mar 2010	Apr-Jun 2010	Jul-Sep 2010
2008 definition	71%	77%	75%	73%	70%	76%	74%	72%	66%
2010 definition	66%	72%	70%	68%	65%	70%	68%	67%	61%
Difference	-5%	-5%	-5%	-5%	-5%	-6%	-6%	-5%	-5%

Summary of effect:

The net effect of changing the definition for EAP is a decrease at the state level of approximately six percentage points. The effect at a hospital level is more varied, ranging from a 16 percentage point decrease in reported values to a 1 percentage point increase.

EAP now represents a more complete measure of the total time a patient spent in the emergency department before being admitted and is more in line with the AIHW method of calculation.

Action:

The new definition has been accepted by the Bureau and will be applied from *Hospital Quarterly, July to September 2010* report onwards.

* Camden Hospital had no admissions when calculated using the 2008 definition and 19 using the new definition. All 19 admissions were either patients who died in the emergency department or were admitted but discharged before they left the emergency department.

About the Bureau

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

The Bureau's Board

- Professor Bruce Armstrong AM (Chair)
- Professor Jane Hall
- Mrs Liz Rummery AM
- Dr Don Weatherburn
- Ms Sue West
- Dr Diane Watson (Chief Executive)

The Bureau's 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 wellbeing of people in NSW.

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