

Healthcare Quarterly

Emergency department

Activity and performance

January to March 2017



BUREAU OF HEALTH INFORMATION

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Please check the online version at **bhi.nsw.gov.au** for any amendments.

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Healthcare Quarterly reports present data at the point in time when data become available to BHI. Changes in data coverage and analytic methods from quarter to quarter mean that figures published in this document are superseded by subsequent reports. At any time, the most up-to-date data are available on BHI's online data portal, Healthcare Observer, at **bhi.nsw.gov.au/healthcare_observer**

The conclusions in this report are those of BHI and no official endorsement by the NSW Minister for Health, the NSW Ministry of Health or any other NSW public health organisation is intended or should be inferred.

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In the January to March 2017 quarter...

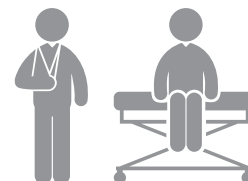
Emergency department

There were **654,189**
emergency presentations

Highest ever for a January to March quarter!

UP
1.3%

8,106
more than
same quarter
last year



75.2% of patients' treatment
started on time

DOWN
0.2



73.2% of all patients spent
four hours or less in the
emergency department

DOWN
1.1

Emergency department activity		January to March 2017	January to March 2016	Difference	% change
All arrivals at NSW EDs by ambulance		145,801	142,930	2,871	2.0%
All ED presentations		677,602	672,686	4,916	0.7%
Emergency presentations		654,189	646,083	8,106	1.3%
Emergency presentations by triage category					
Triage category	T1: Resuscitation	4,252	4,067	185	4.5%
	T2: Emergency	79,873	75,774	4,099	5.4%
	T3: Urgent	221,615	214,826	6,789	3.2%
	T4: Semi-urgent	277,964	280,450	-2,486	-0.9%
	T5: Non-urgent	70,485	70,966	-481	-0.7%
Admissions to hospital from NSW EDs		192,279	183,436	8,843	4.8%

Emergency department performance		January to March 2017	January to March 2016	Difference	
Percentage of patients whose care was transferred within 30 minutes		91.5%	90.7%	+0.8 percentage points	
Time to treatment by triage category	T2: Emergency	Median	8 mins	8 mins	0 mins
		90th percentile	26 mins	24 mins	2 mins
	T3: Urgent	Median	20 mins	20 mins	0 mins
		90th percentile	69 mins	68 mins	1 mins
	T4: Semi-urgent	Median	26 mins	26 mins	0 mins
		90th percentile	101 mins	101 mins	0 mins
	T5: Non-urgent	Median	23 mins	23 mins	0 mins
		90th percentile	104 mins	101 mins	3 mins
	Percentage of patients whose treatment started on time	All patients	75.2%	75.4%	-0.2 percentage points
		T2: Emergency	66.1%	67.6%	-1.5 percentage points
T3: Urgent		70.2%	69.9%	+0.3 percentage points	
T4: Semi-urgent		77.9%	77.7%	+0.2 percentage points	
T5: Non-urgent		93.1%	93.4%	-0.3 percentage points	
Median time spent in the ED		2h 44m	2h 40m	4 mins	
90th percentile time spent in the ED		7h 7m	6h 51m	16 mins	
Patients who spent four hours or less in the ED		73.2%	74.3%	-1.1 percentage points	

Emergency department activity and performance

Emergency department presentations

During the January to March 2017 quarter, a total of 677,602 people presented to a NSW public hospital emergency department (ED), an increase of 0.7% compared with the same quarter last year. Most presentations were classified as 'emergency' (654,189 patients or 96.5%) (Figure 1). The remaining 23,413 patients presented to ED for non-emergency reasons such as a planned return visit.

This quarter, the number of patients triaged to the most urgent categories was higher than in the same quarter last year. The largest increase was in triage category 3 (6,789 more patients; up 3.2%). The number of presentations in triage category 4 decreased (2,486 fewer patients; down 0.9%), and triage category 5 (481 fewer patients; down 0.7%) (Figure 1).

Over a five-year period, the number of patients who presented to an ED in the January to March quarter increased for triage categories 1–4 while the number in the least urgent category 5 decreased (down 8.1%) (Figure 2).

The number of ED patient presentations was higher this quarter than in the same quarter last year for 44 out of 75 NSW hospital EDs. Of these, 13 had an increase of more than 5%, including four that had an increase of more than 10%. Conversely, 29 hospitals had a decrease in the number of ED patient presentations this quarter, including nine that had a decrease of more than 5%.

Hospitals identified in Figure 3 had more than 5,000 ED presentations this quarter and more than a 5% change in the number of presentations compared with the same quarter last year.

This quarter, there were 145,801 ED patients who arrived by ambulance, an increase of 2.0% compared with the same quarter last year (Figure 1).

A small number of patients visit the ED for routine care, or as an entry point for planned admission to the hospital. The majority of ED visits however, are unplanned 'emergency' presentations.

Figure 1 Emergency department presentations and ambulance arrivals at NSW emergency departments, January to March 2017

	This quarter	Same quarter last year	Change since one year ago
All ED presentations	677,602	672,686	0.7%
Emergency presentations by triage category	654,189	646,083	1.3%
Triage 1: Resuscitation	4,252	4,067	4.5%
Triage 2: Emergency	79,873	75,774	5.4%
Triage 3: Urgent	221,615	214,826	3.2%
Triage 4: Semi-urgent	277,964	280,450	-0.9%
Triage 5: Non-urgent	70,485	70,966	-0.7%
Ambulance arrivals	145,801	142,930	2.0%

Figure 2 Emergency presentations by triage category, January 2012 to March 2017

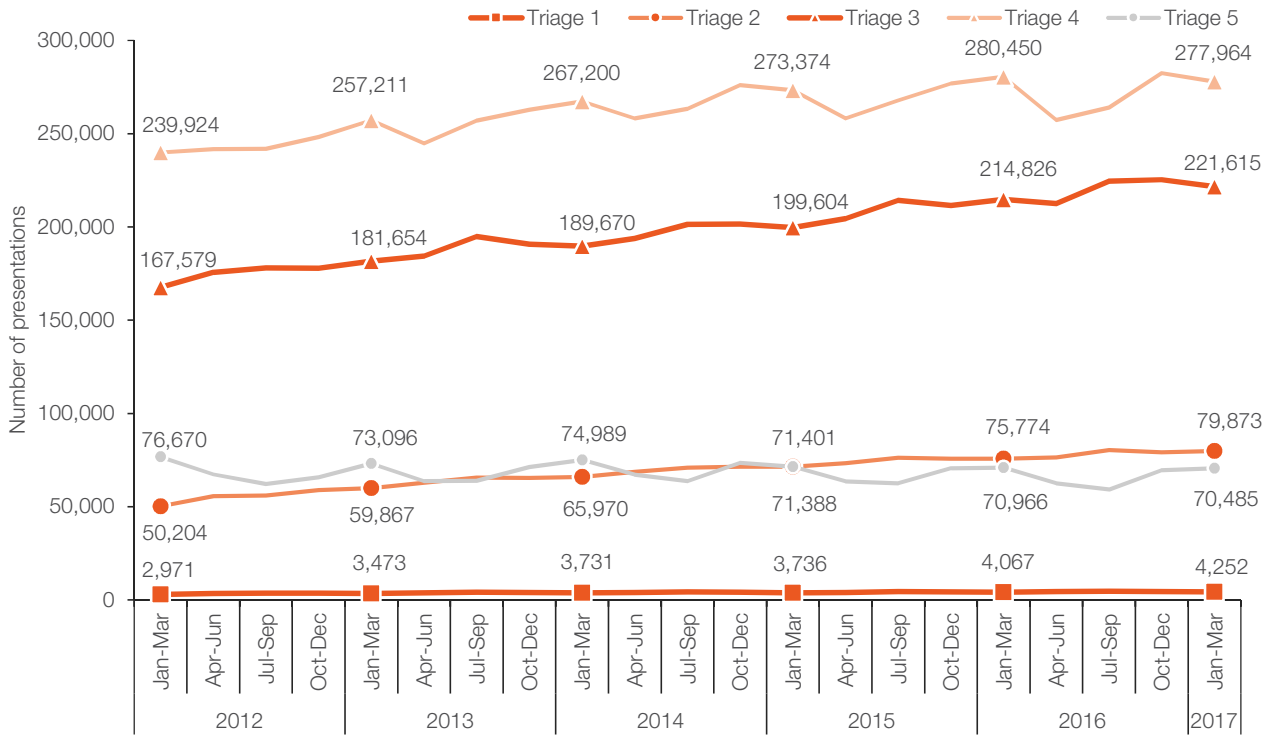
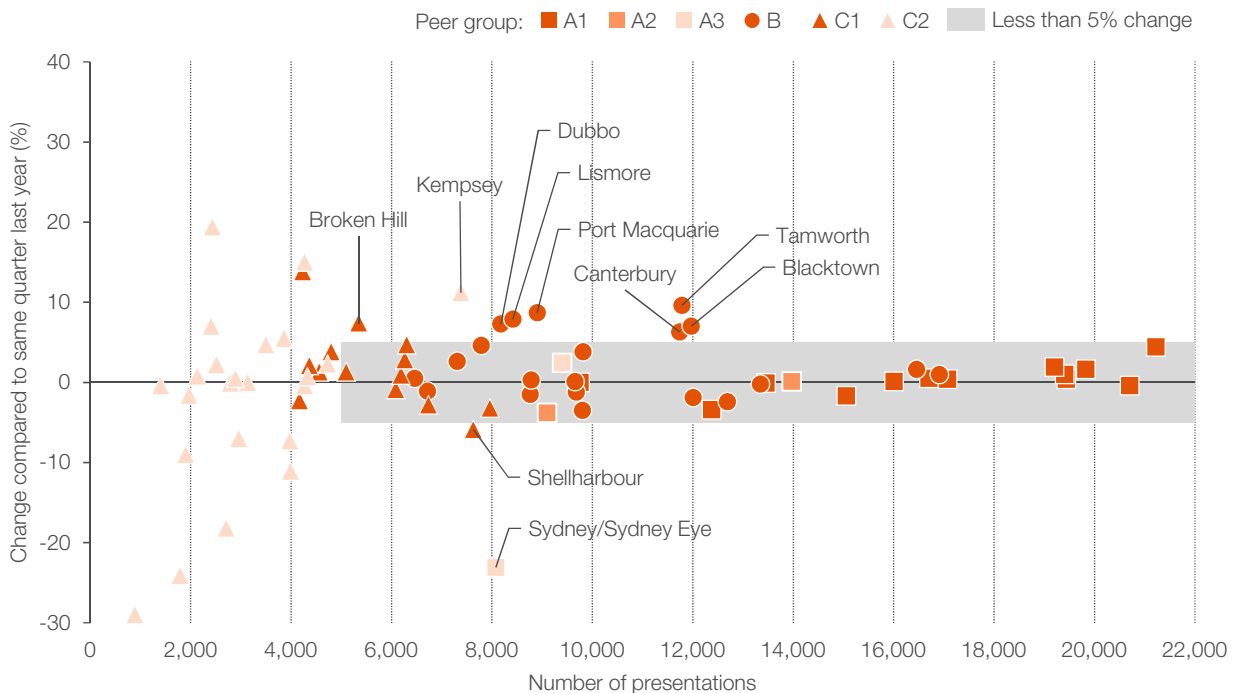


Figure 3 Change in number of emergency department presentations compared with the same quarter last year, hospitals by peer group, January to March 2017



Median time to treatment

On arrival at the ED, patients are allocated to one of five triage categories, based on urgency. Each category has a maximum waiting time within which treatment should start:

- Triage 1: Resuscitation (within two minutes)
- Triage 2: Emergency (within 10 minutes)
- Triage 3: Urgent (within 30 minutes)
- Triage 4: Semi-urgent (within 60 minutes)
- Triage 5: Non-urgent (within 120 minutes).

In the January to March 2017 quarter, the median time from arriving at the ED to starting treatment was unchanged from the same quarter last year for all triage categories. The 90th percentile time was higher for triage categories 2, 3, and 5 but was unchanged for triage category 4 (Figure 4).

For the longer timeframe between 2012 and 2017, the median time to treatment for January to March quarters decreased for triage categories 3, 4 and 5 while for triage category 2, the median time remained unchanged (Figure 5).

For the 90th percentile time to treatment, results for triage categories 3, 4 and 5 decreased over the past five years but increased slightly for triage category 2 (Figure 6).

Figure 4 Time from presentation to starting treatment, by triage category, January to March 2017

	This quarter	Same quarter last year	Change since one year ago
Triage 2 Emergency (e.g. chest pain, severe burns): 78,784 patients			
Median time to start treatment	8m	8m	0m
90th percentile time to start treatment	26m	24m	2m
Triage 3 Urgent (e.g. moderate blood loss, dehydration): 215,790 patients			
Median time to start treatment	20m	20m	0m
90th percentile time to start treatment	1h 9m	1h 8m	1m
Triage 4 Semi-urgent (e.g. sprained ankle, earache): 257,983 patients			
Median time to start treatment	26m	26m	0m
90th percentile time to start treatment	1h 41m	1h 41m	0m
Triage 5 Non-urgent (e.g. small cuts or abrasions): 60,369 patients			
Median time to start treatment	23m	23m	0m
90th percentile time to start treatment	1h 44m	1h 41m	3m

Figure 5

Median time from presentation to starting treatment, by triage category, January 2012 to March 2017

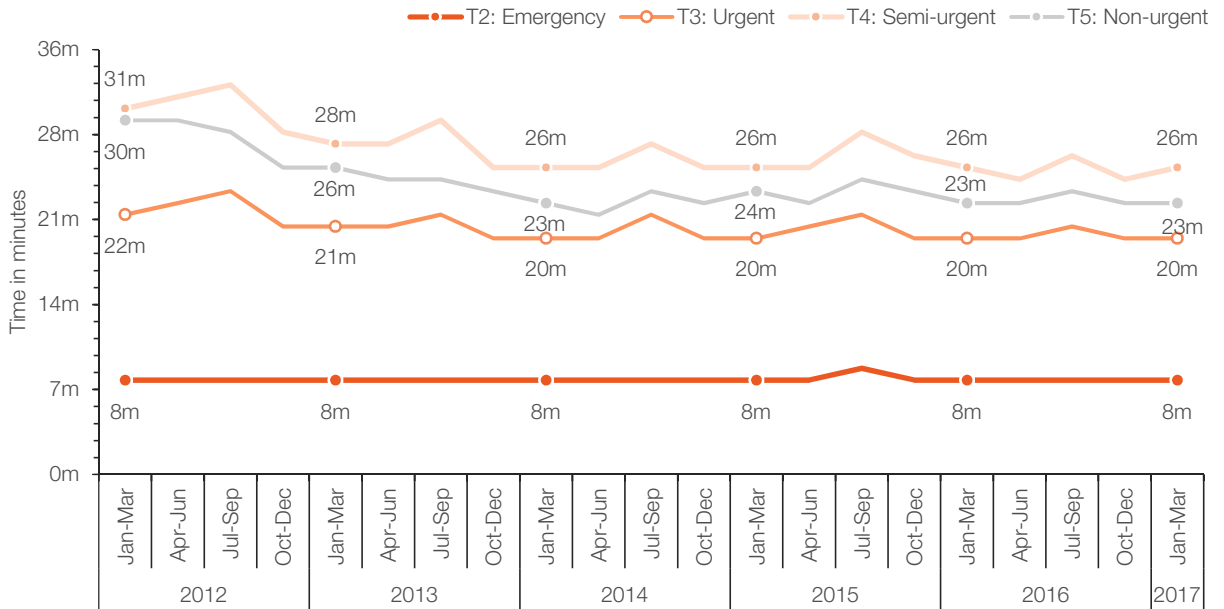
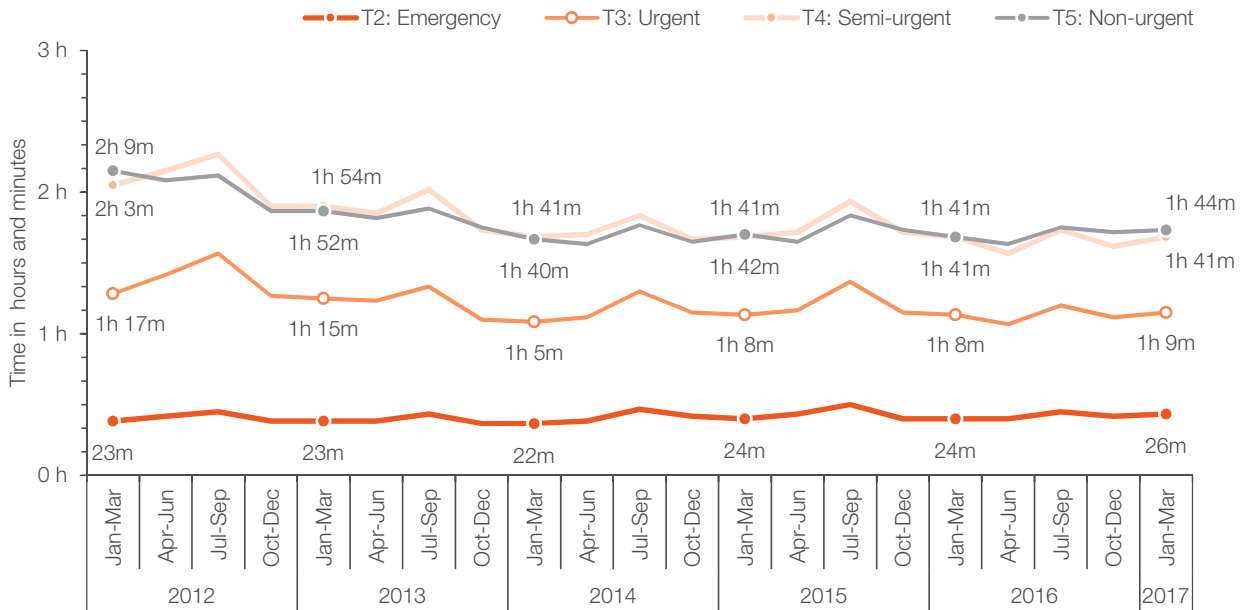


Figure 6

90th percentile time from presentation to starting treatment, by triage category, January 2012 to March 2017



Percentage of patients whose treatment started on time

During the January to March 2017 quarter, 75.2% of ED patients' treatment started within clinically recommended timeframes; a decrease of 0.2 percentage points compared with the same quarter last year.

Within triage categories, comparisons with the same quarter last year show the percentage of patients whose treatment started on time increased for triage categories 3 and 4, and decreased for categories 2 and 5 (Figure 7).

Over the past five years, the percentage of patients whose treatment started on time increased across most triage categories, but decreased for triage category 2. Compared with the same quarter in 2012, the largest increases were seen in triage categories 4 and 5 (5.4 and 4.6 percentage points, respectively) (Figure 8).

Figure 29 shows hospital results for this quarter on two axes: the percentage of patients whose treatment started on time (Y-axis), and the percentage point change since the same quarter last year (X-axis). For hospitals shown above the blue NSW line, a higher percentage of patients

started treatment on time compared with the overall NSW result. For hospitals below this line, a lower percentage of patients' treatment started on time compared with the overall NSW result. Hospitals shown to the left of the vertical '0' line had lower results, compared with the same quarter last year, while those shown to the right of the vertical line had higher results.

Hospitals labelled in Figure 9 are those that had an increase or a decrease of more than five percentage points compared with the same quarter last year.

The percentage of patients whose treatment started on time was higher this quarter in 38 out of 75 hospitals. For eight hospitals, the increase was more than five percentage points and of these, for four hospitals the increase was more than 10 percentage points.

The percentage of patients whose treatment started on time was lower this quarter in 37 hospitals. For seven hospitals, the decrease was more than five percentage points. Of these, for one hospital, the decrease was more than 10 percentage points (Figure 9).

Figure 7 Percentage of patients whose treatment started on time, by triage category, January to March 2017

	This quarter	Same quarter last year	Percentage point change since one year ago
All emergency presentations	75.2%	75.4%	-0.2
Triage category 2	Recommended: 10 minutes 66.1%	67.6%	-1.5
Triage category 3	Recommended: 30 minutes 70.2%	69.9%	0.3
Triage category 4	Recommended: 60 minutes 77.9%	77.7%	0.2
Triage category 5	Recommended: 120 minutes 93.1%	93.4%	-0.3

Figure 8 Percentage of patients whose treatment started on time, by triage category, January 2012 to March 2017

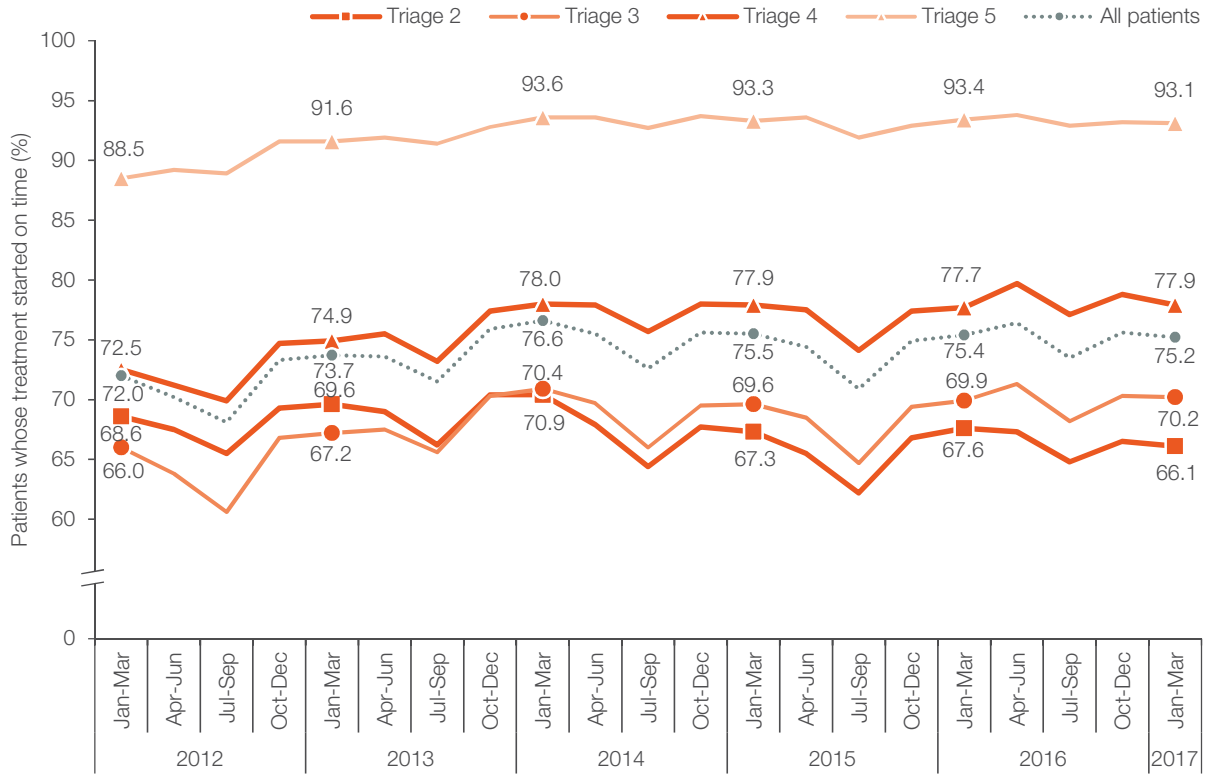
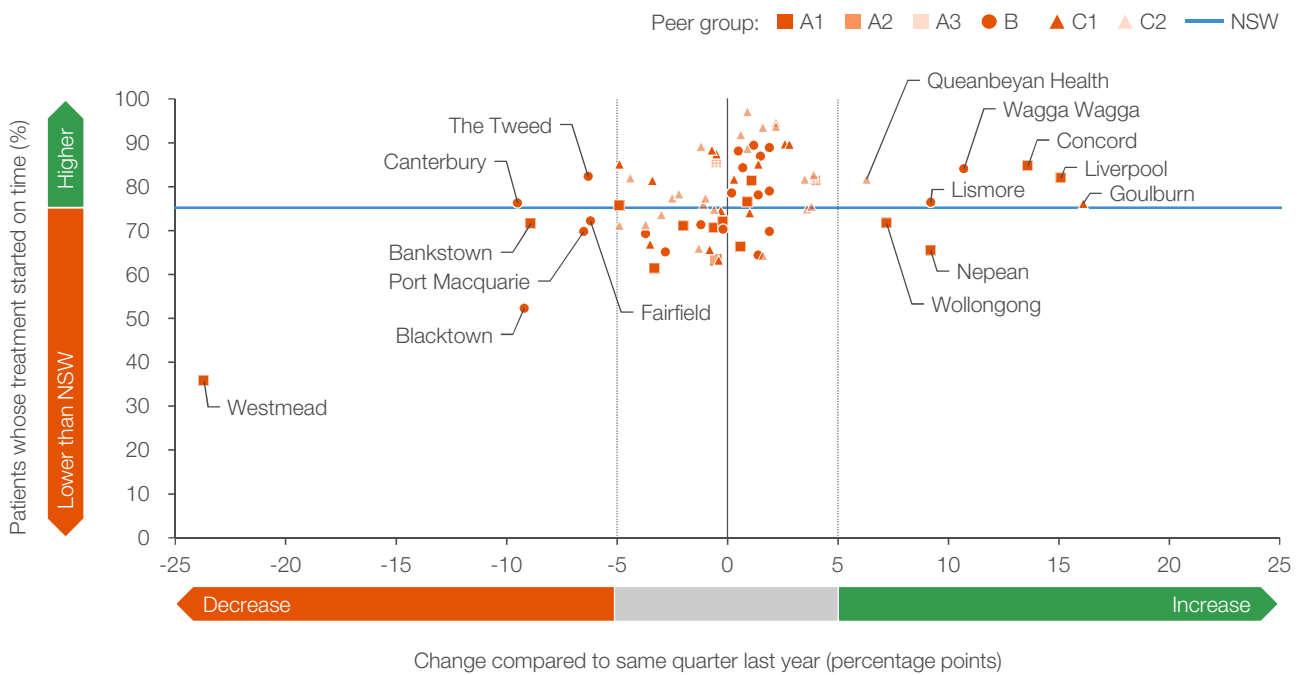


Figure 9 Percentage of patients whose treatment started on time, and percentage point change since same quarter last year, hospitals by peer group, January to March 2017



After leaving the emergency department

Following ED treatment, the majority of patients are either discharged home or admitted to hospital. Some patients choose not to wait for treatment and leave, and others are transferred to a different hospital. These categories are collectively referred to as the 'mode of separation'.

During the January to March 2017 quarter, 62.0% of patients were treated and discharged from the ED (420,302 in total; down 1.7% compared with the same quarter last year), and 28.4% of patients were treated and admitted to hospital (192,279 in total; up 4.8%).

The number of patients transferred to another hospital increased by 2.6% this quarter (13,953 in

total) and the number who left without, or before completing, treatment increased by 3.0% (37,801 in total), compared with the same quarter last year (Figure 10).

Most patients in triage categories 1 and 2 were treated and admitted to hospital (Figure 11). In triage categories 3, 4 and 5 most patients were treated and discharged (Figure 12).

The number of patients who were treated and discharged, treated and admitted to hospital, and transferred to another hospital has increased over the past five years. The number of patients who left without, or before completing, treatment has decreased (Figure 13).

Figure 10 Patients who presented to the emergency department, by mode of separation, January to March 2017

		This quarter	Same quarter last year	Change since one year ago
Treated and discharged	62.0%	420,302	427,412	-1.7%
Treated and admitted to hospital	28.4%	192,279	183,436	4.8%
Left without, or before completing, treatment	5.6%	37,801	36,691	3.0%
Transferred to another hospital	2.1%	13,953	13,604	2.6%
Other	2.0%	13,267	11,543	14.9%

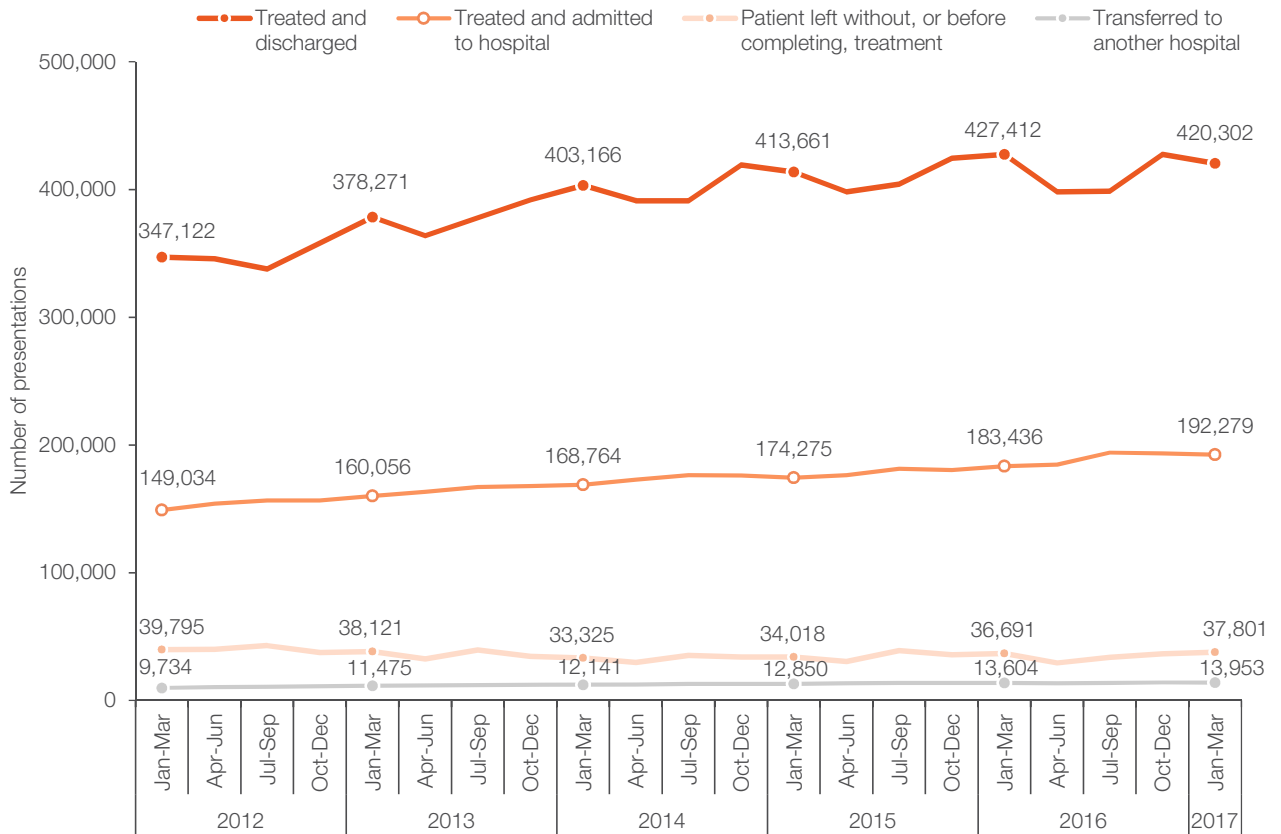
Figure 11 Percentage of patients who were treated and admitted, by triage category, January to March 2017

		This quarter	Same quarter last year	Percentage point change since one year ago
All ED presentations	28.4%		27.3%	1.1
Triage 1	80.4%		81.2%	-0.8
Triage 2	58.7%		59.0%	-0.3
Triage 3	40.8%		40.1%	0.7
Triage 4	16.3%		15.4%	0.9
Triage 5	5.3%		4.8%	0.5

Figure 12 Percentage of patients who were treated and discharged, by triage category, January to March 2017

	This quarter	Same quarter last year	Percentage point change since one year ago
All ED presentations	62.1%	63.6%	-1.5
Triage 1	8.9%	8.4%	0.5
Triage 2	33.9%	34.1%	-0.2
Triage 3	51.9%	52.7%	-0.8
Triage 4	73.4%	75.0%	-1.6
Triage 5	80.3%	81.4%	-1.1

Figure 13 Patients who presented to the emergency department, by mode of separation, January 2012 to March 2017



Median time patients spent in the emergency department

During the January to March 2017 quarter, the median time patients spent in the ED was two hours and 44 minutes, up four minutes compared with the same quarter last year. The 90th percentile time patients spent in the ED was seven hours and seven minutes, 16 minutes longer than the same quarter last year (Figure 14).

For the January to March 2017 quarter, the median time patients spent in the ED was longer across all modes of separation*, compared with the same quarter last year. For patients who were treated and discharged, the median time spent in the ED was two minutes longer and for those treated and admitted to hospital, the median time was seven minutes longer (Figure 15).

Despite a 22.0% increase in the overall number of presentations during the January to March quarters since 2012, the median time patients spent in the ED decreased from three hours and nine minutes in 2012 to two hours and 44 minutes this quarter.

Figure 15 shows the downward trend over the past five years in the median time patients spent in the ED across all modes of separation. For patients who were treated and admitted to hospital, the median time spent in the ED was four hours and 45 minutes this quarter, compared with six hours and 13 minutes in January to March 2012.

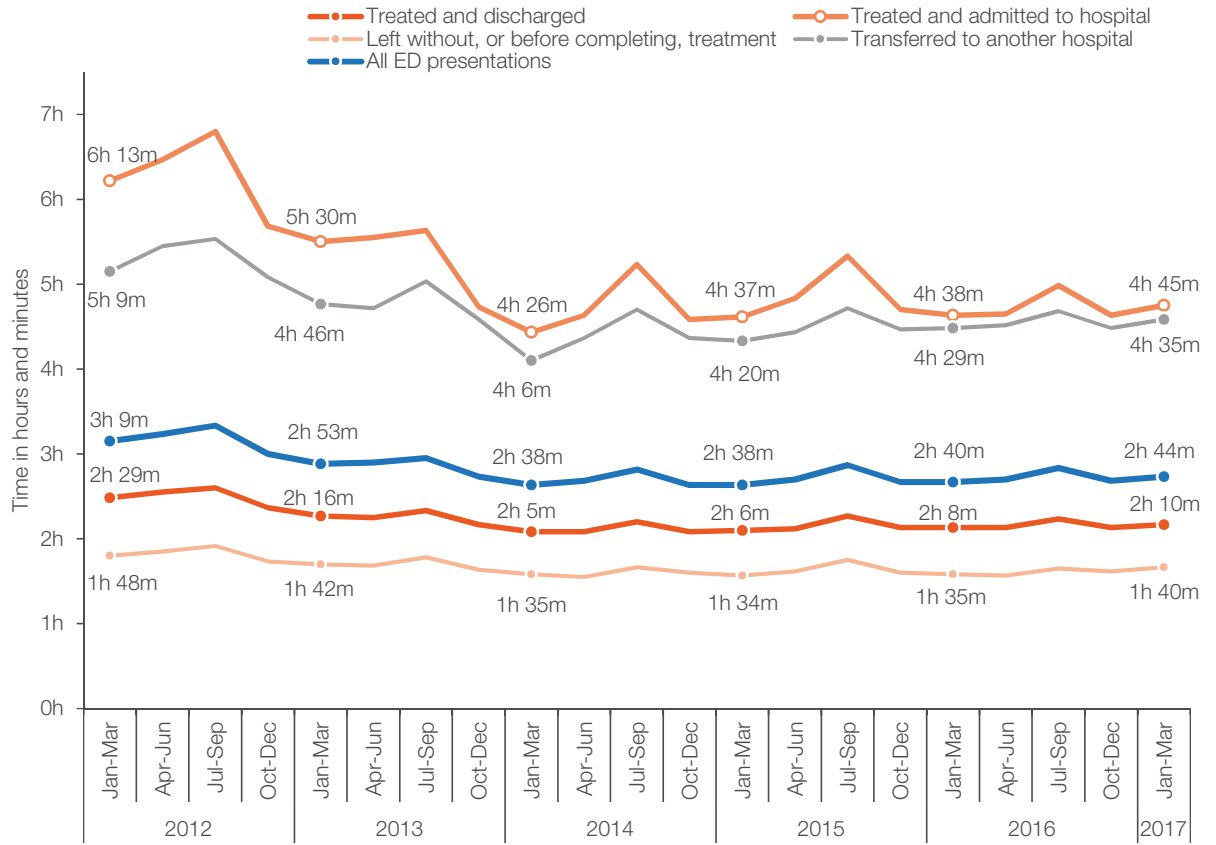
Figure 14 Time patients spent in the emergency department, January to March 2017

	This quarter	Same quarter last year	Change since one year ago
Median time spent in the ED	2h 44m	2h 40m	4m
90th percentile time spent in the ED	7h 7m	6h 51m	16m

* Mode of separation refers to the administrative code that describes where patients went at the conclusion of their emergency department visit. The main codes are: treated and discharged; treated and admitted to hospital; left without, or before completing, treatment; and transferred to another hospital.

Figure 15

Median time patients spent in the emergency department, by mode of separation, January 2012 to March 2017



Percentage of patient stays of four hours or less

In the January to March 2017 quarter, 73.2% of patients spent four hours or less in the ED, a decrease of 1.1 percentage points compared with the same quarter last year (Figures 16 and 17).

Patients who require admission to hospital from the ED usually have more complex health needs than those who are treated and discharged, and therefore often spend longer periods in the ED.

Among patients who were treated and discharged this quarter, 86.0% spent four hours or less in the ED. Among patients who were treated and subsequently admitted to hospital, and those who were transferred to another hospital, less than half spent four hours or less in the ED. Of those who left without, or before completing, treatment, 90.4% spent four hours or less in the ED (Figure 16).

Figure 18 maps hospital results this quarter compared with the same quarter last year. Hospitals labelled are those that had a change of more than five percentage points in the proportion of patients who spent four hours or less in the ED, compared to the same quarter last year.

Due to differences in data definitions, period of reporting and the number of hospitals included, *Healthcare Quarterly* results for the percentage of patients who spent four hours or less in the ED are not directly comparable to figures reported by the NSW Ministry of Health or the Commonwealth. For more information refer to the technical supplements section of the BHI website at bhi.nsw.gov.au

Figure 16 Percentage of patients who spent four hours or less in the emergency department, by mode of separation, January to March 2017

	Number		This quarter	Same quarter last year	Percentage point change since one year ago
All ED presentations	495,675		73.2%	74.3%	-1.1
Treated and discharged	361,555		86.0%	86.4%	-0.4
Treated and admitted	80,953		42.1%	43.4%	-1.3
Left without, or before completing, treatment	34,146		90.4%	91.5%	-1.1
Transferred to another hospital	6,216		44.6%	45.4%	-0.8

Figure 17 Percentage of patients who spent four hours or less in the emergency department, by mode of separation, January 2012 to March 2017

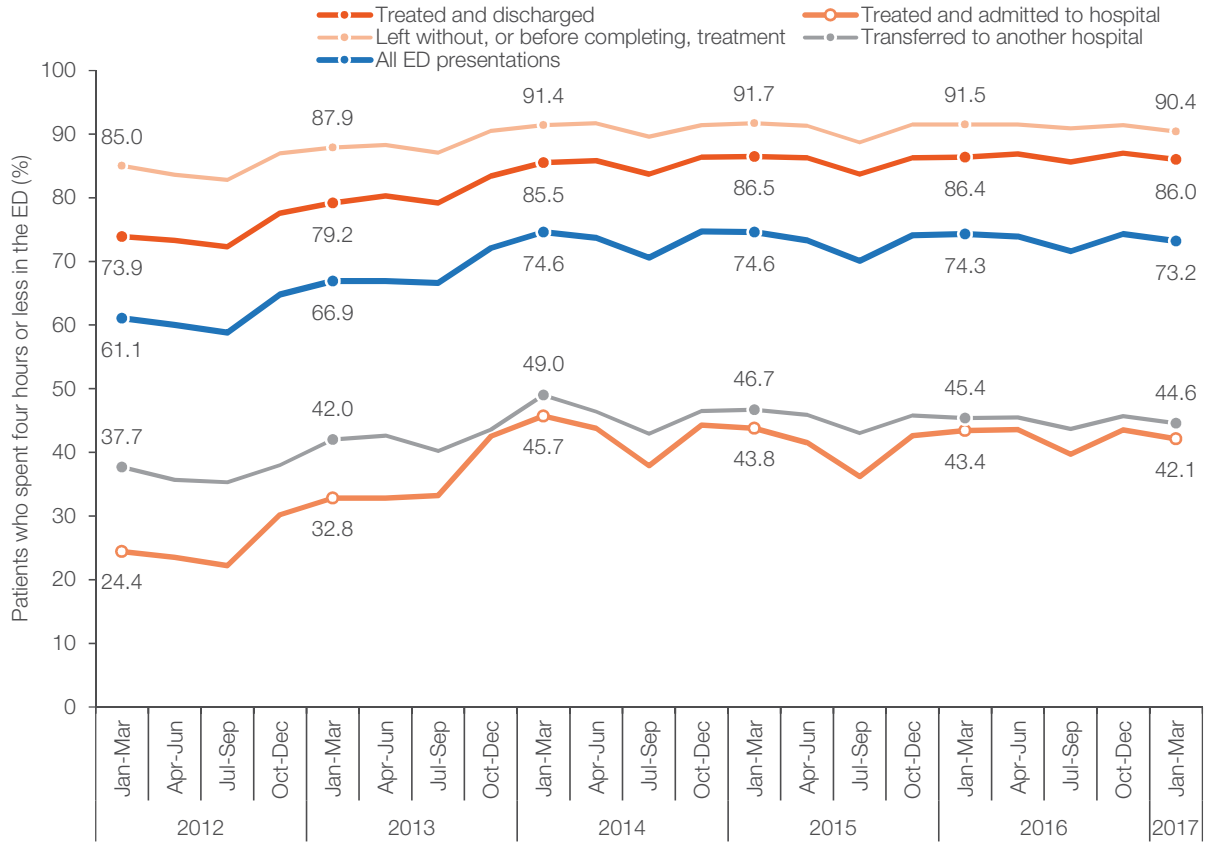
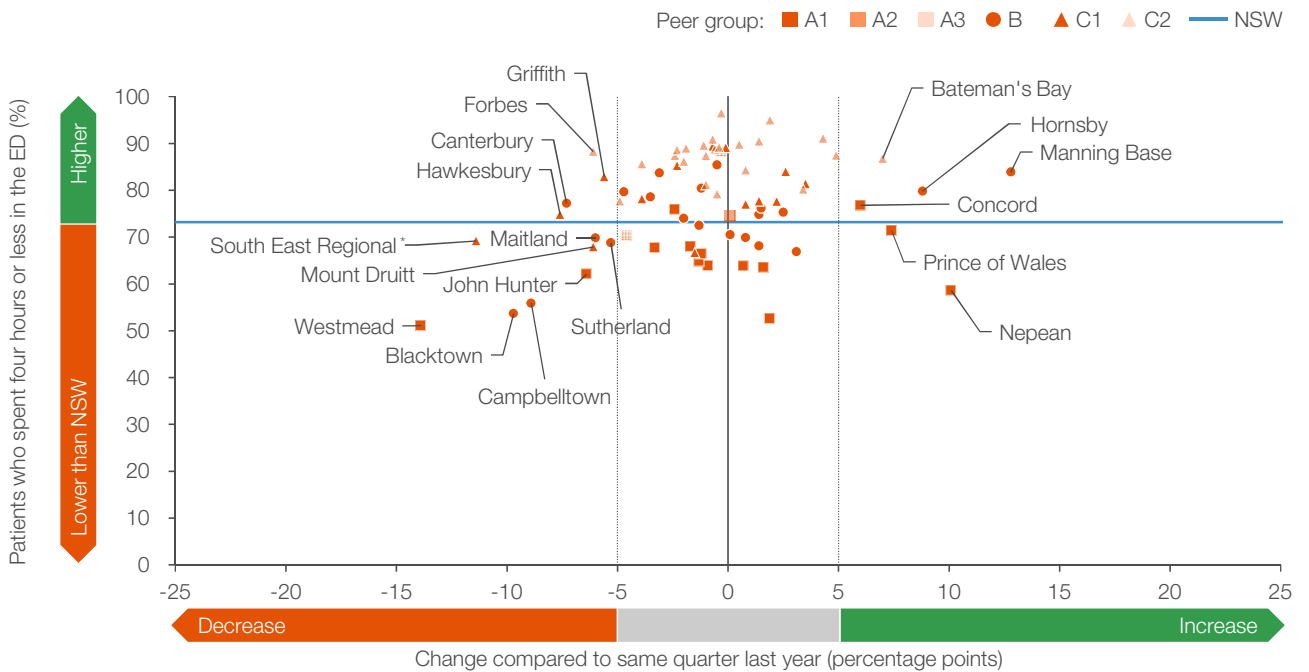


Figure 18 Percentage of patients who spent four hours or less in the emergency department, and percentage point change since same quarter last year, hospitals by peer group, January to March 2017



* Comparisons should be made with caution – South East Regional Hospital replaced Bega District Hospital, which provided different services.

Percentage of patient stays of four hours or less – peer group variation

There is considerable variation between and within hospital peer groups in the percentage of patients who spent four hours or less in the ED. Peer group C2 hospitals have a higher percentage of patients who spent four hours or less in the ED compared with other peer group hospitals. Peer group A1 hospitals have a smaller percentage of patients who spent four hours or less in the ED (Figure 19).

Over the past five years, there has been an increase in the percentage of patients who spent four hours or less in the ED across most hospital peer groups. The only exception is peer group C2 (down 1.3 percentage points compared with the same quarter in 2012) (Figure 20).

Compared with the same quarter last year, the percentage of patients who spent four hours or less in the ED decreased in peer groups A1, B and C1 and was unchanged for peer group C2 (Figure 20).

Figure 19 Percentage of patients who spent four hours or less in the emergency department, by peer group, January to March 2017

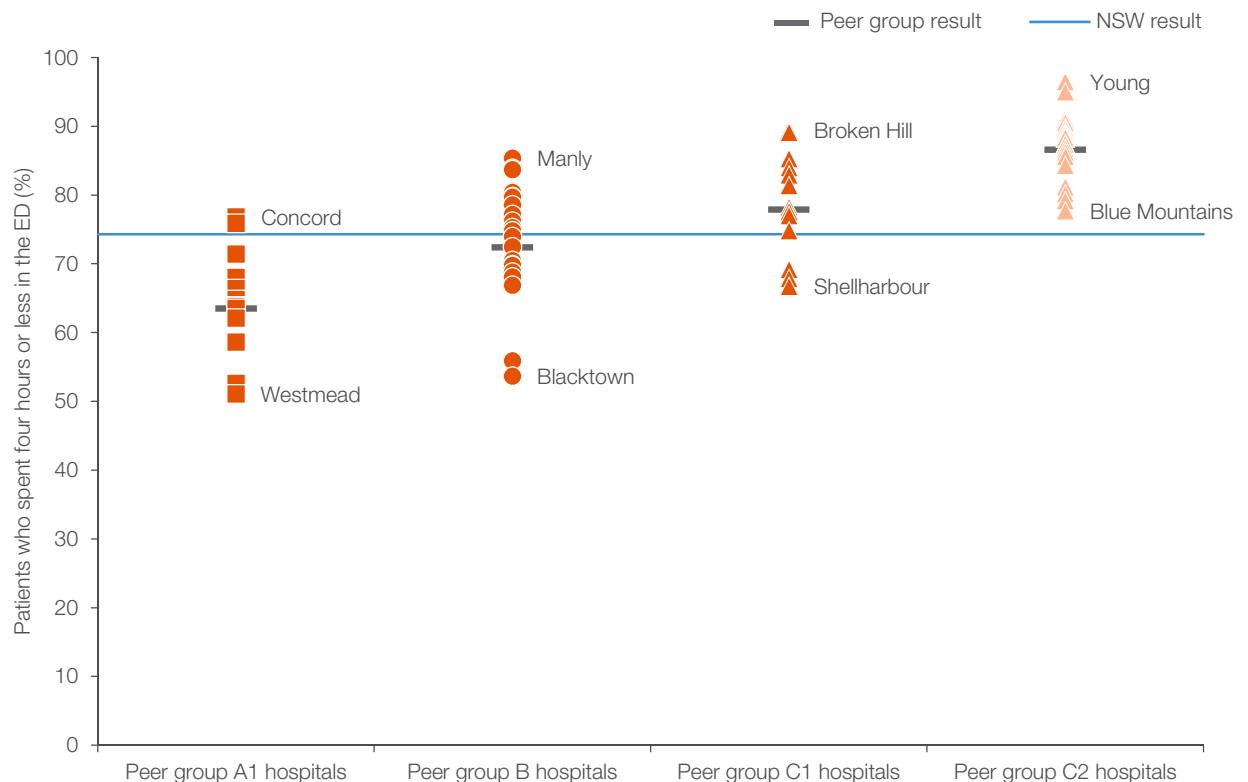
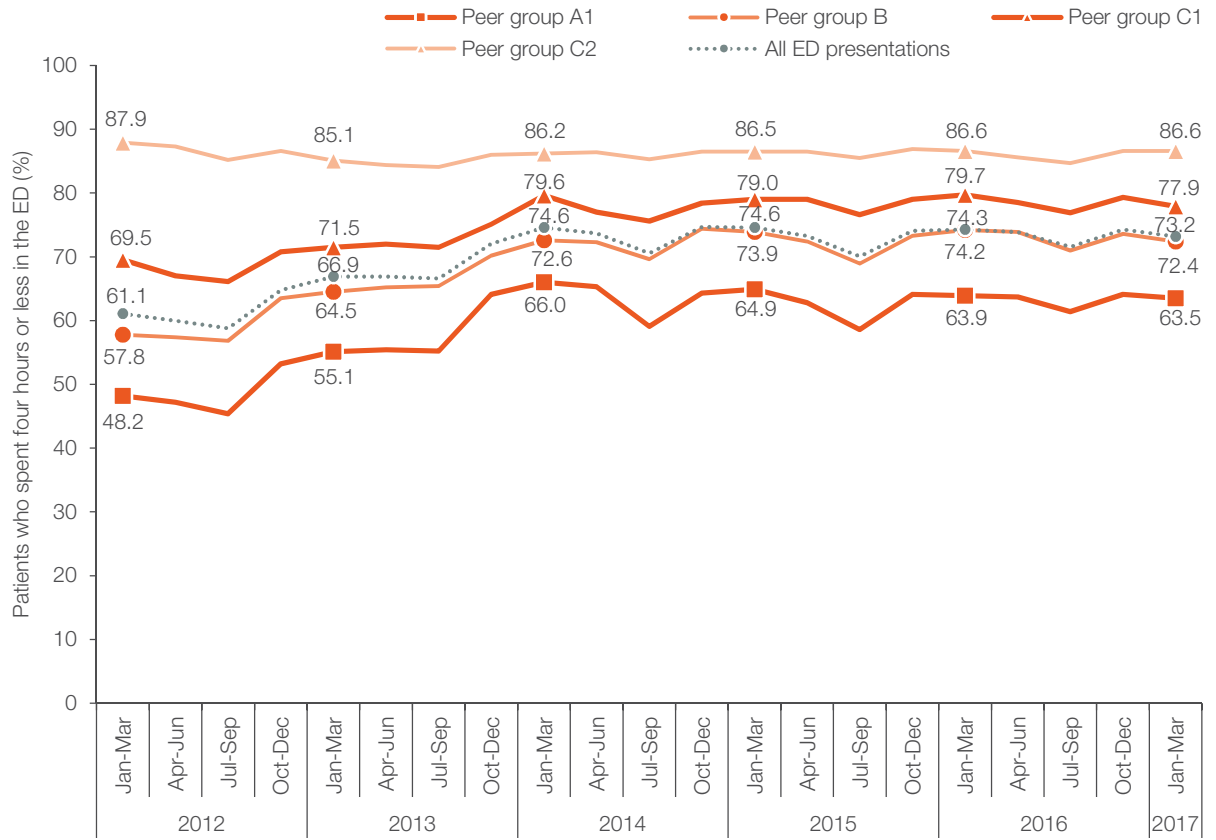


Figure 20

Percentage of patients who spent four hours or less in the emergency department, by peer group, January 2012 to March 2017



Transfer of care from the ambulance to the emergency department

During the January to March 2017 quarter, 145,801 patients arrived at NSW EDs by ambulance (up 2.0% compared with the same quarter last year). This quarter, 132,747 patient records (matched between ambulance service and ED records) were used to calculate transfer of care time (Figure 21).

The median and 90th percentile transfer of care times from ambulance to ED staff were one minute shorter this quarter compared with the same quarter last year (11 minutes and 27 minutes respectively) (Figure 21).

In NSW, transfer of care, from ambulance to ED staff, should have occurred within 30 minutes for 90% of patients. This quarter, 91.5% of patients arriving by ambulance had their care transferred within 30 minutes; 0.8 percentage points higher than in the same quarter last year (Figure 22).

Figure 23 shows variation between and within hospital peer groups in the percentage of patients who had their care transferred within 30 minutes this quarter. Peer group does not appear to be associated with marked differences in transfer of care.

Figure 21 Emergency department transfer of care time, January to March 2017

	This quarter	Same quarter last year	Change since one year ago
Emergency presentations	654,189	646,083	1.3%
Ambulance arrivals	132,747	127,349	4.2%
ED transfer of care time			
Median time	11m	12m	-1m
90th percentile time	27m	28m	-1m

Figure 22 Percentage of ambulance patients with transfer of care time within 30 minutes, April 2013 to March 2017

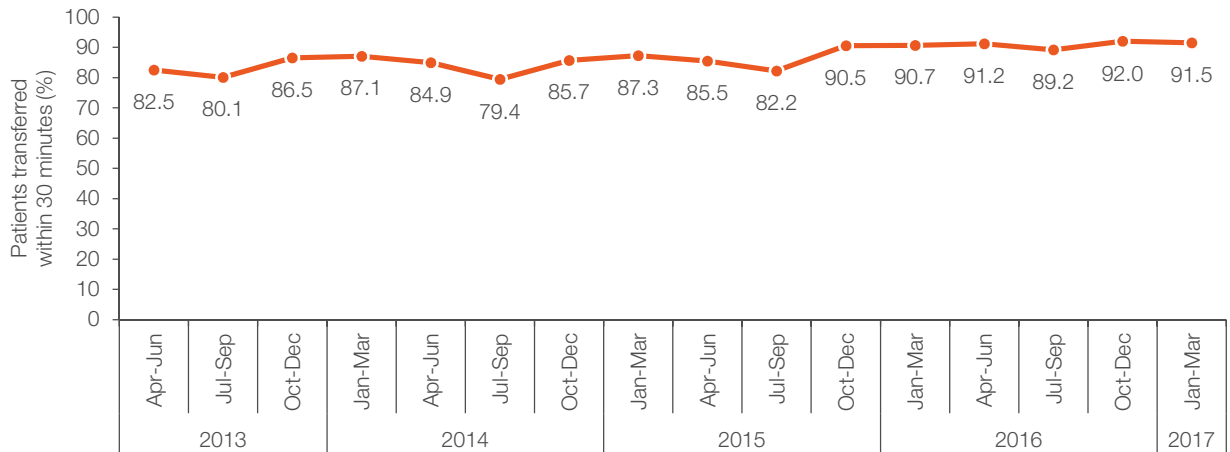
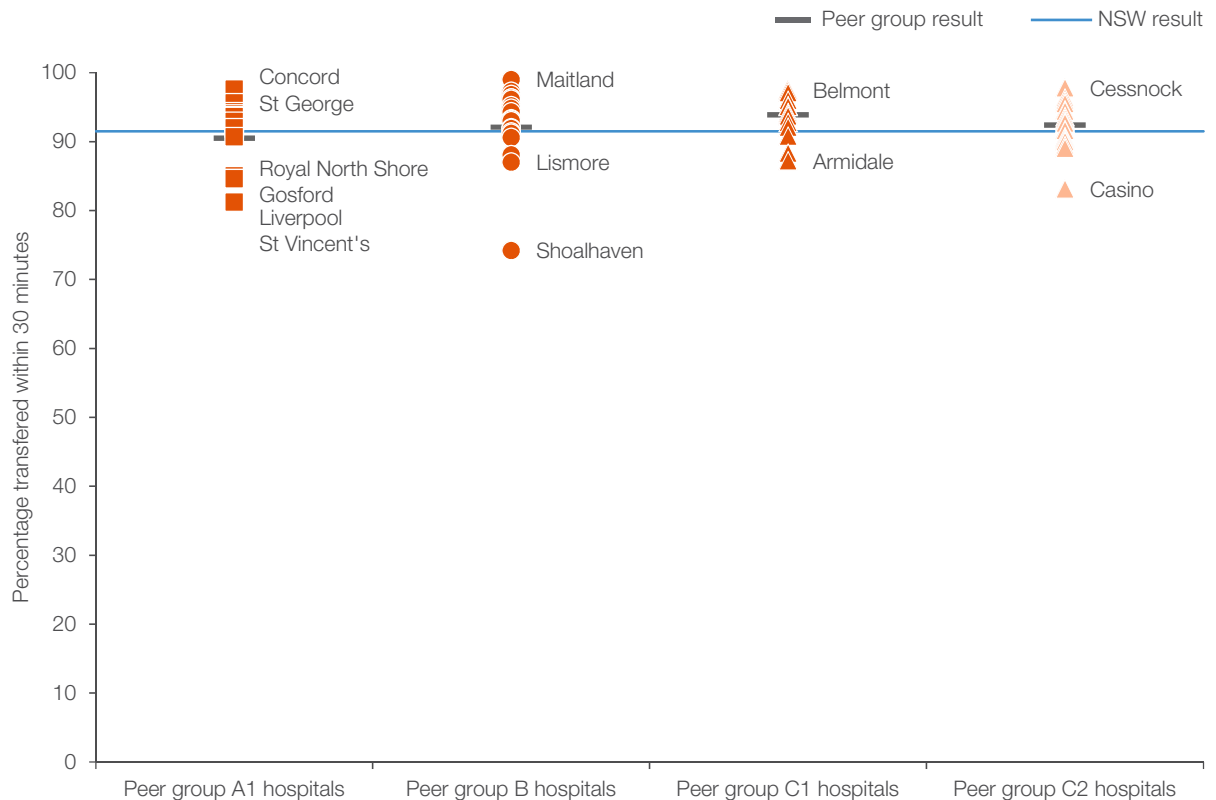


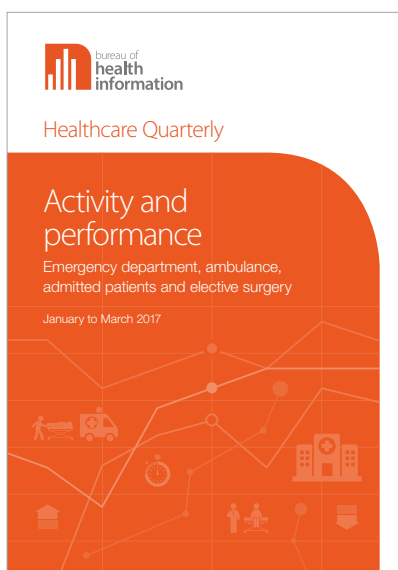
Figure 23 Percentage of ambulance patients whose care was transferred within 30 minutes, by peer group, January to March 2017



Healthcare Quarterly

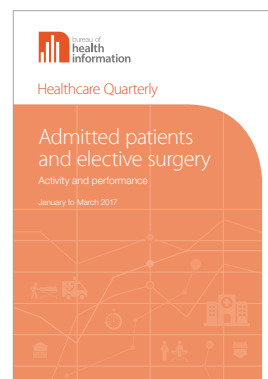
Healthcare Quarterly is a series of regular reports that describes the number and types of services provided to the people of NSW and the timeliness with which they are provided.

The reports feature key indicators of activity and performance across ambulance and public hospital services in NSW.

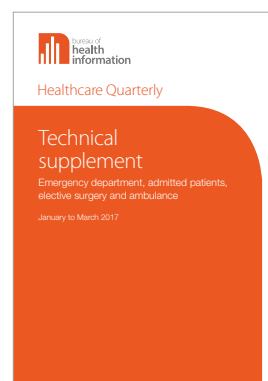
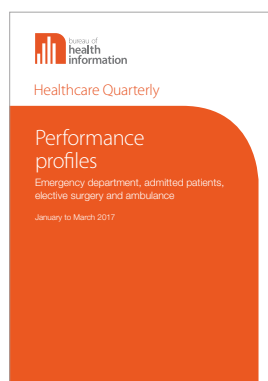


Every day around 25,000 people receive care in the NSW public hospital system and around 1,800 are transported to hospital by ambulance.

Healthcare Quarterly is published alongside three standalone modules that provide more detailed information about emergency department care, admitted patients and elective surgery, and ambulance services.



Additional information on local performance is available in our hospital profiles or from BHI's interactive portal Healthcare Observer, at bhi.nsw.gov.au/healthcare_observer



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

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

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

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

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

- Accessibility – healthcare when and where needed
- Appropriateness – the right healthcare, the right way
- Effectiveness – making a difference for patients
- Efficiency – value for money
- Equity – health for all, healthcare that's fair
- Sustainability – caring for the future

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