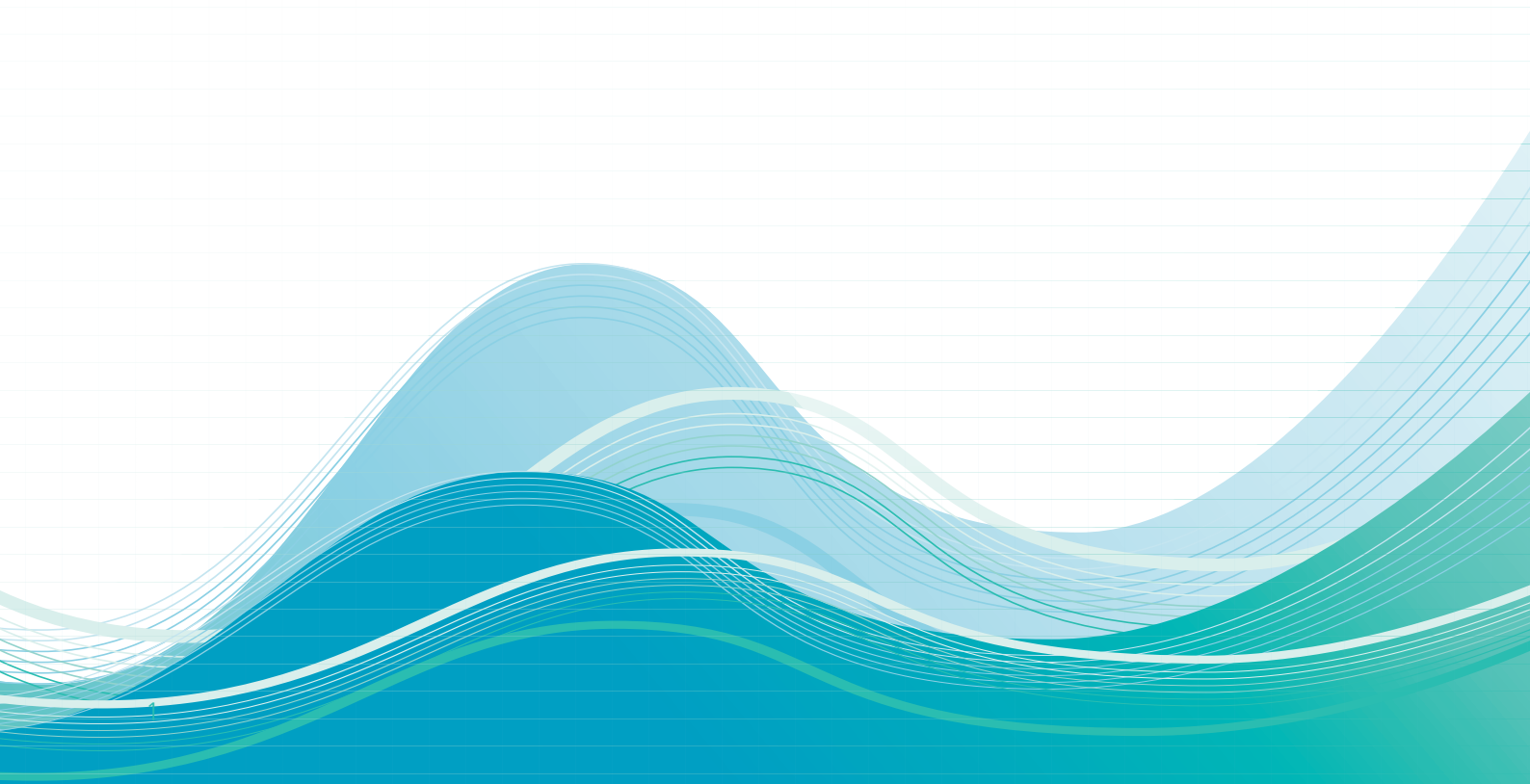


# Hospital Quarterly

Performance of NSW Public Hospitals  
April to June 2010



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1. **Data Quality Assessment:** Information systems in NSW emergency departments  
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2. **Data Quality Assessment:** NSW Health Patient Survey 2009  
Available at [www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au)
3. **Technical supplement:** Measures of emergency department performance and activity  
Available at [www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au)
4. **Technical supplement:** Measures of patient experience of emergency department care  
Available at [www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au)
5. **Technical supplement:** Measures of elective surgery activity  
Available at [www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au)
6. **Technical supplement:** Measures of admitted patient activity  
Available at [www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au)

# Foreword

Welcome to the Bureau of Health Information's inaugural issue of *Hospital Quarterly* designed to provide you, the community and healthcare professionals, with information on the performance of public hospitals in NSW. This first issue sets the tone for future issues with information on patients who were admitted to hospital, underwent elective surgery or attended emergency departments.

The performance of NSW's public hospitals is of vital importance to the community. Healthcare professionals in NSW public hospitals admitted people for more than 400,000 episodes of care from April to June 2010 for both planned and unplanned care. There were also almost half a million visits to a NSW public hospital emergency department, with almost one in four patients needing to be admitted to hospital. *Hospital Quarterly* reports how these figures have changed over time and also how the figures compare across the state.

With a special focus on emergency department care, this issue of *Hospital Quarterly*, gives information for April to June 2010 on the number and types of patients who received care, as well as the length of time people spent waiting for care. By including this information alongside findings from the NSW Health Patient Survey 2009, readers can gain new insights on how patients rated their care, how emergency departments compared on issues that mattered most to patients and how these experiences varied across 66 hospital emergency departments, area health services and by the type of hospital.

The *Special Commission of Inquiry into Acute Care Services in NSW Public Hospitals*, released in November 2008 by Commissioner Garling, outlined a series of recommendations to improve the NSW acute care hospital system. At the heart of Commissioner Garling's report was a recommendation to shift the culture within our hospital system in order to improve public confidence in having access to high quality, safe health care when it is needed. The Bureau was established to report transparently to the people of

NSW and is charged with reporting on the quality of care being received from NSW hospitals. This issue of *Hospital Quarterly* provides robust information to inform efforts to improve care in public hospitals.

The Bureau aims to give the community, those working in healthcare and the NSW Parliament timely, accurate and comparable information about the performance of the NSW public health system and, to this end, the Bureau's staff have assessed the quality of the databases used to create this issue of *Hospital Quarterly*. Opportunities to strengthen and improve information systems provided by emergency departments are reported. More information about the quality of those databases, as well as a summary of the technical and statistical methods used in this report, are available at [www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au)



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



**Dr Diane Watson**  
Chief Executive

# Summary

Patients' experiences of accessing and receiving care in NSW public hospitals and emergency departments are important issues facing healthcare today.

In this report, the Bureau of Health Information charts how hospitals are performing, how use of hospitals has changed over time, and how area health services and public hospitals compare with each other. Through the report, a picture of the experiences of patients and what access to care in NSW is like begins to emerge. In order to provide continuity of information, the Bureau has included the measures reported previously in the NSW Department of Health's *Quarterly Hospital Performance Report* for comparability.

This first edition of *Hospital Quarterly* has an in-depth focus on NSW public hospital emergency departments and the Bureau has increased the number of emergency departments being individually reported on from 40 to 66.

The Bureau has reported on arrivals by ambulances and three time intervals spent in NSW emergency departments:

- waiting times for treatment
- time to discharge and
- time to admission.

The Bureau's in-depth analyses also include feedback from the NSW Health Patient Survey 2009, the largest patient survey in Australia, and from almost 21,000 patients of NSW emergency departments to establish what matters most to patients and provide patient-focused comparisons between the 66 hospitals.

## What we found about admitted patient journey

From April to June 2010, there were 400,592 admitted patient episodes of care in NSW public hospitals. This represents an increase from the previous quarter and since the same time last year.

From April to June 2010, patients admitted for an acute episode stayed a total of 1,322,859 nights in a hospital bed which represents an increase from the previous quarter and since the same time last year.

Detailed findings about admitted patient journeys by area health service and major public hospital can be found on pages 10 and 11.

## What we found about waiting times for elective surgery

From April to June 2010, the percentage of patients admitted for elective surgery in the time recommended differed across urgency categories. The highest priority elective surgery patients, category 1, were recommended to have treatment within 30 days, intermediate patients, category 2, 90 days and the least urgent, category 3 patients, 365 days.

Patients from category 1 were most likely to be admitted within the recommended timeframe with 91 per cent admitted within 30 days. This figure is up slightly from April to June 2009 when the figure was 90 per cent. The median\* waiting time of category 1 patients was 11 days which is up slightly from the same period last year (10 days).

From April to June 2010, most patients from category 2 were admitted within the recommended timeframe with 85 per cent admitted within 90 days. This figure is up slightly from April to June 2009 when the figure was 83 per cent. The median waiting time of category 2 patients was 49 days which is down slightly from the same period last year (51 days).

From April to June 2010, 86 per cent of category 3 patients were admitted within the recommended timeframe of 365 days. In April to June 2009, 91 per cent of category 3 patients were admitted within 365 days. On average, the median waiting time of category 3 patients from April to June 2010 was 205 days, which is up from the same period last year (134 days).

Some area health services perform closer to the recommended timeframes than others and public hospitals performing close to or achieving the timeframes for all categories are spread across NSW. Indeed, there are principal referral and major acute hospitals where almost all elective surgery patients across all urgency categories are seen in the recommended time. These hospitals include: Concord Hospital, Dubbo Base Hospital, Manly District Hospital, Royal Hospital for Women and Royal Prince Alfred Hospital.

Detailed findings about elective surgery waiting times by area health service and major public hospital can be found on pages 14 and 15.

\* The median wait time is the number of days by which a patient who was in the middle of the waiting list of patients waited to be admitted.

## What we found about care in emergency departments

From April to June 2010, there were almost half a million attendances (495,863) at public hospital emergency departments across NSW. This is slightly down from the previous quarter (507,774) and down from a two year high during the swine flu pandemic from July to September 2009. From April to June 2010, 484,212 of these attendances were considered 'emergency attendances' with the remainder attending for planned appointments or visits.

Detailed findings about the journeys of patients through NSW emergency departments can be found on pages 16 to 28.

### Arrivals by ambulance

There is a target set for 90 per cent of patients arriving by ambulance to be accepted into emergency department care within 30 minutes of arrival. From April to June 2010, 122,200 patients arrived in emergency department by ambulance (25% of all attendances). Among these patients 68 per cent were accepted into the care of the emergency department within 30 minutes of the ambulance arriving at the emergency department. This represents a decrease from the previous quarter (71%) and since the same time last year (71%).

Detailed findings about patients being accepted into the care of emergency departments from an ambulance can be found on pages 18 and 19.

## Waiting time to treatment in an emergency department

There are targets that specify how long patients in an emergency department should wait from the time they are first assessed (or triaged) until they start treatment depending on the urgency of their condition. From April to June 2010, NSW patients were seen in the recommended timeframe for all categories, except triage category 3 where 74 per cent were seen within the 30 minute target. This represents an increase in the percentage of category 3 patients seen on time from the previous quarter (73%) and since the same time last year (68%). The target for triage 3 is for 75 per cent of patients to start treatment within 30 minutes of being triaged.

There are emergency departments in principal referral and major acute hospitals that meet the triage targets for all categories, including Bankstown/Lidcombe Hospital, Blacktown Hospital, Campbelltown Hospital, Concord Hospital, Hornsby and Ku-Ring-Gai Hospital, John Hunter Hospital, Liverpool Hospital, Manly District Hospital, Mona Vale and District Hospital, Royal North Shore Hospital, Shoalhaven and District Memorial Hospital, Sutherland Hospital, Sydney Hospital, Sydney Eye Hospital and Wagga Wagga Base Hospital; some area health services perform closer to the targets than others.

Detailed findings about waiting times for treatment by emergency department and area health service can be found on pages 24 to 26.



## Time to admission or discharge from an emergency department

When doctors decide that an emergency patient needs to be admitted to a hospital ward, intensive care unit or operating theatre, the target is for 80 per cent of patients to be admitted within eight hours from the time they start to receive treatment in the emergency department.

From April to June 2010, 72 per cent of patients were treated in an emergency department and admitted to a public hospital within eight hours of starting treatment. This level of performance represents a decrease from the previous quarter (74%) and since the same time last year (73%).

Information on how long it took for NSW patients from each triage group to be admitted or discharged from the beginning of treatment in the emergency department is profiled on page 21 to 23. Detailed findings about emergency admission performance by emergency department and area health services can be found on pages 24 to 26.

## Patient care experiences

By analysing data from the NSW Health Patient Survey 2009\* and the responses of almost 21,000 patients, the Bureau determined that most non-admitted emergency patients who completed the survey rated their care as excellent (26%), very good (32%) or good (25%). A minority reported it to be fair (12%) or poor (5%).

The key areas that influenced these patient ratings of excellent or fair and poor overall care in emergency departments were:

- courtesy of staff
- completeness of care and
- waiting time.

## Want to learn about care in emergency departments in your area?

Information on volume, waiting times and care experiences in 66 emergency departments across NSW is available in the *Hospital Quarterly: Special Feature on Emergency Department Care* from the Bureau of Health Information at [www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au)

The information profiled for each of 66 emergency departments includes:

- Number and types of patients who receive treatment
- Waiting times for treatment
- Time from treatment to admission or discharge
- Patient ratings of overall care, staff courtesy, completeness of care and waiting times
- Performance comparisons relative to one year ago.

Importantly, emergency departments with higher or lower patient ratings of overall care are located across NSW and across the different types of hospitals.

Detailed findings about patient ratings of overall care in emergency departments, by area health service and type of hospital, can be found on pages 29 to 36.

\* In 2010, some of those patients who receive care in an emergency department will be surveyed about their experiences of care. The results of these surveys will be available in late 2010.



# 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 patient is admitted to hospital, they begin what is called an episode of care, which covers care for a specific medical problem or condition. 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 populations' health needs and to allow planning for hospital beds, waiting lists and staffing requirements. Although the number of episodes does vary depending on the season, these changes can have a significant effect on hospital planning and the quality of 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

From April to June 2010, there were 400,592 admitted patient episodes for care in NSW public hospitals, up from 383,492 in the previous quarter. Each year there are more admitted patient episodes from April to June relative to January to March. These seasonal patterns are illustrated in [Figure 1](#).

There is a steady annual rise in the number of admitted episodes in NSW public hospitals:

- From April to June 2009, there were 388,391 admitted patient episodes indicating an increase (3.1%) in the past year
- From April to June 2008, there were 386,319 admitted patient episodes indicating an increase (3.7%) 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).

From April to June 2010, there were 169,856 planned admitted patient episodes and 230,736 unplanned. Planned admitted episodes accounted for 42 per cent of all admitted patient episodes ([Figure 1](#)).

An admission for childbirth is considered unplanned and approximately one in thirteen unplanned episodes was for childbirth. From April to June 2010, 18,118 babies were born in NSW public hospitals, the highest number of births since the July to September 2008 quarter.

## Number of acute patients

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

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 colonoscopy 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.

From April to June 2010, there were 386,584 acute, admitted patient episodes, up from 371,340 in the last quarter. By comparison:

- From April to June 2009, there were 375,648 acute, admitted patient episodes indicating an increase (2.9%) in the past year
- From April to June 2008, there were 374,351 acute, admitted patient episodes indicating an increase (3.3%) 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).

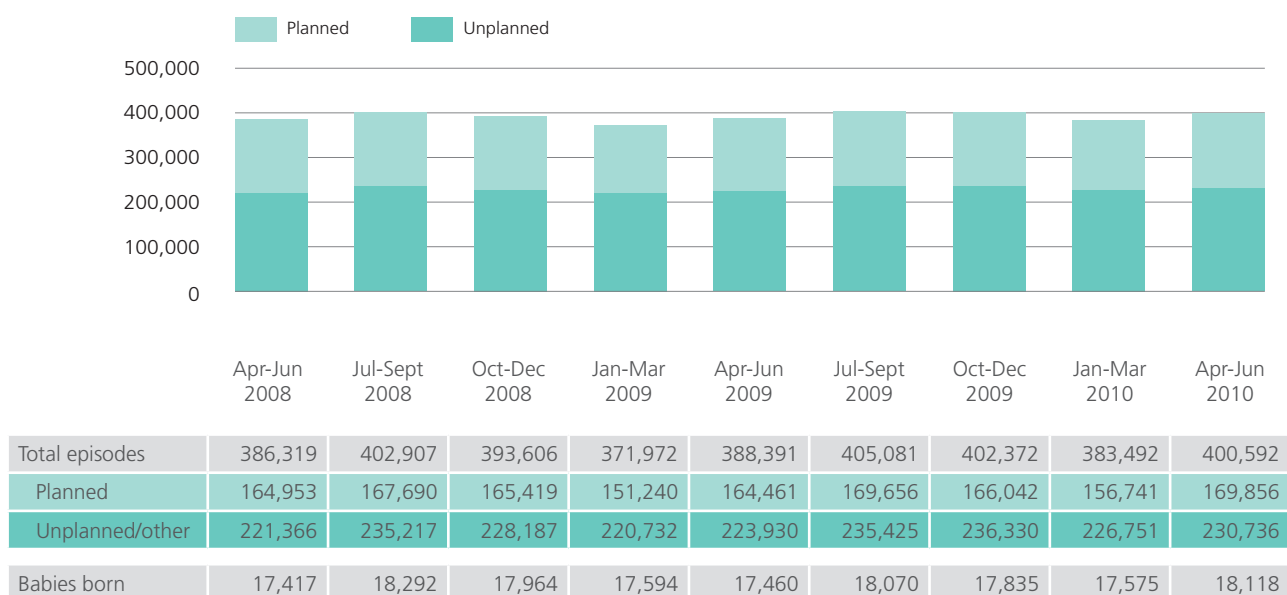
From April to June 2010, there were 171,289 same day episodes (44% of acute admission episodes) and 215,295 overnight episodes (56% of acute admitted patient episodes) as shown in [Figure 2](#).

## Hospital bed use for acute stay patients

From April to June 2010, patients admitted for an acute episode stayed a total of 1,322,859 nights in a hospital bed, up from 1,284,716 in the last quarter. The average length of stay in hospital among acute patients (including same day patients) was 3.4 days, down from 3.5 days in the last quarter. By comparison:

- From April to June 2009, patients admitted for an acute episode stayed a total of 1,315,136 nights indicating an increase (0.6%) in the past year. The average length of stay for acute patients was 3.5 days
- From April to June 2008, patients admitted for an acute episode stayed a total of 1,355,639 nights indicating a decrease (-2.4%) in the past two years. The average length of stay for acute patients was 3.6 days.

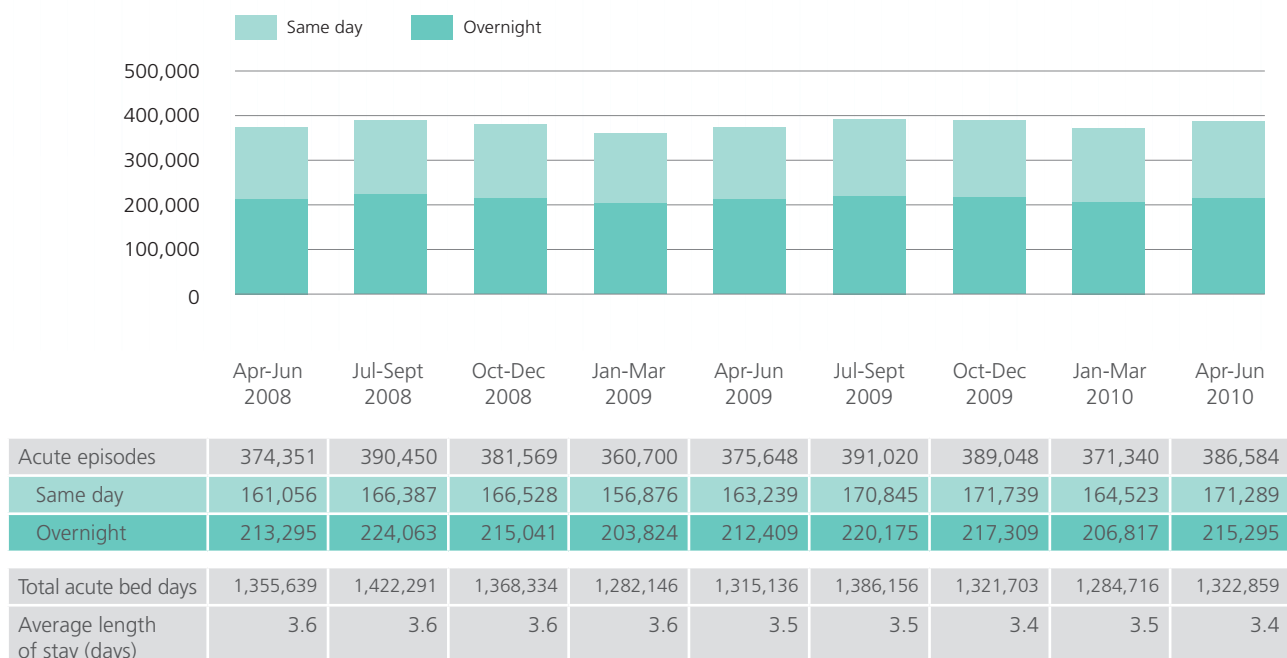
Figure 1: Planned and unplanned admitted patient episodes in NSW public hospitals summary, April 2008 to June 2010



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

Source: Admitted Patient Data Collection. Health Information Exchange, NSW Health. Data extracted on 16 July 2010.

Figure 2: Same day and overnight and same day acute admitted patient episodes in NSW public hospitals, April 2008 to June 2010



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

Source: Admitted Patient Data Collection. Health Information Exchange, NSW Health. Data extracted on 16 July 2010.

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, April to June 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>	400,592	169,856	230,736	171,289	215,295	1,322,859	3.4
<b>Children's Hospital at Westmead</b>							
Total Children's Hospital at Westmead	7,161	3,895	3,266	3,293	3,868	21,497	3.0
<b>Greater Southern</b>							
Wagga Wagga Base Hospital	6,778	2,752	4,026	3,221	3,448	17,907	2.7
Other Greater Southern	19,494	6,535	12,959	8,524	9,764	46,942	2.6
<b>Total Greater Southern</b>	26,272	9,287	16,985	11,745	13,212	64,849	2.6
<b>Greater Western</b>							
Dubbo Base Hospital	4,832	2,199	2,633	2,123	2,631	12,677	2.7
Orange Base Hospital	4,973	2,336	2,637	2,232	2,667	11,819	2.4
Other Greater Western	12,472	4,268	8,204	5,378	6,595	37,859	3.2
<b>Total Greater Western</b>	22,277	8,803	13,474	9,733	11,893	62,355	2.9
<b>Hunter New England</b>							
Calvary Mater Newcastle	2,993	928	2,065	802	2,074	12,214	4.2
John Hunter Hospital	19,386	10,635	8,751	9,726	9,379	61,615	3.2
Maitland Hospital	3,745	893	2,852	680	2,984	15,031	4.1
Manning Base Hospital	4,406	2,137	2,269	2,120	2,234	13,186	3.0
Tamworth Base Hospital	5,020	2,340	2,680	2,065	2,846	15,966	3.3
Other Hunter New England	13,961	5,583	8,378	5,205	8,492	59,134	4.3
<b>Total Hunter New England</b>	49,511	22,516	26,995	20,598	28,009	177,146	3.6
<b>Justice Health</b>							
Total Justice Health	682	482	200	35	482	11,746	22.7
<b>North Coast</b>							
Coffs Harbour Base Hospital	6,490	3,234	3,256	3,064	3,347	20,152	3.1
Lismore Base Hospital	6,192	2,816	3,376	2,558	3,612	20,142	3.3
Port Macquarie Base Hospital	4,813	2,128	2,685	1,846	2,934	15,566	3.3
The Tweed Hospital	7,598	3,043	4,555	3,460	4,136	20,330	2.7
Other North Coast	13,997	7,057	6,940	7,613	5,863	38,702	2.9
<b>Total North Coast</b>	39,090	18,278	20,812	18,541	19,892	114,892	3.0

## All episodes

## Acute episodes

	All episodes			Acute episodes			
	Total episodes	Planned	Unplanned / other	Same day	Overnight	Total acute bed days	Average length of stay (days)
<b>Northern Sydney Central Coast</b>							
Gosford Hospital	11,931	5,136	6,795	4,746	6,930	40,532	3.5
Hornsby and Ku-Ring-Gai Hospital	4,128	1,288	2,840	1,026	2,971	16,151	4.0
Manly District Hospital	3,347	754	2,593	978	2,309	13,004	4.0
Mona Vale and District Hospital	3,832	1,466	2,366	1,737	1,912	9,840	2.7
Royal North Shore Hospital	12,587	5,142	7,445	4,721	7,597	49,622	4.0
Ryde Hospital	2,645	766	1,879	985	1,559	9,633	3.8
Wyong Hospital	6,420	2,979	3,441	3,136	3,103	22,303	3.6
Other Northern Sydney Central Coast	2,421	955	1,466	437	1,095	17,112	11.2
<b>Total Northern Sydney Central Coast</b>	<b>47,311</b>	<b>18,486</b>	<b>28,825</b>	<b>17,766</b>	<b>27,476</b>	<b>178,197</b>	<b>3.9</b>

<b>South Eastern Sydney Illawarra</b>							
Prince of Wales Hospital	10,468	5,799	4,669	4,952	5,322	41,197	4.0
Royal Hospital for Women	3,678	572	3,106	1,122	2,555	12,502	3.4
Shoalhaven and District Memorial Hospital	5,227	2,383	2,844	2,659	2,503	13,318	2.6
St George Hospital	13,512	5,870	7,642	5,311	7,714	46,366	3.6
St Vincent's Hospital, Darlinghurst	9,494	5,103	4,391	5,462	4,032	32,212	3.4
Sutherland Hospital	6,430	2,272	4,158	2,006	3,912	21,136	3.6
Sydney Children's Hospital	3,802	1,886	1,916	1,660	2,136	10,540	2.8
Sydney/Sydney Eye Hospital	2,966	1,745	1,221	1,688	1,278	6,306	2.1
Wollongong Hospital	10,755	3,830	6,925	4,297	6,402	42,421	4.0
Other South Eastern Sydney Illawarra	8,178	3,316	4,862	2,883	2,274	16,377	3.2
<b>Total South Eastern Sydney Illawarra</b>	<b>74,510</b>	<b>32,776</b>	<b>41,734</b>	<b>32,040</b>	<b>38,128</b>	<b>242,375</b>	<b>3.5</b>

<b>Sydney South West</b>							
Bankstown / Lidcombe Hospital	8,336	2,801	5,535	2,897	5,232	30,880	3.8
Campbelltown Hospital	7,549	2,035	5,514	1,991	5,531	29,609	3.9
Canterbury Hospital	4,422	1,137	3,285	1,144	3,140	13,236	3.1
Concord Hospital	12,348	8,276	4,072	7,362	4,668	47,182	3.9
Fairfield Hospital	4,211	1,029	3,182	893	3,139	12,560	3.1
Liverpool Hospital	21,479	10,862	10,617	12,517	8,539	62,832	3.0
Royal Prince Alfred Hospital	17,407	7,826	9,581	7,555	9,816	67,350	3.9
Other Sydney South West	5,705	1,921	3,784	1,512	2,957	15,606	3.5
<b>Total Sydney South West</b>	<b>81,457</b>	<b>35,887</b>	<b>45,570</b>	<b>35,871</b>	<b>43,022</b>	<b>279,255</b>	<b>3.5</b>

<b>Sydney West</b>							
Auburn Hospital	4,620	1,134	3,486	2,166	2,406	9,544	2.1
Blacktown Hospital	6,415	1,236	5,179	1,256	5,129	28,622	4.5
Mount Druitt Hospital	2,856	963	1,893	993	1,646	4,834	1.8
Nepean Hospital	13,557	4,214	9,343	5,155	8,224	43,430	3.2
Westmead Hospital (all units)	21,277	10,396	10,881	11,184	9,610	64,957	3.1
Other Sydney West	3,596	1,503	2,093	913	2,298	19,160	6.0
<b>Total Sydney West</b>	<b>52,321</b>	<b>19,446</b>	<b>32,875</b>	<b>21,667</b>	<b>29,313</b>	<b>170,547</b>	<b>3.3</b>

Source: Admitted Patient Data Collection. Health Information Exchange, NSW Health. Data extracted on 16 July 2010.

## Chapter 2: Waiting times for elective surgery

Planned or elective surgery can be any surgery that a patient's doctor believes to be necessary but can be delayed by at least 24 hours, as opposed to emergency surgery, which 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 of time, 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 to hospital for surgery within the maximum time (in days) recommended by their surgeon. Therefore, each surgeon assigns people on the booking system to one of three urgency categories. These categories and the recommended waiting times are:

Category 1	Admission within 30 days desirable
Category 2	Admission within 90 days desirable
Category 3	Admission within 365 days desirable

The waiting times presented in this report show all elective surgery conducted in public hospitals in NSW and therefore includes all public and private patients who were treated in NSW public hospitals.

### Patients admitted in time for their elective surgery

From April to June 2010, 87 per cent of patients in all urgency categories who were admitted to a public hospital and received elective surgery in NSW were admitted within the timeframe recommended by the surgeon who referred them (Figure 3). This proportion is the same as the preceding quarter (87%), almost the same as in the April to June 2009 quarter (88%) and the same as from April to June 2008 (87%).

### Wait times for elective surgery

From April to June 2010, patients from the highest priority category (category 1) were most likely to be admitted within the recommended timeframe with 91 per cent admitted within 30 days. This per cent is down slightly from the preceding quarter (93%), up slightly from April to June 2009 (90%) and down slightly from April to June 2008 (92%). On average, the median\* waiting time of category 1 patients was 11 days (Figure 4), which is up from the preceding quarter (9 days), up slightly from April to June 2009 and April to June 2008 (each 10 days).

From April to June 2010, most category 2 patients (85%) were admitted within the recommended timeframe of 90 days. This per cent is up from the preceding quarter (80%), slightly up from April to June 2009 (83%) and considerably higher when compared with April to June 2008 (75%). On average, the median waiting time of category 2 patients was 49 days which is down from the preceding quarter (54 days), down slightly from April to June 2009 (51 days) and down from April to June 2008 (52 days).

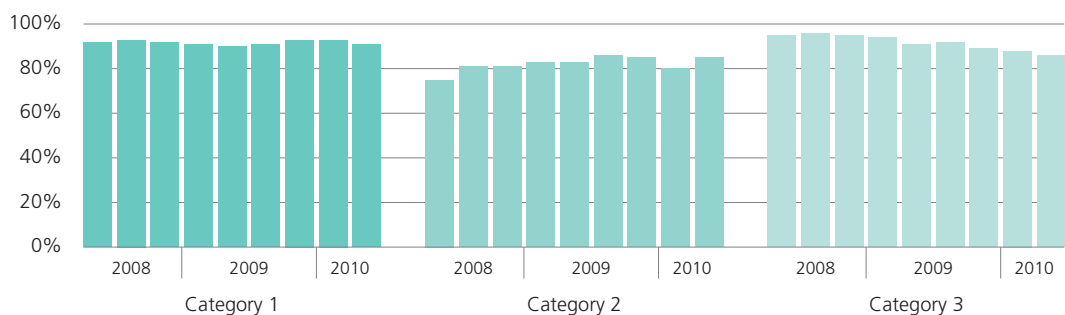
From April to June 2010, most category 3 patients (86%) were admitted within the recommended timeframe of 365 days. This per cent is down slightly from the preceding quarter (88%), down from April to June 2009 (91%) and considerably lower when compared with April to June 2008 (95%). On average, the median waiting time of category 3 patients was 205 days which is up from the preceding quarter (175 days), up from April to June 2009 (134 days) and up from April to June 2008 (136 days).

Under the national reform process, 95 per cent of urgency category 1 and 2 patients should be treated within clinically recommended times by December 2014; by December 2015, the target of 95 per cent will also apply to category 3 patients.<sup>1</sup>

\* Median wait time is the number of days by which a patient who was in the middle of the waiting list of patients waited to be admitted.



Figure 3: Per cent of elective surgery patients seen in recommended waiting time, by urgency category, April 2008 to June 2010

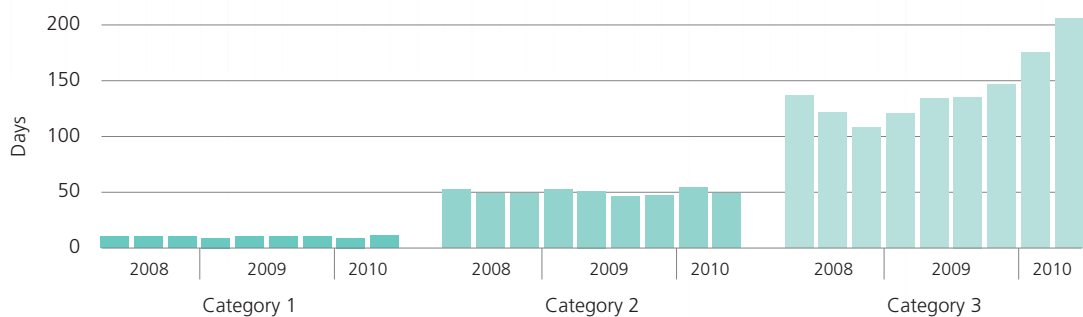


	Apr-Jun 2008	Jul-Sept 2008	Oct-Dec 2008	Jan-Mar 2009	Apr-Jun 2009	Jul-Sept 2009	Oct-Dec 2009	Jan-Mar 2010	Apr-Jun 2010
All categories	87%	91%	90%	90%	88%	90%	89%	87%	87%
Category 1	92%	93%	92%	91%	90%	91%	93%	93%	91%
Category 2	75%	81%	81%	83%	83%	86%	85%	80%	85%
Category 3	95%	96%	95%	94%	91%	92%	89%	88%	86%

Note: Patients treated on time refers to the per cent of patients that are admitted for elective surgery in the time frame recommended by the referring surgeon.

Source: Waiting List Collection On-line System, NSW Health. Data extracted on the 14 July 2010.

Figure 4: NSW elective surgery median waiting time (days), by urgency category, April 2008 to June 2010



	Apr-Jun 2008	Jul-Sept 2008	Oct-Dec 2008	Jan-Mar 2009	Apr-Jun 2009	Jul-Sept 2009	Oct-Dec 2009	Jan-Mar 2010	Apr-Jun 2010
Category 1	10	10	10	9	10	10	10	9	11
Category 2	52	49	49	52	51	46	47	54	49
Category 3	136	121	108	120	134	135	146	175	205

Note: Median waiting time is the number of days by which a patient who was in the middle of the waiting list of patients waited to be admitted.

Source: Waiting List Collection On-line System, NSW Health. Data extracted on the 14 July 2010.

Elective surgery waiting time data at a state level includes all public hospitals in NSW conducting elective surgery but is presented individually for all principal referral hospitals and major acute hospitals, as well

as for area health services in [Table 2](#). Information from smaller hospitals is presented for each area health service under an 'other' category.

**Table 2: NSW elective surgery performance by hospital and area health service, April to June 2010**

	Per cent 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>	87%	91%	85%	86%	11	49	205
<b>Children's Hospital at Westmead</b>							
Total Children's Hospital at Westmead	85%	98%	70%	90%	5	58	53
<b>Greater Southern</b>							
Wagga Wagga Base Hospital	68%	87%	68%	60%	23	70	349
Other Greater Southern	89%	91%	83%	93%	16	57	223
Total Greater Southern	81%	90%	77%	80%	19	63	304
<b>Greater Western</b>							
Dubbo Base Hospital	96%	97%	97%	95%	12	28	90
Orange Base Hospital	82%	96%	91%	71%	10	54	349
Other Greater Western	96%	95%	94%	98%	13	42	222
Total Greater Western	91%	95%	94%	88%	12	42	251
<b>Hunter New England</b>							
Calvary Mater Newcastle	77%	72%	84%	100%	20	56	137
John Hunter Hospital	81%	87%	81%	77%	12	55	277
Maitland Hospital	84%	76%	92%	81%	20	47	250
Manning Base Hospital	76%	87%	90%	71%	22	55	325
Tamworth Base Hospital	93%	95%	88%	97%	12	61	195
Other Hunter New England	89%	86%	91%	88%	10	38	174
Total Hunter New England	85%	85%	87%	83%	14	48	236
<b>North Coast</b>							
Coffs Harbour Base Hospital	61%	85%	65%	48%	16	80	367
Lismore Base Hospital	86%	93%	80%	86%	12	58	194
Port Macquarie Base Hospital	81%	89%	76%	78%	14	63	262
The Tweed Hospital	87%	87%	78%	93%	16	52	180
Other North Coast	88%	91%	88%	87%	17	55	213
Total North Coast	82%	89%	80%	80%	15	61	262

Per cent of patients treated on time

Median waiting time  
(days)

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

Northern Sydney Central Coast							
Gosford Hospital	72%	96%	72%	62%	15	67	333
Hornsby and Ku-Ring-Gai Hospital	94%	98%	95%	92%	6	36	112
Manly District Hospital	98%	100%	95%	100%	6	35	65
Mona Vale and District Hospital	94%	98%	93%	94%	3	25	36
Royal North Shore Hospital	92%	96%	84%	96%	7	48	139
Ryde Hospital	95%	100%	93%	95%	13	37	129
Wyong Hospital	90%	99%	86%	91%	15	48	231
<b>Total Northern Sydney Central Coast</b>	<b>87%</b>	<b>97%</b>	<b>84%</b>	<b>85%</b>	<b>8</b>	<b>48</b>	<b>161</b>

South Eastern Sydney Illawarra							
Prince of Wales Hospital	84%	87%	89%	74%	13	43	296
Royal Hospital for Women	99%	99%	98%	100%	8	36	46
St George Hospital	80%	83%	79%	75%	15	57	278
St Vincent's Hospital, Darlinghurst	88%	93%	81%	86%	7	46	94
Sutherland Hospital	90%	83%	90%	93%	17	54	249
Sydney Children's Hospital	93%	96%	88%	99%	8	33	81
Sydney/Sydney Eye Hospital	95%	97%	96%	94%	11	42	255
Wollongong Hospital	89%	91%	80%	92%	8	65	104
Other South Eastern Sydney Illawarra	93%	84%	89%	97%	15	57	220
<b>Total South Eastern Sydney Illawarra</b>	<b>90%</b>	<b>90%</b>	<b>88%</b>	<b>91%</b>	<b>11</b>	<b>48</b>	<b>218</b>

Sydney South West							
Bankstown / Lidcombe Hospital	87%	82%	83%	91%	14	62	161
Campbelltown Hospital	88%	68%	86%	92%	22	67	191
Canterbury Hospital	95%	99%	91%	96%	14	57	316
Concord Hospital	98%	97%	98%	98%	8	44	81
Fairfield Hospital	80%	100%	100%	71%	12	42	323
Liverpool Hospital	93%	92%	91%	96%	11	54	183
Royal Prince Alfred Hospital	99%	99%	100%	100%	6	17	14
Other Sydney South West	99%	96%	99%	100%	7	38	39
<b>Total Sydney South West</b>	<b>94%</b>	<b>94%</b>	<b>94%</b>	<b>94%</b>	<b>8</b>	<b>41</b>	<b>106</b>

Sydney West							
Auburn Hospital	84%	88%	73%	90%	9	70	276
Blacktown Hospital	80%	86%	71%	86%	12	63	212
Mount Druitt Hospital	66%	97%	63%	60%	12	80	313
Nepean Hospital	71%	88%	67%	62%	10	71	307
Westmead Hospital (all units)	88%	91%	84%	84%	9	41	117
Other Sydney West	74%	91%	86%	67%	14	54	323
<b>Total Sydney West</b>	<b>79%</b>	<b>90%</b>	<b>75%</b>	<b>73%</b>	<b>10</b>	<b>59</b>	<b>274</b>

Source: Waiting List Collection On-line System, NSW Health. Data extracted on the 14 July 2010.

# 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.

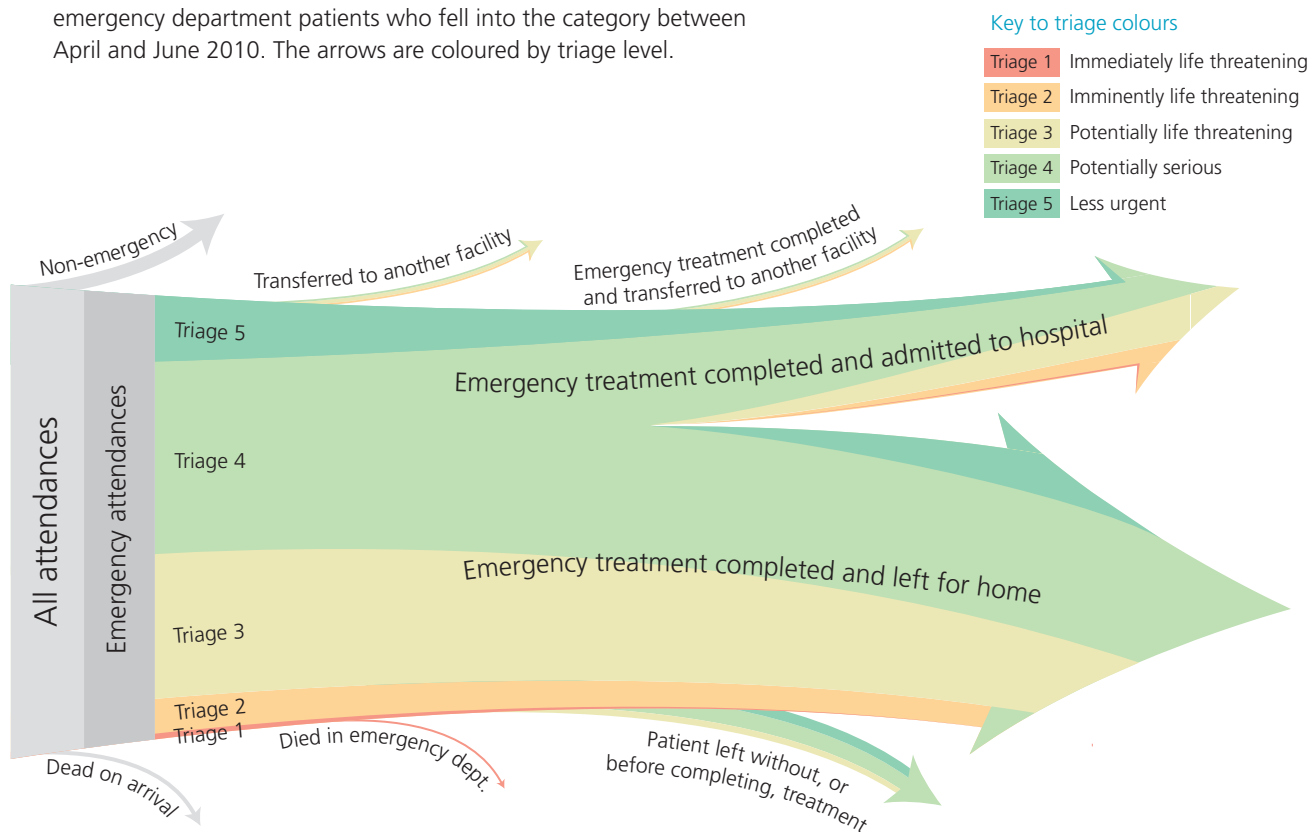
A patient or someone helping them might call an ambulance or take them to an emergency department. On arrival, whether by ambulance or otherwise, most patient journeys will follow a similar pattern of arrival, triage,\* a more detailed assessment, then treatment and leaving the emergency department to 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 April to June 2010 quarter are summarised in Figure 5. Almost seven in ten patients (68% of 484,212 emergency attendances) who were triaged in an emergency department from April to June 2010 received treatment there but were not admitted to hospital, while just more

Figure 5: Summary of patient journeys through NSW emergency departments, April to June 2010

The thickness of each arrow is proportional to the number of NSW emergency department patients who fell into the category between April and June 2010. The arrows are coloured by triage level.



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

than two in ten (23% of emergency attendances) received treatment and were then admitted to the same hospital. People also left the emergency department without, or before completing treatment (7% of emergency attendances). There are a number of reasons for leaving before treatment has been completed, including being dissatisfied with the care they received or if their reason for visiting the emergency department 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 categorised 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.

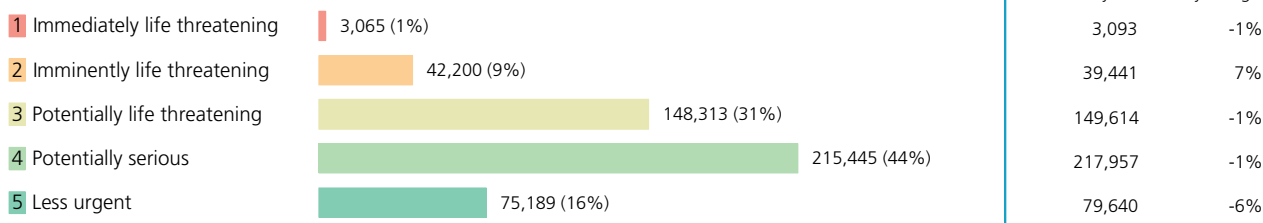
## Triage categories and destination following treatment

From April to June 2010, there were almost half a million attendances (495,863) at public hospital emergency departments in NSW and 484,212 of these were considered 'emergency attendances' (Figure 6). The remaining 11,651 patients were recorded as

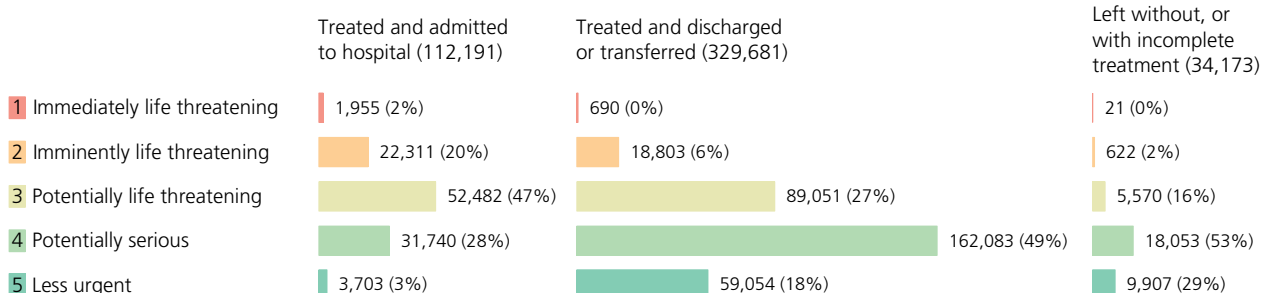
Figure 6: Attendances at NSW emergency departments, April to June 2010

All attendances:<sup>1</sup> 495,863 patients

Emergency attendances<sup>2</sup> by triage category: 484,212 patients



Emergency attendances by triage category and mode of separation:<sup>3</sup> 476,045 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: Emergency department activity includes 85 facilities for which electronic data is reported. This covers over 83 per cent of NSW emergency department activity.

Source: Health Information Exchange, NSW Health. Data extracted on 16 July 2010.

planned or pre-arranged visits, of which 1,335 were admitted to hospital through the emergency department. This report presents information for emergency attendances; patients classified as planned or prearranged are not included in the data presented with the exception of 'all attendance' numbers and 'admissions' in [Table 5](#) and [Figure 11](#).

Four in ten emergency attendances (44%) were categorised as potentially serious (triage category 4), 31 per cent were categorised as potentially life threatening (triage 3), 16 per cent were less urgent (triage 5) and nine per cent were imminently life threatening (triage 2). Immediately life threatening (triage 1), the most urgent category, represents one per cent of all people triaged in emergency departments ([Figure 6](#)).

Once a person has been triaged, there are three main patient journeys in an emergency department. In terms of patient journeys from April to June 2010:

- 112,191 people (23% 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 per cent were triage category 3, 28 per cent were triage 4, 20 per cent were triage 2, three per cent were triage 5 and two per cent were triage 1
- 329,681 people (68% of emergency attendances) received treatment and then left the emergency department. Among these patients, 49 per cent were triage 4, 27 per cent were triage 3, 18 per cent were triage 5, six per cent were triage 2 and less than one per cent were triage 1
- 34,173 (7% of emergency attendances) people left without, or before completing, treatment. Among these patients, 53 per cent were triage 4, 29 per cent were triage 5, 16 per cent were triage 3, two per cent were triage 2 and less than one per cent were triage 1.

## Arrivals by ambulance

From April to June 2010, 122,200 patients (25% of all attendances) arrived at hospital by ambulance ([Figure 8](#)). An ambulance crew is required to wait with a patient until emergency department staff can accept that patient into their care. By comparison:

- From April to June 2009, 121,306 patients (24% of all attendances) arrived at hospital by ambulance
- From April to June 2008, 119,185 patients (25% of all attendances) arrived at hospital by ambulance.

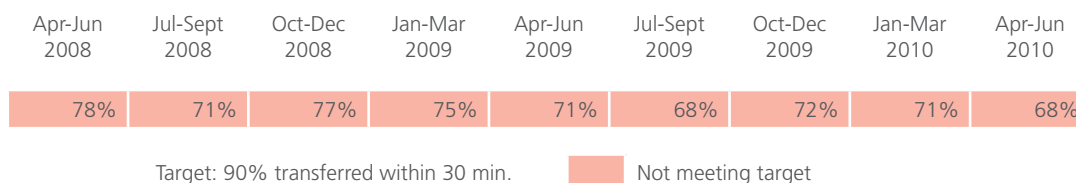
The number of attendances and waiting times, as well as one year comparisons, in 60 emergency departments in NSW is provided in the *Hospital Quarterly: Special feature on emergency department care*, available at [www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au)

From April to June 2010, 68 per cent of these patients were accepted into the care of the emergency department within 30 minutes of the ambulance arriving at the emergency department ([Figure 7](#)), compared to 71 per cent in the last quarter. By comparison:

- From April to June 2009, 71 per cent of patients were accepted into the care of an emergency department within 30 minutes of the ambulance arriving
- From April to June 2008, 78 per cent of patients were accepted into the care of an emergency department within 30 minutes of the ambulance arriving.

The NSW target is for 90 per cent of patients arriving by ambulance to be accepted by the emergency department within 30 minutes of arrival.

Figure 7: Per cent of patients accepted into the care of the emergency department from an ambulance within 30 minutes of arriving (off stretcher performance) in NSW, April 2008 to June 2010



Source: Ambulance Service, NSW. Data received on 23 July 2010.

## 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.<sup>2</sup> These waiting times were endorsed for public hospitals nationally in 1999. Each triage category has a maximum recommended time which the patient should wait to be seen by a healthcare professional and any required treatment should begin (see Glossary for triage categories and triage targets).

From April to June 2010, electronic patient records showed almost all patients across NSW in triage 1 (rounding to 100%) were seen within the recommended two minutes. Electronic patient records showed that there were two hospitals that did not achieve the 100 per cent target for Triage 1 patients to start treatment within two minutes of being triaged; Bowral District Hospital and the Royal Prince Alfred Hospital each recorded one Triage 1 patient waiting more than the two minute target.

On 26 July 2010, the Bureau contacted the NSW Department of Health regarding triage 1 performance at Bowral District Hospital and the Royal Prince Alfred Hospital. On 27 August 2010, the NSW Department of Health notified the Bureau that NSW Health had conducted an independent clinical review and this investigation concluded that these electronic patient records contained data entry errors and all patients received treatment within two minutes of being triaged.

### Information systems in emergency departments

From April to June 2010, there were six 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 on the performance of these six hospitals.

The performance of these six 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 Broken Hill Base Hospital, Coffs Harbour Hospital, Goulburn Base Hospital, Sydney Children's Hospital, Orange Base Hospital and Prince of Wales Hospital.

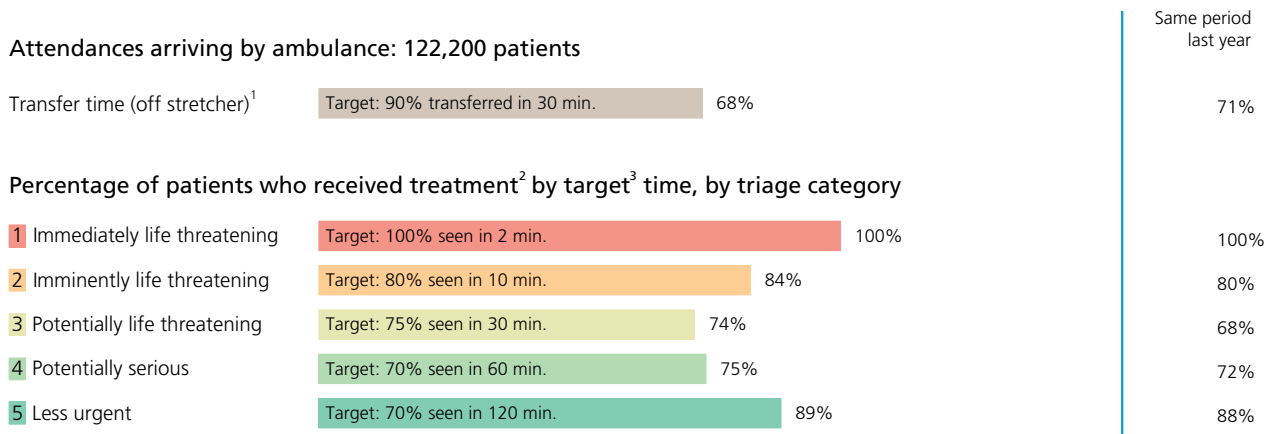
From January to March 2010, Grafton Hospital and Port Macquarie Base Hospital transitioned to the new electronic information system. Caution is advised when considering results from these hospitals.

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

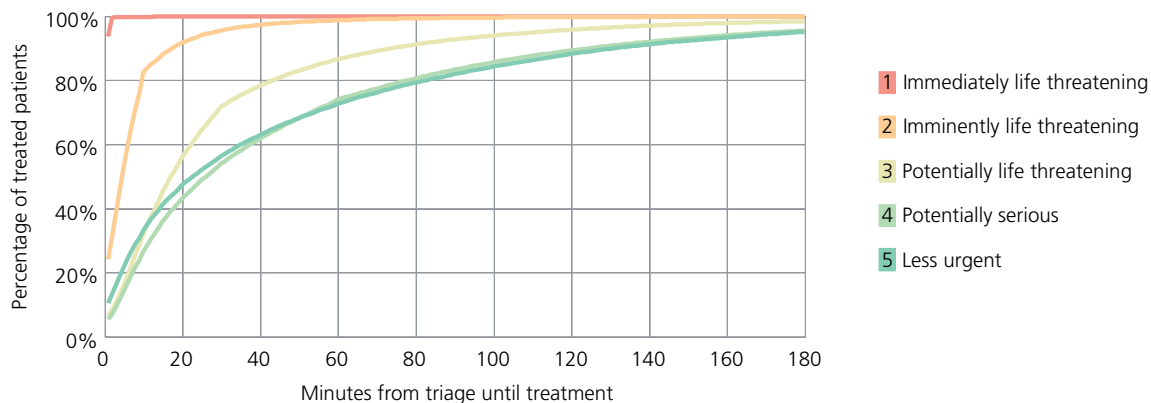
From April to June 2010, greater than the target per cent of patients were seen within the recommended timeframe for triage 2, 4 and 5. More specifically, 84 per cent of patients in triage 2, 75 per cent of patients in triage 4 and 89 per cent of patients in triage 5 were seen within the maximum recommended time.

From April to June 2010, 74 per cent of patients in triage 3 were seen in the recommended time which is just below the target of 75 per cent. The per cent of patients in each triage category seen in different time intervals is summarised in [Figure 8](#).

Figure 8: Waiting times in NSW emergency departments, April to June 2010



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



1. Transfer time refers to the time between arrival and transfer to the care of the emergency department.
2. All unplanned and pre-arranged 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.

**Note:** Numbers and percentages might differ slightly from those previously reported by the NSW Department of Health's *Quarterly Hospital Performance Report* due to differences in when data was 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 19 for more information).

**Source:** Health Information Exchange, NSW Health. Data extracted on 16 July 2010. Ambulance patient numbers and off stretcher time data from Ambulance Service, NSW on 23 July 2010.



Last year, from April to June 2009, 100 per cent of patients in triage 1, 80 per cent of patients in triage 2, 68 per cent of patients in triage 3, 72 per cent of patients in triage 4 and 88 per cent of patients in triage 5 were seen within the maximum recommended time. This represents improvement in performance across all triage categories, especially for triage categories 2, 3 and 4 in the past year.

Information about the wait time for patients who arrive by ambulance, as well as wait time by triage category, for patients in 60 emergency departments in NSW is provided in the *Hospital Quarterly: Special feature on emergency department care*, available at [www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au)

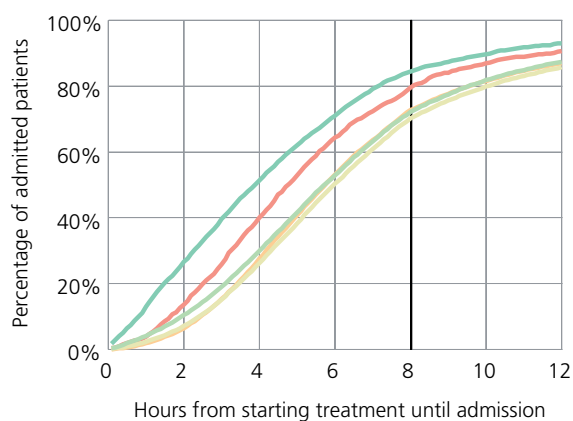
## From treatment until leaving the emergency department

When doctors decide that an emergency patient needs to be admitted to hospital, the target is for 80 per cent of patients to be admitted within eight hours from the time they start to receive treatment in the emergency department. The per cent of patients who arrive on the ward within this time is called the Emergency Admission Performance (EAP).

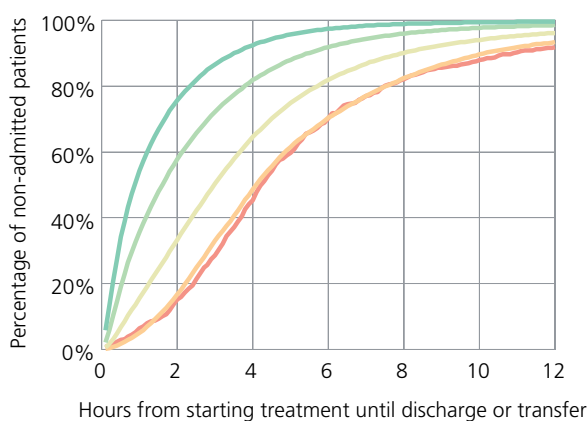
From April to June 2010, 72 per cent of patients were treated in an emergency department and admitted to a public hospital within eight hours of the commencement of treatment (Figure 9). This level of performance is down from last quarter (74%) and from one year ago (73%) as shown in Figure 10. From April to June 2008, 77 per cent of patients were treated and admitted within eight hours.

Figure 9: Waiting times from treatment to admission, discharge or transfer by triage, April to June 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

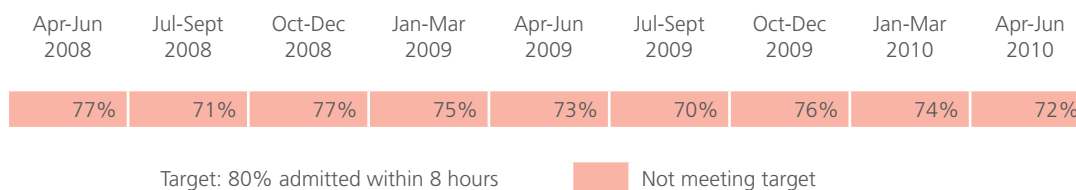
### Emergency Admission Performance (EAP) Target: 80% admitted in 8 hours

72% of admitted patients were transferred from the emergency department to a ward or operating suite within 8 hours of starting treatment.

1. All unplanned and pre-arranged medical attendances excluding those without a recorded triage category, treatment time, or departure time.

Source: Health Information Exchange, NSW Health. Data extracted on 16 July 2010.

Figure 10: Emergency Admission Performance (EAP) in NSW emergency departments, April 2008 to June 2010



**Note:** Numbers and percentages might differ slightly from those previously reported by the NSW Department of Health's Quarterly Hospital Performance Report due to differences in when data was 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 19 for more information).

**Source:** Health Information Exchange, NSW Health. Data extracted on 16 July 2010.

Across NSW, 80 per cent of triage 1 patients and 85 per cent of triage 5 patients were admitted within the eight hour target (Figure 9, Table 3). The proportion that achieved the target for triage 2 patients was 73 per cent, 70 per cent for triage 3 and 72 per cent for triage 4.

Although classified as the least urgent patients, triage 5 patients across NSW are admitted sooner than patients from any other triage group; that is, at each hour (up to 12 hours from the start of treatment), a greater percentage of triage 5 patients were admitted to hospital. There are a number of reasons why this might be. For example, patients from this group have less complex problems and there is less risk to the patient's health of transitioning their care from one clinical team in the emergency department to another on the hospital ward. By comparison, patients from other triage levels are likely to take more time to be medically stable enough to have their care transitioned from one clinical team to another.

More than two thirds (68%) of patients who attend an emergency department receive treatment there but are not admitted to hospital. More than half of these patients (52%) left hospital within two hours

of starting treatment, with those of less urgent triage status leaving soonest (Table 4). By eight hours, 94 per cent of all patients who were not admitted had left the emergency department.

Table 3 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 beginning of treatment in the emergency department.

Table 4 presents the time taken to leave the emergency department (starting from when treatment begins) for those emergency patients who completed treatment but who were not admitted.

Information on the per cent of patients treated in an emergency department and admitted to a public hospital within eight hours, as well as the per cent of patients admitted, discharged or transferred in different time intervals is provided for 60 emergency departments in the *Hospital Quarterly: Special feature on emergency department care*, available at [www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au)

**Table 3: Per cent of patients admitted to the ward from the emergency department, by triage level and time interval<sup>1</sup>, April to June 2010**

	2 hours	4 hours	6 hours	8 hours (EAP)	10 hours	12 hours
Triage 1: Immediately life threatening	14%	40%	64%	80%	87%	91%
Triage 2: Imminently life threatening	6%	28%	53%	73%	82%	87%
Triage 3: Potentially life threatening	7%	26%	50%	70%	80%	86%
Triage 4: Potentially serious	10%	30%	53%	72%	82%	87%
Triage 5: Less urgent	27%	51%	71%	85%	90%	93%
All triage categories	9%	29%	53%	72%	81%	87%

1. Time from start of treatment until arrival on the ward for those admitted from the emergency department.  
Source: Health Information Exchange, NSW Health. Data extracted on 16 July 2010.

**Table 4: Per cent of patients discharged or transferred from the emergency department, by triage level and time interval<sup>1</sup>, April to June 2010**

	2 hours	4 hours	6 hours	8 hours	10 hours	12 hours
Triage 1: Immediately life threatening	15%	45%	70%	82%	88%	92%
Triage 2: Imminently life threatening	17%	49%	70%	82%	90%	93%
Triage 3: Potentially life threatening	33%	65%	82%	90%	94%	96%
Triage 4: Potentially serious	58%	82%	92%	96%	98%	99%
Triage 5: Less urgent	76%	92%	98%	99%	99%	100%
All triage categories	52%	77%	89%	94%	97%	98%

1. Time from start of treatment until discharge or transfer from the emergency department.  
Source: Health Information Exchange, NSW Health. Data extracted on 16 July 2010.

Specific emergency department data is provided for all principal referral, paediatric specialist, ungrouped acute/tertiary referral, major metropolitan, major non-metropolitan and district groups 1 and 2 hospitals and area health services in [Table 5](#). 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 of Emergency Medicine, the off stretcher time and the emergency admission performance.

**Table 5: Activity and select performance measures for 85 emergency departments in NSW, April to June 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.		
<b>New South Wales</b>	495,863	113,526	100%	82%	72%	74%	88%	68%	72%
<b>Children's Hospital at Westmead</b>									
Total Children's Hospital at Westmead	12,442	3,042	100%	100%	71%	70%	79%	92%	76%
<b>Greater Southern</b>									
Goulburn Base Hospital	4,318	799	*	*	*	*	*	83%	*
Griffith Base Hospital	4,945	715	100%	72%	71%	74%	96%	92%	91%
Wagga Wagga Base Hospital	8,251	2,025	100%	84%	78%	78%	87%	62%	67%
Total Greater Southern	17,514	3,539	100%	80%	76%	76%	88%	72%	74%
<b>Greater Western</b>									
Bathurst Base Hospital	5,865	444	100%	64%	77%	78%	96%	80%	84%
Broken Hill Base Hospital	4,987	472	*	*	*	*	*	91%	*
Dubbo Base Hospital	6,891	1,360	100%	81%	71%	74%	90%	90%	73%
Orange Base Hospital	6,614	1,519	*	*	*	*	*	74%	*
Total Greater Western	24,357	3,795	100%	75%	73%	76%	93%	83%	76%
<b>Hunter New England</b>									
Armidale and New England Hospital	3,661	742	100%	81%	82%	85%	95%	96%	98%
Belmont Hospital	5,569	719	100%	86%	78%	76%	89%	77%	82%
Calvary Mater Newcastle	7,257	1,496	100%	67%	53%	59%	81%	56%	72%
Cessnock District Hospital	4,163	437	100%	90%	81%	85%	95%	92%	94%
Gunnedah District Hospital	2,386	223	100%	100%	100%	100%	100%	100%	100%
Inverell District Hospital	2,327	294	100%	83%	71%	78%	93%	96%	96%
John Hunter Hospital	15,983	4,990	100%	85%	75%	78%	90%	65%	75%
Kurri Kurri District Hospital	1,758	89	100%	89%	78%	84%	98%	94%	93%
Maitland Hospital	9,885	1,717	100%	78%	70%	69%	85%	69%	70%
Manning Base Hospital	5,421	1,373	100%	76%	50%	51%	80%	66%	85%
Moree District Hospital	2,385	259	100%	95%	96%	96%	99%	97%	98%
Muswellbrook District Hospital	1,811	198	100%	72%	75%	78%	96%	88%	91%
Narrabri District Hospital	1,461	194	100%	100%	96%	97%	100%	97%	100%



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

	Meeting target
	Not meeting target

Sydney South West									
Bankstown / Lidcombe Hospital	10,380	3,170	100%	98%	81%	90%	96%	79%	74%
Bowral and District Hospital	4,239	668	91% †	82%	78%	85%	98%	89%	91%
Camden Hospital	2,875	0	100%	92%	90%	90%	97%	93%	n/a
Campbelltown Hospital	12,547	3,337	100%	92%	80%	73%	94%	70%	67%
Canterbury Hospital	8,066	1,708	100%	89%	74%	69%	84%	70%	80%
Concord Hospital	7,870	2,285	100%	100%	81%	81%	95%	72%	74%
Fairfield Hospital	7,735	1,459	100%	77%	76%	77%	93%	84%	88%
Liverpool Hospital	15,222	5,544	100%	88%	84%	83%	94%	58%	60%
Royal Prince Alfred Hospital	15,255	4,684	99% ‡	82%	69%	71%	86%	57%	67%
<b>Total Sydney South West</b>	<b>84,189</b>	<b>22,855</b>	<b>100%</b>	<b>89%</b>	<b>79%</b>	<b>78%</b>	<b>92%</b>	<b>68%</b>	<b>70%</b>

Sydney West									
Auburn Hospital	5,895	942	100%	73%	65%	60%	81%	68%	86%
Blacktown Hospital	8,282	2,115	100%	89%	80%	78%	87%	52%	51%
Blue Mountains District Anzac Memorial Hospital	4,149	499	100%	75%	74%	69%	87%	93%	93%
Hawkesbury District Health Service	4,787	1,164	100%	93%	94%	94%	98%	54%	87%
Lithgow Health Service	3,123	322	100%	78%	79%	88%	96%	95%	93%
Mount Druitt Hospital	7,668	783	100%	82%	77%	69%	82%	64%	77%
Nepean Hospital	12,581	4,438	100%	80%	54%	67%	83%	55%	61%
Westmead Hospital (all units)	13,294	4,204	100%	81%	52%	56%	79%	49%	57%
<b>Total Sydney West</b>	<b>59,779</b>	<b>14,467</b>	<b>100%</b>	<b>81%</b>	<b>69%</b>	<b>69%</b>	<b>85%</b>	<b>58%</b>	<b>65%</b>

**Note:** Emergency department activity includes 85 facilities for which electronic data is reported. These facilities are comprised of the 66 principal referral, major acute and district hospitals, plus 19 others in the 'Other Hunter New England' category and account for more than 83 per cent of NSW emergency department activity.

**Note:** All targets have been highlighted in blue if the hospital or area health service met the target or highlighted in red if it did not. Information from smaller hospitals is presented for each area health service under an 'other' category.

**Note:** Admissions refers to all admissions through the emergency department, not just emergency patient admissions. For this reason, the number of admissions in this column will differ from the number of admissions presented in the hospital performance reports and in figure 6.

(\*) due to the implementation of a new electronic information system in this emergency department during the April to June 2010 quarter, the data for this hospital is not considered reliable enough to display (see page 19 for more information).

(\*\*) due to the implementation of a new electronic information system in this emergency department in the last quarter (January to March 2010), caution is advised when considering this hospital's results (see page 19 for more information).

(†) Sydney Eye Hospital had no patients classified as triage 1 from April to June 2010.

(‡) Data in the HIE at the time of extraction for this report, and therefore reported here, recorded that this hospital had below 100 per cent triage 1 performance (i.e. started to receive treatment within two minutes of being triaged). The NSW Department of Health has advised that an initial data entry error was corrected at source in May 2010 but, because of technical limitations, this correction does not appear in the HIE. It also advised that an independent clinical review, which it commissioned, confirmed that these records contained data entry errors and all patients received treatment within two minutes of being triaged.

(Ω) Data suppressed due to small numbers of patients (see page 36 for more information).

Source: Health Information Exchange, NSW Health. Data extracted on 16 July 2010. Ambulance off stretcher time data from Ambulance Service, NSW. Data provided 23 July 2010.

## Emergency attendances over time

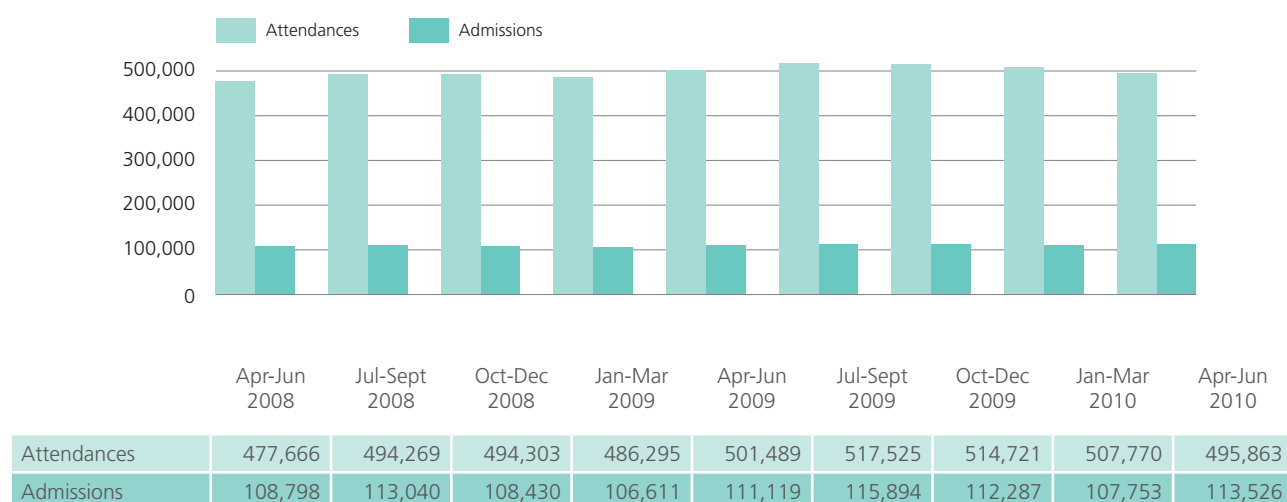
From April to June 2010, there were almost half a million attendances (495,863) at public hospital emergency departments in NSW (Figure 11) slightly down from the previous quarter (507,774 attendances).

- From April to June 2009, there were 501,489 attendances indicating a decrease (1.3%) in the past year

- From April to June 2008, there were 477,666 attendances indicating an increase (3.6%) in the past two years.

This volume of attendances has decreased over the previous four quarters since a historic high of 517,525 attendances in July to September 2009 during the swine flu pandemic (Figure 12).

Figure 11: Attendances at, and admissions from, NSW emergency departments, April 2008 to June 2010



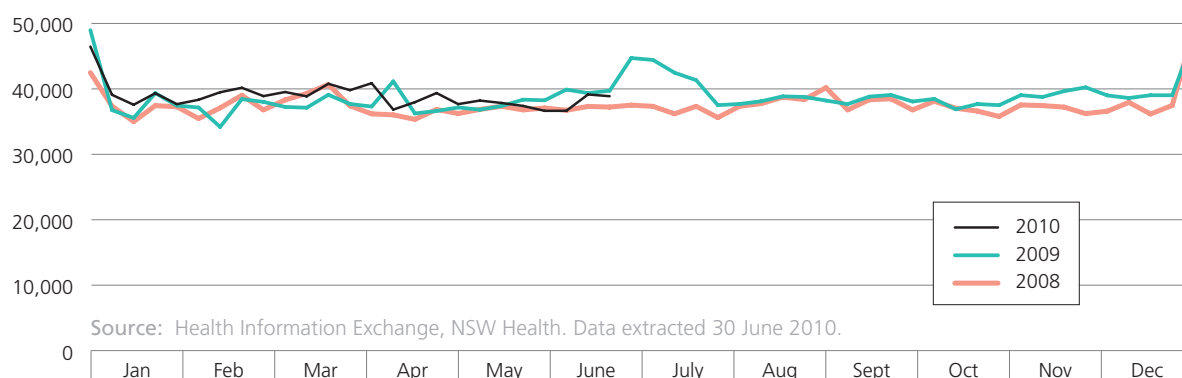
**Note:** Emergency department activity includes 85 facilities for which electronic data is reported. This covers over 83 per cent of NSW emergency department activity.

**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 was extracted from the emergency department information system.

**Note:** Admissions refers to all admissions through the emergency department, not just emergency patient admissions. For this reason, the number of admissions in this row will differ from the number of admissions presented in the hospital performance reports and in figure 6.

**Source:** Health Information Exchange, NSW Health. Data extracted on 16 July 2010.

Figure 12: Attendances at NSW emergency departments by week, January 2008 to June 2010



Source: Health Information Exchange, NSW Health. Data extracted 30 June 2010.

## Emergency department targets over time

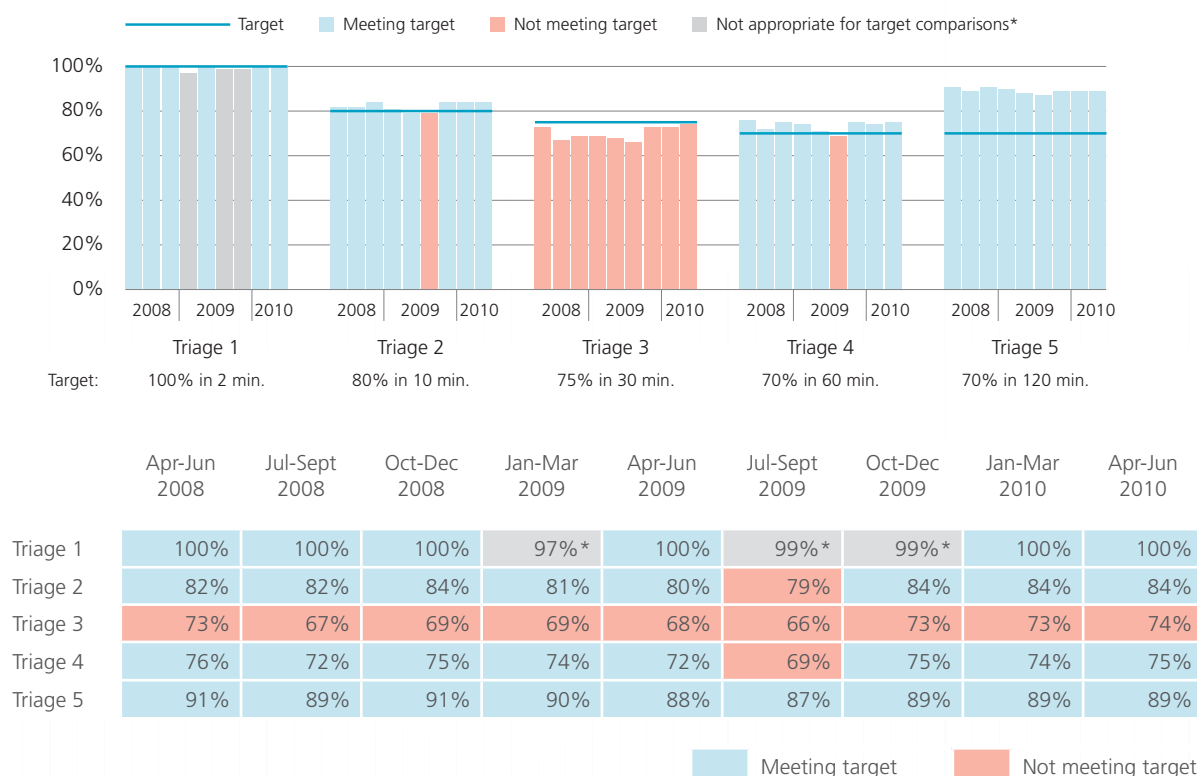
From April to June 2010, NSW met or exceeded the national target for the proportion of patients seen within the recommended time for all triage categories except triage 3; 74 per cent of patients compared to the 75 per cent target (Figure 13). NSW has not met the triage 3 target at a state level in the past four years of reporting in the *NSW Quarterly Hospital Performance Reports*.<sup>4</sup>

From April to June 2010, 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; 68 per cent of patients were transferred compared to the 90 per cent target. NSW has not met this target at a state level in the past four years of reporting in the *NSW Quarterly Hospital Performance Reports* (Figure 7).<sup>4</sup>

From April to June 2010, 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; 72 per cent of patients were transferred compared to the 80 per cent target. NSW has not met this target at a state level since the January to March 2007 quarter when it achieved 80 per cent of patients admitted within eight hours (Figure 10).<sup>4</sup>

Figure 13: Triage to treatment targets in NSW emergency departments, April 2008 to June 2010



(\*) Data in the HIE at the time of extraction for this report, and therefore reported here, recorded below 100 per cent triage 1 performance (i.e. started to receive treatment within two minutes of being triaged) for this period. An investigation by the NSW Department of Health concluded that these electronic patient records contained data entry errors and that all patients received treatment within two minutes of being triaged; because of technical limitations, this correction does not appear in the HIE.

Source: Health Information Exchange, NSW Health. Data extracted on 16 July 2010.



# Patients' perspectives

Since 2007, NSW Health has conducted the largest patient experience survey program in Australia and one that rivals or exceeds the size of major survey initiatives in Europe and North America. In May 2009, questionnaires asking about the care they had experienced were mailed to a sample of people who had visited a NSW public hospital emergency department for care during February 2009, but were not subsequently admitted to hospital.<sup>5</sup>

The Bureau has used the information provided by these patients to investigate how people rated the care they received and to conduct an analysis of which aspects of care most influenced how patients rated the emergency department they visited. Although the most recently published patient experience data of NSW emergency departments has been used, the data for the patient survey applies to care provided during February 2009 rather than the April to June 2010 quarter used for all other measures in this report.

In 2010 patients who receive care in an emergency department will be asked about their care experiences. The results of those surveys will be available in late 2010.

The 2009 survey included only those patients who were not subsequently admitted to hospital and 20,915 people returned completed questionnaires.<sup>6</sup>

## Patients' views of overall care in the emergency department

Most people who responded to the emergency department patient survey in 2009 rated their care as excellent (26%), very good (32%) or good (25%). A minority reported it to be fair (12%) or poor (5%).

Information about patient ratings of overall care in 2009, as well as ratings of care experiences that matter most including staff courtesy, completeness of care and waiting times are provided for 66 emergency departments in the *Hospital Quarterly: Special feature on emergency department care*, available at [www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au)

## Staff courtesy and complete care matter most to patients

The Bureau conducted analyses of the emergency department patient survey to identify those aspects of care most important to patients who attended an emergency department in NSW.

We identified the three key aspects of care that most influenced people who rated their overall care as excellent. When healthcare professionals in emergency departments perform well in these areas, patients report the most positive overall quality of care. We also identified the three key aspects that most influenced people who rated their overall care as fair or poor - when healthcare professionals in emergency departments perform poorly in these areas, patients report more negatively on the overall quality of their care.

Staff courtesy mattered more than any other factor for people who said their overall care in the emergency department was excellent. Perceptions of how complete the care provided was and how positively they rated the time they spent waiting also contributed strongly to patients saying their care was excellent.

For those patients who rated the overall care they received as fair or poor, how complete the care they received was contributed the most to reporting a negative experience of care. Being unhappy about the degree to which staff were courteous and being unhappy about the time spent waiting were also major factors contributing to people reporting fair or poor care in the emergency department.

In February 2009, most people who responded to the non-admitted emergency patient survey rated staff courtesy as excellent (30%), very good (32%) or good (25%). A minority reported it to be fair (10%) or poor (3%). Most people rated the completeness of care to be excellent (26%), very good (31%) or good (26%). A minority reported it to be fair (12%) or poor (6%) as shown in [Figure 14](#).

In February 2009, six in ten people who responded to the non-admitted emergency patient survey rated their waiting time as excellent (17%), very good (18%) or good (21%). Four in ten reported it to be fair (21%) or poor (22%).

[Appendix 1](#) summarises the care experiences measured on the survey that matter to patients who visited an emergency department in a public hospital in NSW. These are presented in descending order of importance. The survey also contained additional questions which, when analysed, did not influence the participant's rating of overall care in emergency department. The list of these additional questions is shown in [Appendix 2](#).

Care experiences that underlie excellent and fair or poor ratings by patients are remarkably similar. When healthcare professionals do well in providing courteous, complete and timely care, then patients offer high ratings. When healthcare professionals do poorly in those areas, patients offer negative ratings of overall quality of care.

**Figure 14: Patient experiences in NSW emergency departments, 2009**

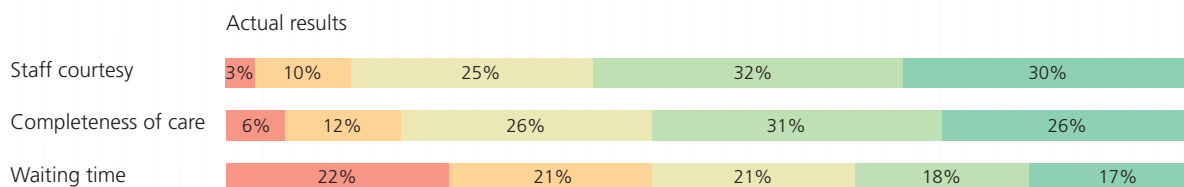
**Key to patient ratings:**



**Overall patient ratings of emergency department care**



**Patient ratings of care experiences that matter most<sup>1</sup>**



1. Care experiences that matter most are based on analysis of all emergency department respondents to the NSW Health patient Survey 2009.

Note: Percentages may not add to 100 per cent due to rounding.

Source: Emergency department module of the 2009 NSW Health Patient Survey.

No other Australian state has conducted a survey of emergency department patients using the same patient group as NSW did (i.e. non-admitted emergency department patients only) which means that we cannot compare these NSW patients with other states or national figures.

Internationally, the Emergency Department Services Survey from British Columbia, Canada, was the only comparable survey we found that looked at the experiences of all non-admitted emergency department patients, as other jurisdictions exclude children and teens.<sup>7</sup> In British Columbia, 28 per cent of patients rated the care they received in the emergency department as excellent, 33 per cent rated it as very good, 24 per cent as good, 11 per cent as fair and five per cent as poor. This rating by patients is nearly identical to that achieved by NSW emergency departments suggesting that NSW compares well with emergency departments in at least one other comparable public health system.

## Effect of pain on patients' perspectives

Pain and pain management might affect how emergency department patients rate their care or might affect the care experiences that matter most.

Among people who receive care in NSW emergency departments, whether or not a person was in pain did contribute to the rating of overall care that person reported but did not influence which care experiences most influence their positive or negative ratings of overall care. Thus staff courtesy, completeness of care and waiting times matter most to people who received care in an emergency department regardless of whether they were in pain or not.

## Emergency departments with the highest and lowest patient ratings are across NSW

Across 66 hospital emergency departments, the percentage of emergency department patients who gave excellent ratings of care was four times as high in the highest performing hospital as in the lowest performing hospital. The percentage of emergency department patients who gave fair or poor ratings to care was six times as high in the lowest performing hospital as in the highest performing hospital.

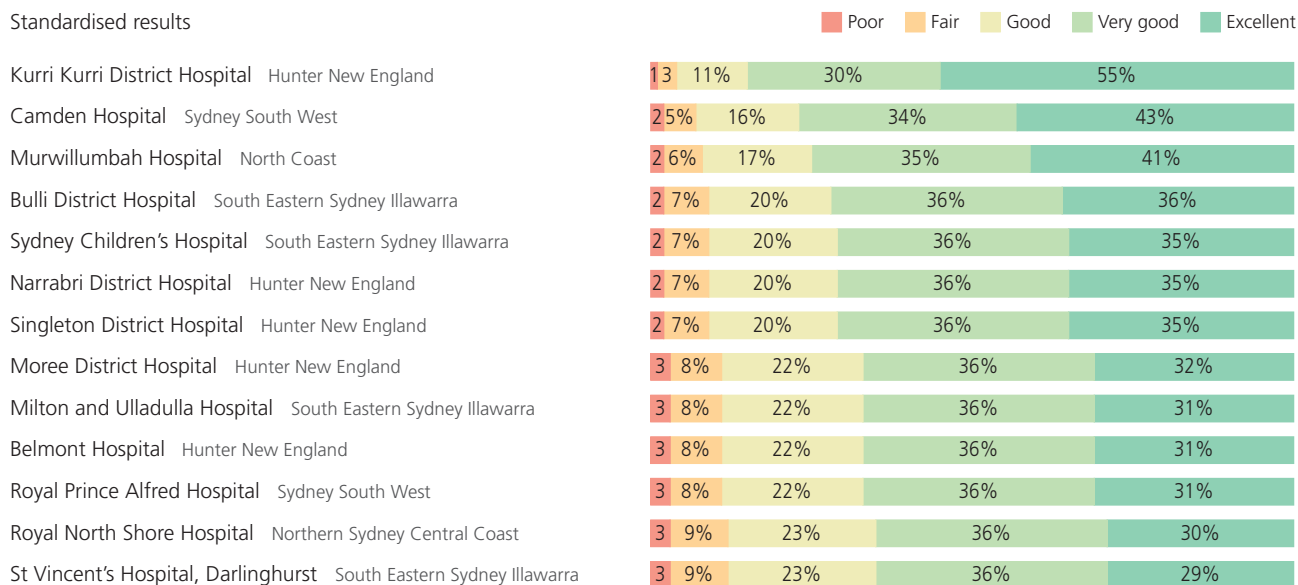
...there is no one area health service that is home to all, or most, of the emergency departments that have the highest or lowest patient ratings of care.

We defined higher and lower performing hospitals on the basis of the top and bottom 20 per cent of 66 emergency departments in NSW (Figure 15). We compare hospitals as fairly as possible by taking into account differences between emergency departments in patient characteristics, such as age and severity of illness that influence ratings, using a process of statistical standardisation which is described on page 37.

Importantly, there is no one area health service that is home to all, or most, of the emergency departments that have the highest or lowest patient ratings of care.

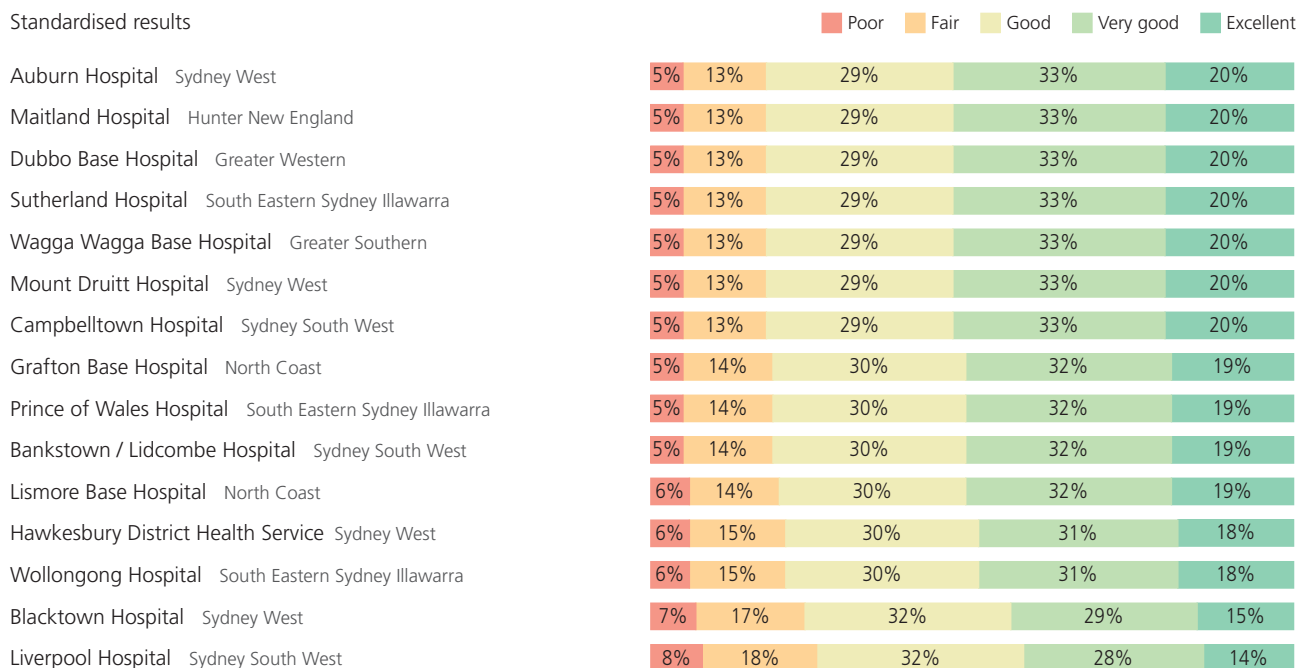
Figure 15: Comparisons of standardised ratings of patients' care experiences in emergency departments, February 2009

### Public hospitals with higher patient ratings



All other large public hospitals\* in NSW (not shown) were rated lower than the hospitals in the graph above and higher than the hospitals in the graph below.

### Public hospitals with lower patient ratings



**Note:** Standardised results: To account for differences between hospitals in the types of patients served, values are standardised for age, gender, health status, education, language, socio-economic status, days in bed for illness or injury in February 2009, times in hospital overnight in past six months and severity of pain (if any).

**Note:** Seven hospitals were similarly rated by patients and therefore all have been included in the list of hospitals with lower patient ratings.

**Note:** Percentages may not add to 100 per cent due to rounding.

(\* ) Large public hospitals includes all NSW hospitals comprising the peer groups of principal referral, paediatric specialist, ungrouped acute/tertiary referral, major metropolitan, major non-metropolitan and district groups 1 and 2.

**Source:** Emergency department module of the 2009 NSW Health Patient Survey.

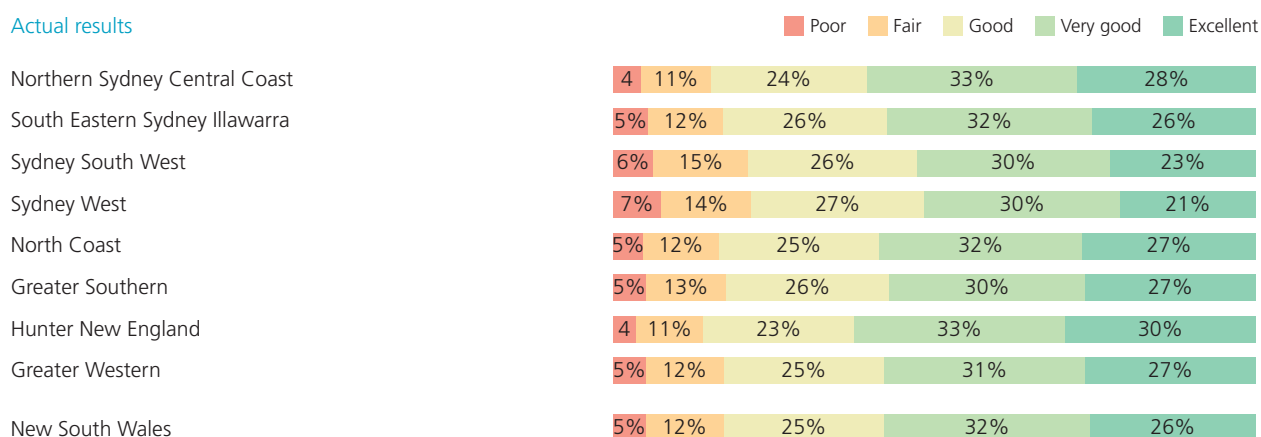
## Patients' views of overall care across area health services

Patients responding to the survey gave Hunter New England Area Health Service (AHS) emergency departments the highest ratings of overall care (Figure 16). Respondents gave Sydney West AHS and Sydney South West AHS emergency departments the lowest ratings of overall care.

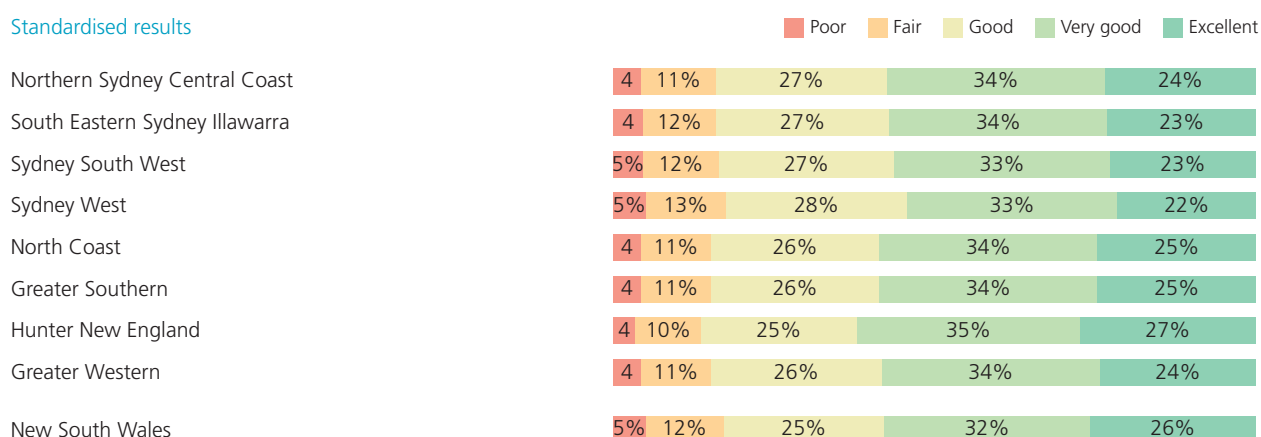
After adjusting for the types of patients seen by each area health service (see text box 'Standardisation to support fairer comparisons' on page 37), the way patients rated the overall care received from each area health service changes, decreasing the differences in ratings of overall care between different health services. Survey respondents rated Hunter New England AHS emergency departments most positively; 27 per cent said the overall care they received was excellent and 14 per cent said the care was fair or poor.

Figure 16: Comparisons of actual (not standardised) and standardised ratings of patients' care experiences in emergency departments, February 2009

### Actual results



### Standardised results



**Note:** Standardised results: To account for differences between area health services in the types of patients served, values are standardised for age, gender, health status, education, language, socioeconomic status, days in bed for illness or injury in February 2009, times in hospital overnight in past six months and severity of pain (if any).

**Note:** Percentages may not add to 100 per cent due to rounding.

**Source:** Emergency department module of the 2009 NSW Health Patient Survey.

## Patient ratings of care vary depending on hospital type

Survey data shows that patient ratings of care are related to the type of hospital where the emergency department is located. Therefore, the two emergency departments that have the highest and the two emergency departments that have the lowest standardised patient ratings of overall care in February 2009 are presented for each hospital peer group in **Figure 17**. Other emergency departments in each hospital peer group have standardised patient ratings between these highest and lowest rated hospitals.

The percentage of patients who gave an excellent rating of care to the emergency departments of NSW's largest

hospitals, principal referral hospitals, was twice as high in the highest performing hospital as the proportion in the lowest performing hospital. The percentage of patients who gave fair or poor ratings to care in these large emergency departments was twice as high in the lowest performing hospital as in the highest performing hospital.

The percentage of patients who gave an excellent rating of care to the emergency departments of NSW's largest hospitals, principal referral hospitals, was twice as high in the highest performing hospital as the proportion in the lowest performing hospital.

### Hospital peer group

NSW hospitals are not all identical in size or the services they provide. To make direct comparisons between hospitals, people find it useful to compare similar hospitals together. To do this, the Bureau used a classification system in NSW called peer group.

All public hospitals are assigned to a peer group and these can be found in the index of hospitals in the *Hospital Quarterly: Special feature on emergency department care*. The largest peer groups 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 which are not similar enough to any other group to fall within those peer groups. Because of this dissimilarity, the two hospitals which comprise this group are not presented in the peer analysis below.
BM	Major metropolitan	Large metropolitan hospitals with few patients from rural areas.
BNM	Major non-metropolitan	Large hospitals that provide services to 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.

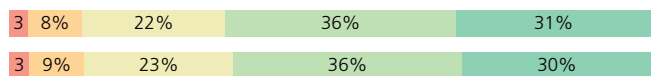
The percentage of patients who gave an excellent rating of care to the smallest, typically rural emergency departments, district group 2 hospitals, was almost three times as high in the highest performing hospital as the proportion in the lowest

performing hospital. The percentage of patients who gave fair or poor ratings to care in these smallest, rural emergency departments was five times as high in the lowest performing hospital as in the highest performing hospital.

Figure 17: Comparisons of standardised ratings of patients' care experiences in emergency departments by hospital peer group, February 2009

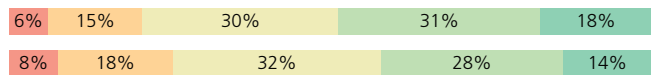
Principal referral hospitals with higher patient ratings

Royal Prince Alfred Hospital Sydney South West  
 Royal North Shore Hospital Northern Sydney Central Coast



Principal referral hospitals with lower patient ratings

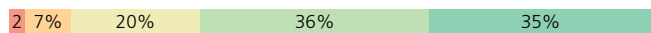
Wollongong Hospital South Eastern Sydney Illawarra  
 Liverpool Hospital Sydney South West



Concord, Gosford, John Hunter, Nepean, Prince of Wales, St George, St Vincent's and Westmead hospitals were rated lower than the hospitals above and higher than the hospitals below.

Paediatric specialist hospitals with higher patient ratings

Sydney Children's Hospital South Eastern Sydney Illawarra



Paediatric specialist hospitals with lower patient ratings

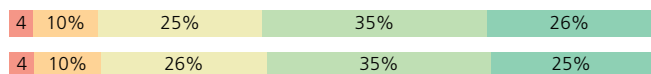
Children's Hospital at Westmead Children's Hospital at Westmead



There are no other paediatric specialist hospitals in NSW.

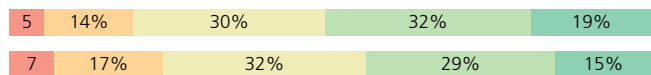
Major metropolitan hospitals with higher patient ratings

Mona Vale and District Hospital Northern Sydney Central Coast  
 Manly District Hospital Northern Sydney Central Coast



Major metropolitan hospitals with lower patient ratings

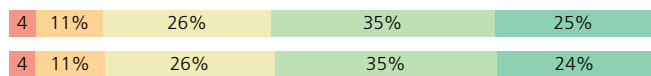
Bankstown / Lidcombe Hospital Sydney South West  
 Blacktown Hospital Sydney West



Auburn, Campbelltown, Canterbury, Fairfield, Hornsby and Ku-Ring-Gai, Sutherland and Wyong hospitals were rated lower than the hospitals above and higher than the hospitals below.

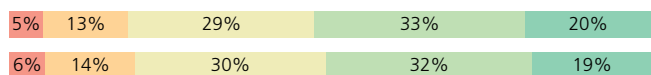
Major non-metropolitan hospitals with higher patient ratings

The Tweed Hospital North Coast  
 Shoalhaven and District Memorial Hospital S. E. Sydney Illawarra



Major non-metropolitan hospitals with lower patient ratings

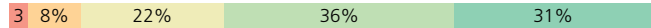
Wagga Wagga Base Hospital Greater Southern  
 Lismore Base Hospital North Coast



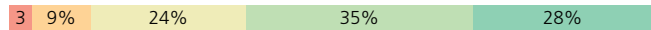
Coffs Harbour Base, Dubbo Base, Maitland, Manning Base, Orange Base, Port Macquarie Base and Tamworth Base hospitals were rated lower than the hospitals above and higher than the hospitals below.

### District group 1 hospitals with higher patient ratings

Belmont Hospital Hunter New England



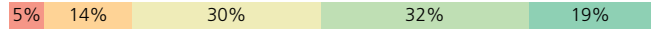
Bathurst Base Hospital Greater Western



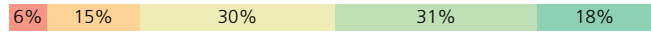
Armidale and New England, Bowral and District, Broken Hill Base, Goulburn Base, Griffith Base, Mount Druitt, Ryde and Shellharbour hospitals were rated lower than the hospitals above and higher than the hospitals below.

### District group 1 hospitals with lower patient ratings

Grafton Base Hospital North Coast



Hawkesbury District Health Service Sydney West



### District group 2 hospitals with higher patient ratings

Kurri Kurri District Hospital Hunter New England



Camden Hospital Sydney South West



Blue Mountains District Anzac Memorial, Bulli District, Cessnock District, Gunnedah District, Kempsey, Lithgow Health Service, Milton and Ulladulla, Moree District, Murwillumbah District, Narrabri District and Singleton District hospitals were rated lower than the hospitals above and higher than the hospitals below.

### District group 2 hospitals with lower patient ratings

Inverell District Hospital Hunter New England



Muswellbrook District Hospital Hunter New England



**Note:** Standardised results: To account for differences between area health services in the types of patients served, values are standardised for age, gender, health status, education, language, socioeconomic status, days in bed for illness or injury in February 2009, times in hospital overnight in past six months and severity of pain (if any).

**Note:** Percentages may not add to 100 per cent due to rounding.

**Source:** Emergency department module of the 2009 NSW Health Patient Survey.

## 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 ten 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 can be suppressed if there is risk of disclosing the identity of patients – these values have been anonymised in an identical manner.



## Standardisation to support fairer comparisons

To support fair comparisons, patient ratings of care experiences have been standardised statistically to show how area health services, peer groups or hospitals would rate if they served very similar populations of patients. The process of standardisation is important because different area health services and hospitals provide services to different kinds of people with different illnesses and severity of illness. These differences can affect patients' ratings of care independently of the quality of the care healthcare workers give them during their stay in hospital.

Using information from the survey, the Bureau of Health Information determined that age group, gender, self reported health status, education, language spoken at home, days that illness or injury kept them in bed in February 2009, time in hospital overnight in the six months prior to receiving the questionnaire and severity of pain (if the patient has pain) influenced their ratings of care. A statistical analysis was done to standardise ratings on the basis of these patient characteristics. Additionally, we used Australian Bureau of Statistics information about the socioeconomic circumstance of a patient's community (called the SEIFA Index) to standardise ratings since the Bureau also determined that this type of information influenced ratings of care. There may be other characteristics of patients that differ between area health services or hospitals and influence ratings, such as type of illness or triage category, but the Bureau could not include them in the statistical analysis because they were not recorded in the survey.

## Effects of standardisation

Standardisation had a noticeable impact on Sydney South West and Sydney West Area Health Services. The types of patients cared for in these regions were, on average, more likely to give fair or poor ratings of overall care than those cared for by other area health services. Standardisation reduced these differences but did not remove them completely.

Standardisation also had an important impact on the ratings for large public hospitals that served younger patients, patients who reported their overall health as being poor or patients who did not speak English in their home. These groups of patients were more likely to give negative ratings than older patients, those who said they were in good health and patients who spoke English at home. Thus standardisation with respect to them was particularly important to comparing patients' ratings of care in large public hospitals.

The Bureau supports standardising patient ratings of care for fairer comparisons between area health services and hospitals. However, to ensure transparency and to allow healthcare workers to see, and to seek to address, the views that their patients actually expressed, we have also made the actual or non-standardised comparisons available.

Information on actual and standardised patient ratings for 66 emergency departments is available in the *Special Feature on Emergency Department Care* at [www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au)

## Special feature on emergency departments care

The index below references the complete *Hospital Quarterly: Special feature on emergency department care* which provides detailed information about emergency departments in NSW. The full document is available at [www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au)

Hospital name	Area health service	Peer group
Armidale Hospital	HNEAHS	C1
Auburn Hospital	SWAHS	BM
Bankstown - Lidcombe Hospital	SSWAHS	BM
Bathurst Base Hospital	GWAHS	C1
Belmont District Health Service	HNEAHS	C1
Blacktown Hospital	SWAHS	BM
Blue Mountains District Anzac Memorial Hospital	SWAHS	C2
Bowral and District Hospital	SSWAHS	C1
Broken Hill Health Service	GWAHS	C1
Bulli District Hospital	SESAHS	C2
Calvary Mater Hospital	HNEAHS	A3
Camden Hospital	SSWAHS	C2
Campbelltown Hospital	SSWAHS	BM
Canterbury Hospital	SSWAHS	BM
Cessnock District Health Service	HNEAHS	C2
Coffs Harbour Base Hospital	NCAHS	BNM
Concord Hospital	SSWAHS	A1
Dubbo Base Hospital	GWAHS	BNM
Fairfield Hospital	SSWAHS	BM
Gosford Hospital	NSCCAHS	A1
Goulburn Base Hospital	GSAHS	C1
Grafton Base Hospital	NCAHS	C1
Griffith Base Hospital	GSAHS	C1
Gunnedah District Health Service	HNEAHS	C2
Hawkesbury District Health Service	SWAHS	C1
Hornsby and Ku-Ring-Gai Hospital	NSCCAHS	BM
Inverell District Health Service	HNEAHS	C2
John Hunter Hospital	HNEAHS	A1
Kempsey District Hospital	NCAHS	C2
Kurri Kurri District Health Service	HNEAHS	C2

Hospital name	Area health service	Peer group
Lismore Base Hospital	NCAHS	BNM
Lithgow Health Service	SWAHS	C2
Liverpool Hospital	SSWAHS	A1
Maitland Hospital	HNEAHS	BNM
Manly District Hospital	NSCCAHS	BM
Manning Hospital	HNEAHS	BNM
Milton and Ulladulla Hospital	SESAHS	C2
Mona Vale and District Hospital	NSCCAHS	BM
Moree District Health Service	HNEAHS	C2
Mount Druitt Hospital	SWAHS	C1
Murwillumbah District Hospital	NCAHS	C2
Muswellbrook District Health Service	HNEAHS	C2
Narrabri District Health Service	HNEAHS	C2
Nepean Hospital	SWAHS	A1
NSW	-	-
Orange Base Hospital	GWAHS	BNM
Port Macquarie Base Hospital	NCAHS	BNM
Prince of Wales Hospital	SESAHS	A1
Royal North Shore Hospital	NSCCAHS	A1
Royal Prince Alfred Hospital	SSWAHS	A1
Ryde Hospital	NSCCAHS	C1
Shellharbour Hospital	SESAHS	C1
Shoalhaven and District Memorial Hospital	SESAHS	BNM
Singleton District Health Service	HNEAHS	C2
St George Hospital	SESAHS	A1
St Vincent's Hospital	SESAHS	A1
Sutherland Hospital	SESAHS	BM
Sydney Children's Hospital	SESAHS	A2
Sydney Eye Hospital	SESAHS	A3
Sydney Hospital	SESAHS	A3
Tamworth Hospital	HNEAHS	BNM
The Children's Hospital at Westmead	CHW	A2
The Tweed Hospital	NCAHS	BNM
Wagga Wagga Base Hospital	GSAHS	BNM
Westmead Hospital	SWAHS	A1
Wollongong Hospital	SESAHS	A1
Wyong Hospital	NSCCAHS	BM

## 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 an expanded set of information on surgical care. In November 2010, the Bureau will also release an annual report that benchmarks 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, present a core set of statistics so that efforts to improve care can be monitored over time."*

## Data quality assessments

### The NSW Health Patient Survey 2009

#### Strengths

Largest patient survey of emergency department care in Australia and one that rivals or exceeds the size of major survey initiatives in Europe, Europe and North America.

Survey questionnaire is based on qualitative research regarding the dimensions of care that are important to patients.

Supports performance estimates at the hospital, area health service and state levels.

#### Opportunities

Develop a shorter survey that measures care experiences that matter most to patients. Shortening the survey questionnaire would create the opportunity to ask patients about the impact of care on their health and about unexpected complications. This information would be valuable in the assessment of performance of emergency departments in NSW and understanding patient outcomes following care.

The Bureau has published a data quality assessment report to offer suggestions to improve survey sampling, response rates and case-weight methods.

More information about the quality of the NSW Health Patient Survey data is available from the Bureau of Health Information in *Data Quality Assessment: 2009 NSW Health Emergency Department Patient Survey* at [www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au)

## Information systems in NSW emergency departments as of August 2010

### Strengths

Electronic information systems from 85 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. There are jurisdictions overseas that do not have electronic information systems in public hospital emergency departments as comprehensive as those in NSW.

There is a NSW Health Policy Directive and 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 publically 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 a data quality assessment report 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 it 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)

# Glossary

**Actual results** – numbers that have not been standardised to account for differences in the characteristics of patients (e.g. age or health status) who attend each hospital (as opposed to ‘standardised results’ below).

**Acute episode** – a period of time when patients receive hospital care that is considered short-term and requiring immediate care.

**Admission(s)** – an ‘admission’ is the formal process, using registration procedures, under which a person is accepted by a hospital or an area or district health service facility as an inpatient. In the context of admission from the emergency department, the person is transferred to a hospital ward, an intensive care unit or an operating theatre.

**Attendance** – an ‘attendance’ is the presentation of a patient to the emergency department and is the earliest occasion of the patient being registered clerically or being triaged. An ‘attendance’ is equal to a ‘visit’ or a ‘presentation’ at the emergency department.

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

**Elective surgery** – any form of surgery that a patient’s doctor believes to be necessary but which can be delayed by at least 24 hours.

**Emergency Admission Performance (EAP)** – in the context of care in emergency departments, this is a measure of the time from when the patient begins receiving treatment until the time they arrive on a ward, operating theatre/suite or intensive care unit in that hospital. The target for NSW is 80% admitted within eight hours.

**Emergency Attendances** – an attendance to an emergency department that required medical action by a healthcare professional.

**Emergency department** – a distinct area of a hospital responsible for providing medical and surgical care to patients arriving at the hospital in need of immediate care.

**Episode of care** – a period of care in a healthcare facility for a specific medical problem or condition, characterised by a single type of care, e.g. acute care, rehabilitation, palliative care. A change of care type starts a new episode of care.

**Median waiting time (days)** – this is the number of days it took for half of the patients who received elective surgery in the period to receive their surgery.

**Mode of separation** – the mode of separation is the status of the patient when they depart from the emergency department and, in some cases, the location to which patient is released.

**Non-emergency attendances** – these are non-emergency attendances to the emergency department. The two largest groups are planned returns to the emergency department for further treatment and private referral for treatment in the emergency department by a private medical officer.

**Off Stretcher Time (OST)** – the time between when a patient arrives at an emergency department by ambulance and when they are transferred into the care of the emergency department. In NSW the target for this is 90% of patients arriving by ambulance transferred within 30 minutes.

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

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

**Pre-arranged admission** – in the context of care in emergency departments, this is a planned visit to the emergency department that results in the patient being admitted to hospital and allocated a bed on a ward.

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

**Standardised results** – to support fair comparisons between hospitals, the patient ratings of care experiences reported have been standardised statistically to show how hospitals would perform if they served very similar populations of patients (see page 37).

**Start of treatment time** – in the context of care in emergency departments, the recorded time of when treatment begins, i.e. typically when the patient was first seen by a healthcare professional after being triaged (see 'Triage' below).

**Time to admission** – in the context of care in emergency departments, the time (in hours) from when a patient starts to receive treatment in the emergency department until they are admitted to a ward, intensive care unit (ICU) or operating suite/theatre in the same hospital.

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

**Triage** – from the French verb *'trier'*, meaning *'to sort'*. Australian emergency departments classify, or triage, patients based on the urgency of their condition or how soon they need to receive care. Emergency departments use a five-point scale where '1' is most urgent and '5' is least urgent. Triage is usually carried out by a registered nurse when the patient arrives in the emergency department. Examples of conditions categorised in each triage group can be found at: [www.wacebnm.curtin.edu.au/workshops/Triage.pdf](http://www.wacebnm.curtin.edu.au/workshops/Triage.pdf)

**Triage categories** – There are two main triage scales:

- The first Australian five-point triage scale originated at Ipswich Hospital, Queensland during the 1980s and was found to be “a valid and reliable measure of medical urgency”. The Ipswich Triage Scale was the basis for the National Triage Scale (NTS) produced by the Australasian College for Emergency Medicine (ACEM) in 1993.
- The ACEM released a revised scale in 2001 (renamed as the Australasian Triage Scale) which was endorsed by the Commonwealth Department of Health and Aging in 2002 for use in all Australian emergency departments.<sup>7</sup>

Triage level	National Triage Scale	Australasian Triage Scale	Recommended maximum waiting time (Target time)
Triage 1	Resuscitation	Immediately life-threatening	2 minutes
Triage 2	Emergency	Imminently life-threatening	10 minutes
Triage 3	Urgent	Potentially life-threatening	30 minutes
Triage 4	Semi-urgent	Potentially serious	60 minutes
Triage 5	Non-Urgent	Less urgent	120 minutes



**Triage targets** – each triage category has a recommended maximum waiting time as outlined in the table above (see ‘triage categories’).

**Unplanned admission** – an unplanned admission is an admission to a hospital ward that was not arranged prior to admission. These admissions include emergency admissions as well as maternity and newborn admissions.

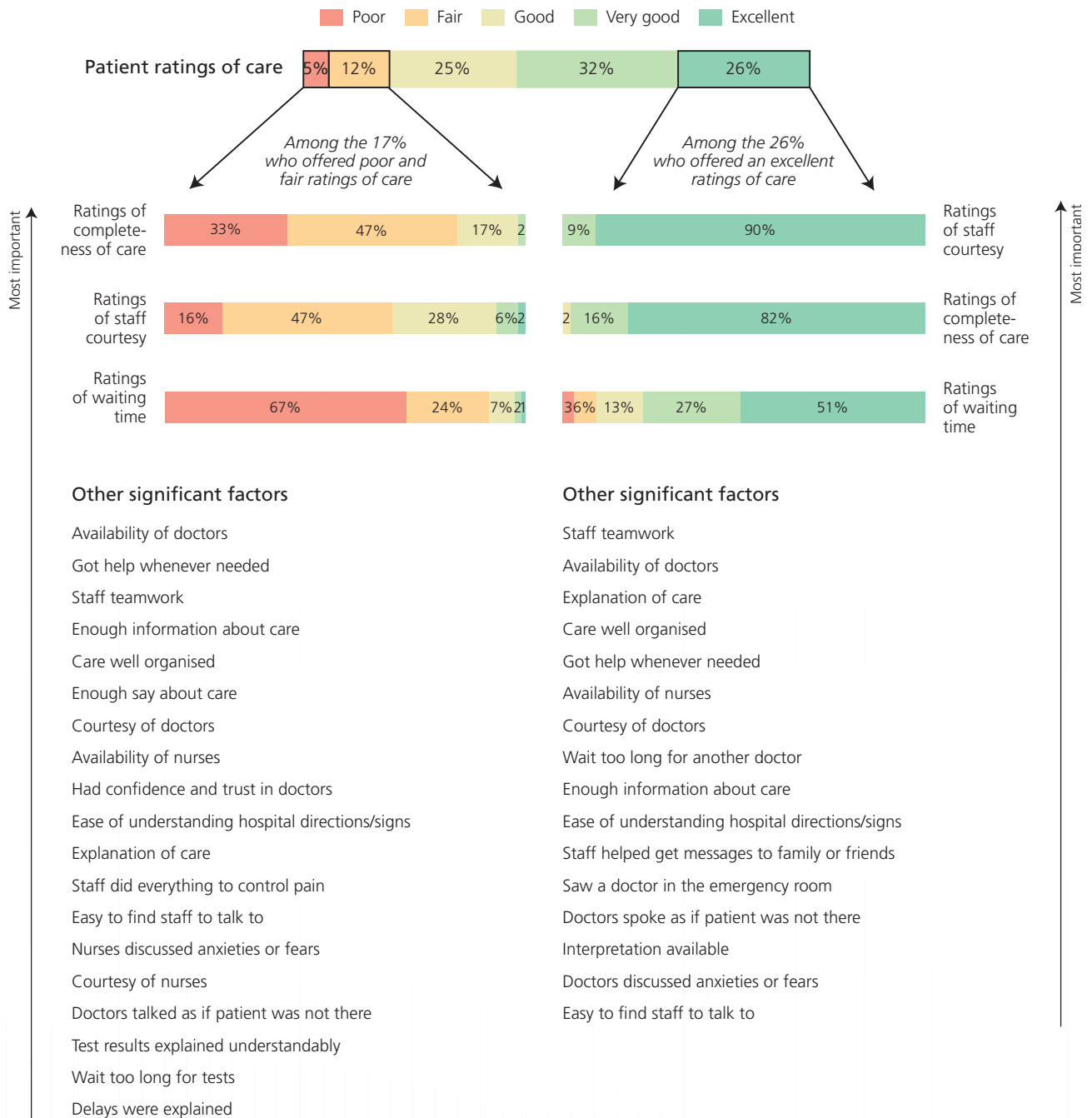
**Urgency categories** – all patients on the elective surgery waiting list are allocated to an urgency category by the surgeon to whom they were referred.<sup>8</sup> These categories provide a timeframe for how soon the doctor recommends the patient be admitted for their procedure:

Category 1	Admission within <b>30 days</b> desirable
Category 2	Admission within <b>90 days</b> desirable
Category 3	Admission within <b>365 days</b> desirable

# Appendix 1: Care experiences that matter most to patients in NSW

Rank order of importance of factors that had a statistically significant influence on excellent or poor/fair ratings of care that emergency department patients in NSW offered in 2009.

For further information from the methods used in this analysis see *Technical supplement: measures of patient experience of emergency department care*.



## Appendix 2: NSW Health Patient Survey 2009: non-influencing questions

The following is a summary of questions that did not influence statistically how people rated the overall care they received in emergency department module of the NSW Health Patient Survey 2009.

For further information from the methods used in this analysis see *Technical supplement: measures of patient experience of emergency department care*.

- Noise levels kept to a minimum
- Availability of parking
- Informed by staff how long it would take to be seen
- One particular doctor in overall charge of my care
- Doctors gave answers I could understand
- Nurses gave answers I could understand
- Staff explained why test is required in a way I could understand
- How much pain medicine was received
- Informed about danger signals for when I arrived home
- Told how to take my new medication (if required)
- Staff told me about any side effects of a new medicine
- Appointment made for further treatment (if required)
- Knew who to contact for help or advice after leaving
- Total time spent in the emergency room\*
- Causes of problem explained in a way I could understand
- Treated with respect and dignity
- Cleanliness of the emergency room
- Confidence and trust in the nurses treating me
- Nurses talking in front of me as if you were not there
- Felt it was an unnecessarily long wait to get to bed or room
- Length of time waiting in an examination room to see a doctor
- Staff explained the purpose of a new take home medicine
- Hospital staff gave conflicting information
- Privacy in the emergency department
- Information about rights and responsibilities
- Alcohol hand wash or hand basin available at bedside
- Staff washed their hands before providing care
- Staff washed their hands after providing care
- Prompted staff to wash hands before providing care for me

\* During analysis, the effect of this question on how people rate their overall care is masked by another question on how people rated the time they had to wait.

# Acknowledgments

In 2009, almost 21,000 patients who visited an emergency department completed the NSW Health Patient Survey in order to share information about their first-hand experiences with public healthcare. The analysis of what is most important to people using NSW emergency departments was made possible by their participation in the survey.

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This report relies on patient survey data collected and digitised by researchers and analysts at the survey research firm hired to conduct the 2009 NSW Health Patient Survey, as well as case-weights calculated by them and verified by the Bureau's staff.

# About the Bureau

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

## Our Mission

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

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

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# References

1. Council of Australian Governments. *The national health and hospitals network - national partnership agreement on improving public hospital services*. Canberra: Australian Government Publishing Service; 2009.
2. Smart D, Pollard C, Walpole B. *Mental health triage in emergency medicine*. Aust New Zealand J Psychiatr 1999; 33 (1): 57—66.
3. Ministry of Health Services. *British Columbia Patient Experience Survey Results: Emergency Department Services*. British Columbia, Canada: Government Publishing Service 2004.
4. New South Wales Health. *Monthly Hospital Performance Reports January 2008 to March 2010 [Internet] [cited 2010 Aug 23]*. Available from [www.health.nsw.gov.au/reports/reports.asp](http://www.health.nsw.gov.au/reports/reports.asp)
5. New South Wales Health. *New South Wales Health Patient Survey 2009 Statewide Report*; IPSOS NRC+Picker. *[Internet] [cited 2010 Aug 23]*. Available from [www.health.nsw.gov.au/pubs/2009/patient\\_survey\\_2009.html](http://www.health.nsw.gov.au/pubs/2009/patient_survey_2009.html)
6. Bureau of Health Information. *Technical supplement: measures of patient experience of emergency department care [Internet] [cited 2010 Aug 25]*. Available from [www.bhi.nsw.gov.au](http://www.bhi.nsw.gov.au)
7. Gerdtz M. *Triage education resource book*. Commonwealth Department of Health and Ageing. Canberra: Australian Government Publishing Service; 2002.
8. Australian Institute of Health & Welfare. *National health data dictionary: Version 6*. National Health Data Committee. Canberra: Australian Government Publishing Service; 1997.



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