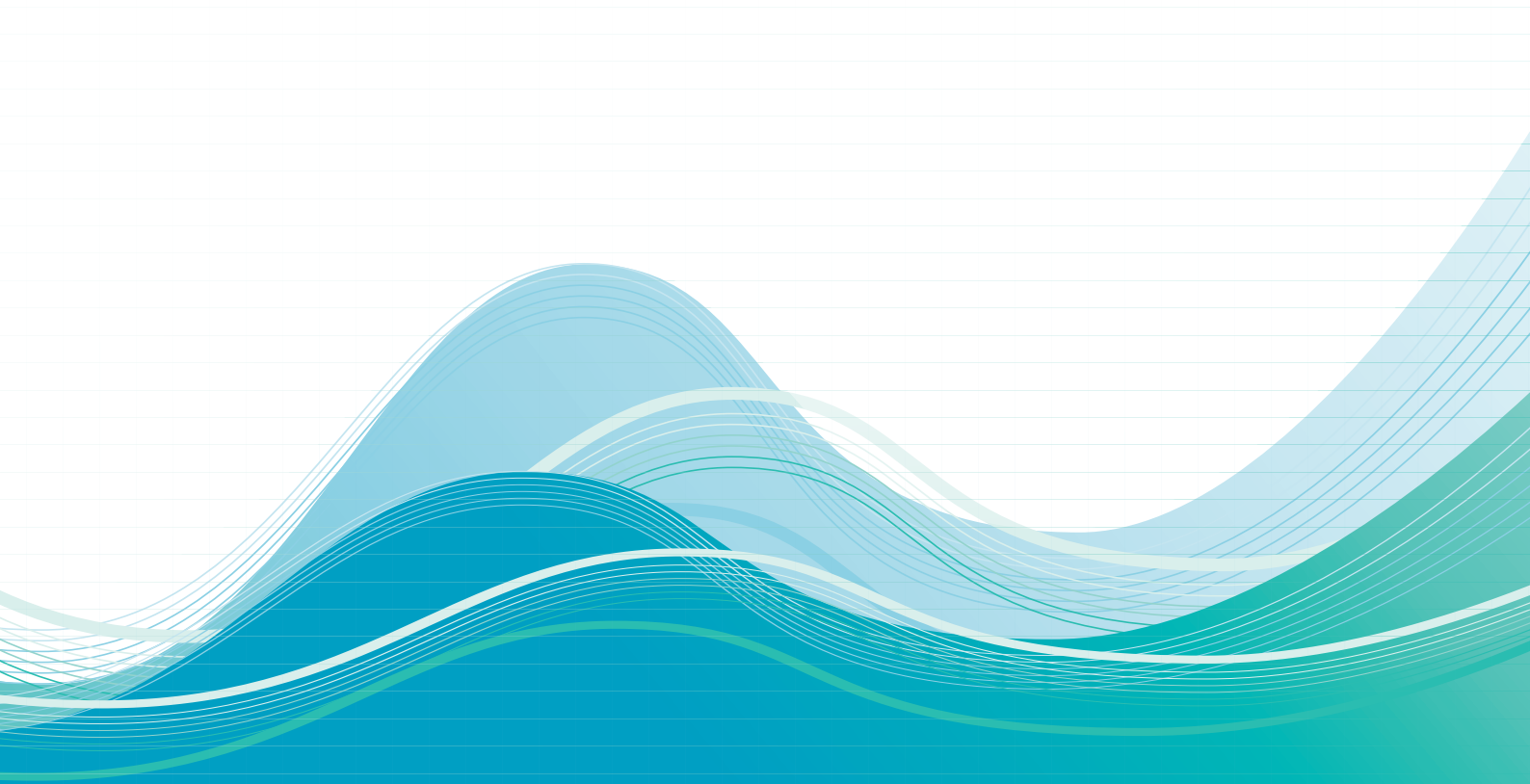


# Hospital Quarterly

Performance of NSW public hospitals  
July to September 2010

Volume 1, Issue 2



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# Additional documents

Available for download on the Bureau's website at [www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au)

1. **Data quality assessment:** information systems in NSW emergency departments
2. **Data quality assessment:** elective surgery information systems for patients of NSW public hospitals
3. **Technical supplement:** measures of emergency department activity and performance
4. **Technical supplement:** measures of elective surgery activity and performance
5. **Technical supplement:** measures of admitted patient activity

# Foreword

Looking at public hospital performance through a number of different lenses allows communities to gain better insights into their healthcare system.

The Bureau of Health Information's *Hospital Quarterly* report series aims to help with this process by providing timely, accurate and comparable information about the NSW public health system.

Our second issue of *Hospital Quarterly* covers the July to September 2010 quarter, providing the most recent available information on public hospitals to have passed through the Bureau's rigorous and independent analytical processes.

During the quarter, healthcare professionals in the NSW public hospital system admitted people for more than 415,000 episodes of care and more than half a million emergency department visits. Our second issue examines these figures, how they have changed over time, and how they compare across the state.

This issue has an additional focus on elective surgery, which has been identified by the Council of Australian Governments as an area of priority to reduce the number of Australians waiting longer than clinically recommended times for elective surgery.

As the Bureau continues to evolve, we will paint a larger picture of how the NSW public health system performs – but we need to put the information basics in place first.

If we think of the number and types of patients who receive care, and the length of time they spend waiting for that care as the basic 'information platform', we can use this to create a strong reporting foundation for the future.

Over time the Bureau will publish new information on dimensions of quality care and how our hospitals fit into that picture, creating a window on quality for the NSW community.

Commissioner Peter Garling SC, who led the 2008 Special Commission of Inquiry into Acute Care Services in NSW Public Hospitals, recommended a Bureau of Health Information be established to report on data relating to the safety and quality of patient care.

*"Information," he said, "is the basis for knowing where health care in hospitals is at, where it has to go, and when it has arrived."*

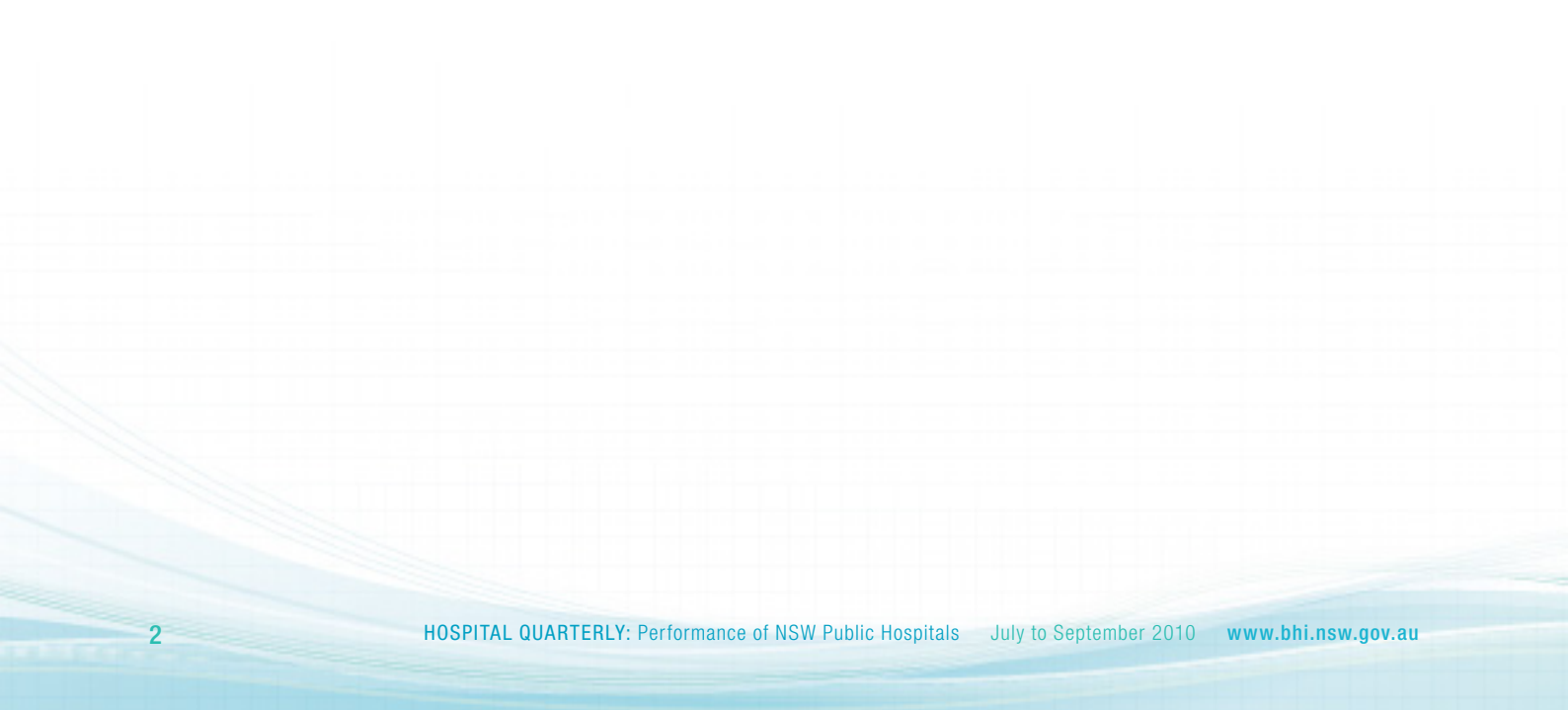
The Bureau is committed to this transparent provision of information – both at a state level and, more specifically, at the level of individual hospitals.



**Professor Bruce Armstrong AM**  
Chairman of the Board



**Dr Diane Watson**  
Chief Executive



# Summary

Patients, their families and the community should be able to access accurate and up-to-date information about the healthcare provided by NSW public hospitals. It is also important for healthcare workers to understand how patients access and receive hospital care, as this information is central to achieving a high-performing health system.

In this *Hospital Quarterly*, the Bureau of Health Information continues to chart how hospitals are performing, how use of hospitals is changing over time and how similar hospitals compare with each other. As we gather more information, the picture of how patients experience care in NSW public hospitals becomes clearer.

This issue of *Hospital Quarterly* places a special focus on elective, or planned, surgery. It includes information on the number of elective surgical procedures performed, how long patients wait for their surgery and whether they are treated within clinically recommended time frames. Data are provided at a state-wide level, area health service level and also for more than 80 hospitals. This more than doubles the number of hospitals previously reported for elective surgery performance.

This issue also includes performance information on emergency departments in more than 60 hospitals and profiles four time intervals:

- ambulance arrival to emergency department care
- waiting times for treatment
- time from arrival to admission
- time from arrival to discharge or transfer.

For the first time, we have charted emergency department attendances (by triage category) over a period of two years, allowing us to show seasonal fluctuations. This information is available at a state-wide level and for more than 60 emergency departments.

## What we found about admitted patient journeys

In the July to September 2010 quarter, there were 415,441 admitted patient episodes for care in NSW public hospitals – the highest number in any quarter over the two-year period profiled. This number represents an increase from the previous quarter and since the same quarter last year.

In July to September 2010, patients admitted for an acute episode stayed a total of 1,397,376 days in a hospital bed, which represents an increase from the previous quarter and since the same time last year. Patients admitted for an acute episode stayed on average 3.5 days.

More detail about admitted patient journeys by area health service and major public hospital can be found on [pages 12 to 14](#).

A glossary of terms used in this and other Bureau publications is available at [www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au)

## What we found about elective surgery

This issue of *Hospital Quarterly* shows that the total number of elective surgery procedures performed is at a two-year high, with the largest increase seen in non-urgent procedures.

The percentage of patients seen within the clinically recommended time has increased for semi-urgent and non-urgent procedures, and there has been a large decrease in the amount of time patients wait for non-urgent surgery. This appears to reverse a four-quarter trend of increasing wait times for these patients. Future Bureau reports will offer insight on whether or not this is the beginning of a new downward trend in waits for non-urgent surgery.

## Surgical procedures performed

In July to September 2010, there were 54,580 elective surgery procedures carried out in NSW public hospitals, 3% higher than the previous quarter and 7% higher than the same quarter last year.

The number of elective procedures in public hospitals has also increased in each urgency category compared to the same quarter last year: 14,122 patients in the highest priority category received surgery (category 1, up 1%); 17,025 patients in the semi-urgent category received surgery (category 2, up 10%); and 23,433 patients in the non-urgent category received surgery (category 3, up 7%).

The composition of patients receiving elective surgery has changed over time. Urgent surgery now makes up 26% of all elective procedures (compared to 41% five years ago), semi-urgent surgery has remained largely unchanged, and non-urgent surgery now represents 43% of all elective surgery procedures (up from 29% five years ago).

More detail about the number and composition of elective surgical procedures by area health service and public hospital is profiled on [pages 18 to 20](#).

### Learn more about elective surgery at your local hospital

More specific information on more than 80 NSW public hospitals that perform elective surgery is available in the *Performance profile: elective surgery, July to September 2010* available at the Bureau of Health Information website [www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au)

Information for more than 80 hospitals profiled includes:

- Number and types of patients receiving elective surgery
- On time performance by urgency category
- Waiting times
- Change over time.



## On time performance

Data for the July to September 2010 quarter show that more people requiring elective surgery are being seen on time and there has been a decrease in the amount of time patients wait for non-urgent procedures. Most elective surgery patients (91%) were admitted to hospital in the time frame recommended by their surgeon, higher than the previous quarter (87%) and similar to the same quarter last year (90%).

Patients in the highest urgency category for elective surgery (category 1) were most likely to be admitted within the recommended 30-day time frame (92%) and this percentage is similar to the same quarter last year. The median\* waiting time of category 1 patients was 10 days – the same as the July to September quarter last year.

The majority of patients waiting for semi-urgent procedures (90%) were admitted within the recommended 90-day time frame. This is higher than the same quarter last year (when the figure was 86%). The median waiting time for these patients was 48 days, similar to the preceding quarter (49 days) and the same period last year (46 days).

In July to September 2010, 91% of patients waiting for non-urgent procedures were admitted within the recommended 365-day time frame. This is higher than the preceding quarter (86%), similar to the same quarter in 2009 (92%) and lower than in 2008, when 96% were admitted (see Figure 4 on page 21). For these patients the median waiting time in the July to September 2010 quarter was 175 days, considerably less than the 205 days in the previous quarter but up

from the same period last year (135 days). More detail about elective surgery performance and waiting times by area health service and hospital can be found on pages 23 to 26.

The guidelines are as follows:

Elective surgery guidelines	
<b>Category 1</b> Urgent	Admission <b>within 30 days</b> desirable for a condition that has the potential to deteriorate quickly to the point that it may become an emergency
<b>Category 2</b> Semi-urgent	Admission <b>within 90 days</b> desirable for a condition which is not likely to deteriorate quickly or become an emergency
<b>Category 3</b> Non-urgent	Admission <b>within 365 days</b> acceptable for a condition which is unlikely to deteriorate quickly and which has little potential to become an emergency

### Further information on patients waiting for elective surgery

Information on the number of patients currently waiting for surgery is contained in the monthly reports released by the NSW Department of Health: *Current Waiting Times and Waiting Times Register by Specialty for NSW Hospitals* (available at [www.health.nsw.gov.au](http://www.health.nsw.gov.au))

\* This is the number of days it took for half of the patients who received elective surgery during the period to be admitted and receive their surgery. The other half took longer than the median to be admitted for surgery.

## What we found about emergency departments

During the July to September 2010 quarter, there were more than half a million attendances (507,955) at public hospital emergency departments across NSW. This is more than in the previous quarter, but lower than the 518,022 patients seen when the swine flu pandemic was at its peak in the July to September quarter last year. Of the total attendances for July to September 2010, 495,899 were considered 'emergency attendances'. The remaining 12,056 patients were planned or pre-arranged visits.

In July to September 2010, there were 117,076 admissions to hospital via the emergency department, which is 5% higher than the last quarter and 2% higher than the same quarter last year.

More detail about the journeys of patients through NSW emergency departments can be found on [pages 31 to 46](#).

### Arrivals by ambulance

Hospital targets for NSW stipulate that 90% of patients arriving by ambulance should be accepted into emergency department care within 30 minutes of arrival. In July to September 2010, 126,177 patients arrived at the department by ambulance (25% of all attendances). Among these patients 64% were accepted into the care of the emergency department within 30 minutes of the ambulance arriving at the hospital. This represents a decrease from the last quarter (68%) and the same quarter last year (68%). The target for NSW has not been met in the past two years.

More detail about patients being accepted into the care of emergency departments from an ambulance can be found on [pages 34 to 35 and 43 to 44](#).

## Waiting time to treatment in an emergency department

There are targets that specify how long patients should wait in public hospital emergency departments from the time they are first assessed (or triaged) until they start treatment – depending on the urgency of their condition.

The guidelines are as follows:

Emergency department guidelines	
Category 1	Immediately life threatening: <b>100% seen in 2 minutes</b>
Category 2	Imminently life threatening: <b>80% seen in 10 minutes</b>
Category 3	Potentially life threatening: <b>75% seen in 30 minutes</b>
Category 4	Potentially serious: <b>70% seen in 60 minutes</b>
Category 5	Less urgent: <b>70% seen in 120 minutes</b>

In July to September 2010, patients were seen within the recommended time frame for all categories, except triage category 3 where 69% were seen within the 30 minute target. This represents a decrease in the percentage of category 3 patients seen on time from the previous quarter (74%) but is higher than the same time last year (66%). The 75% target has not been met at a state wide level in the past two years. Some hospitals and area health services perform closer to the targets than others.

More detail about waiting times for treatment in emergency departments can be found on [pages 39 to 41](#).

This report includes a change in the methods used to calculate the time interval from triage to treatment in the emergency department. The change has occurred as part of the national health reform process being driven by the Council of Australian Governments, which advocates uniform national measures of emergency department performance. This change in method has had only a small impact on total measurement. Footnotes explaining these changes are found in the relevant figures and tables in this report. More information can be found in the *Technical supplement: measures of emergency department activity and performance*.

### Learn more about the performance of your local emergency department

Information on patient volume and waiting times in more than 60 emergency departments across NSW is available in the *Performance profile: emergency department care, July to September 2010* on the Bureau of Health Information website [www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au) and on page 48 of this report.

The information includes:

- Number and types of patients who receive treatment
- Triage performance and comparison over time
- Waiting times
- Time from treatment to admission or discharge.

## Time from arrival in the emergency department to departure

When doctors decide a patient in the emergency department needs to be admitted to hospital, the target is for 80% of patients to be admitted within eight hours of arrival. This is called emergency admission performance (EAP).

Under the national reform process mentioned earlier, governments across Australia have also agreed to a more uniform approach to measure and report on EAP.

The Bureau reports on EAP for NSW and each hospital using both the new uniform approach to measurement (time from arrival to admission) and the historic approach taken in NSW (time from treatment to admission).

Using the new measurement, the Bureau found that during the July to September 2010 quarter, 61% of patients were admitted in the eight-hour target time from arrival to admission. This level of performance is down from last quarter (67%) and from one year ago (65%).

Using the historic approach, 67% of patients were admitted within the eight-hour target time from treatment to admission in the July to September quarter 2010. This compares to 72% in the previous quarter and 70% one year ago.

The drop in emergency admission performance compared to the previous quarter has occurred across the state and in most individual hospitals.

More detail about emergency admission performance by emergency departments and area health services can be found on [pages 39 to 41](#).



# Chapter 1: Patients who spend one or more days in public hospitals

People can be admitted to hospital for a variety of reasons including medical care, surgery, procedures and childbirth. When a person is admitted to hospital, they begin what is called an episode of care, which covers a single type of care such as acute care, rehabilitation or palliative care. Sometimes, the medical needs of a person staying in hospital change so much that they can start a second or third episode during the same admission period.

Healthcare professionals monitor the number of episodes to better understand their local population's health needs and to allow planning for hospital beds, waiting lists and staffing requirements. The number of episodes varies depending on the season. These changes can have a significant effect on hospital planning and the care provided. For this reason, the Bureau has reported change since the last quarter, since one year ago and since two years ago.

## Number of admitted patient episodes

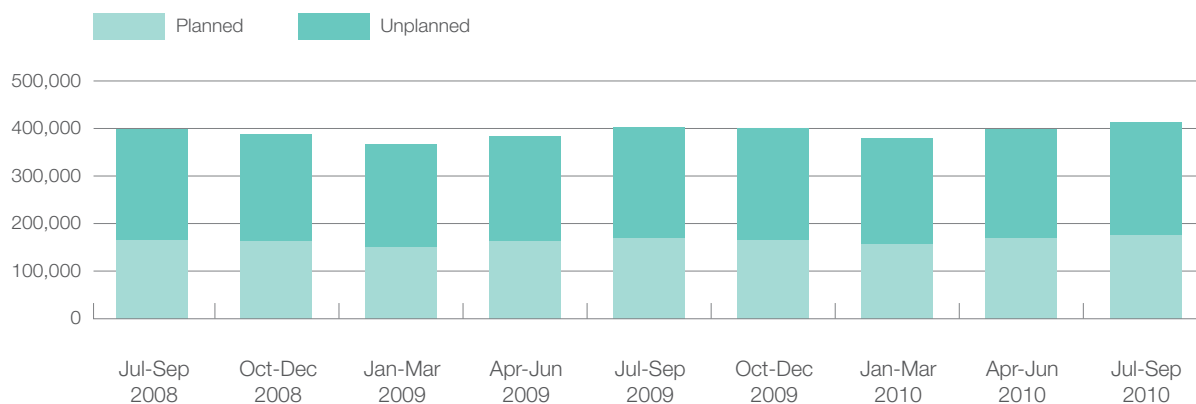
In the July to September 2010 quarter, there were 415,441 admitted patient episodes for care in NSW public hospitals - the highest number in any quarter over the two-year period profiled. Each year there is a seasonal peak in the number of admitted patient episodes during the July to September quarter. Within each year, the fewest admitted patient episodes occur during the January to March quarter. These seasonal patterns are illustrated in [Figure 1](#).

There has been a steady annual rise in the number of admitted patient episodes in NSW public hospitals:

- In July to September 2009, there were 404,362 admitted patient episodes indicating an increase of 3% in the past year
- In July to September 2008, there were 398,963 admitted patient episodes indicating an increase of 4% in the past two years.

Admitted patient episodes can be either 'planned' (admitted episodes that are arranged in advance so the hospital can plan for what care is needed and schedule any procedures) or 'unplanned / other' (admitted episodes that are emergency admissions or unplanned surgical patients).

Figure 1: Planned and unplanned admitted patient episodes in NSW public hospitals, July 2008 to September 2010



<b>Total episodes</b>	398,963	389,919	368,432	384,723	404,362	401,636	382,945	400,809	415,441
Planned	166,044	163,831	149,831	162,920	169,183	165,590	156,403	169,880	175,464
Unplanned / other	232,919	226,088	218,601	221,803	235,179	236,046	226,542	230,929	239,977
<b>Babies born</b>	18,094	17,742	17,423	17,227	17,835	17,662	17,393	17,928	18,041

**Note:** Only babies born in NSW public hospitals and multi-purpose services are included in this count.

**Note:** Numbers might differ slightly from those reported in previous *Hospital Quarterly* reports and in the NSW Department of Health's *Quarterly Hospital Performance Report* due to differences in when data were extracted. The facilities and episodes of care that contribute to episode numbers in NSW have changed for *Hospital Quarterly, July to September 2010* and subsequent reports. Additional detail on the effect of this can be found in the Bureau's *Technical supplement: measures of admitted patient activity*.

**Source:** Admitted Patient Data Collection. Health Information Exchange, NSW Health. Data extracted on 18 October 2010.

In the July to September 2010 quarter, there were 175,464 planned admitted patient episodes and 239,977 unplanned. Planned admitted episodes accounted for 42% of all admitted patient episodes (Figure 1).

An admission for childbirth is considered unplanned and approximately one in thirteen unplanned episodes was for childbirth. During July to September 2010, there were 18,041 babies born in NSW public hospitals, up from 17,835 in the same quarter one year ago.

## Number of acute patients

Planned and unplanned admissions may be either for acute care or subacute care (such as rehabilitation, palliative care or aged care).

When patients are admitted for 'acute care', this could be for medical care after a heart attack or with cancer, for a procedure such as cardiac catheterisation, or for surgery such as a hip replacement. Typically, the hospital care is short-term and immediate. All maternal and newborn admissions are also considered acute. Acute episodes are illustrated in Figure 2.



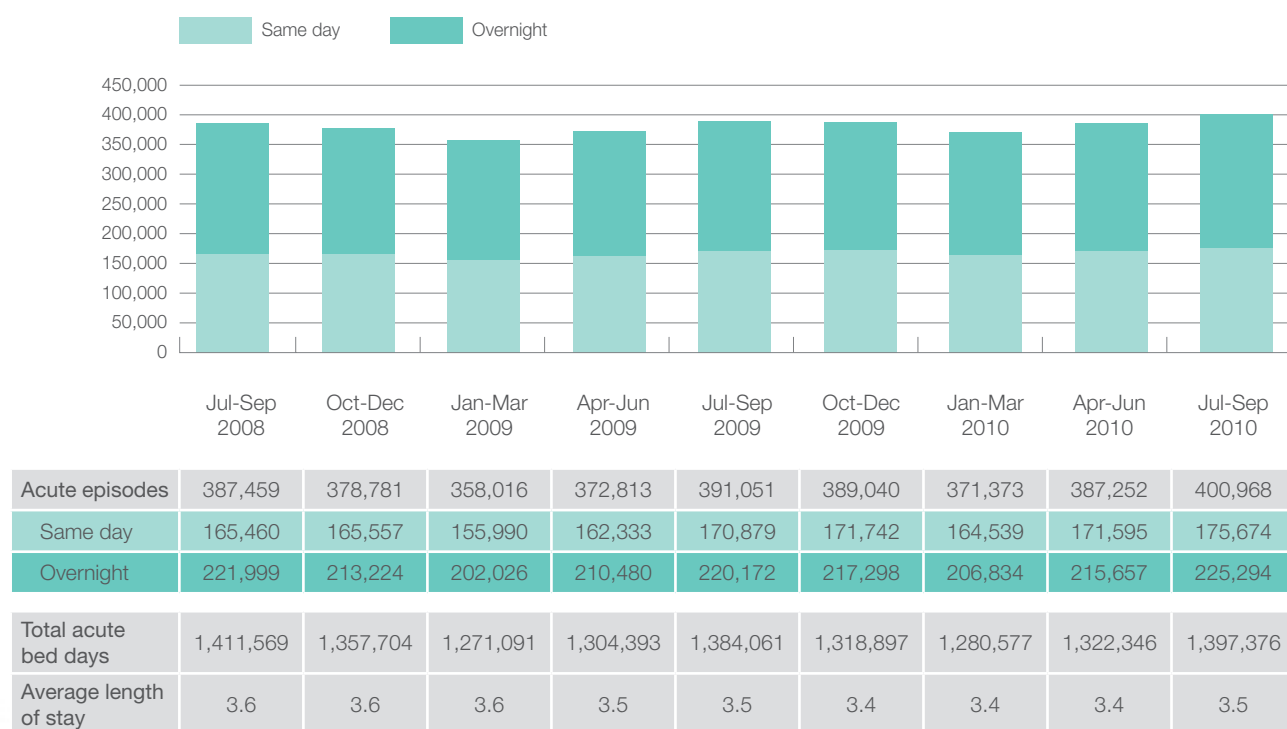
In the July to September 2010 quarter, there were 400,968 acute admitted patient episodes, up from 387,252 in the last quarter. By comparison:

- In July to September 2009, there were 391,051 acute admitted patient episodes indicating an increase of almost 3% in the past year
- In July to September 2008, there were 387,459 acute admitted patient episodes indicating an increase of just over 3% in the past two years.

Acute admitted patient episodes can be either 'same day' (admitted for a single day or part of a day to receive a test, surgery or other procedure) or 'overnight' (admitted for a stay of one or more nights in hospital).

In July to September 2010, there were 175,674 same day episodes (44% of acute admitted episodes) and 225,294 overnight episodes (56% of acute admitted patient episodes) as shown in [Figure 2](#).

Figure 2: Same day and overnight acute admitted patient episodes in NSW public hospitals, July 2008 to September 2010



Note: Numbers might differ slightly from those reported in previous *Hospital Quarterly* reports and in the NSW Department of Health's *Quarterly Hospital Performance Report* due to differences in when data were extracted.

Note: The facilities and episodes of care that contribute to episode numbers in NSW have changed for *Hospital Quarterly, July to September 2010* and subsequent reports. Additional detail on the effect of this can be found in the Bureau's *Technical supplement: measures of admitted patient activity*.

Source: Admitted Patient Data Collection. Health Information Exchange, NSW Health. Data extracted on 18 October 2010.

## Hospital bed use for acute patients

In the July to September 2010 quarter, patients admitted for an acute episode stayed a total of 1,397,376 days in a hospital bed, up from 1,322,346 in the last quarter. The average length of stay in hospital among acute patients (including same day patients) was 3.5 days (Figure 2).

By comparison:

- In July to September 2009, patients admitted for an acute episode stayed a total of 1,384,061 days indicating an increase of 1% in the past year. The average length of stay for acute patients was 3.5 days

- In July to September 2008, patients admitted for an acute episode stayed a total of 1,411,569 days indicating a decrease of 1% in the past two years. The average length of stay for acute patients was 3.6 days.

Admitted patient episode data at a state level includes all public hospitals in NSW but is presented individually for all principal referral hospitals and major acute hospitals, as well as for area health services, in Table 1. Information from smaller hospitals is presented for each area health service under an 'other' category.

Table 1: NSW admitted patient activity by hospital and area health service, July to September 2010

	All episodes			Acute episodes			
	Total episodes	Planned	Unplanned / other	Same day	Overnight	Total acute bed days	Average length of stay (days)
<b>Total New South Wales</b>	415,441	175,464	239,977	175,674	225,294	1,397,376	3.5
<b>Children's Hospital at Westmead</b>							
Total Children's Hospital at Westmead	7,551	4,178	3,373	3,438	4,113	24,943	3.3
<b>Greater Southern</b>							
Wagga Wagga Base Hospital	7,077	2,850	4,227	3,385	3,575	19,661	2.8
Other Greater Southern	19,870	6,347	13,523	8,380	10,180	48,878	2.6
<b>Total Greater Southern</b>	<b>26,947</b>	<b>9,197</b>	<b>17,750</b>	<b>11,765</b>	<b>13,755</b>	<b>68,539</b>	<b>2.7</b>
<b>Greater Western</b>							
Dubbo Base Hospital	5,085	2,348	2,737	2,282	2,784	13,720	2.7
Orange Base Hospital	5,099	2,447	2,652	2,419	2,616	12,610	2.5
Other Greater Western	12,674	4,353	8,321	5,300	6,940	40,444	3.3
<b>Total Greater Western</b>	<b>22,858</b>	<b>9,148</b>	<b>13,710</b>	<b>10,001</b>	<b>12,340</b>	<b>66,774</b>	<b>3.0</b>



### All episodes

### Acute episodes

	Total episodes	Planned	Unplanned / other	Same day	Overnight	Total acute bed days	Average length of stay (days)
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#### Hunter New England

Calvary Mater Newcastle	3,230	1,043	2,187	920	2,230	13,236	4.2
John Hunter Hospital	19,731	10,654	9,077	9,884	9,523	64,406	3.3
Maitland Hospital	3,827	889	2,938	744	3,003	15,433	4.1
Manning Base Hospital	4,583	2,269	2,314	2,195	2,307	13,701	3.0
Tamworth Base Hospital	5,488	2,600	2,888	2,386	2,989	17,337	3.2
Other Hunter New England	14,225	5,608	8,617	5,144	8,817	56,945	4.1
<b>Total Hunter New England</b>	<b>51,084</b>	<b>23,063</b>	<b>28,021</b>	<b>21,273</b>	<b>28,869</b>	<b>181,058</b>	<b>3.6</b>

#### Justice Health

<b>Total Justice Health</b>	<b>604</b>	<b>410</b>	<b>194</b>	<b>23</b>	<b>578</b>	<b>12,951</b>	<b>21.5</b>
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#### North Coast

Coffs Harbour Base Hospital	6,980	3,496	3,484	3,349	3,562	20,161	2.9
Lismore Base Hospital	6,552	3,206	3,346	2,874	3,670	22,499	3.4
Port Macquarie Base Hospital	4,929	2,128	2,801	1,889	3,019	16,871	3.4
The Tweed Hospital	8,092	3,244	4,848	3,592	4,496	21,858	2.7
Other North Coast	14,410	6,897	7,513	7,694	6,165	39,498	2.8
<b>Total North Coast</b>	<b>40,963</b>	<b>18,971</b>	<b>21,992</b>	<b>19,398</b>	<b>20,912</b>	<b>120,887</b>	<b>3.0</b>

#### Northern Sydney Central Coast

Gosford Hospital	11,732	4,967	6,765	4,625	6,862	41,264	3.6
Hornsby and Ku-Ring-Gai Hospital	4,214	1,341	2,873	1,019	3,054	17,384	4.3
Manly District Hospital	3,355	793	2,562	960	2,353	12,898	3.9
Mona Vale and District Hospital	4,006	1,532	2,474	1,849	1,951	11,088	2.9
Royal North Shore Hospital	13,409	5,387	8,022	4,830	8,193	54,862	4.2
Ryde Hospital	2,825	758	2,067	981	1,751	11,679	4.3
Wyong Hospital	6,580	2,950	3,630	3,157	3,217	23,511	3.7
Other Northern Sydney Central Coast	2,690	1,100	1,590	443	1,331	18,998	10.7
<b>Total Northern Sydney Central Coast</b>	<b>48,811</b>	<b>18,828</b>	<b>29,983</b>	<b>17,864</b>	<b>28,712</b>	<b>191,684</b>	<b>4.1</b>

#### South Eastern Sydney Illawarra

Prince of Wales Hospital	10,611	5,926	4,685	4,908	5,485	42,805	4.1
Royal Hospital for Women	3,833	654	3,179	1,127	2,705	13,261	3.5
Shoalhaven and District Memorial Hospital	5,618	2,529	3,089	2,887	2,656	14,611	2.6
St George Hospital	13,753	5,925	7,828	5,393	7,845	47,735	3.6
St Vincent's Hospital, Darlinghurst	9,657	5,169	4,488	5,395	4,262	33,446	3.5
Sutherland Hospital	6,521	2,374	4,147	2,055	3,922	22,036	3.7
Sydney Children's Hospital	4,233	2,093	2,140	1,966	2,251	11,846	2.8
Sydney / Sydney Eye Hospital	2,801	1,520	1,281	1,459	1,332	6,253	2.2
Wollongong Hospital	12,077	3,945	8,132	5,143	6,907	45,758	3.8
Other South Eastern Sydney Illawarra	8,648	3,409	5,239	2,928	2,490	17,349	3.2
<b>Total South Eastern Sydney Illawarra</b>	<b>77,752</b>	<b>33,544</b>	<b>44,208</b>	<b>33,261</b>	<b>39,855</b>	<b>255,100</b>	<b>3.5</b>

All episodes			Acute episodes			
Total episodes	Planned	Unplanned / other	Same day	Overnight	Total acute bed days	Average length of stay (days)

Sydney South West							
Bankstown / Lidcombe Hospital	8,938	3,093	5,845	3,227	5,499	33,332	3.8
Campbelltown Hospital	7,991	2,052	5,939	2,023	5,960	31,392	3.9
Canterbury Hospital	4,544	1,220	3,324	1,200	3,202	14,195	3.2
Concord Hospital	12,641	8,224	4,417	7,263	5,069	49,037	4.0
Fairfield Hospital	4,597	1,220	3,377	1,040	3,375	14,247	3.2
Liverpool Hospital	21,949	10,929	11,020	12,275	9,269	64,530	3.0
Royal Prince Alfred Hospital	17,697	8,234	9,463	7,678	10,000	70,211	4.0
Other Sydney South West	5,907	1,912	3,995	1,538	3,109	15,848	3.4
<b>Total Sydney South West</b>	<b>84,264</b>	<b>36,884</b>	<b>47,380</b>	<b>36,244</b>	<b>45,483</b>	<b>292,792</b>	<b>3.6</b>

Sydney West							
Auburn Hospital	4,827	1,133	3,694	2,172	2,569	10,668	2.3
Blacktown Hospital	6,661	1,428	5,233	1,418	5,227	30,725	4.6
Mount Druitt Hospital	3,146	1,079	2,067	956	1,966	5,819	2.0
Nepean Hospital	13,999	4,735	9,264	5,297	8,504	44,257	3.2
Westmead Hospital (all units)	21,942	11,075	10,867	11,411	9,952	69,286	3.2
Other Sydney West	4,032	1,791	2,241	1,153	2,459	21,893	6.1
<b>Total Sydney West</b>	<b>54,607</b>	<b>21,241</b>	<b>33,366</b>	<b>22,407</b>	<b>30,677</b>	<b>182,648</b>	<b>3.4</b>

Source: Admitted Patient Data Collection. Health Information Exchange, NSW Health. Data extracted on 18 October 2010.

## Chapter 2: Elective surgery

Planned or elective surgery is surgery a patient's doctor considers necessary but that can be delayed by at least 24 hours. In contrast, emergency surgery is advised within 24 hours.

Because elective operations and procedures need to be planned in advance, people requiring these procedures wait for care. During this period, people are typically said to be on a waiting list, although the booking system is more complex than a simple list.

People on the booking system should be admitted for surgery within the maximum time (in days) recommended by their surgeon. A surgeon assigns patients to one of three urgency categories. These categories and the recommended waiting times are:

<b>Category 1</b> Urgent	Admission <b>within 30 days</b> desirable for a condition that has the potential to deteriorate quickly to the point that it may become an emergency
<b>Category 2</b> Semi-urgent	Admission <b>within 90 days</b> desirable for a condition which is not likely to deteriorate quickly or become an emergency
<b>Category 3</b> Non-urgent	Admission <b>within 365 days</b> acceptable for a condition which is unlikely to deteriorate quickly and which has little potential to become an emergency

NSW Health maintains a list of all patients referred for elective surgery in NSW, known as the Waiting List Collection On-line System (WLCOS). This system is used to manage the admissions information of all patients referred for elective surgery in NSW public hospitals – including private patients treated in public hospitals. All surgical data presented in this report is sourced from WLCOS.

### Number of elective surgery procedures performed

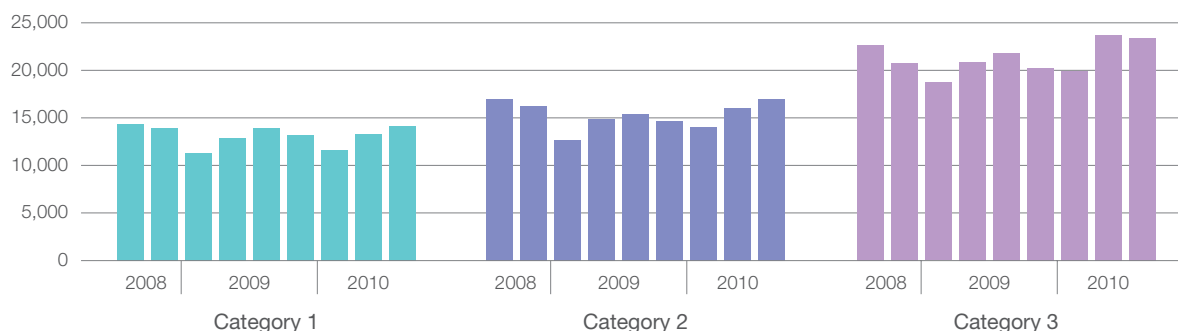
In July to September 2010, WLCOS recorded 54,580 surgical procedures completed in NSW, up 3% compared to the 53,064 conducted in the previous quarter ([Table 2](#)):

- In July to September 2009, 51,148 procedures were performed indicating an increase of 7% in the past year
- In July to September 2008, 54,078 procedures were performed indicating an increase of 1% in the past two years.

The number of surgical procedures has also increased across all urgency categories since the same quarter last year ([Table 2](#)):

- There were 14,122 procedures completed for the urgent category (category 1), compared to 13,918 last year (up 1%). Category 1 procedures made up 26% of all elective surgery in WLCOS
- In the semi-urgent category (category 2), there were 17,025 procedures completed, up from 15,413 last year (up 10%). Category 2 procedures made up 31% of all elective surgery procedures in WLCOS
- There were 23,433 procedures completed for the non-urgent category (category 3), up from 21,817 last year (up 7%). Category 3 procedures made up 43% of all elective surgery procedures in WLCOS.

Table 2: Number of elective surgery procedures conducted, by urgency category, July 2008 to September 2010



	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
All categories	54,078	51,032	42,750	48,727	51,148	48,136	45,603	53,064	54,580
Category 1	14,362	13,966	11,300	12,914	13,918	13,188	11,621	13,276	14,122
Category 2	17,028	16,250	12,721	14,890	15,413	14,669	14,016	16,060	17,025
Category 3	22,688	20,816	18,729	20,923	21,817	20,277	19,966	23,728	23,433

Note: Numbers might differ slightly from those reported in previous *Hospital Quarterly* reports and in the NSW Department of Health's *Quarterly Hospital Performance Report* due to differences in when data were extracted.

Source: Waiting List Collection On-line System, NSW Health. Data extracted for July to September 2010 quarter on 13 October 2010. Data extracted for all previous quarters on 30 September 2010.

*Hospital Quarterly* reports on the activity and performance of hospitals that have provided elective surgery. Information about patients who are still on the waiting list is published by the NSW Department of Health and can be found at [www.health.nsw.gov.au/reports/reports.asp](http://www.health.nsw.gov.au/reports/reports.asp)

For NSW, the composition of urgency categories has changed over the past five years (Figure 3b). Looking at the number of operations completed in August of each year (the middle month of the quarter covered by this report):

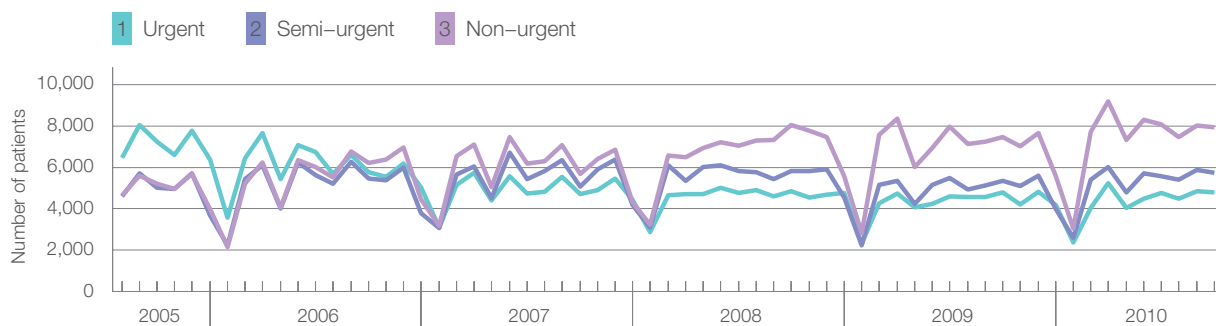
- The number of urgent (category 1) surgical procedures has decreased from 8,060 to 4,858 (down 40%) over five years
- The number of semi-urgent (category 2) surgical procedures is largely unchanged; there were 5,713 in August 2005 compared to 5,869 in August 2010

There is a strong seasonal effect on elective surgery activity in NSW each year (Figure 3a). The number of completed elective surgery procedures falls sharply across all surgical categories in December and, to a greater extent, January.

- The number of non-urgent surgical procedures (category 3) has increased from 5,602 to 8,033 (up 43%) over five years.

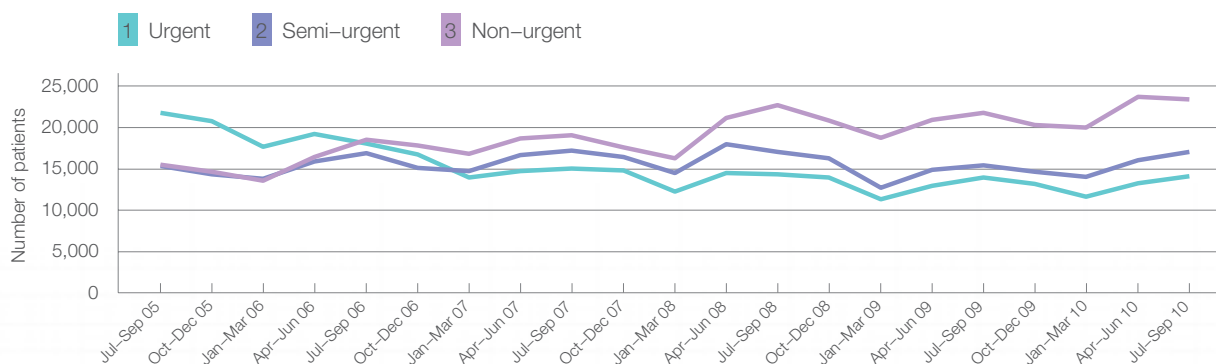
The net effect of these changes over five years is a shift in the composition of surgical procedures by urgency category. Category 1 surgery numbers have decreased from making up 41% of all surgical procedures to 26% whereas category 3 surgery numbers have increased from 29% of all surgical procedures to 43 percent.

Figure 3a: Patients who received elective surgery, by urgency category, by month, July 2005 to September 2010



Source: Waiting List Collection On-line System, NSW Health. Data extracted on 13 October 2010.

Figure 3b: Patients who received elective surgery, by urgency category, by quarter, July 2005 to September 2010



Source: Waiting List Collection On-line System, NSW Health. Data extracted on 13 October 2010.

**Table 3** summarises elective surgery activity for all public hospitals in NSW. The number of surgical procedures is reported by urgency category and for the sum of all urgency categories. Data is presented by area health service for all principal referral, paediatric specialist, ungrouped acute / tertiary referral,

major metropolitan, major non-metropolitan and district groups 1 and 2 hospitals. These hospitals account for 98% of all elective surgery recorded as complete in WLCOS. Surgery information from smaller hospitals is presented for each area health service under the 'other' category.

**Table 3: NSW elective surgery activity, by hospital and area health service, July to September 2010**

	Number of elective surgical procedures			
	All categories	Category 1	Category 2	Category 3
<b>New South Wales</b>	54,580	14,122	17,025	23,433
<b>Children's Hospital at Westmead</b>				
Total Children's Hospital at Westmead	1,735	451	530	754
<b>Greater Southern</b>				
Bateman's Bay District Hospital	171	5	32	134
Bega District Hospital	252	93	42	117
Cooma Health Service	68	9	24	35
Deniliquin Health Service	77	18	32	27
Goulburn Base Hospital	430	124	92	214
Griffith Base Hospital	252	59	73	120
Moruya District Hospital	160	47	41	72
Pambula District Hospital	24	10	1	13
Queanbeyan Health Service	203	10	99	94
Tumut Health Service	68	18	23	27
Wagga Wagga Base Hospital	1,156	219	377	560
Young Health Service	68	14	26	28
Other Greater Southern	121	21	54	46
<b>Total Greater Southern</b>	<b>3,050</b>	<b>647</b>	<b>916</b>	<b>1,487</b>
<b>Greater Western</b>				
Bathurst Base Hospital	389	119	120	150
Broken Hill Base Hospital	280	70	119	91
Cowra District Hospital	114	13	50	51
Dubbo Base Hospital	775	116	241	418
Forbes District Hospital	96	7	29	60
Mudgee District Hospital	120	21	31	68
Orange Base Hospital	858	140	312	406
Parkes District Hospital	55	8	21	26
Other Greater Western	29	1	8	20
<b>Total Greater Western</b>	<b>2,716</b>	<b>495</b>	<b>931</b>	<b>1,290</b>

## Number of elective surgical procedures

	All categories	Category 1	Category 2	Category 3
<b>Hunter New England</b>				
Armidale and New England Hospital	328	50	126	152
Belmont Hospital	630	140	209	281
Calvary Mater Newcastle	333	179	107	47
Cessnock District Hospital	301	17	187	97
Gunnedah District Hospital	65	9	17	39
Inverell District Hospital	61	10	23	28
John Hunter Hospital	2,196	779	681	736
Kurri Kurri District Hospital	397	53	111	233
Maitland Hospital	683	158	250	275
Manning Base Hospital	698	109	169	420
Moree District Hospital	95	21	26	48
Muswellbrook District Hospital	140	5	72	63
Narrabri District Hospital	60	27	25	8
Singleton District Hospital	147	20	38	89
Tamworth Base Hospital	876	153	336	387
Other Hunter New England	165	12	69	84
<b>Total Hunter New England</b>	<b>7,175</b>	<b>1,742</b>	<b>2,446</b>	<b>2,987</b>
<b>North Coast</b>				
Ballina District Hospital	179	36	81	62
Casino and District Memorial Hospital	244	29	98	117
Coffs Harbour Base Hospital	1,069	250	280	539
Grafton Base Hospital	413	107	131	175
Kempsey Hospital	230	5	24	201
Lismore Base Hospital	1,178	383	380	415
Macksville District Hospital	112	11	13	88
Macleay District Hospital	67	25	22	20
Murwillumbah District Hospital	447	70	123	254
Port Macquarie Base Hospital	740	223	226	291
The Tweed Hospital	847	252	229	366
Other North Coast	243	28	77	138
<b>Total North Coast</b>	<b>5,769</b>	<b>1,419</b>	<b>1,684</b>	<b>2,666</b>
<b>Northern Sydney Central Coast</b>				
Gosford Hospital	1,533	334	527	672
Hornsby and Ku-Ring-Gai Hospital	655	123	179	353
Manly District Hospital	319	76	135	108
Mona Vale and District Hospital	442	94	79	269
Royal North Shore Hospital	1,614	599	500	515
Ryde Hospital	393	51	174	168
Wyong Hospital	892	127	365	400
<b>Total Northern Sydney Central Coast</b>	<b>5,848</b>	<b>1,404</b>	<b>1,959</b>	<b>2,485</b>



## Number of elective surgical procedures

All categories	Category 1	Category 2	Category 3
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South Eastern Sydney Illawarra				
Bulli District Hospital	116	21	20	75
Milton and Ulladulla Hospital	33	11	10	12
Prince of Wales Hospital	1,391	389	594	408
Royal Hospital for Women	608	275	216	117
Shellharbour Hospital	803	56	181	566
Shoalhaven and District Memorial Hospital	853	171	190	492
St George Hospital	1,021	460	310	251
St Vincent's Hospital, Darlinghurst	1,019	472	247	300
Sutherland Hospital	767	209	266	292
Sydney Children's Hospital	931	179	399	353
Sydney / Sydney Eye Hospital	1,178	206	338	634
Wollongong Hospital	1,263	446	293	524
<b>Total South Eastern Sydney Illawarra</b>	<b>9,983</b>	<b>2,895</b>	<b>3,064</b>	<b>4,024</b>

Sydney South West				
Bankstown / Lidcombe Hospital	1,497	263	565	669
Bowral and District Hospital	339	47	95	197
Campbelltown Hospital	1,042	106	337	599
Canterbury Hospital	683	89	311	283
Concord Hospital	2,163	482	556	1,125
Fairfield Hospital	674	92	131	451
Liverpool Hospital	1,860	685	477	698
Royal Prince Alfred Hospital	3,062	1,292	1,075	695
RPAH Institute of Rheumatology & Orthopaedics	418	47	56	315
<b>Total Sydney South West</b>	<b>11,738</b>	<b>3,103</b>	<b>3,603</b>	<b>5,032</b>

Sydney West				
Auburn Hospital	689	128	234	327
Blacktown Hospital	839	205	294	340
Blue Mountains District Anzac Memorial Hospital	77	8	19	50
Lithgow Health Service	204	17	71	116
Mount Druitt Hospital	503	58	191	254
Nepean Hospital	1,610	471	340	799
Westmead Hospital (all units)	2,057	982	615	460
Other Sydney West	587	97	128	362
<b>Total Sydney West</b>	<b>6,566</b>	<b>1,966</b>	<b>1,892</b>	<b>2,708</b>

Source: Waiting List Collection On-line System, NSW Health. Data extracted on 13 October 2010.

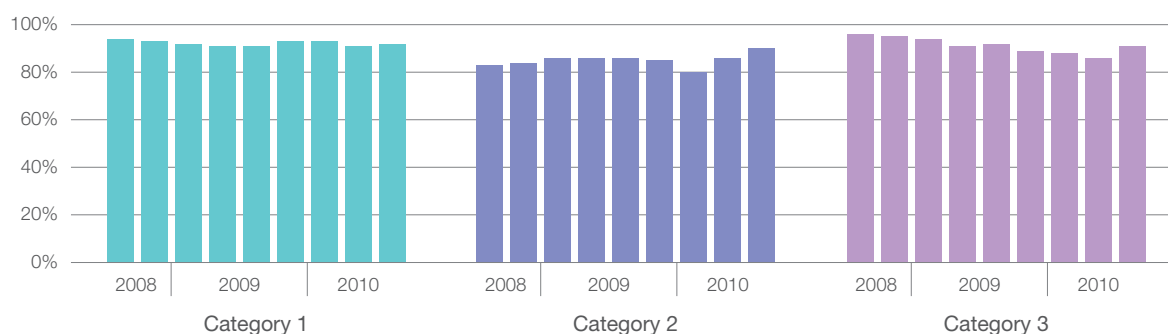


Information about the number of surgery procedures performed and how this has changed over the past five years is provided for more than 80 NSW hospitals in *Performance profiles: elective surgery in NSW public hospitals, July to September 2010*, at [www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au) and on page 184 of this report.

## Patients admitted on time for their elective surgery

In July to September 2010, 91% of patients in all urgency categories who were admitted to a public hospital and received elective surgery in NSW were admitted within the time frame recommended by their surgeon (Figure 4). This proportion has increased since the preceding quarter (87%) and is comparable to the quarters for July to September 2009 (90%) and July to September 2008 (92%).

Figure 4: Percentage of elective surgery patients treated within recommended waiting time, by urgency category, July 2008 to September 2010



	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
All categories	92%	91%	91%	90%	90%	89%	87%	87%	91%
Category 1	94%	93%	92%	91%	91%	93%	93%	91%	92%
Category 2	83%	84%	86%	86%	86%	85%	80%	86%	90%
Category 3	96%	95%	94%	91%	92%	89%	88%	86%	91%

**Note:** Patients treated on time refers to the percentage of patients admitted for elective surgery in the time frame recommended by their surgeon.

**Note:** Percentages might differ slightly from those reported in previous *Hospital Quarterly* reports and in the NSW Department of Health's *Quarterly Hospital Performance Report* due to differences in when data were extracted.

**Source:** Waiting List Collection On-line System, NSW Health. Data extracted for July to September 2010 quarter on 13 October 2010. Data extracted for all previous quarters on 30 September 2010.

## Wait times for elective surgery

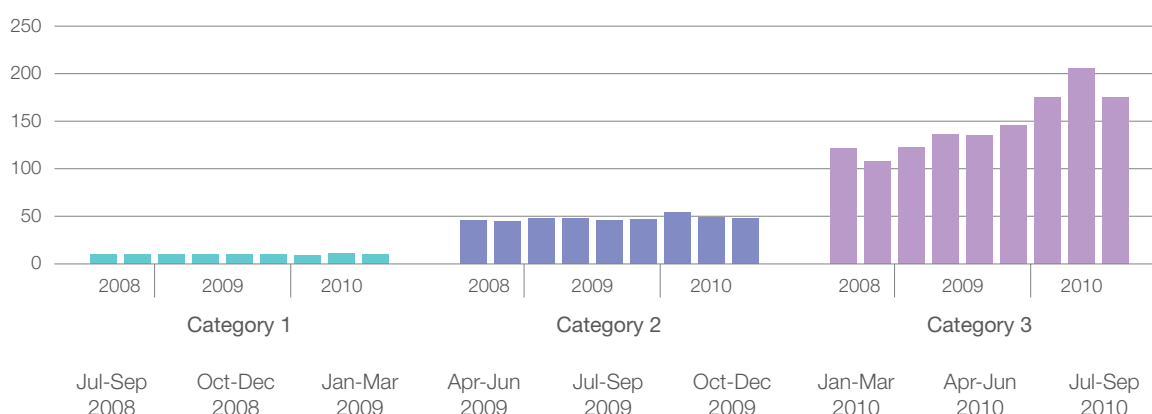
### Urgent surgery

Patients from the highest priority category (category 1) were most likely to be admitted within the recommended timeframe in the July to September 2010 quarter, with 92% admitted within 30 days (Figure 4). This percentage is similar to the preceding quarter (91%) and to the July to September quarter in 2009 (91%) and 2008 (94%). The median\* waiting time for category 1 patients was 10 days (Figure 5). Again, this is similar to the preceding quarter (11 days) and the same as the July to September quarter in 2008 and 2009 (each 10 days).

### Semi-urgent surgery

In July to September 2010, 90% of semi-urgent (category 2) patients were admitted within the recommended 90-day time frame. This percentage is higher than in the preceding quarter, the July to September 2009 quarter (86%), and considerably higher when compared with July to September 2008 (83%). The median waiting time of category 2 patients was 48 days, which is similar to the preceding quarter (49 days), and the July to September quarters in 2008 and 2009 (46 days).

Figure 5: NSW elective surgery median waiting time (days), by urgency category, July 2008 to September 2010



Category 1	10	10	10	10	10	10	9	11	10
Category 2	46	45	48	48	46	47	54	49	48
Category 3	121	108	122	136	135	146	175	205	175

**Note:** Median waiting time is the number of days it took for half of the patients who received elective surgery during the period to be admitted and receive their surgery. The other half took longer than the median to be admitted for surgery.

**Note:** Percentages might differ slightly from those reported in previous *Hospital Quarterly* reports and in the NSW Department of Health's *Quarterly Hospital Performance Report* due to differences in when data were extracted.

**Source:** Waiting List Collection On-line System, NSW Health. Data extracted for July to September 2010 quarter on 13 October 2010. Data extracted for all previous quarters on 30 September 2010.

\* This is the number of days it took for half of the patients who received elective surgery during the period to be admitted and receive their surgery. The other half took longer than the median to be admitted for surgery.

## Non-urgent surgery

In July to September 2010, 91% of non-urgent (category 3) patients were admitted within the recommended 365-day time frame. This percentage is higher than the preceding quarter (86%), similar to the July to September 2009 quarter (92%), and lower than July to September 2008 (96%). The median waiting time of category 3 patients was 175 days, which is considerably lower than the preceding quarter (205 days), but up from July to September 2009 (135 days) and July to September 2008 (121 days).

## Proposed elective surgery targets

Under the national health reform process, new elective surgery waiting time targets have been set for hospitals. By December 2014, 95% of urgency category 1 and 2 patients should be

treated within the clinically recommended period and by December 2015, this target will also apply to category 3 patients.

Table 4 presents waiting time data for all public hospitals conducting elective surgery in NSW. The percentage of patients treated within the clinically recommended time frame and the median waiting time in days are presented by urgency category for all principal referral, paediatric specialist, ungrouped acute / tertiary referral, major metropolitan, major non-metropolitan and district groups 1 and 2 hospitals.

The information is shown for NSW as a whole and grouped by area health service. Surgery information from smaller hospitals is presented for each area health service under the 'other' category.

Table 4: NSW elective surgery performance, by hospital and area health service, July to September 2010

	Percentage of patients treated on time				Median waiting time (days)		
	All categories	Category 1	Category 2	Category 3	Category 1	Category 2	Category 3
<b>New South Wales</b>	91%	92%	90%	91%	10	48	175
<b>Children's Hospital at Westmead</b>							
Total Children's Hospital at Westmead*	91%	97%	83%	94%	5	47	60
<b>Greater Southern</b>							
Bateman's Bay District Hospital	99%	100%	97%	99%	26	49	337
Bega District Hospital	90%	90%	95%	87%	22	74	329
Cooma Health Service	100%	100%	100%	100%	17	54	111
Deniliquin Health Service	92%	100%	84%	96%	14	80	242
Goulburn Base Hospital	97%	98%	99%	95%	14	35	198
Griffith Base Hospital*	86%	64%	88%	95%	21	63	324
Moruya District Hospital	99%	98%	100%	100%	8	28	96
Pambula District Hospital	92%	100%	100%	85%	8	57	285
Queanbeyan Health Service	100%	100%	100%	100%	17	62	206
Tumut Health Service	75%	67%	61%	93%	14	70	42
Wagga Wagga Base Hospital	81%	78%	84%	81%	21	56	324

**Percentage of patients treated on time**

**Median waiting time (days)**

	All categories	Category 1	Category 2	Category 3	Category 1	Category 2	Category 3
Young Health Service	85%	57%	85%	100%	28	71	49
Other Greater Southern	98%	90%	100%	100%	13	29	78
<b>Total Greater Southern</b>	<b>89%</b>	<b>85%</b>	<b>90%</b>	<b>90%</b>	<b>17</b>	<b>55</b>	<b>291</b>

**Greater Western**

Bathurst Base Hospital*	93%	94%	84%	99%	11	51	216
Broken Hill Base Hospital	92%	99%	83%	98%	14	61	218
Cowra District Hospital	99%	100%	98%	100%	7	37	56
Dubbo Base Hospital*	96%	99%	97%	95%	8	22	86
Forbes District Hospital	100%	100%	100%	100%	19	28	279
Mudgee District Hospital	93%	100%	84%	96%	21	57	320
Orange Base Hospital*	86%	93%	90%	81%	8	62	350
Parkes District Hospital	98%	100%	95%	100%	3	54	21
Other Greater Western	100%	100%	100%	100%	1	23	222
<b>Total Greater Western</b>	<b>92%</b>	<b>96%</b>	<b>91%</b>	<b>92%</b>	<b>10</b>	<b>48</b>	<b>229</b>

**Hunter New England**

Armidale and New England Hospital	85%	86%	85%	86%	21	67	317
Belmont Hospital	93%	90%	90%	96%	20	53	247
Calvary Mater Newcastle	85%	78%	91%	100%	17	57	159
Cessnock District Hospital	100%	100%	99%	100%	10	13	40
Gunnedah District Hospital	100%	100%	100%	100%	8	36	51
Inverell District Hospital	100%	100%	100%	100%	13	49	191
John Hunter Hospital	88%	89%	88%	85%	11	47	209
Kurri Kurri District Hospital	84%	91%	67%	91%	10	78	252
Maitland Hospital	89%	82%	88%	92%	17	56	154
Manning Base Hospital	87%	92%	81%	89%	20	66	266
Moree District Hospital	100%	100%	100%	100%	6	29	66
Muswellbrook District Hospital	100%	100%	100%	100%	1	12	19
Narrabri District Hospital	100%	100%	100%	100%	6	18	128
Singleton District Hospital	100%	100%	100%	100%	7	20	26
Tamworth Base Hospital	94%	91%	90%	99%	13	50	168
Other Hunter New England	99%	83%	100%	100%	17	34	92
<b>Total Hunter New England</b>	<b>90%</b>	<b>88%</b>	<b>89%</b>	<b>92%</b>	<b>13</b>	<b>45</b>	<b>184</b>

**North Coast**

Ballina District Hospital	100%	100%	100%	100%	10	39	86
Casino and District Memorial Hospital	98%	97%	97%	99%	8	35	77
Coffs Harbour Base Hospital	71%	83%	66%	68%	18	81	354
Grafton Base Hospital	93%	98%	94%	89%	10	44	283
Kempsey Hospital	99%	100%	92%	100%	27	48	125
Lismore Base Hospital	90%	96%	84%	90%	10	54	280
Macksville District Hospital	94%	82%	77%	98%	24	54	304

**Percentage of patients treated on time**

**Median waiting time (days)**

	All categories	Category 1	Category 2	Category 3	Category 1	Category 2	Category 3
Maclean District Hospital	99%	96%	100%	100%	13	43	26
Murwillumbah District Hospital*	89%	73%	89%	94%	22	62	304
Port Macquarie Base Hospital*	90%	92%	87%	90%	15	62	224
The Tweed Hospital*	89%	83%	85%	95%	17	55	165
Other North Coast	88%	50%	94%	93%	29	66	134
<b>Total North Coast</b>	<b>88%</b>	<b>89%</b>	<b>85%</b>	<b>88%</b>	<b>14</b>	<b>58</b>	<b>253</b>
<b>Northern Sydney Central Coast</b>							
Gosford Hospital*	91%	99%	91%	87%	15	57	280
Hornsby and Ku-Ring-Gai Hospital*	98%	98%	99%	97%	6	27	89
Manly District Hospital	98%	100%	96%	99%	6	33	62
Mona Vale and District Hospital	98%	100%	99%	97%	4	15	30
Royal North Shore Hospital	97%	96%	95%	99%	6	46	118
Ryde Hospital	98%	100%	99%	98%	12	35	146
Wyong Hospital	96%	98%	95%	96%	12	45	232
<b>Total Northern Sydney Central Coast</b>	<b>95%</b>	<b>98%</b>	<b>95%</b>	<b>95%</b>	<b>8</b>	<b>43</b>	<b>136</b>
<b>South Eastern Sydney Illawarra</b>							
Bulli District Hospital	100%	100%	100%	100%	8	40	246
Milton and Ulladulla Hospital	100%	100%	100%	100%	5	40	43
Prince of Wales Hospital	93%	91%	94%	93%	13	42	234
Royal Hospital for Women	100%	99%	100%	100%	7	36	84
Shellharbour Hospital	96%	79%	91%	100%	21	63	201
Shoalhaven and District Memorial Hospital	87%	83%	84%	89%	14	55	306
St George Hospital	83%	80%	83%	90%	14	56	183
St Vincent's Hospital, Darlinghurst	92%	95%	85%	91%	4	47	107
Sutherland Hospital	89%	83%	89%	92%	15	56	268
Sydney Children's Hospital	96%	100%	94%	96%	7	21	78
Sydney / Sydney Eye Hospital	97%	100%	96%	96%	12	42	207
Wollongong Hospital	89%	84%	84%	95%	11	62	105
<b>Total South Eastern Sydney Illawarra</b>	<b>92%</b>	<b>90%</b>	<b>91%</b>	<b>94%</b>	<b>11</b>	<b>46</b>	<b>182</b>
<b>Sydney South West</b>							
Bankstown / Lidcombe Hospital	87%	83%	86%	89%	14	62	168
Bowral and District Hospital	100%	100%	100%	100%	16	35	71
Campbelltown Hospital*	90%	78%	88%	94%	20	64	204
Canterbury Hospital	91%	94%	88%	93%	12	55	265
Concord Hospital*	98%	97%	96%	99%	9	46	79
Fairfield Hospital	96%	100%	100%	94%	12	40	306
Liverpool Hospital*	92%	91%	89%	95%	12	56	171
Royal Prince Alfred Hospital*	99%	99%	100%	100%	7	14	13
RPAH Institute of Rheumatology & Orthopaedics	100%	100%	100%	100%	5	23	28
<b>Total Sydney South West</b>	<b>95%</b>	<b>95%</b>	<b>94%</b>	<b>96%</b>	<b>8</b>	<b>41</b>	<b>99</b>

### Percentage of patients treated on time

### Median waiting time (days)

All categories	Category 1	Category 2	Category 3	Category 1	Category 2	Category 3
----------------	------------	------------	------------	------------	------------	------------

Sydney West							
Auburn Hospital	83%	92%	68%	90%	12	71	236
Blacktown Hospital	89%	96%	87%	88%	11	44	140
Blue Mountains District Anzac Memorial Hospital	90%	100%	89%	88%	14	53	224
Lithgow Health Service	96%	100%	97%	95%	18	56	307
Mount Druitt Hospital	74%	97%	77%	67%	11	58	274
Nepean Hospital	68%	91%	73%	53%	8	66	352
Westmead Hospital (all units)	89%	93%	87%	81%	9	43	112
Other Sydney West	70%	89%	88%	59%	15	57	337
<b>Total Sydney West</b>	<b>81%</b>	<b>93%</b>	<b>82%</b>	<b>71%</b>	<b>10</b>	<b>55</b>	<b>253</b>

(\*) This hospital had more than 10% of category 3 patients admitted after waiting one day or less for their elective surgery.

Caution is advised when considering this hospital's results (see page 28 for more information).

Source: Waiting List Collection On-line System, NSW Health. Data extracted on 13 October 2010.

Information about the percentage of elective surgery procedures performed within clinically recommended time frames and how long patients waited for care is provided for more than 80 NSW hospitals in *Performance profiles: elective surgery in NSW public hospitals, July to September 2010*, at [www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au) and on page 184 of this report.

The slope of this graph indicates the speed at which patients were admitted for care. A steep slope demonstrates a high percentage of patients from that category being admitted for their surgery over the time period shown. A flat slope demonstrates relatively fewer patients from a category receiving surgery over the period.

At a state level:

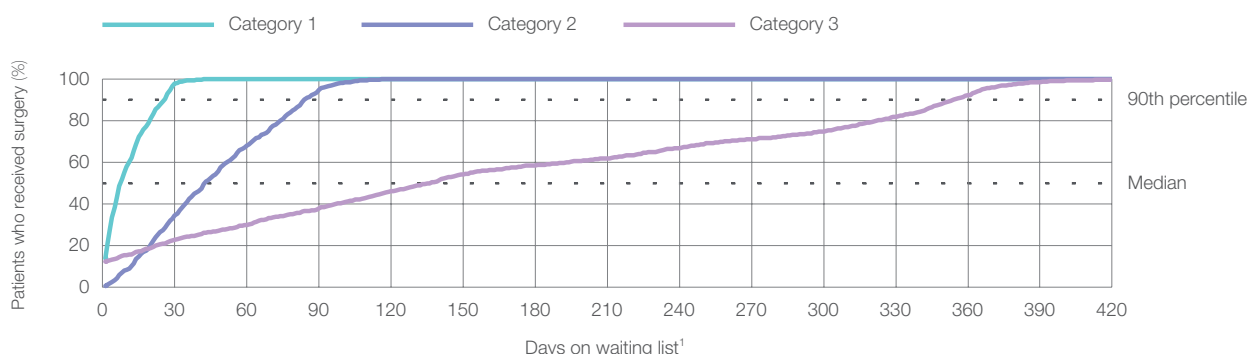
- Urgent patients (category 1) are admitted at a high rate that is maintained before and after the 30-day benchmark passes
- Semi-urgent patients (category 2) are admitted at a fairly high rate until the target of admitting patients within 90 days is met, after which patients are admitted more slowly

## Cumulative waiting time

Additional detail on how long people who received elective surgery waited to be admitted between July and September 2010 is presented in **Figure 6**. This graph shows the cumulative percentage of patients who received elective surgery against the total number of days patients waited on the list for each urgency category.



Figure 6: Cumulative percentage of patients who received elective surgery, by waiting time (days), July to September 2010



1. Excludes the total number of days the patient was coded as 'not ready for care'.

Source: Waiting List Collection On-line System, NSW Health. Data extracted on 13 October 2010.

- Non-urgent patients (category 3) have a slower rate of admission, but the clinically recommended time for admission of these patients is 365 days. The data shows that just over half the patients in this category received their surgery within 150 days, after which the speed of admission slowed until about 300 days. The speed increased again after 300 days.

Performance profiles for all hospital peer groups and area health services are available on the Bureau's website at [www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au) These profiles contain information for all individual hospitals within each peer group as well as an additional profile that sums all patients within that peer group or area health service.

## Elective surgery activity and performance by hospital peer group

Elective surgery waiting times are affected by the number and urgency category of patients, and the type of surgery performed at each hospital.

In NSW, most elective surgery is conducted in principal referral (A1), major metropolitan (BM) and major non-metropolitan (BNM) hospital peer groups. Of the 95 hospitals listed on the WLCOS, the 35 hospitals from these three peer groups conduct 72% of all elective surgery recorded on WLCOS.

There are also many smaller hospitals that perform elective surgery although the category of patients at these hospitals is typically less urgent than at larger hospitals.

In district group 2 (C2) hospitals, 53% of all elective surgery patients were coded as category 3 when they received their surgery, compared with 35% of patients at principal referral (A1) hospitals (Figure 7).

## Waiting times of less than one day

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.

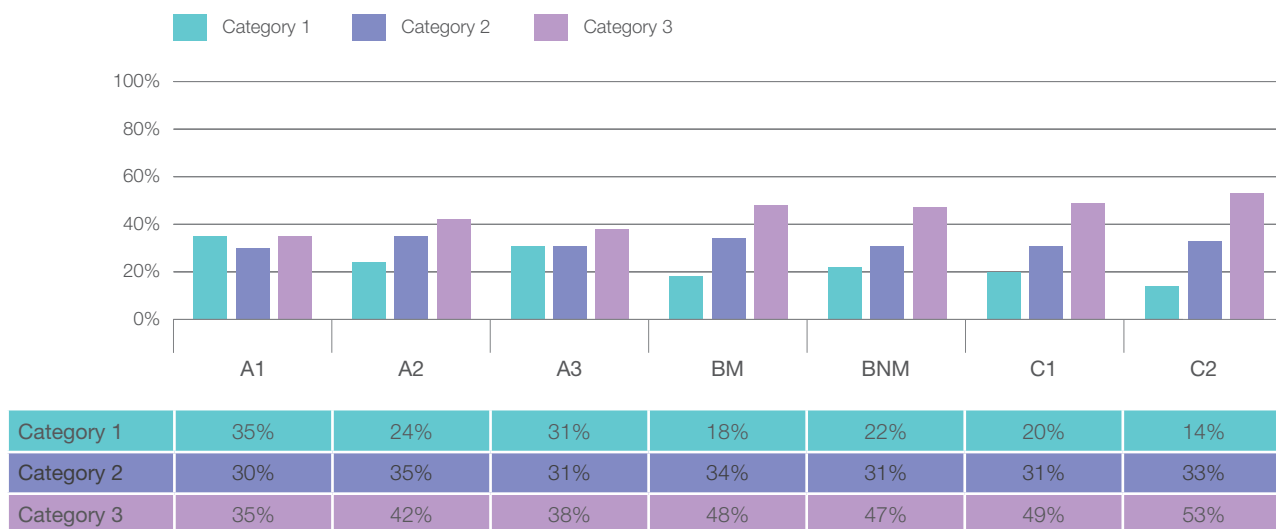
Listing a patient as 'not ready for care' for clinical reasons may be due to booking the patient for a 'staged' surgery. A staged surgery is where there is a clinically appropriate interval before the procedure can occur and, as the patient either cannot or should not undergo the procedure any sooner,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



Figure 7: Percentage of patients in each urgency category, by peer group, July to September 2010

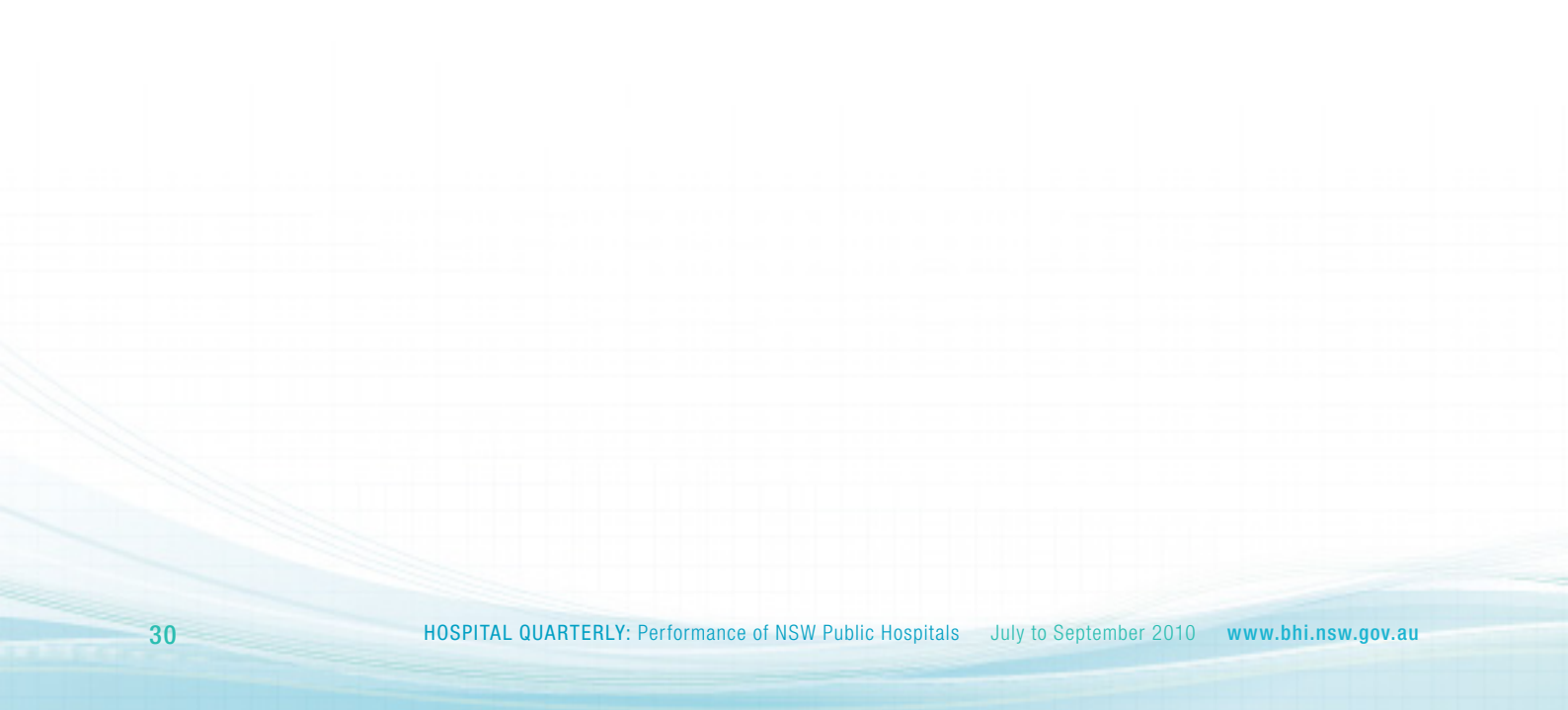


Source: Waiting List Collection On-line System, NSW Health. Data extracted on 13 October 2010.

## What are hospital peer groups?

NSW hospitals vary in size and the services they provide. To make comparisons between hospitals, people find it useful to compare similar hospitals together. To do this, the Bureau used a NSW classification system called 'peer group'. The peer groups reported in the *Hospital Quarterly* are:

Group	Name	Description
A1	Principal referral	Very large hospitals providing a broad range of services, including specialised units at a state or national level.
A2	Paediatric specialist	Specialist hospitals for children and young people.
A3	Ungrouped acute - tertiary referral	Specialist hospitals are major hospitals not similar enough to any other peer group to be classified with them. Data for this group has been reported to ensure completeness but this group is not included in any comparison of performance in this report.
BM	Major metropolitan	Large metropolitan hospitals in the greater Sydney area.
BNM	Major non-metropolitan	Large hospitals in rural and smaller urban areas.
C1	District group 1	Medium sized, typically rural hospitals.
C2	District group 2	Small to moderate sized, typically rural hospitals.



# Chapter 3: Care in emergency departments

## A visit to the emergency department

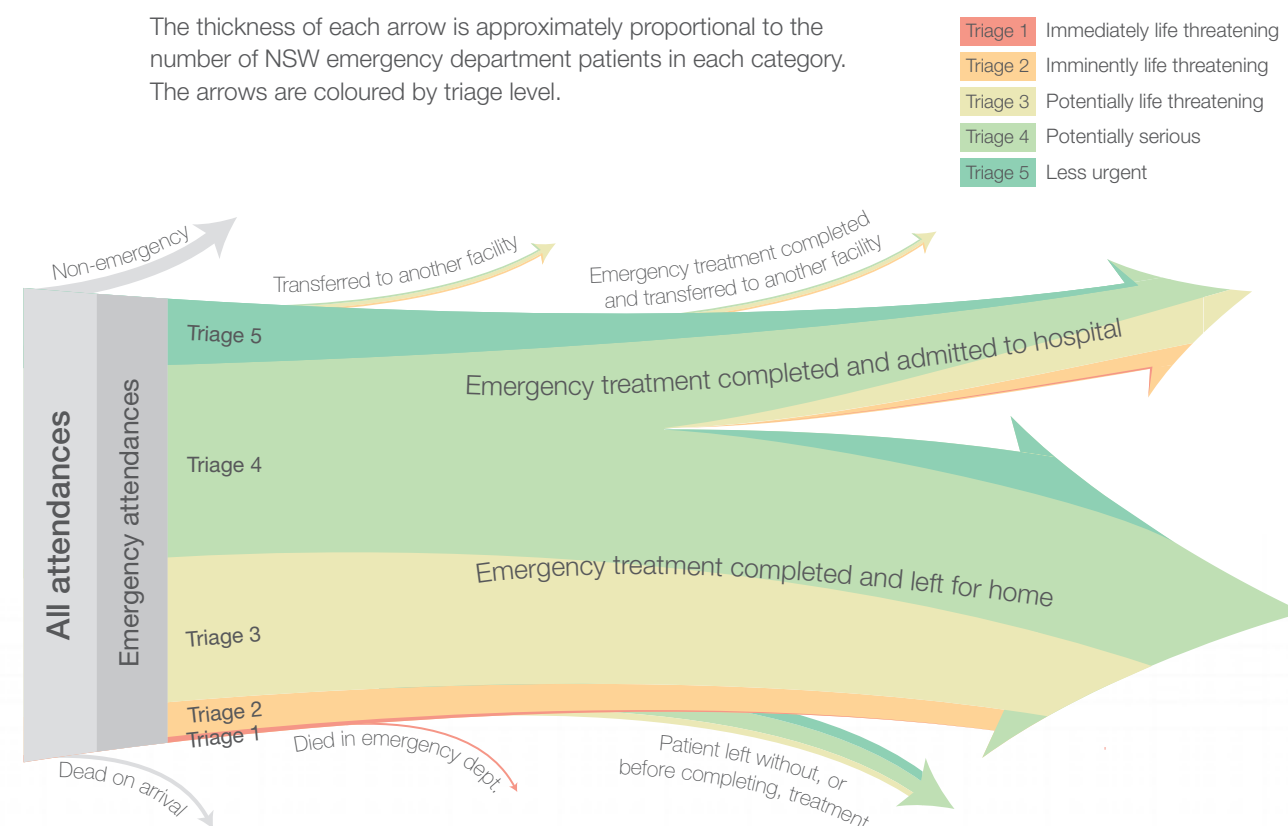
When a person is hurt or feels unwell and decides they need medical care they begin what we refer to as a 'patient journey'. Depending on the needs of the patient, there are many different pathways they might follow to complete this journey.

A patient or someone helping them might call an ambulance to take them to an emergency department. On arrival, whether by ambulance or otherwise, most patient journeys will follow a similar pattern: triage;\* a more detailed assessment; then treatment and leaving the emergency department for a hospital ward or elsewhere. Hospital staff record the times when

each of these events occur and these times are used to measure how long people take to complete their care. Some people finish their visit to the emergency department in other ways, such as leaving because the problem has resolved itself or through being transferred to another hospital.

The journeys of patients through NSW emergency departments during the July to September 2010 quarter are summarised in **Figure 8**. Almost two in every three patients (66% of the 495,899 emergency attendances) who were triaged in an emergency department in July, August or September 2010 received treatment there but were not admitted to hospital. About one in every four patients

Figure 8: Summary of patient journeys through NSW emergency departments



\* A registered nurse assigns people to a 'triage category' when they arrive in the emergency department depending on how urgently they require care. Triage is a five-point scale where category 1 is most urgent and category 5 is least urgent.

(24% of emergency attendances) received treatment and were then admitted to the same hospital. People also left the emergency department without, or before completing, treatment (8% of emergency attendances). There are a number of reasons patients have for leaving before treatment has been completed, including being dissatisfied with the care they received or if their reason for visiting resolved without treatment from staff. People were more likely to be admitted to hospital if they were allocated to the more urgent triage groups (categories 1 to 3) and most likely to leave without completing treatment if they were from the least urgent triage groups (categories 4 and 5).

Electronic records show that one in a thousand people were recorded as 'dead on arrival' when they reached the emergency department. A further one in every thousand patients died in the emergency department sometime after being triaged.

## Triage categories and destination following treatment

In the July to September 2010 quarter, there were more than half a million attendances (507,955) at public hospital emergency departments in NSW and 495,899 of these were considered 'emergency attendances' (Figure 9). The remaining 12,056 patients were recorded as planned or pre-arranged visits, of which 1,693 were admitted to hospital through the emergency department.

Almost half of all emergency attendances (45%) were categorised as potentially serious (triage category 4), 31% were categorised as potentially life threatening (triage 3), 15% were less urgent (triage 5) and 9% were imminently life threatening (triage 2). Immediately life threatening (triage 1), the most urgent category, represents 1% of all people

triaged in emergency departments (Figure 9). Once a person has been triaged, there are three main patient journeys in an emergency department. In terms of patient journeys during July to September 2010:

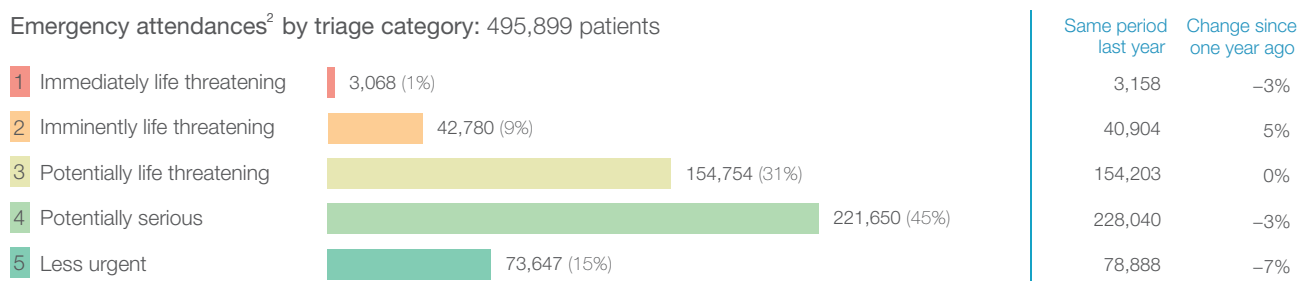
- 117,076 people (24% of emergency attendances) were admitted to a ward, operating theatre or critical care unit in the hospital they visited for emergency care. Among these patients, 47% were triage category 3, 29% were triage 4, 19% were triage 2, 3% were triage 5 and 2% were triage 1
- 328,084 people (66% of emergency attendances) received treatment and then left the emergency department. Among these patients, 49% were triage 4, 28% were triage 3, 17% were triage 5, 6% were triage 2 and less than 1% were triage 1
- 40,821 (8% of emergency attendances) people left without, or before completing, treatment. Among these patients, 55% were triage 4, 27% were triage 5, 16% were triage 3, 1% were triage 2 and less than 1% were triage 1 (Figure 9).

The number of attendances and waiting times, as well as one year comparisons, in more than 60 emergency departments in NSW is provided in the *Performance profiles: emergency department care, July to September 2010*, available at [www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au)

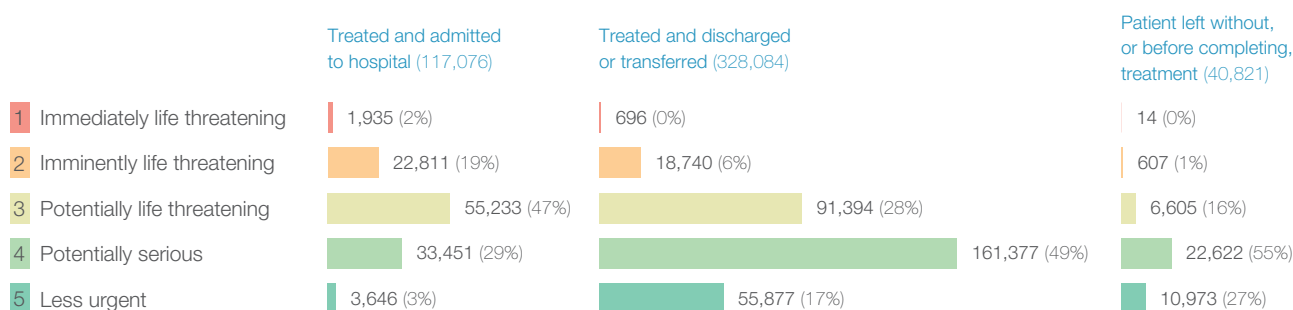
Figure 9: Attendances at NSW emergency departments, July to September 2010

All attendances:<sup>1</sup> 507,955 patients

Emergency attendances<sup>2</sup> by triage category: 495,899 patients



Emergency attendances by triage category and mode of separation:<sup>3</sup> 485,981 patients



1. All attendances at the emergency department including emergency and non-emergency.
2. All emergency attendances with a recorded triage category.
3. All emergency attendances with a recorded triage category, excluding attendances with a mode of separation of 'transferred prior to treatment' or 'died in ED'.

Note: All percentages rounded to whole numbers and therefore percentages may not add to 100%.

Note: Emergency department activity includes 87 facilities for which electronic data is reported. This covers approximately 85% of NSW emergency department activity.

Source: Health Information Exchange, NSW Health. Data extracted on 18 October 2010.

## Change to triage performance measurement

At the start of the 2010-11 financial year, NSW modified the definition of triage performance bringing it more in line with the Commonwealth definition. Patients who did not wait for care are excluded from this measure and arrival time is used if triage time is missing. The Bureau will use the new definition for this issue, and all future issues, of *Hospital Quarterly* and all historical data is presented using this new method. Additional detail on the effect of this can be found in the Bureau's *Technical supplement: measures of emergency department patient activity and performance* available at [www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au)

## Arrivals by ambulance

In the July to September 2010 quarter, 126,177 patients (25% of all attendances) arrived at hospital by ambulance (Figure 10). An ambulance crew

waits with a patient until emergency department staff can accept that patient into their care; this is called the transfer time. In July to September 2010, 64% of patients arriving by ambulance were accepted into the care of the emergency

Figure 10: Waiting times in NSW emergency departments, July to September 2010

Attendances arriving by ambulance: 126,177 patients

Transfer time (off stretcher)<sup>1</sup> Target: 90% transferred in 30 min. 64%

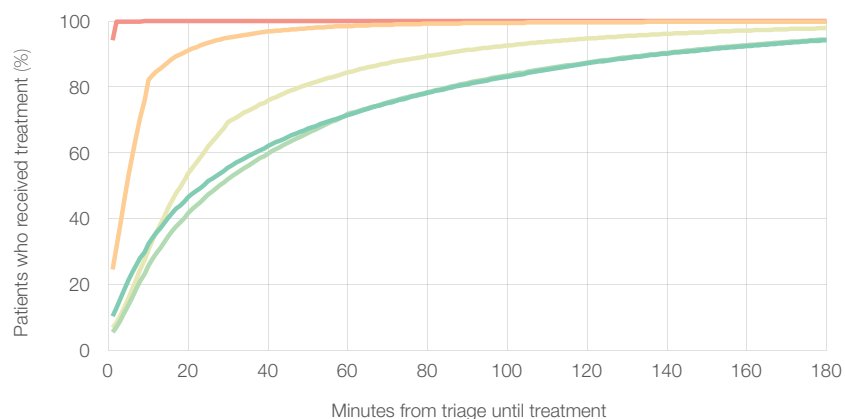
Same period last year

68%

Percentage of patients who received treatment<sup>2</sup> by target<sup>3</sup> time, by triage category<sup>4</sup>



Percentage of patients who received treatment<sup>2</sup> by time and triage category<sup>4</sup>



<sup>†</sup> Emergency department records for NSW recorded less than 100% triage 1 performance. The NSW Department of Health has advised that these records contained data entry errors and all patients received treatment within two minutes of being triaged. The Bureau has reported the percentage currently available on the Health Information Exchange.

1. Transfer time refers to the time between arrival and transfer to the care of the emergency department.
2. All unplanned and prearranged medical attendances excluding those without a recorded triage category, triage time, or treatment time.
3. Targets for triage levels are recommended by the Australasian College for Emergency Medicine.
4. At the start of the 2010-11 financial year, NSW modified the definition of triage performance. Patients who did not wait for care are excluded from this measure and arrival time is used if triage time is missing. Additional detail on the effect of this can be found in the Bureau's *Technical supplement: measures of emergency department patient activity and performance*.

**Note:** Numbers and percentages differ slightly from those previously reported by the NSW Department of Health's *Quarterly Hospital Performance Report* due to differences in when data were extracted from the emergency department information system. The Bureau also used a different approach to calculating performance information from hospitals transitioning to the new emergency department information system (see page 46 for more information).

**Source:** Health Information Exchange, NSW Health. Data extracted on 18 October 2010. Ambulance patient numbers and off-stretcher time data provided by the NSW Ambulance Service on 13 October 2010.

department within 30 minutes of arriving (Figure 10), compared with 68% in the last quarter. The target for this transfer, known as the off-stretcher time in NSW, is for 90% of patients arriving by ambulance to be accepted by the emergency department within 30 minutes of arrival.

## Triage to treatment

In 1993, the Australasian College for Emergency Medicine recommended how long a patient should wait from the time they were triaged until the commencement of treatment in the emergency department, based on a patient's triage level. These waiting times were endorsed for public hospitals nationally in 1999. Each triage category has a maximum recommended time in which the patient should wait to be seen by a healthcare professional and any required treatment should begin (see the online glossary for descriptions of triage categories and triage targets at [www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au)).

In the July to September 2010 quarter, electronic patient records showed almost all patients across NSW in triage 1 (rounding to 100%) were seen within the recommended two minutes. When data were extracted on 18 October 2010, electronic patient records showed there were two hospitals that did not achieve the 100% target for triage 1 patients to start treatment within two minutes of being triaged. Inverell Hospital and Lismore Hospital each recorded one triage 1 patient waiting more than the two minute target.

On 23 October 2010, the Bureau contacted the NSW Department of Health regarding triage 1 performance at Inverell Hospital and Lismore Hospital. On 27 October 2010, the

NSW Department of Health\* notified the Bureau that its investigation concluded these electronic patient records contained data entry errors and all patients received treatment within two minutes of being triaged.

In the July to September 2010 quarter, the percentage of patients seen within the recommended time frames for triage 2, 4 and 5 exceeded targets. Specifically, 82% of patients in triage 2, 72% of patients in triage 4 and 87% of patients in triage 5 were seen within the clinically recommended time.

In the July to September 2010 quarter, 69% of patients in triage 3 were seen in the recommended time, which is below the target of 75%. The percentage of patients in each triage category seen in different time intervals is summarised in Figure 10.

Last year, in July to September 2009, 99%\* of patients in triage 1, 79% of patients in triage 2, 66% of patients in triage 3, 70% of patients in triage 4 and 87% of patients in triage 5 were seen within the maximum recommended time. This represents improvement in performance for triage categories 1, 2, 3 and 4 since one year ago (Figure 10).

Information about the wait time for patients who arrive by ambulance, as well as wait time by triage category, for patients in more than 60 emergency departments in NSW is provided on pages 39 to 41.

(\*) On any occasions where triage 1 performance is less than 100%, the NSW Department of Health initiates an investigation.



## From treatment until leaving the emergency department

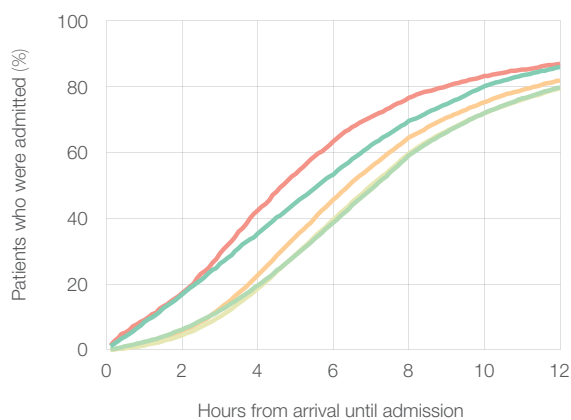
When doctors decide that an emergency patient needs to be admitted to hospital, the target is for 80% of patients to be admitted within eight hours from the time the hospital recorded the patient being triaged or, if this data is missing for a patient, their recorded time of arrival in the emergency department. The percentage of patients who arrive on the ward within this time is called the Emergency Admission Performance (EAP).

In the July to September 2010 quarter, 61% of patients were treated in an emergency department and admitted to a public hospital within eight hours of being triaged (Figure 11, Table 5). This level of performance is down from the last quarter (67%) and the same quarter last year (65%).

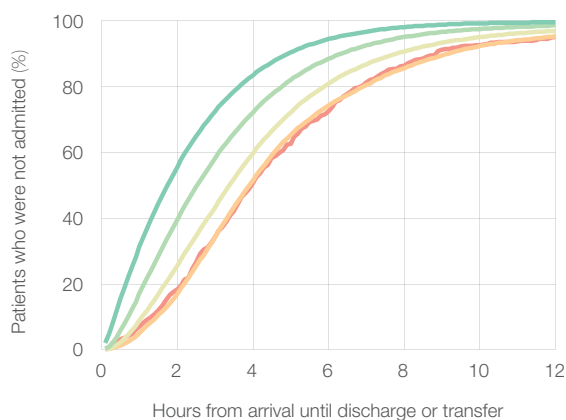
Across NSW, 77% of triage 1 patients and 70% of triage 5 patients were admitted within the eight hour target. The proportion that achieved the target for triage 2 patients was 64%, 60% for triage 3 and 59% for triage 4 (Figure 11, Table 5).

Figure 11: Waiting times from treatment to admission and treatment to discharge or transfer by triage, July to September 2010

Percentage of patients who were treated and admitted by time and triage category<sup>1</sup>



Percentage of patients who were treated and discharged or transferred by time and triage category<sup>1</sup>



1 Immediately life threatening 2 Imminently life threatening 3 Potentially life threatening 4 Potentially serious 5 Less urgent

Emergency admission performance (EAP):<sup>2</sup> Percentage of patients who were treated and admitted

Arrival to admission	Target: 80% admitted in 8 hours	61%	Same period last year
Start of treatment to admission	Target: 80% admitted in 8 hours	67%	
			70%

1. All unplanned attendances, excluding those without a recorded triage category, treatment time, or departure time.  
 2. At the start of the 2010-11 financial year, NSW adopted the Commonwealth definition of EAP. Patients who died in the emergency department or were admitted and discharged from the emergency department are now included in this measure. In addition, the period now begins from the time of triage (or arrival time, if triage time missing) rather than the start of treatment. Pre-arranged admissions have also been excluded. Additional detail on the effect of this can be found in the Bureau's *Technical supplement: measures of emergency department patient activity and performance*.

Source: Health Information Exchange, NSW Health. Data extracted on 18 October 2010.



**Table 5** presents wait time information on how long it took for NSW patients from each triage group to be admitted in two-hour intervals from the time they were triaged.

**Table 6** presents the time taken to leave the emergency department (starting from when they were triaged) for those emergency patients who completed treatment but who were not admitted.

Almost two-thirds (65%) of patients who attend an emergency department receive treatment there but are not admitted to hospital. In July to September 2010, more than one-third of these patients (38%) left hospital within two hours of being triaged, down from 52% in the last quarter. Patients with less urgent triage status tended to leave the emergency

department soonest. By eight hours, 94% of all patients who were not admitted had left the emergency department (**Table 6**).

Information on the percentage of patients treated in an emergency department and admitted to a public hospital within eight hours, as well as the percentage of patients admitted, discharged or transferred in different time intervals is provided for more than 60 emergency departments in the *Performance profiles: emergency department care, July to September 2010*, available at [www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au)

**Table 5:** Percentage of patients admitted to the ward from the emergency department, by triage level and time interval,<sup>1</sup> July to September 2010

	2 hours	4 hours	6 hours	8 hours (EAP)	10 hours	12 hours	14 hours
Triage 1: Immediately life threatening	17%	42%	63%	77%	83%	87%	91%
Triage 2: Imminently life threatening	6%	23%	46%	65%	75%	82%	86%
Triage 3: Potentially life threatening	4%	19%	40%	60%	72%	80%	85%
Triage 4: Potentially serious	6%	20%	39%	59%	72%	80%	85%
Triage 5: Less urgent	17%	35%	53%	70%	80%	86%	90%
All triage categories	6%	21%	41%	61%	73%	80%	85%

1. Time from triage (or arrival in the emergency department if triage time missing) until arrival on the ward for those admitted from the emergency department.

**Note:** At the start of the 2010-11 financial year, NSW adopted the Commonwealth definition of EAP. Patients who died in the emergency department or were admitted and discharged from the emergency department are now included in this measure. In addition, the period now begins from the time of triage (or arrival time, if triage time missing) rather than the start of treatment. Pre-arranged admissions have also been excluded. Additional detail on the effect of this can be found in the Bureau's *Technical supplement: measures of emergency department patient activity and performance*.

**Source:** Health Information Exchange, NSW Health. Data extracted on 18 October 2010.

Table 6: Percentage of patients discharged or transferred from the emergency department, by triage level and time interval,<sup>1</sup> July to September 2010

	2 hours	4 hours	6 hours	8 hours	10 hours	12 hours	14 hours
Triage 1: Immediately life threatening	18%	51%	73%	86%	93%	95%	96%
Triage 2: Imminently life threatening	17%	52%	74%	86%	92%	95%	97%
Triage 3: Potentially life threatening	26%	60%	81%	91%	95%	97%	98%
Triage 4: Potentially serious	40%	72%	88%	95%	97%	99%	99%
Triage 5: Less urgent	56%	83%	94%	98%	99%	100%	100%
All triage categories	38%	70%	87%	94%	97%	98%	99%

1. Time from triage (or arrival in the emergency department if triage time missing) until discharge or transfer from the emergency department.

Source: Health Information Exchange, NSW Health. Data extracted on 18 October 2010.

## Changes to emergency admission measurement

In previous quarterly reports by the Bureau and the NSW Department of Health, emergency admission performance (EAP) was measured from the time patients commenced treatment until the time they were admitted to hospital.

As part of the national health reform process being driven by the Council of Australian Governments (COAG), governments have agreed to a more uniform approach to measuring EAP. Since 1 July 2010, the NSW Department of Health has used this new definition, which measures EAP from the time of triage (or if missing, arrival time) to admission. The new definition now includes two other groups of admitted patients and excludes patients who had a pre-arranged admission through the emergency department. The net result is an increase in the time period measured by EAP and an increase in the number of admitted patients.

For this issue and all future issues of *Hospital Quarterly*, the Bureau will use the new national approach to measuring EAP. In this issue, we have recalculated historical data using the new method (Figure 11, Table 9). A comparison of EAP calculated using the new approach (time from arrival to admission) and the historic NSW approach (time from treatment to admission) can be found in the Bureau's *Technical supplement: measures of emergency department activity and performance* available on the Bureau's website at [www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au)

Specific emergency department data is provided for all area health services and principal referral, paediatric specialist, ungrouped acute / tertiary referral, major metropolitan, major non-metropolitan and district groups 1 and 2 hospitals in [Table 7](#). This information

includes the number of attendances, the number of admissions, the percentage of emergency attendances that are triaged within the benchmark set by the Australasian College for Emergency Medicine, the off-stretcher time and the emergency admission performance (EAP).

**Table 7: Activity and select performance measures for 87 emergency departments in NSW, July to September 2010**

	Activity measures		Performance measures							
	Attendances	Admissions	Triage performance					Off stretcher	EAP	
			Triage 1 100% in 2 min.	Triage 2 80% in 10 min.	Triage 3 75% in 30 min.	Triage 4 70% in 60 min.	Triage 5 70% in 120 min.			
			Meeting target							
			Not meeting target							
<b>New South Wales</b>	<b>507,955</b>	<b>118,769</b>	<b>100%</b>	<b>82%</b>	<b>69%</b>	<b>72%</b>	<b>87%</b>	<b>64%</b>	<b>61%</b>	
<b>Children's Hospital at Westmead</b>										
Total Children's Hospital at Westmead	12,661	2,947	100%	100%	63%	66%	71%	89%	65%	
<b>Greater Southern</b>										
Goulburn Base Hospital	4,473	847	*	*	*	*	*	82%	*	
Griffith Base Hospital	5,060	722	100%	76%	59%	68%	86%	89%	87%	
Wagga Wagga Base Hospital	8,459	2,063	100%	83%	75%	74%	90%	61%	66%	
<b>Total Greater Southern</b>	<b>17,992</b>	<b>3,632</b>	<b>100%</b>	<b>81%</b>	<b>70%</b>	<b>72%</b>	<b>89%</b>	<b>71%</b>	<b>71%</b>	
<b>Greater Western</b>										
Bathurst Base Hospital	6,131	872	*	*	*	*	*	65%	*	
Broken Hill Base Hospital**	5,918	554	100%	78%	72%	75%	92%	86%	80%	
Dubbo Base Hospital	7,011	1,545	*	*	*	*	*	81%	*	
Orange Base Hospital	6,636	1,466	*	*	*	*	*	79%	*	
<b>Total Greater Western</b>	<b>25,696</b>	<b>4,437</b>	<b>100%</b>	<b>78%</b>	<b>72%</b>	<b>75%</b>	<b>92%</b>	<b>78%</b>	<b>80%</b>	
<b>Hunter New England</b>										
Armidale and New England Hospital	3,672	714	100%	74%	76%	81%	94%	96%	97%	
Belmont Hospital	5,952	940	100%	87%	77%	76%	87%	78%	81%	
Calvary Mater Newcastle	7,355	1,565	100%	58%	50%	52%	78%	48%	47%	
Cessnock District Hospital	4,387	437	100%	95%	83%	86%	99%	94%	85%	
Gunnedah District Hospital	2,841	244	100%	100%	100%	100%	100%	97%	99%	
Inverell District Hospital	2,252	326	83%†	89%	71%	76%	94%	97%	98%	
John Hunter Hospital	16,534	5,232	100%	86%	72%	71%	86%	54%	62%	
Kurri Kurri District Hospital	1,840	79	100%	91%	81%	89%	97%	89%	92%	
Maitland Hospital	10,232	1,753	100%	75%	66%	67%	88%	61%	64%	
Manning Base Hospital	5,579	1,434	100%	85%	57%	56%	85%	70%	70%	
Moree District Hospital	2,226	242	100%	91%	94%	98%	100%	99%	100%	

	Activity measures		Performance measures							
	Attendances	Admissions	Triage performance					Off stretcher	EAP	
			Triage 1	Triage 2	Triage 3	Triage 4	Triage 5			
			100% in 2 min.	80% in 10 min.	75% in 30 min.	70% in 60 min.	70% in 120 min.	90% in 30 min.	80% in 8 hours	
			Meeting target	Not meeting target						
Muswellbrook District Hospital	1,845	197	100%	67%	76%	79%	94%	86%	95%	
Narrabri District Hospital	1,275	193	100%	100%	92%	93%	99%	96%	99%	
Singleton District Hospital	3,112	354	100%	84%	76%	79%	98%	96%	98%	
Tamworth Base Hospital	11,120	1,859	100%	76%	62%	53%	78%	82%	70%	
Other Hunter New England	12,018	1,320	100%	82%	86%	91%	98%	93%	94%	
<b>Total Hunter New England</b>	<b>92,240</b>	<b>16,889</b>	<b>100%</b>	<b>80%</b>	<b>71%</b>	<b>73%</b>	<b>91%</b>	<b>70%</b>	<b>71%</b>	
<b>North Coast</b>										
Coffs Harbour Base Hospital**	8,334	1,794	100%	75%	44%	50%	72%	67%	38%	
Grafton Base Hospital	5,813	921	100%	82%	56%	60%	80%	85%	79%	
Kempsey Hospital	4,981	580	100%	60%	77%	85%	96%	84%	85%	
Lismore Base Hospital	7,313	2,193	98% <sup>†</sup>	83%	63%	64%	85%	71%	50%	
Murwillumbah District Hospital	3,940	545	100%	100%	74%	78%	92%	94%	89%	
Port Macquarie Base Hospital	7,921	1,990	100%	63%	53%	65%	86%	59%	56%	
The Tweed Hospital	10,513	3,447	100%	63%	70%	80%	95%	75%	61%	
<b>Total North Coast</b>	<b>48,815</b>	<b>11,470</b>	<b>100%</b>	<b>72%</b>	<b>61%</b>	<b>69%</b>	<b>87%</b>	<b>71%</b>	<b>58%</b>	
<b>Northern Sydney Central Coast</b>										
Gosford Hospital	13,852	3,822	100%	67%	61%	59%	78%	64%	60%	
Hornsby and Ku-Ring-Gai Hospital	7,599	1,871	100%	93%	81%	81%	90%	68%	70%	
Manly District Hospital	5,358	1,437	100%	96%	95%	89%	95%	90%	73%	
Mona Vale and District Hospital	6,509	1,544	100%	99%	85%	84%	95%	93%	69%	
Royal North Shore Hospital	14,003	5,302	100%	91%	78%	85%	94%	59%	67%	
Ryde Hospital	5,989	1,573	100%	93%	79%	75%	87%	83%	63%	
Wyong Hospital	13,024	2,249	100%	67%	63%	64%	77%	69%	52%	
<b>Total Northern Sydney Central Coast</b>	<b>66,334</b>	<b>17,798</b>	<b>100%</b>	<b>84%</b>	<b>75%</b>	<b>74%</b>	<b>85%</b>	<b>70%</b>	<b>64%</b>	
<b>South Eastern Sydney Illawarra</b>										
Bulli District Hospital	2,226	0	n/a <sup>†</sup>	100%	98%	98%	99%	100%	n/a <sup>†</sup>	
Milton and Ulladulla Hospital	3,157	331	100%	97%	96%	92%	94%	82%	90%	
Prince of Wales Hospital**	10,376	3,207	100%	62%	37%	49%	72%	50%	58%	
Shellharbour Hospital	6,572	813	100%	91%	77%	71%	93%	67%	58%	
Shoalhaven and District Memorial Hospital	7,954	1,405	100%	94%	74%	71%	88%	71%	56%	
St George Hospital	14,957	5,245	100%	79%	61%	66%	82%	51%	53%	
St Vincent's Hospital, Darlinghurst	9,894	2,897	100%	100%	71%	76%	92%	52%	57%	
Sutherland Hospital	10,683	2,712	100%	88%	74%	81%	93%	56%	54%	
Sydney Children's Hospital**	9,409	1,311	100%	77%	70%	61%	87%	93%	74%	
Sydney Eye Hospital	4,764	153	n/a <sup>†</sup>	80%	98%	99%	100%	83%	100%	
Sydney Hospital	4,263	398	100%	97%	87%	85%	96%	90%	93%	
Wollongong Hospital	12,872	4,316	100%	91%	72%	69%	83%	49%	58%	
<b>Total South Eastern Sydney Illawarra</b>	<b>97,127</b>	<b>22,788</b>	<b>100%</b>	<b>86%</b>	<b>66%</b>	<b>71%</b>	<b>92%</b>	<b>57%</b>	<b>59%</b>	

Activity  
measures

Performance measures

	Meeting target
	Not meeting target

Attendances	Admissions	Triage performance					Off stretcher 90% in 30 min.	EAP 80% in 8 hours
		Triage 1 100% in 2 min.	Triage 2 80% in 10 min.	Triage 3 75% in 30 min.	Triage 4 70% in 60 min.	Triage 5 70% in 120 min.		

Sydney South West									
Bankstown / Lidcombe Hospital	10,808	3,251	100%	100%	79%	87%	96%	72%	62%
Bowral and District Hospital	4,489	748	100%	74%	65%	73%	94%	81%	77%
Camden Hospital	2,750	0	100%	94%	93%	91%	98%	100%	89%
Campbelltown Hospital	13,208	3,574	100%	91%	80%	71%	92%	64%	59%
Canterbury Hospital	8,444	1,763	100%	89%	76%	71%	93%	61%	64%
Concord Hospital	8,111	2,500	100%	98%	77%	79%	97%	69%	66%
Fairfield Hospital	7,910	1,532	100%	76%	72%	73%	93%	80%	71%
Liverpool Hospital	15,498	5,790	100%	85%	81%	77%	92%	52%	50%
Royal Prince Alfred Hospital	15,471	4,773	100%	81%	70%	76%	91%	54%	59%
<b>Total Sydney South West</b>	<b>86,689</b>	<b>23,931</b>	<b>100%</b>	<b>88%</b>	<b>77%</b>	<b>77%</b>	<b>93%</b>	<b>63%</b>	<b>60%</b>

Sydney West									
Auburn Hospital	5,902	947	100%	63%	58%	53%	82%	53%	72%
Blacktown Hospital	8,305	2,160	100%	88%	69%	71%	82%	45%	38%
Blue Mountains District Anzac Memorial Hospital	4,215	514	100%	72%	70%	73%	91%	92%	94%
Hawkesbury District Health Service	4,581	1,165	100%	85%	90%	88%	95%	52%	82%
Lithgow Health Service	3,216	336	100%	79%	77%	84%	94%	95%	89%
Mount Druitt Hospital	8,015	868	100%	78%	69%	61%	78%	56%	68%
Nepean Hospital	12,904	4,513	100%	83%	48%	59%	78%	53%	45%
Westmead Hospital (all units)	13,263	4,374	100%	74%	41%	47%	69%	40%	42%
<b>Total Sydney West</b>	<b>60,401</b>	<b>14,877</b>	<b>100%</b>	<b>78%</b>	<b>62%</b>	<b>63%</b>	<b>80%</b>	<b>51%</b>	<b>52%</b>

- Note:** Emergency department activity includes 87 facilities for which electronic data is reported. These facilities account for approximately 85% of NSW emergency department activity.
- Note:** The approach used to measure triage performance and EAP changed in the July to September 2010 period. Detail on the effect of this can be found in the Bureau's *Technical supplement: measures of emergency department activity and performance*.
- Note:** Admissions refers to all admissions through the emergency department, not just emergency patient admissions.
- (\*) Due to the implementation of a new electronic information system in this emergency department during the July to September 2010 quarter, the data for this hospital is not considered reliable enough to display (see page 46 for more information).
- (\*\*) Due to the implementation of a new electronic information system in this emergency department in the previous quarter (April to June 2010), caution is advised when considering this hospital's results (see page 46 for more information).
- (†) Bulli District Hospital and Sydney Eye Hospital had no patients classified as triage 1 during July to September 2010.
- (‡) Data in the HIE at the time of extraction for this report, and therefore reported here, recorded that this hospital had below 100% triage 1 performance. The NSW Department of Health has advised that these records contained data entry errors and all patients received treatment within two minutes of being triaged.
- (Ω) Bulli District Hospital had no patients admitted to hospital from the emergency department during July to September 2010 and therefore has no EAP value.
- Source:** Health Information Exchange, NSW Health. Data extracted on 18 October 2010. Ambulance off-stretcher time data provided by the NSW Ambulance Service on 13 October 2010.

## Emergency attendances over time

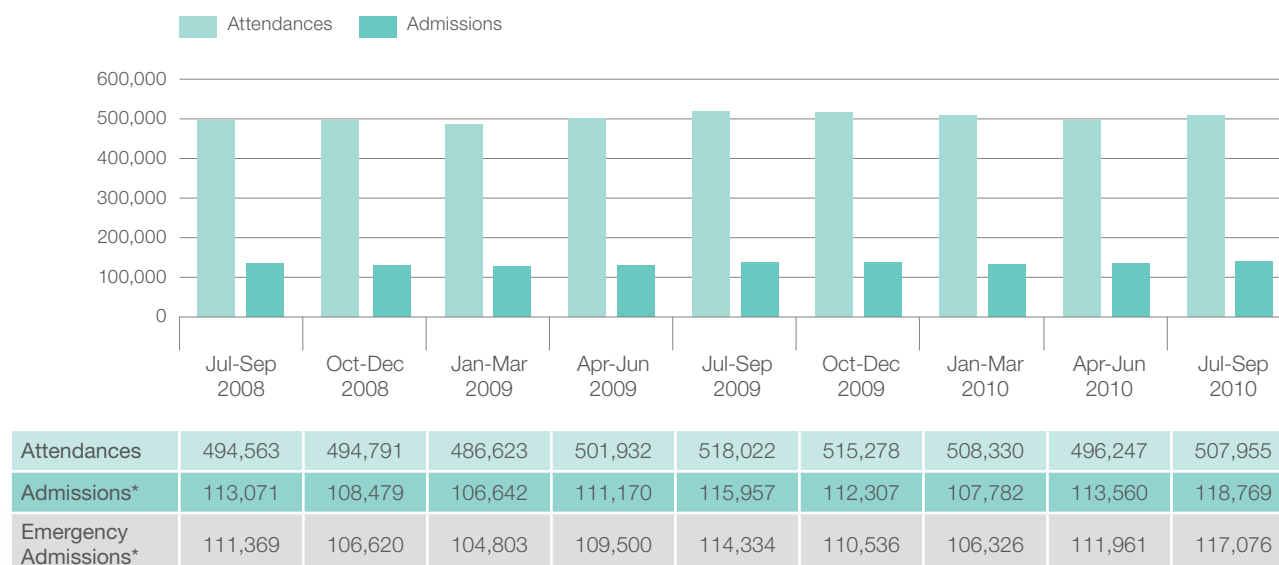
In the July to September 2010 quarter, there were almost half a million attendances (507,955) at public hospital emergency departments in NSW (Figure 12), up from the previous quarter (496,247 attendances):

- In July to September 2009, there were 518,022 attendances indicating a decrease (2%) in the past year
- In July to September 2008, there were 494,563 attendances indicating an increase (3%) in the past two years.

Until this quarter, the volume of attendances had decreased each quarter since a historic high of 518,022 attendances in July to September 2009 during the swine flu pandemic (Figure 13).

The number of patients in each urgency category for the past nine quarters is available for more than 60 emergency departments across NSW in the *Performance profiles: emergency department care, July to September 2010*, available at [www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au)

Figure 12: Attendances at, and admissions from, NSW emergency departments, July 2008 to September 2010



(\*) Admissions refers to all admissions through the emergency department. Emergency admissions refers only to those patients attending for an emergency or unplanned presentation, and who have a recorded triage category.

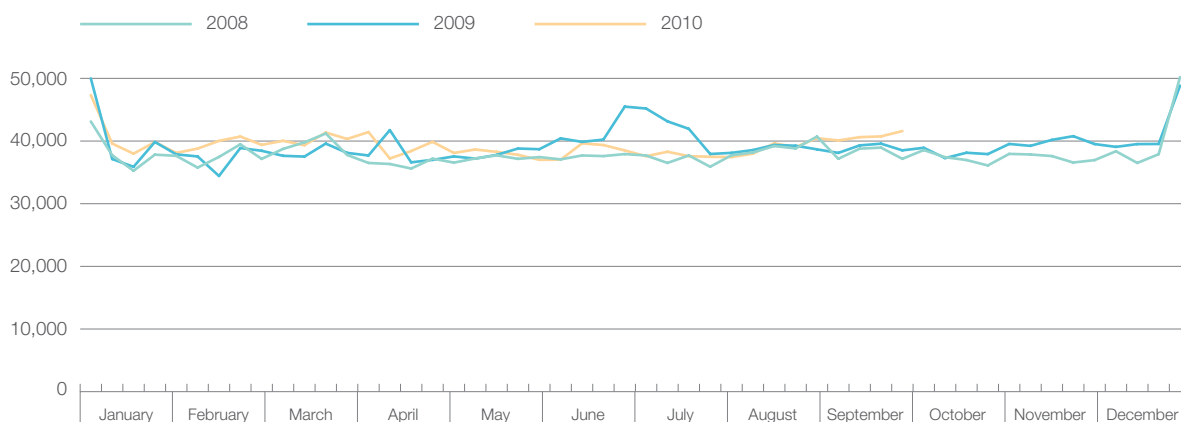
Note: Emergency department activity includes 87 facilities for which electronic data is reported. This covers approximately 85% of NSW emergency department activity.

Note: Numbers might differ slightly from those previously reported by the NSW Department of Health's *Quarterly Hospital Performance Report* due to differences in when data were extracted from the emergency department information system.

Source: Health Information Exchange, NSW Health. Data extracted on 18 October 2010.



Figure 13: Attendances at NSW emergency departments by week, January 2008 to September 2010



Source: Health Information Exchange, NSW Health. Data extracted on 18 October 2010.

## Arrivals by ambulance over time

In the July to September 2010 quarter, 126,177 patients (25% of all attendances) arrived at hospital by ambulance (Figure 10). An ambulance crew waits with a patient until emergency department staff can accept that patient into their care.

By comparison:

- In July to September 2009, 127,623 patients (25% of all attendances) arrived at hospital by ambulance
- In July to September 2008, 128,318 patients (26% of all attendances) arrived at hospital by ambulance.

In the July to September 2010 quarter, NSW did not achieve the state target for the proportion of patients arriving by ambulance being transferred into the care of emergency department staff within 30 minutes; 64% of patients were transferred compared to the 90% target.

By comparison:

- In July to September 2009, 68% of patients were accepted into the care of an emergency department within 30 minutes of the ambulance arriving
- In July to September 2008, 71% of patients were accepted into the care of an emergency department within 30 minutes of the ambulance arriving.

NSW has not met this target at a state level in the past two years (Table 8).

## Emergency care targets over time

For the July to September 2010 quarter, NSW met or exceeded the national target for the percentage of patients seen within the recommended time for all triage categories except triage 3; 69% of patients were seen compared to the 75% target. NSW has not met the triage 3 target at a state level in the past two years (Figure 14).



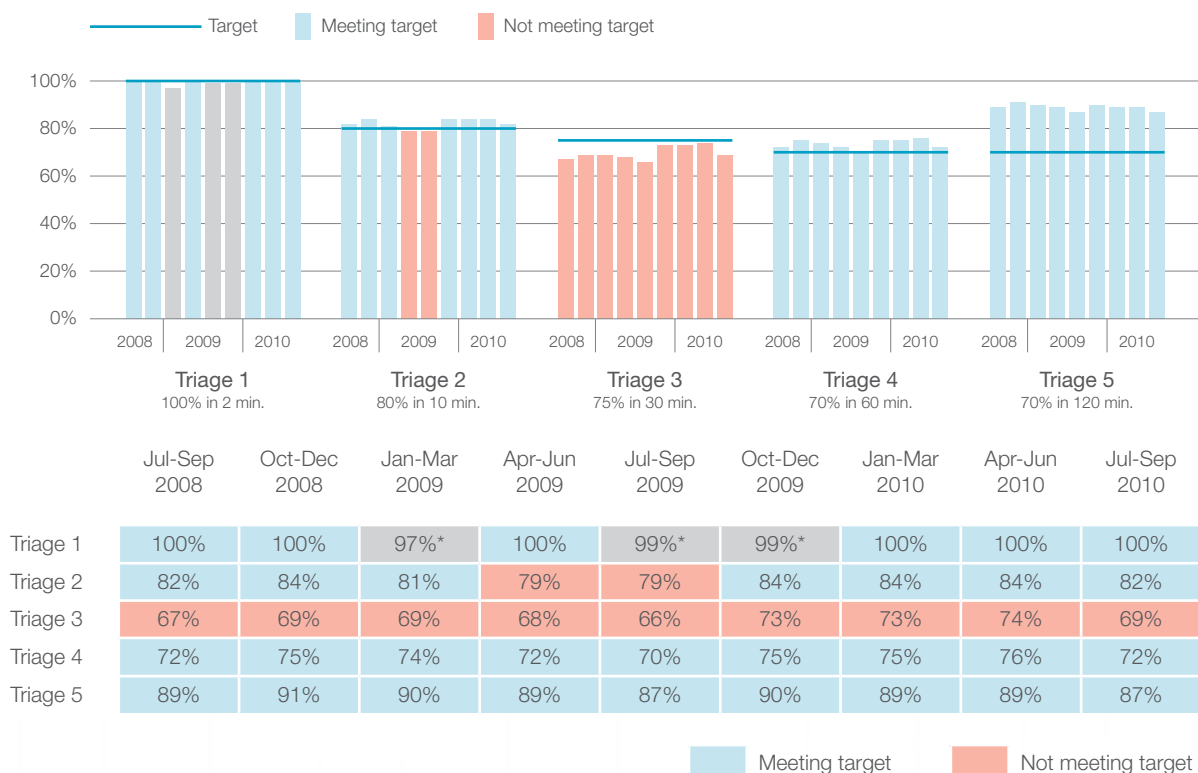
Table 8: Percentage of patients accepted into the care of the emergency department from an ambulance (off-stretcher performance) in NSW, July 2008 to September 2010

Jul-Sept 2008	Oct-Dec 2008	Jan-Mar 2009	Apr-Jun 2009	Jul-Sept 2009	Oct-Dec 2009	Jan-Mar 2010	Apr-Jun 2010	Jul-Sep 2010
71%	77%	75%	71%	68%	72%	71%	68%	64%

Target: 90% transferred within 30 min. ■ Not meeting target

Source: Data provided by NSW Ambulance Service on 13 October 2010.

Figure 14: Arrival to treatment targets in NSW emergency departments, July 2008 to September 2010



**Note:** At the start of the 2010-11 financial year, NSW modified the definition of triage performance. Patients who did not wait for care are excluded from this measure and arrival time is used if triage time is missing. Additional detail on the effect of this can be found in the Bureau's *Technical supplement: measures of emergency department patient activity and performance*.

(\*) Emergency department electronic records show these periods as having below 100% triage 1 performance (i.e. started to receive treatment within two minutes of being triaged). An investigation by the NSW Department of Health concluded that these electronic patient records contained data entry errors and all patients received treatment within two minutes of being triaged. The Bureau has reported the performance using electronic data available in the NSW Health Information Exchange on 18 October 2010.

Source: Health Information Exchange, NSW Health. Data extracted on 18 October 2010.

In the July to September 2010 quarter, NSW did not achieve the target for the proportion of patients admitted to a hospital ward, intensive care unit or operating theatre from the emergency department within eight hours (EAP);

61% of patients were transferred compared to the 80% target. This level of performance is down from last quarter (67%), from one year ago (65%) and from two years ago (66%) as shown in [Table 9](#).

**Table 9: Emergency admission performance (EAP) in NSW emergency departments, July 2008 to September 2010**

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
66%	72%	70%	68%	65%	70%	68%	67%	61%

Target: 80% admitted within 8 hours ■ Not meeting target

**Note:** Percentages might differ slightly from those in previous *Hospital Quarterly* reports and in the NSW Department of Health's *Quarterly Hospital Performance Report* due to differences in when data were extracted from the emergency department information systems. The Bureau also used a different approach to calculating performance information from hospitals transitioning to the new emergency department information system (see page 46 for more information).

**Note:** At the start of the 2010-11 financial year, NSW adopted the Commonwealth definition of EAP. Patients who died in the emergency department or were admitted and discharged from the emergency department are now included in this measure. In addition, the period now begins from the time of triage (or arrival time, if triage time missing) rather than the start of treatment. Pre-arranged admissions have also been excluded. Additional detail on the effect of this can be found in the Bureau's *Technical supplement: measures of emergency department patient activity and performance*.

**Source:** Health Information Exchange, NSW Health. Data extracted on 18 October 2010.

### Small number suppression

Some hospitals have very few patients in certain groups, for example, a hospital might have very few admissions from the emergency department. Small numbers in any group need to be treated cautiously both to protect the identity of patients and because of data accuracy.

The Bureau deals with this issue by suppressing any data that is based on very few patients. If there are fewer than 10 patients in any group, patient numbers or percentages will be replaced by a symbol referring to a footnote about small number suppression. At the discretion of the Bureau, the next smallest values may be suppressed if there is risk of disclosing the identity of patients.

## Information systems in emergency departments

From July to September 2010, there were four hospitals that changed to a new electronic information system for patients in their emergency department. Following examination of the quality of electronic information for these hospitals over this period, the Bureau has concluded that, other than attendance numbers, information from the hospitals transitioning to new electronic information systems are not reliable enough to report.

The performance of these four hospitals is not reported in this *Hospital Quarterly* and electronic data from these hospitals was not used to calculate area health service, hospital peer group or NSW performance measures. These hospitals are Bathurst Base Hospital, Dubbo Base Hospital, Goulburn Base Hospital and Orange Base Hospital.

From April to June 2010, Broken Hill Base Hospital, Coffs Harbour Hospital, Goulburn Base Hospital, Sydney Children's Hospital, Orange Base Hospital and Prince of Wales Hospital transitioned to the new electronic information system. Caution is advised when considering results from these hospitals.

# Hospital performance profiles for July to September 2010

The index below references all hospitals for which at least one hospital performance profile is available for the July to September 2010 quarter. Performance profiles are available for either elective surgery or emergency department

activity and performance. These are available for individual hospitals or all hospitals in an area health service or peer group and can be downloaded from the Bureau's website at [www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au)

Hospital name	Area health service	Peer group	Elective surgery report	Emergency department report
Armidale and New England Hospital	HNEAHS	C1	x	x
Auburn Hospital	SWAHS	BM	x	x
Ballina District Hospital	NCAHS	C2	x	
Bankstown / Lidcombe Hospital	SSWAHS	BM	x	x
Bateman's Bay District Hospital	GSAHS	C2	x	
Bathurst Base Hospital	GWAHS	C1	x	x
Bega District Hospital	GSAHS	C1	x	
Belmont Hospital	HNEAHS	C1	x	x
Blacktown Hospital	SWAHS	BM	x	x
Blue Mountains District Anzac Memorial Hospital	SWAHS	C2	x	x
Bowral and District Hospital	SSWAHS	C1	x	x
Broken Hill Base Hospital	GWAHS	C1	x	x
Bulli District Hospital	SESAHS	C2	x	x
Calvary Mater Newcastle	HNEAHS	A3	x	x
Camden Hospital	SSWAHS	C2		x
Campbelltown Hospital	SSWAHS	BM	x	x
Canterbury Hospital	SSWAHS	BM	x	x
Casino and District Memorial Hospital	NCAHS	C2	x	
Cessnock District Hospital	HNEAHS	C2	x	x
Coffs Harbour Base Hospital	NCAHS	BNM	x	x
Concord Hospital	SSWAHS	A1	x	x
Cooma Health Service	GSAHS	C2	x	
Cowra District Hospital	GWAHS	C2	x	
Deniliquin Health Service	GSAHS	C2	x	
Dubbo Base Hospital	GWAHS	BNM	x	x
Fairfield Hospital	SSWAHS	BM	x	x

Hospital name	Area health service	Peer group	Elective surgery report	Emergency department report
Forbes District Hospital	GWAHS	C2	x	
Gosford Hospital	NSCCAHS	A1	x	x
Goulburn Base Hospital	GSAHS	C1	x	x
Grafton Base Hospital	NCAHS	C1	x	x
Griffith Base Hospital	GSAHS	C1	x	x
Gunnedah District Hospital	HNEAHS	C2	x	x
Hawkesbury District Health Service	SWAHS	C1		x
Hornsby and Ku-Ring-Gai Hospital	NSCCAHS	BM	x	x
Inverell District Hospital	HNEAHS	C2	x	x
John Hunter Hospital	HNEAHS	A1	x	x
Kempsey Hospital	NCAHS	C2	x	x
Kurri Kurri District Hospital	HNEAHS	C2	x	x
Lismore Base Hospital	NCAHS	BNM	x	x
Lithgow Health Service	SWAHS	C2	x	x
Liverpool Hospital	SSWAHS	A1	x	x
Macksville District Hospital	NCAHS	C2	x	
Maclean District Hospital	NCAHS	C2	x	
Maitland Hospital	HNEAHS	BNM	x	x
Manly District Hospital	NSCCAHS	BM	x	x
Manning Base Hospital	HNEAHS	BNM	x	x
Milton and Ulladulla Hospital	SESAHS	C2	x	x
Mona Vale and District Hospital	NSCCAHS	BM	x	x
Moree District Hospital	HNEAHS	C2	x	x
Moruya District Hospital	GSAHS	C2	x	
Mount Druitt Hospital	SWAHS	C1	x	x
Mudgee District Hospital	GWAHS	C2	x	
Murwillumbah District Hospital	NCAHS	C2	x	x
Muswellbrook District Hospital	HNEAHS	C2	x	x
Narrabri District Hospital	HNEAHS	C2	x	x
Nepean Hospital	SWAHS	A1	x	x
Orange Base Hospital	GWAHS	BNM	x	x
Pambula District Hospital	GSAHS	C2	x	
Parkes District Hospital	GWAHS	C2	x	
Port Macquarie Base Hospital	NCAHS	BNM	x	x

Hospital name	Area health service	Peer group	Elective surgery report	Emergency department report
Prince of Wales Hospital	SESAHS	A1	x	x
Queanbeyan Health Service	GSAHS	C2	x	
Royal Hospital for Women	SESAHS	A3	x	
Royal North Shore Hospital	NSCCAHS	A1	x	x
Royal Prince Alfred Hospital	SSWAHS	A1	x	x
RPAH Institute of Rheumatology and Orthopaedics	SSWAHS	A1	x	
Ryde Hospital	NSCCAHS	C1	x	x
Shellharbour Hospital	SESAHS	C1	x	x
Shoalhaven and District Memorial Hospital	SESAHS	BNM	x	x
Singleton District Hospital	HNEAHS	C2	x	x
St George Hospital	SESAHS	A1	x	x
St Vincent's Hospital, Darlinghurst	SESAHS	A1	x	x
Sutherland Hospital	SESAHS	BM	x	x
Sydney Children's Hospital	SESAHS	A2	x	x
Sydney Eye Hospital	SESAHS	A3	x	x
Sydney Hospital	SESAHS	A3	x#	x
Tamworth Base Hospital	HNEAHS	BNM	x	x
The Children's Hospital at Westmead	CHW	A2	x	x
The Tweed Hospital	NCAHS	BNM	x	x
Tumut Health Service	GSAHS	C2	x	
Wagga Wagga Base Hospital	GSAHS	BNM	x	x
Westmead Hospital	SWAHS	A1	x	x
Wollongong Hospital	SESAHS	A1	x	x
Wyong Hospital	NSCCAHS	BM	x	x
Young Health Service	GSAHS	C2	x	

\* For elective surgery, activity and performance for Sydney Hospital and Sydney Eye Hospital are presented in a single performance profile. This is because waiting list data for patients at these two hospitals use the same code in the waiting list database.

## What's next?

The Bureau of Health Information will publish *Hospital Quarterly* every three months. The next issue will include information on emergency departments, patients who spend one or more days in public hospitals and surgical care in NSW. In December 2010, the Bureau also released an annual report that benchmarked the performance of the NSW public health system against other comparable health systems.

*"Hospital Quarterly has been designed to provide timely, accurate and comparable information on the performance of public hospitals in NSW. Future issues will follow every three months and present a core set of statistics so that efforts to improve care can be monitored over time."*

## Data quality assessments

### Elective surgery information systems for patients of NSW public hospitals as of 15 October 2010

#### Strengths

NSW Department of Health publishes a range of measures of elective surgery in NSW providing insight into waiting times and care processes.

WLCOS contains records for all patients receiving elective surgery in public hospitals in NSW as well as public patients in private hospitals; coverage is high.

Completeness of data in WLCOS is high with systems in place to check data quality.

#### Opportunities

The Bureau of Health Information supports rigorous consensus-based and evidence-informed processes to identify meaningful performance indicators for elective surgery. These indicators should identify information needs and inform the future design of information systems in NSW.

More information about the quality of data on WLCOS and opportunities to improve is available from the Bureau of Health Information in *Data quality assessment: elective surgery information systems for patients of NSW public hospitals* at [www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au)



## Information systems in NSW emergency departments as of 15 October 2010

### Strengths

Electronic information systems from 87 of the 189 emergency departments in NSW contribute data on, for example, attendance numbers, triage categorisation, mode of separation and measured time periods to a central data warehouse in NSW called the Health Information Exchange (HIE). There are jurisdictions in Australia and overseas that do not have electronic information systems in public hospital emergency departments as comprehensive as those in NSW.

There are NSW Health policy directives and also quality assurance processes in place to provide a broad framework to support data quality.

Electronic systems support performance estimates at hospital, area health service and state level.

### Opportunities

Electronic information systems are not available in all emergency departments in public hospitals across NSW. If they were, access to electronic data to better monitor and manage care could be simpler and faster. Also, the identification of patients to participate in patient surveys could be done centrally to allow for stratification and other complex methods to reduce survey bias. To ensure the most appropriate use of health funding, a cost-benefit analysis may inform the decision process.

Electronic record systems are used to create key public reporting performance indicators, such as triage performance and waiting periods. Other indicators of performance are calculated and used internally by NSW Health. The Bureau recommends a broader suite of publicly released performance indicators, which would improve the transparency of healthcare in NSW and provide the public and healthcare professionals with greater understanding of how NSW emergency departments perform.

Regular public reporting by the NSW Department of Health summarising the results of routine data quality assessments or ad hoc audits of the completeness and accuracy of information systems' data would inform public debate about the quality of information on waiting times in emergency departments and build consensus for areas of improvement.

The Bureau has published this data quality assessment to offer suggestions to improve the relevance of information systems on care in emergency departments and to enhance transparency regarding data quality of electronic information systems.

More information about the quality of data on information systems in emergency departments and opportunities to improve is available from the Bureau of Health Information in *Data quality assessment: information systems in NSW emergency departments* at [www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au)

# Acknowledgments

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# 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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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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