

## Healthcare Quarterly

# Activity and performance

Emergency department, ambulance,  
admitted patients and elective surgery

October to December 2017



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Please note there is the potential for minor revisions of data in this report.  
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Changes in data coverage and analytic methods from quarter to quarter mean that figures published in this document are superseded by subsequent reports.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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# 10 key findings

October to December 2017

- 1 There were 703,410 presentations at emergency departments in NSW public hospitals during the October to December 2017 quarter, up 2.0% compared with the same quarter last year.** The greatest increase was seen in triage category 2 (emergency) – up 7.2% to 85,293. Over the past five years, the number of emergency department presentations in the October to December quarter has increased by 22.7%.
- 2 Treatment started within clinically recommended timeframes for 76.0% of emergency department patients (up 0.3 percentage points).** Compared with the same quarter last year, the percentage of patients whose treatment started on time was up for Westmead Hospital by 21.8 percentage points to 63.4%, while marked increases were also seen at Mount Druitt (up 14.1 percentage points to 78.0%), Blacktown (up 11.5 percentage points to 67.6%), and Dubbo (up 11.0 percentage points to 82.3%) hospitals.
- 3 Almost three quarters of patients (73.6%) spent four hours or less in the emergency department (down 0.8 percentage points).** Results for three hospitals – Mount Druitt, Liverpool and Bathurst – increased by more than five percentage points compared with the same quarter last year, while the number of patients leaving the emergency department within four hours at Blacktown Hospital was up 10.9 percentage points to 64.7%.
- 4 A total of 151,235 patients arrived at emergency departments by ambulance, up 3.1% compared with the same quarter last year.** Of those patients who arrived at emergency departments by ambulance, 92.1% had their care transferred from paramedics to emergency department staff within 30 minutes, up 0.2 percentage points.
- 5 There were 284,044 ambulance responses (defined as the dispatch of a vehicle), up 0.2% compared with the same quarter last year.** The number of responses categorised as emergency (priority 1) and urgent (priority 2) were up by 1.6% (to 126,942) and 7.6% (to 134,514), respectively. However the number of responses categorised as time-critical (priority 3) and non-emergency (priorities 4–9) were down by 41.4% (to 13,994) and 10.7% (to 8,574) respectively, compared with the same quarter last year.
- 6 There were 5,947 ambulance responses that were categorised as emergency, highest priority (priority 1A: P1A), up 10.3% compared with the same quarter last year.** The percentage of P1A responses within 10 minutes was 72.1% (up 0.5 percentage points). The median response time for P1A cases was 7.4 minutes, down from 7.5 minutes during the same quarter last year.
- 7 Call to ambulance arrivals times for emergency calls were similar to the same quarter last year.** Paramedics reached 63.2% of emergency cases within 15 minutes (up 0.4 percentage points compared with the same quarter last year) and 94.5% within 30 minutes (up 0.2 percentage points).
- 8 During the October to December quarter, 478,234 patients were admitted to hospitals.** This was down 1.5% (7,251) compared to the same quarter last year.
- 9 There were 55,872 elective surgical procedures performed in NSW public hospitals during the quarter.** The median wait times were 10 days for urgent procedures (unchanged, compared with the same quarter last year), 44 days for semi-urgent procedures (up one day) and 210 days for non-urgent procedures (down two days).
- 10 Altogether, 97.5% of elective surgical procedures were performed within clinically recommended timeframes.** Compared with the same quarter last year, the percentage of elective surgery performed on time at Wagga Wagga Rural Referral Hospital was up by 10.6 percentage points to 99.2%, while at Wollongong Hospital it was down by 9.0 percentage points to 89.0%.

# Healthcare Quarterly – Activity

Emergency department activity		October to December 2017	October to December 2016	Difference	% change
All arrivals at NSW EDs by ambulance		151,235	146,621	4,614	3.1%
All ED presentations		703,410	689,903	13,507	2.0%
Emergency presentations		680,126	665,860	14,266	2.1%
Emergency presentations by triage category					
Triage category	T1: Resuscitation	4,735	4,556	179	3.9%
	T2: Emergency	85,293	79,597	5,696	7.2%
	T3: Urgent	231,360	226,707	4,653	2.1%
	T4: Semi-urgent	287,474	284,650	2,824	1.0%
	T5: Non-urgent	71,264	70,350	914	1.3%
Admissions to hospital from NSW EDs		186,834	194,789	-7,955	-4.1% <sup>†</sup>

<sup>†</sup> The decrease in the percentage of patients treated and admitted to hospital from the ED may reflect changes in data coding practices. Changes will be reflected in the January to March 2018 edition of *Healthcare Quarterly*.

Ambulance activity		October to December 2017	October to December 2016	Difference	% change
Calls		288,687	287,339	1,348	0.5%
Responses		284,044	283,502	542	0.2%
Priority category	P1: Emergency	126,942	124,999	1,943	1.6%
	P1A: Highest priority	5,947	5,392	555	10.3%
	P2: Urgent	134,514	125,003	9,511	7.6% <sup>‡</sup>
	P3: Time-critical	13,994	23,899	-9,905	-41.4% <sup>‡</sup>
	P4-9: Non-emergency	8,574	9,601	-1,027	-10.7%
Incidents		225,180	223,984	1,196	0.5%
Patient transports		168,645	164,466	4,179	2.5%

Note: Ambulance activity data do not include outage estimates

<sup>‡</sup> In September 2017, a change in protocol was introduced when triaging patients for inter-facility transport. Some of these responses remain as priority 3 while others require a higher priority response.

Admitted patient activity		October to December 2017	October to December 2016	Difference	% change
All admitted patient episodes		478,234	485,485	-7,251	-1.5%
All acute episodes		*	*	*	*
Overnight episodes		*	*	*	*
Same-day episodes		*	*	*	*
Non-acute episodes*		*	*	*	*
Average length of stay (days)	All acute episodes	*	*	*	*
	Acute overnight episodes	*	*	*	*
	Non-acute episodes	*	*	*	*
Hospital bed days	All bed days	1,643,352	1,687,606	-44,254	-2.6%
	Acute bed days	*	*	*	*
	Non-acute bed days	*	*	*	*
Babies born in NSW public hospitals		17,497	17,771	-274	-1.5%

Elective surgery activity		October to December 2017	October to December 2016	Difference	% change
Elective surgical procedures performed		55,872	54,764	1,108	2.0%
Urgent surgery		12,342	12,326	16	0.1%
Semi-urgent surgery		18,776	18,046	730	4.0%
Non-urgent surgery		21,986	21,687	299	1.4%
Patients on waiting list ready for elective surgery at end of quarter		76,227	73,454	2,773	3.8%
Urgent surgery		921	834	87	10.4%
Semi-urgent surgery		11,414	10,474	940	9.0%
Non-urgent surgery		63,892	62,146	1,746	2.8%

\* This number is not reported due to a policy change in the definition of patient stay types. A new mental health care stay type has been introduced that comprises patients who were previously included in the acute and non-acute stay types that are routinely reported by BHI. Acute, non-acute and mental health stay types will be reported separately in the next edition of *Healthcare Quarterly*, which covers January to March 2018.

# Healthcare Quarterly – Performance

Emergency department performance			October to December 2017	October to December 2016	Difference
Percentage of patients transferred from ambulance to ED within 30 minutes			92.1%	91.9%	+0.2 percentage points
Time to treatment by triage category	T2: Emergency	Median	8 mins	8 mins	0 mins
		90th percentile	23 mins	25 mins	-2 mins
	T3: Urgent	Median	20 mins	20 mins	0 mins
		90th percentile	65 mins	67 mins	-2 mins
	T4: Semi-urgent	Median	26 mins	25 mins	1 mins
		90th percentile	99 mins	97 mins	2 mins
	T5: Non-urgent	Median	23 mins	23 mins	0 mins
		90th percentile	103 mins	103 mins	0 mins
Percentage of patients whose treatment started on time	All patients	76.0%	75.7%	+0.3 percentage points	
	T2: Emergency	68.7%	66.6%	+2.1 percentage points	
	T3: Urgent	71.2%	70.4%	+0.8 percentage points	
	T4: Semi-urgent	78.4%	78.9%	-0.5 percentage points	
	T5: Non-urgent	93.1%	93.2%	-0.1 percentage points	
Median time spent in the ED			2h 44m	2h 40m	4 mins
90th percentile time spent in the ED			6h 55m	6h 53m	2 mins
Percentage of patients who spent four hours or less in the ED			73.6%	74.4%	-0.8 percentage points
Ambulance performance			October to December 2017	October to December 2016	Difference
Call to ambulance arrival time					
Percentage of P1 (emergency) call to ambulance arrival within 15 minutes			63.2%	62.8%	0.4 percentage points
Percentage of P1 (emergency) call to ambulance arrival within 30 minutes			94.5%	94.3%	0.2 percentage points
Percentage of P2 (urgent) call to ambulance arrival within 30 minutes			72.6%	74.8%	-2.2 percentage points
Percentage of P2 (urgent) call to ambulance arrival within 60 minutes			94.0%	94.7%	-0.7 percentage points
Mobilisation time					
P1: Emergency	Median	2.4m	2.5m	-0.1m	
	Percentage within 3 minutes	63.8%	61.7%	2.1 percentage points	
Response time					
Percentage of P1A (highest priority) responses within 10 minutes			72.1%	71.6%	0.5 percentage points
Number of days median P1A response time > 10 minutes			0 days	1 day	-1 days
Turnaround time					
P1: Emergency	Median	37.0m	35.5m	1.5m	
	90th percentile	60.0m	57.7m	2.3m	
	Percentage within 45 minutes	69.1%	72.8%	-3.7 percentage points	
P2: Urgent	Median	34.7m	33.1m	1.6m	
	90th percentile	56.5m	54.3m	2.2m	
	Percentage within 45 minutes	74.3%	78.0%	-3.7 percentage points	
Elective surgery performance			October to December 2017	October to December 2016	Difference
Median waiting time (days)	Urgent surgery	10 days	10 days	unchanged	
	Semi-urgent surgery	44 days	43 days	+1 days	
	Non-urgent surgery	210 days	212 days	-2 days	
Elective surgical procedures performed on time	All surgeries	97.5%	97.6%	-0.1 percentage points	
	Urgent surgery	99.8%	99.8%	unchanged	
	Semi-urgent surgery	97.2%	97.6%	-0.4 percentage points	
	Non-urgent surgery	96.4%	96.4%	unchanged	

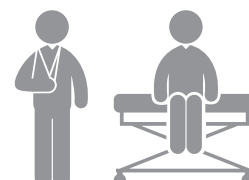
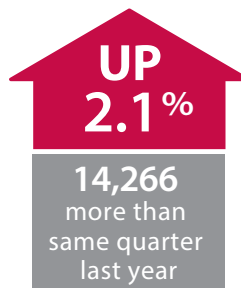
Note: Triage 1 patients are the most urgent and are almost all treated within two minutes. Clinicians are focused on providing immediate and essential care, rather than recording times, therefore times to start treatment are generally not reported. Timeframes to treat other triage categories are recommended by the Australasian College for Emergency Medicine.

In the October to December 2017 quarter...

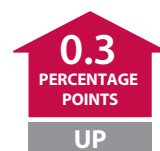
## Emergency department

There were **680,126**  
emergency presentations

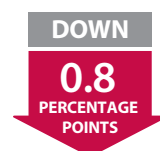
**Highest ever for an October to December quarter**



**76.0%** of patients' treatment  
started on time



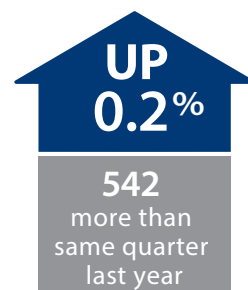
**73.6%** of patients spent  
**four hours or less** in the  
emergency department



## Ambulance



There were **284,044**  
ambulance responses



Note: All comparisons are in reference to the same quarter last year.



## Admitted patients

There were **7,251**  
fewer episodes of  
care compared with the  
same quarter last year

478,234  
in total

**DOWN**  
**1.5%**



**54.9%** of admitted patient  
episodes were for overnight stays

## Elective surgery

There were **55,872**  
elective surgical  
procedures performed

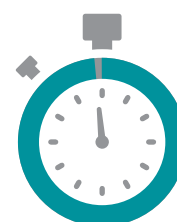
**UP**  
**2.0%**

1,108  
more than  
same quarter  
last year



Almost all (97.5%) were performed  
within recommended time frames

Median waiting times were shorter  
for non-urgent surgery compared  
with same quarter last year



10, 44 and 210 days for urgent, semi-urgent and non-urgent surgery, respectively

Note: All comparisons are in reference to the same quarter last year.

# About this report

## The data

*Healthcare Quarterly* draws on four main data sources:

- **Emergency Department Data Collection (EDDC)**  
– data drawn from the Health Information Exchange (HIE) on 23 January 2018
- **NSW Ambulance Computer Aided Dispatch (CAD) system** – provided on 11 January 2018
- **Admitted Patient Data Collection (APDC)**  
– data drawn from the HIE on 23 January 2018
- **Waiting List Collection Online System (WLCOS)**  
– data drawn on 23 January 2018

Hospital data are transmitted by the state's hospitals to centralised data warehouses administered by the NSW Ministry of Health and are extracted by BHI from the NSW Health Information Exchange. Ambulance data are provided directly to BHI by the Ambulance Service of NSW and resultant information is calculated independently by BHI.

## The analyses

Organisational units in hospitals and ambulance services vary in size and in the types of services they provide. For some hospital analyses, results are stratified by 'peer group' into principal referral hospitals (peer group A), major hospitals (peer group B) and district hospitals (peer group C).

Similarly, for some ambulance analyses, results are stratified by type of local response area (LRA) into 24-hour, 24-hour (with on-call), non-24-hour and community and volunteer LRAs.

For both the hospital-based and ambulance-based indicators, stratification by acuity or urgency is also used. Strata are referred to as 'triage categories' (1–5) for emergency department (ED) analyses; 'urgency categories' (A–C) for elective surgery; and 'priority categories' (1–9) for ambulance (although BHI reports on ambulance performance for categories 1 and 2 only).

Data analyses are conducted in SAS 9.4. Codes that form the basis of routine reporting are written by two data analysts independently and only accepted when matching results are achieved. The indicator development process for ambulance reporting is detailed in an edition of *Spotlight on Measurement*, and all data specifications and analytic methods are described in technical supplements – available from the BHI website [bhi.nsw.gov.au](http://bhi.nsw.gov.au)

## The measures

*Healthcare Quarterly* uses nine core measures of performance (Table 1). For timeliness indicators, two different measurement approaches are used.

The first approach is based on units of time such as minutes or days and generally reports median and 90th percentile times, where:

- the median is the middle value of all observations, once they have been ordered from the lowest to the highest value. For example, in measuring the time that patients waited for their treatment to start, the median time refers to the 'middle wait' – half of all patients waited a shorter time and the other half waited a longer time
- the 90th percentile time gives an indication of the longest waiting times experienced by patients – most patients have a shorter wait than the 90th percentile time but one in 10 patients wait longer.

The second approach is based on achievement against a recommended or defined time. Here, results are reported in proportions, such as the percentage of patients who received elective surgery within clinically recommended time periods of 30, 90 and 365 days.

The large datasets used in *Healthcare Quarterly* mean that analyses have considerable statistical power to detect significant differences. However, not all of these differences are clinically or organisationally meaningful. Therefore a 5+ percentage point threshold is used to highlight hospitals with marked variation in results – either over time, or relative to the NSW result.

## Reporting

ED, admitted patient and elective surgery data are reported for principal referral (peer group A), major (peer group B) and district (peer group C) hospitals.

Hospital results based on very few patients are not reported. If there are fewer than five patients in any group for admitted patient and ED data, patient numbers are displayed as < 5. NSW and local health district (LHD) results include data from all public hospitals.

Ambulance activity and performance are reported at a NSW and zone level. NSW and zone results include data from all constituent LRAs. Non-modifiable factors such as travel time and distance make attribution of performance difficult and so LRA results are shown on a non-nominal (not named) basis only. LRAs classified as community and volunteer, with fewer than nine consecutive quarters of data, those with fewer than 100 responses per quarter (on average), and those classified as non-24-hour with a coefficient of variation of over 10% are not shown.

*Healthcare Quarterly* compares this quarter's results with the same quarter in previous years, to take into account seasonal effects on activity and performance.

Table 1 Description of main measures featured in *Healthcare Quarterly*\*

Emergency departments (ED)	
Transfer of care time	For patients who are transported to the emergency department (ED) by ambulance, the time from arrival at hospital to when responsibility for their care is transferred from paramedics to ED staff in an ED treatment zone.
Time to start treatment	The time from patient arrival at an ED until the start of clinical treatment.
Time spent in the ED	The time from patient arrival at the ED until their departure.
Ambulance	
Call to ambulance arrival time	The time from when a call is first answered in the ambulance control centre (phone pick-up), to the time the first ambulance arrives at the scene of an incident.
Mobilisation time	The time from placement of a triple zero call 'in queue' for ambulance dispatch until the time a vehicle is en route to the incident.
Response time	The time from when a call for an ambulance is placed 'in queue' for vehicle dispatch by the ambulance control centre to the time the first vehicle arrives at the scene.
Turnaround time	The time from an ambulance arrives at a hospital until the ambulance is 'clear' and ready to respond to a new incident.
Admitted patients	
Average length of stay	Total bed days of admitted patient episodes that had an 'end date' during the quarter divided by the number of admitted patient episodes.
Elective surgery	
Elective surgery waiting time	The number of days from a patient's placement on the elective surgery waiting list until removal from the list (generally when they undergo surgery).

\* For some measures, other agencies report similar metrics, often with slightly different data definitions, so cross publication comparisons should be made with care.

# Emergency department presentations

NSW public hospital emergency departments (EDs) are open to everyone and provide specialised assessment and life-saving care for acutely unwell patients. EDs often act as an entry point to inpatient services.

In the October to December 2017 quarter, 703,410 people presented to NSW public hospital EDs, up 2.0% compared with the same quarter last year. Most presentations (96.7%) were classified as emergency presentations (Figure 1). Over the past five years, the number of emergency presentations in the October to December quarter has increased by 22.7% (Figure 2).

Compared with the same quarter last year, the number of patients in each triage category increased. The largest change was in triage category 2 (5,696 more presentations; up 7.2%) (Figure 1).

Compared with the same quarter last year, the number of emergency presentations was higher this quarter in 52 out of 78 NSW public hospital EDs. Of these, four were up by more than 10%: Bateman's Bay (13.2%), Moree (11.2%), Byron Central (10.5%), Ballina (10.5%).

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

## Hospitals with >10% change in the number of total emergency presentations, compared with same quarter last year

Hospital	Peer group	Emergency presentations	Change (%)
Bateman's Bay	C2	4,676	13.2
Moree	C2	2,474	11.2
Byron Central	C2	5,481	10.5
Ballina	C2	4,606	10.5
Forbes	C2	1,832	-10.5
Deniliquin	C2	2,359	-12.6
Milton	C2	3,531	-14.8
Young	C2	2,182	-22.1

Figure 1 Patient presentations and ambulance arrivals at NSW emergency departments, October to December 2017

		This quarter	Same quarter last year	Change since one year ago
All ED presentations		703,410	689,903	2.0%
Emergency presentations by triage category		680,126	665,860	2.1%
Triage 1: Resuscitation	0.7%	4,735	4,556	3.9%
Triage 2: Emergency	12.5%	85,293	79,597	7.2%
Triage 3: Urgent	34.0%	231,360	226,707	2.1%
Triage 4: Semi-urgent	42.3%	287,474	284,650	1.0%
Triage 5: Non-urgent	10.5%	71,264	70,350	1.3%
Ambulance arrivals		151,235	146,621	3.1%

In the October to December 2017 quarter, there were 21,533 ED presentations in small district hospitals that are not reported in *Healthcare Quarterly*. These hospitals were recently added to the Emergency Department Data Collection and the data provided for their EDs are under data quality review by BHI, prior to inclusion in *Healthcare Quarterly*.

Figure 2

## Number of emergency presentations to an ED, October to December quarters, 2012 to 2017

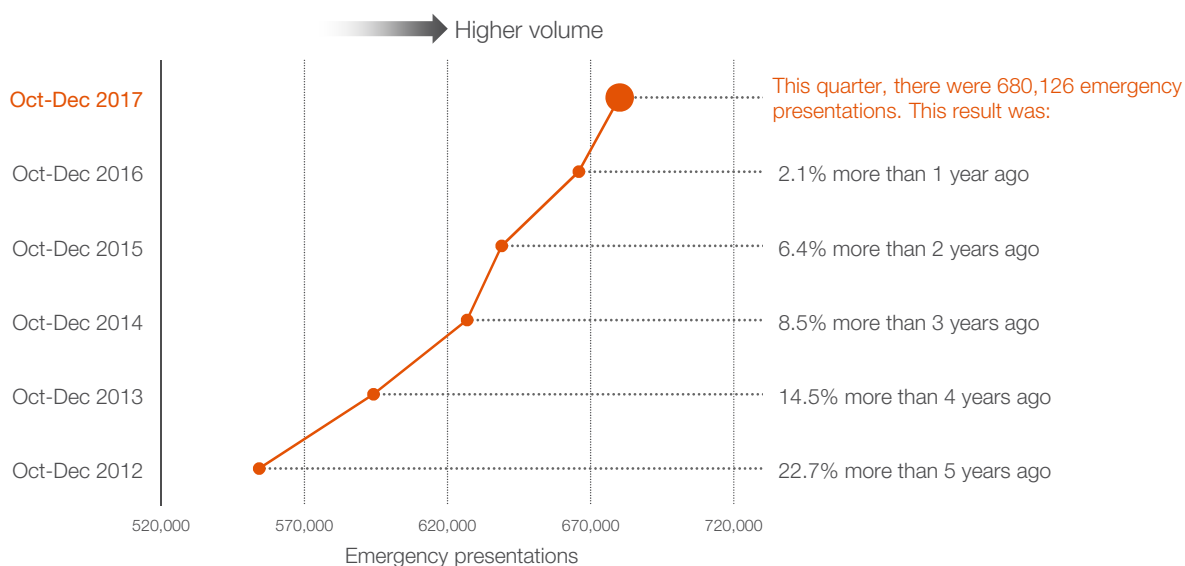
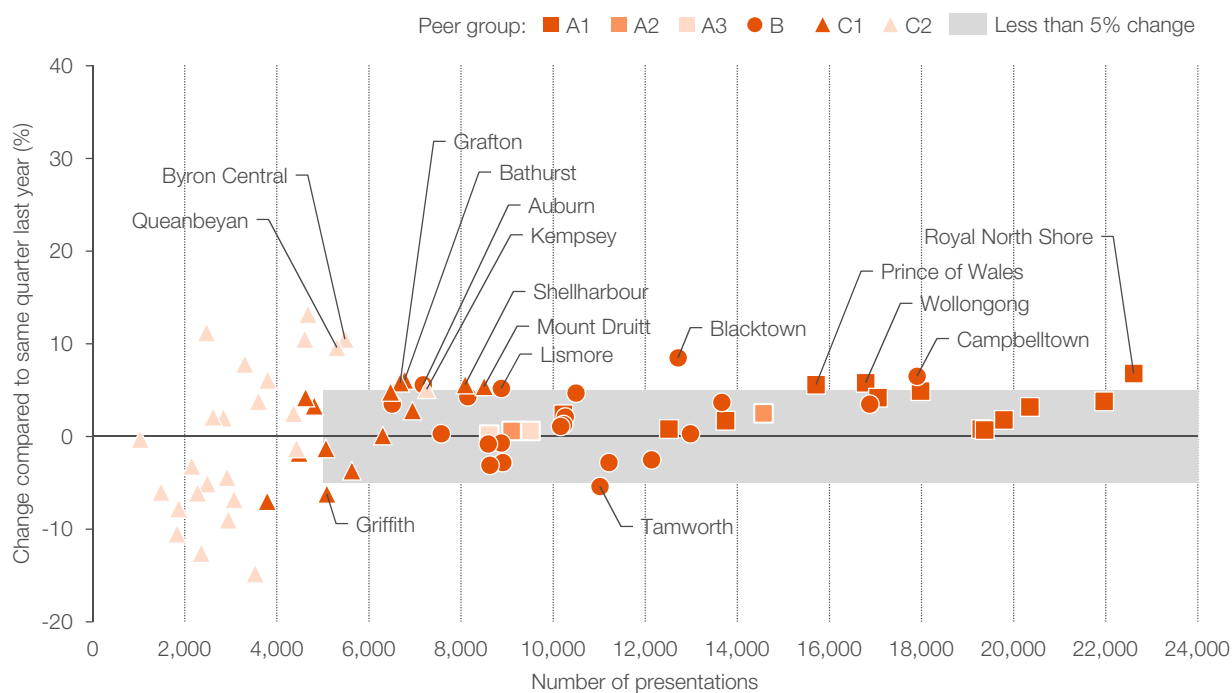


Figure 3

## Change in number of total emergency department presentations compared with the same quarter last year, hospitals by peer group, October to December 2017



# Time to treatment in the emergency department

On arrival at the ED, patients are allocated to one of five triage categories, based on urgency.

Each category has a maximum recommended waiting time within which treatment should start, ranging from two minutes for triage 1 to 120 minutes for triage 5.

In the October to December 2017 quarter, for 76.0% of ED visits, treatment started within clinically recommended timeframes; up 0.3 percentage points compared with the same quarter last year (Figure 4). This result is 2.7 percentage points higher than in the same quarter in 2012 (Figure 5).

Figure 6 maps hospital results this quarter compared with the same quarter last year. Hospitals labelled are those that had an increase or decrease of more

than five percentage points in the percentage of patients whose treatment started on time, compared with the same quarter last year.

**Hospitals with >10 percentage point change in the percentage of patients whose treatment started on time in ED, compared with same quarter last year**

Hospital	Peer group	Emergency visits treated on time (%)	Percentage point change
Westmead	A1	63.4	21.8
Mount Druitt	C1	78.0	14.1
Blacktown	B	67.6	11.5
Dubbo	B	82.3	11.0
Nepean	A1	55.8	-12.6
Concord	A1	67.1	-13.6

**Figure 4** Percentage of patients whose treatment started on time, by triage category, October to December 2017

	This quarter	Same quarter last year	Percentage point change since one year ago
All emergency presentations	76.0%	75.7%	0.3
Triage category 2	Recommended: 80% in 10 minutes 68.7%	66.6%	2.1
Triage category 3	Recommended: 75% in 30 minutes 71.2%	70.4%	0.8
Triage category 4	Recommended: 70% in 60 minutes 78.4%	78.9%	-0.5
Triage category 5	Recommended: 70% in 120 minutes 93.1%	93.2%	-0.1

	This quarter	Same quarter last year	Change since one year ago
Triage 2 Emergency (e.g. chest pain, severe burns): 84,275 patients			
Median time to start treatment	8m	8m	0m
90th percentile time to start treatment	23m	25m	-2m
Triage 3 Urgent (e.g. moderate blood loss, dehydration): 225,861 patients			
Median time to start treatment	20m	20m	0m
90th percentile time to start treatment	1h 5m	1h 7m	-2m
Triage 4 Semi-urgent (e.g. sprained ankle, earache): 267,241 patients			
Median time to start treatment	26m	25m	1m
90th percentile time to start treatment	1h 39m	1h 37m	2m
Triage 5 Non-urgent (e.g. small cuts or abrasions): 60,725 patients			
Median time to start treatment	23m	23m	0m
90th percentile time to start treatment	1h 43m	1h 43m	0m

Note: Triage 1 patients are the most urgent and are almost all treated within two minutes. Clinicians are focused on providing immediate and essential care, rather than recording times, therefore times to start treatment are generally not reported. Timeframes to treat other triage categories are recommended by the Australasian College for Emergency Medicine.

Figure 5

Percentage of patients whose treatment started within clinically recommended timeframes, October to December quarters, 2012 to 2017

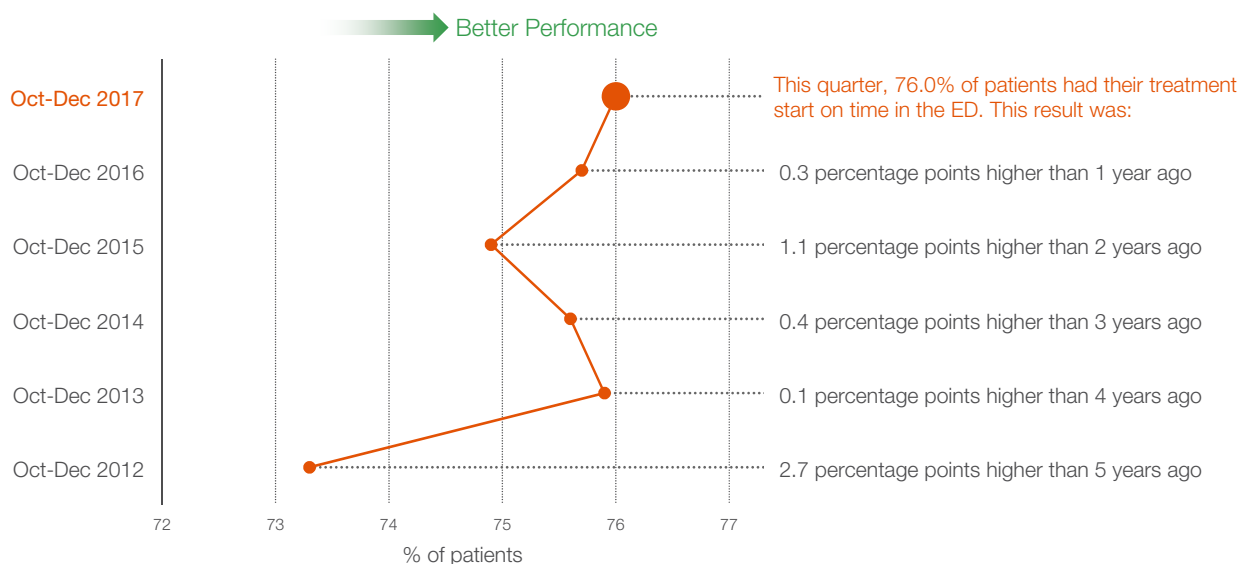
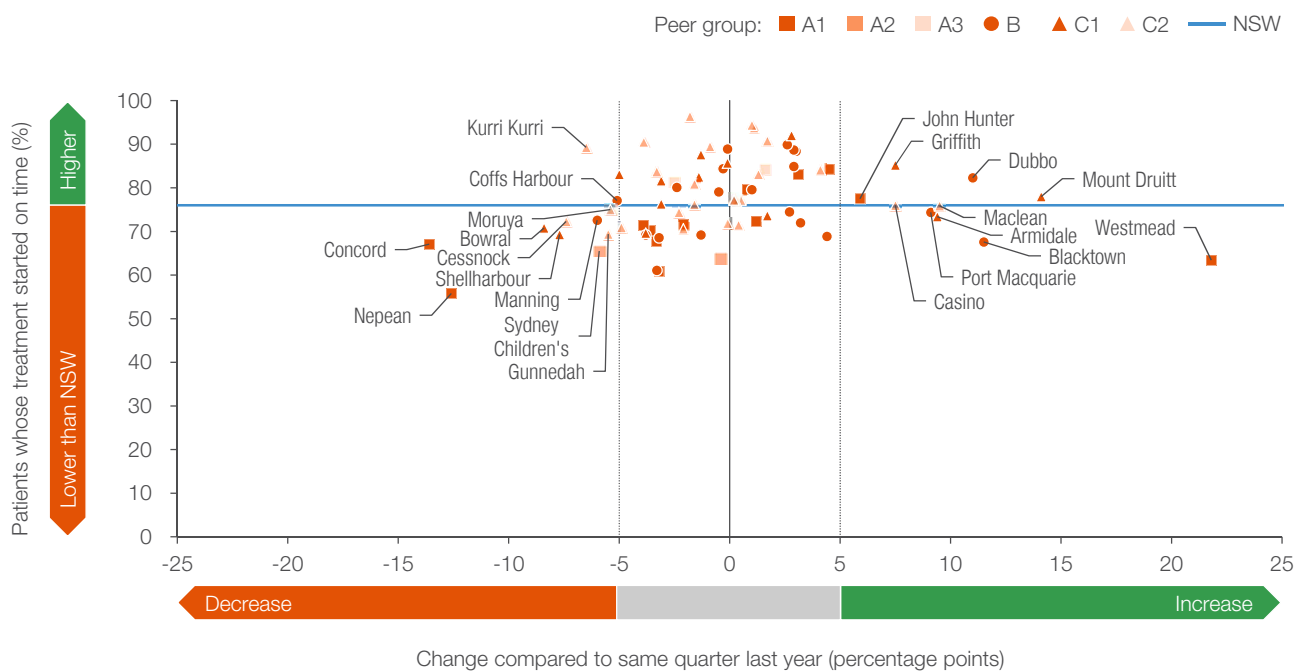


Figure 6

Percentage of patients whose treatment started on time, and percentage point change compared with same quarter last year, hospitals by peer group, October to December 2017



# Time spent in the emergency department

Following assessment, stabilisation and treatment in the ED, patients are either discharged home, admitted to a hospital ward, or transferred to another facility. A small percentage of patients choose not to wait for treatment.

In the October to December 2017 quarter, 73.6% of patients spent four hours or less in the ED. This was 0.8 percentage points lower compared with the same quarter last year and 8.8 percentage points higher compared with the same quarter in 2012 (Figure 8).

Patients who require admission to hospital from the ED usually have more complex health needs than those who are treated in the ED and discharged. Patients whose ED visit ends in admission to hospital therefore often spend longer periods in the ED. Among patients who were treated and subsequently admitted to hospital this quarter, 43.6% spent four

hours or less in the ED. Among patients who were treated and discharged this quarter, 85.0% spent four hours or less in the ED (Figure 7).

Compared with the same quarter last year:

- In 34 hospitals, the percentage of patients who spent four hours or less in the ED was higher. Of these, four hospitals were up by more than five percentage points and one hospital (Blacktown) was up by more than 10 percentage points.
- In 43 hospitals, there was a drop in the proportion of patients who spent four hours or less in the ED. Of these, nine hospitals were over five percentage points lower (Figure 9).

Figure 7 Percentage of patients who spent four hours or less in the emergency department, by mode of separation, October to December 2017






	Number		This quarter	Same quarter last year	Percentage point change since one year ago
All ED presentations	517,863		73.6%	74.4%	-0.8
Treated and discharged	382,495		85.0%	87.0%	-2.0
Treated and admitted	81,414		43.6%	43.6%	unchanged
Left without, or before completing, treatment	33,665		89.1%	91.4%	-2.3
Transferred to another hospital	6,656		46.0%	45.8%	0.2



Figure 8

Percentage of patients who spent four hours or less in the ED, October to December quarters, 2012 to 2017

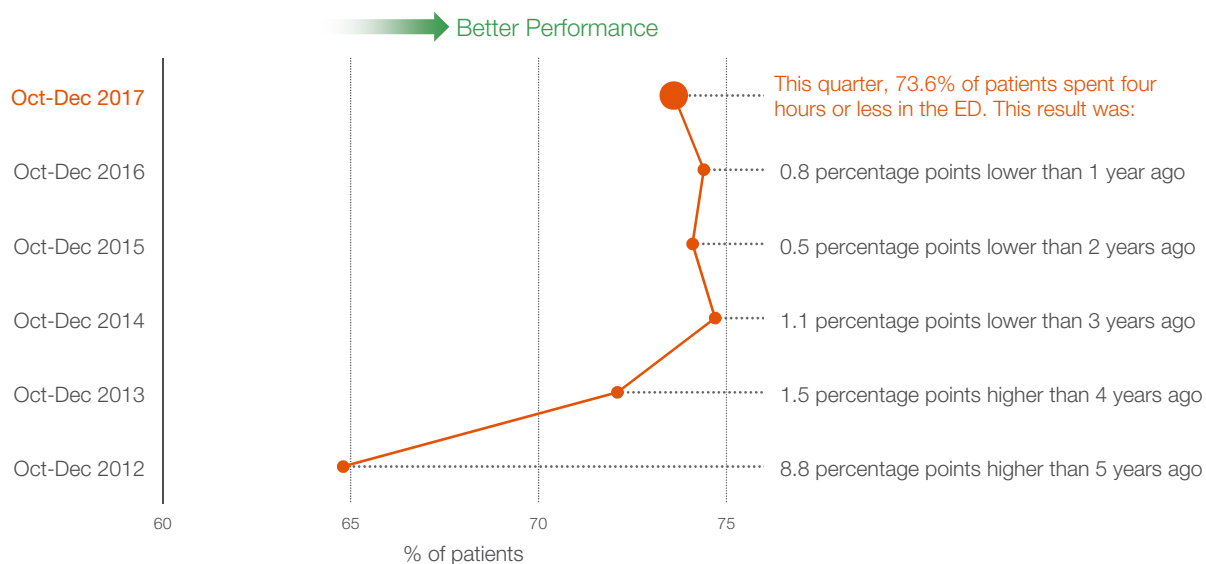
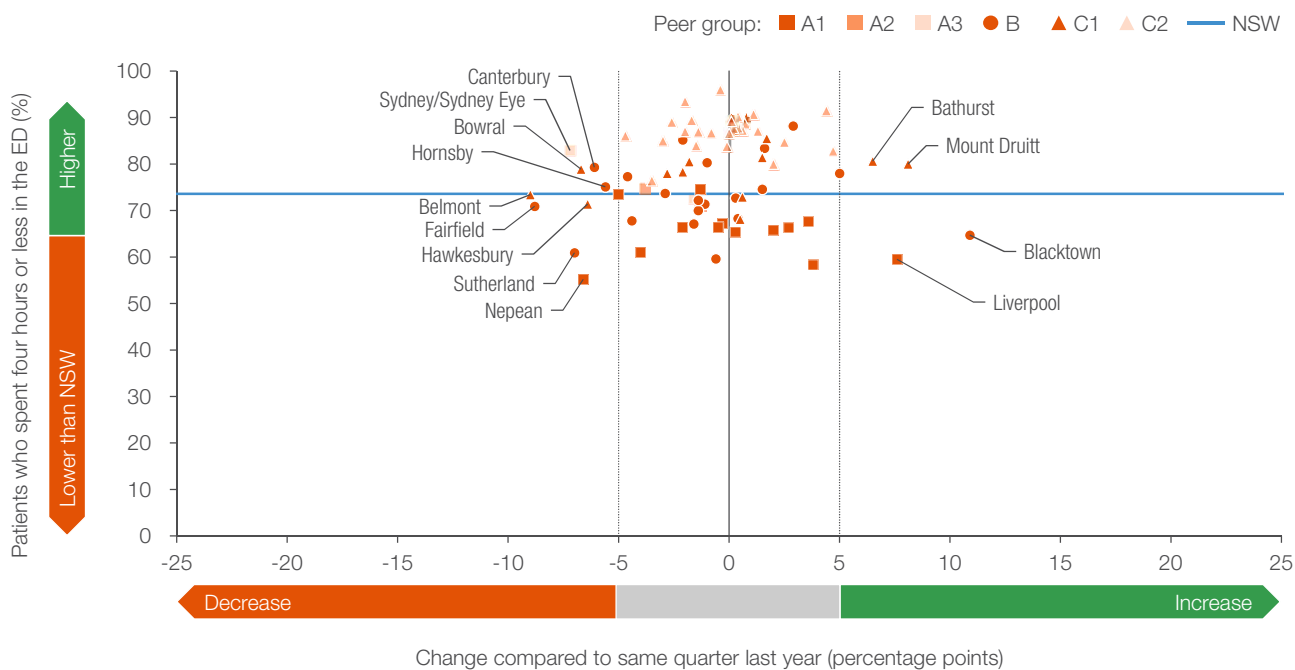


Figure 9

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, October to December 2017



# Transfer of care

The median time for patient care to be transferred from ambulance crews to ED staff in the October to December 2017 quarter was 11 minutes (unchanged) (Figure 10).

In NSW, transfer of care should occur within 30 minutes for at least 90% of patients. This quarter, 92.1% of patients who arrived by ambulance had their care transferred within 30 minutes; 0.2 percentage points higher than in the same quarter last year and 5.6 percentage points higher than the same quarter in 2013 (Figure 11).

Figure 12 shows variation between and within hospital peer groups in the percentage of patients whose care was transferred within 30 minutes this quarter. Widest variation was among district hospitals (peer group C2), with results ranging from 79.8% to 99.1%.

## Hospitals with >10 percentage point change in transfer of care on time, compared with same quarter last year

Hospital name	Peer group	% within 30 minutes	Percentage point change
Cowra†	C2	79.8	20.9
Casino	C2	90.7	13.3
Mudgee	C2	96.0	11.2
Shoalhaven	B	86.4	11.2
Cooma**†	C2	99.1	10.7

\* Caution – transfer of care could not be calculated for more than 30% of records for the same quarter last year.

† This hospital was included for the first time in the July to September 2017 issue of Healthcare Quarterly.

Compared with the same quarter last year, the number of ambulance arrivals in nine hospitals was up by more than 10%. In four of these hospitals, the change was over 20%: Kurri Kurri (53.3%), Cessnock (31.3%), Fairfield (22.4%) and Auburn (20.3%).

For five hospitals, the percentage of patients whose care was transferred within 30 minutes was over 10 percentage points higher compared with the same quarter last year. No hospital had a drop of more than 10 percentage points.

## Hospitals with >10% change in ambulance arrivals, compared with same quarter last year

Hospital	Peer group	Emergency presentations	Change (%)
Kurri Kurri	C2	69	53.3
Cessnock	C2	525	31.3
Fairfield	B	1,668	22.4
Auburn	B	1,171	20.3
Bowral	C1	1,111	19.6
Bankstown-Lidcombe	A1	4,200	15.7
Blacktown	B	4,140	13.6
Goulburn	C1	981	12.4
Gunnedah	C2	240	10.1
Macksville	C2	472	-10.9
Mudgee	C2	273	-11.1
Muswellbrook	C2	368	-13.0

Figure 10 Emergency presentations, ambulance arrivals and transfer of care time, October to December 2017

	This quarter	Same quarter last year	Change since one year ago
Emergency presentations	680,126	665,860	2.1%
Ambulance arrivals (number used to calculate transfer of care time)	137,708	132,496	3.9%
ED transfer of care time			
Median time	11m	11m	unchanged
90th percentile time	26m	26m	unchanged
Percentage of patients transferred from ambulance to ED within 30 minutes	92.1%	91.9%	+0.2 percentage points

Figure 11 Percentage of patients transported to the ED by ambulance whose care was transferred within 30 minutes, October to December quarters, 2013 to 2017

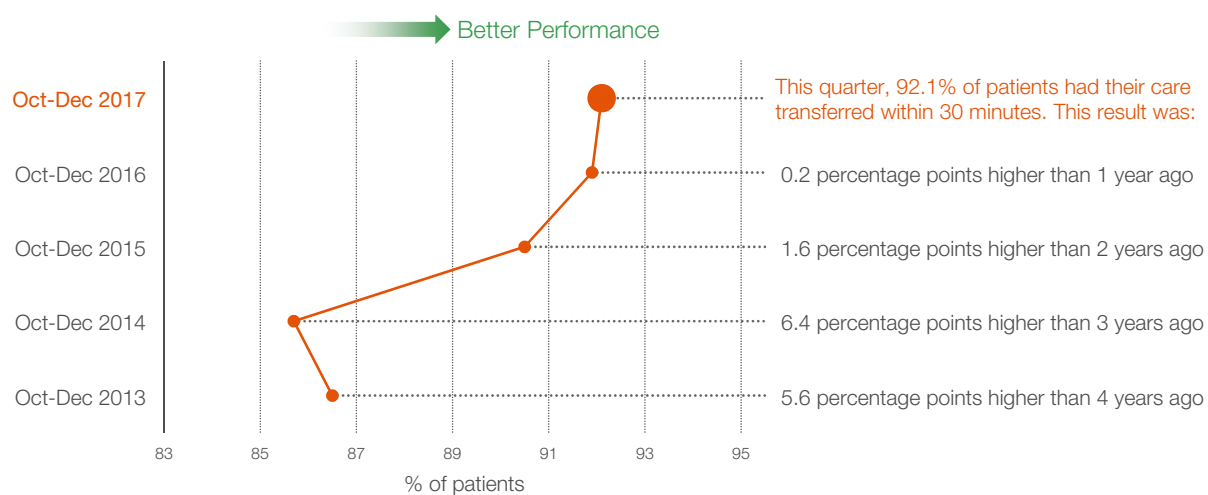
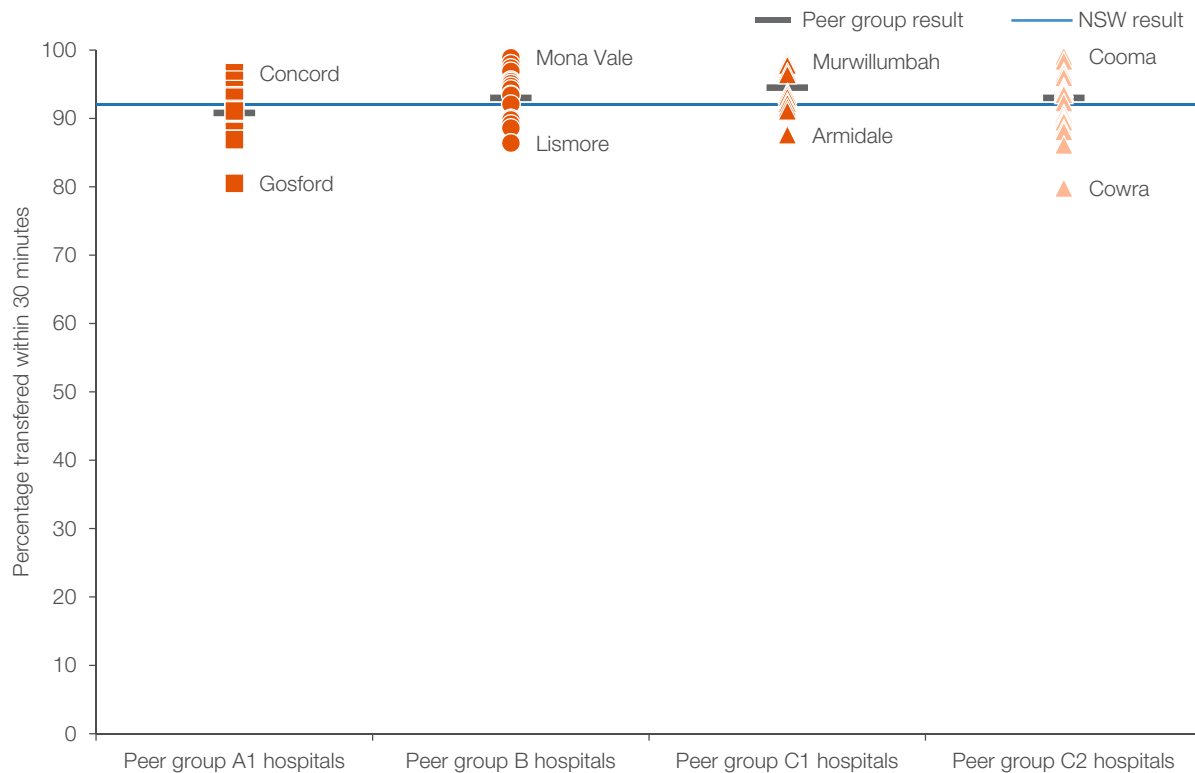


Figure 12 Percentage of patients transported to the ED by ambulance whose care was transferred within 30 minutes, by peer group, October to December 2017



# Ambulance activity

Ambulance activity can be quantified in terms of calls, incidents, responses and patient transports (Table 2).

In the October to December 2017 quarter, there were 288,687 calls and 284,044 ambulance responses; this was 0.5% and 0.2% higher compared with the same quarter last year (Figure 13).

This quarter, the majority of responses were categorised as either priority 1 (44.7% of the total responses) or priority 2 (47.4% of the total responses).

The total number of priority 1–3 responses this quarter was 0.6% more than in the same quarter last year and 8.8% more than in the same quarter in 2012 (Figure 14).

Figure 15 shows the daily number of priority 1, 2 and 3 responses this quarter. Daily activity ranged throughout the quarter between 107 and 1,691 responses.

**Table 2** Description of ambulance activity counts

<b>Calls</b>	Calls received at the ambulance communication (control) centre, requesting an ambulance vehicle.
<b>Incidents</b>	A call that results in the dispatch of one or more ambulance vehicles.
<b>Responses</b>	The dispatch of an ambulance vehicle from a local response area. There may be multiple responses to a single incident. Responses include vehicles cancelled prior to arrival at the incident scene.  Responses are prioritised as priority category 1 (emergency response under lights and sirens; with category 1A as highest acuity); priority category 2 (urgent – undelayed response required without lights and sirens); priority category 3 (time-critical – undelayed response required); and priority categories 4-9 (non-emergency).
<b>Patient transports</b>	Number of patients transported by the ambulance service.

**Figure 13** Ambulance calls, incidents, responses and transports, October to December 2017

		This quarter	Same quarter last year	Change since one year ago
Calls		288,687	287,339	0.5%
Incidents		225,180	223,984	0.5%
All responses		284,044	283,502	0.2%
P1: Emergency	<div><div></div></div> 44.7%	126,942	124,999	1.6%
P1A: Highest priority	<div><div></div></div> 4.7%	5,947	5,392	10.3%
P2: Urgent	<div><div></div></div> 47.4%	134,514	125,003	7.6%*
P3: Time-critical	<div><div></div></div> 4.9%	13,994	23,899	-41.4%*
P4–9: Non-emergency	<div><div></div></div> 3.0%	8,574	9,601	-10.7%
Patient transports		168,645	164,466	2.5%

Note: Ambulance activity data do not include CAD outages and activity estimates. All calls, incidents and responses that have been assigned a priority number are included in the total counts. Most priority numbers correspond to priority codes P1 to P9.

\* In September 2017, a change in protocol was introduced when triaging patients for inter-facility transport. Some of these responses remain as priority 3 while others require a higher priority response.

Figure 14 Number of priority category 1, 2 and 3 responses, October to December quarters, 2012 to 2017

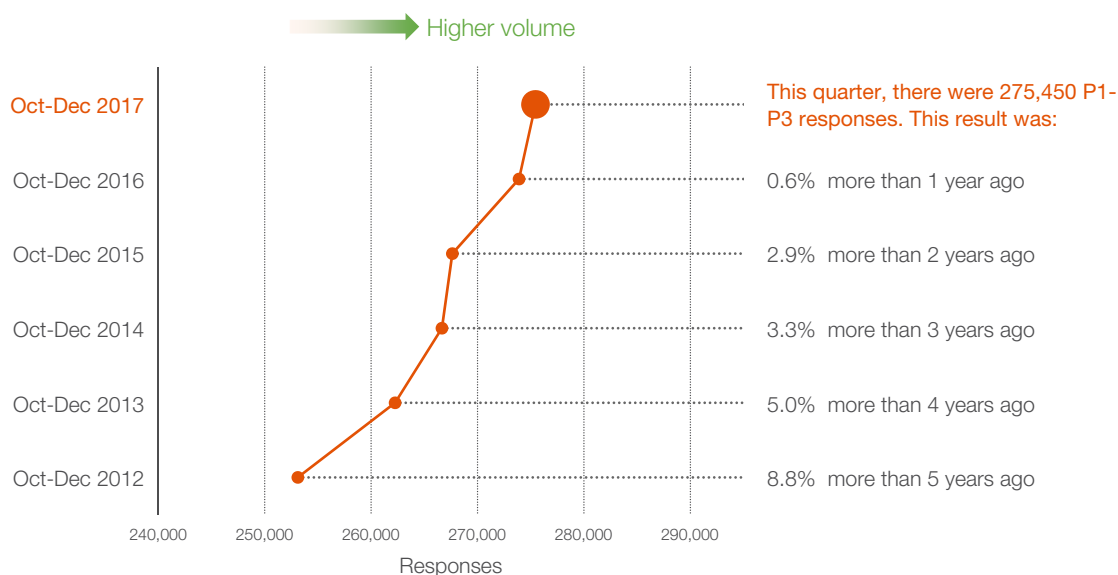
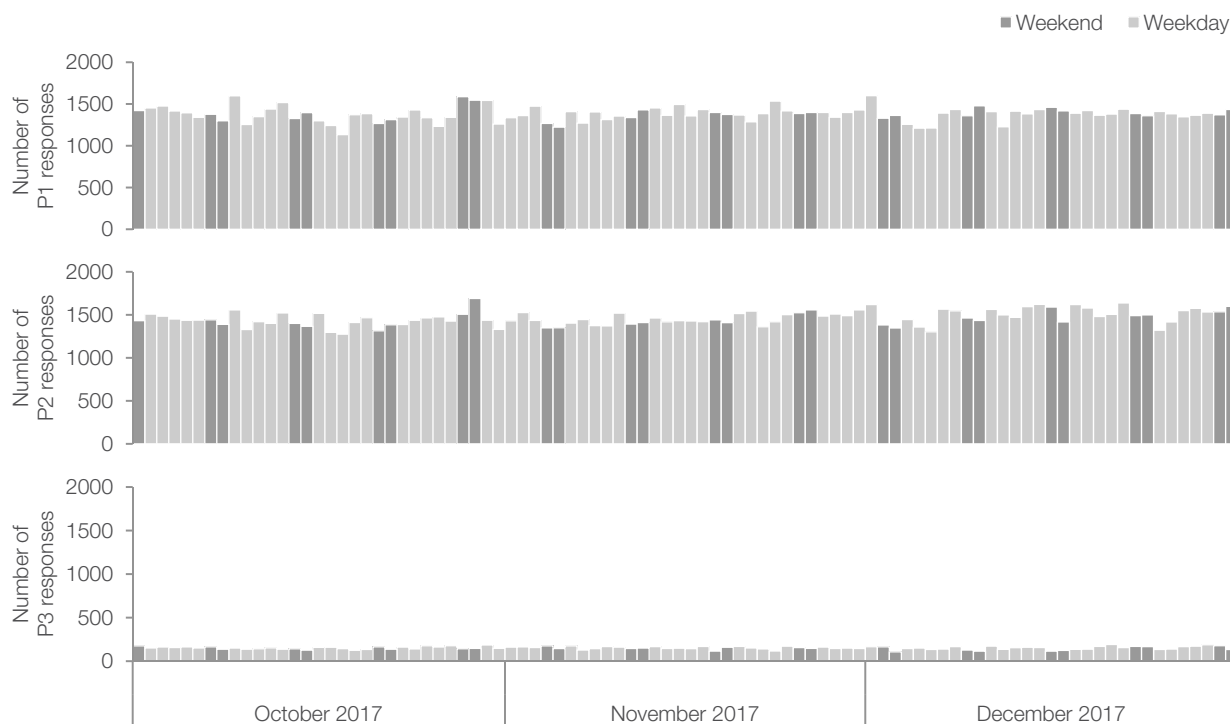


Figure 15 Daily number of priority category 1, 2 and 3 responses, October to December 2017



# Call to ambulance arrival time

Call to ambulance arrival time covers the period from when a triple zero call is first answered in the ambulance control centre (phone pick-up), to the time an ambulance arrives at the scene.

This quarter, most priority 1 call to ambulance arrival times were within 30 minutes (94.5%). A similar percentage of priority 2 responses had a call to ambulance arrival time within 60 minutes (94.0%) (Figure 16).

The percentage of call to ambulance arrival times within 30 minutes for priority 1 was higher compared with the same quarter last year (up 0.2 percentage points) and lower compared with the same quarter in 2012 (down 0.1 percentage points) (Figure 17).

Compared with the same quarter last year, the percentage of priority 1 call to ambulance arrival times within 15 minutes was higher (63.2%; up 0.4 percentage points). The percentage of priority 2 call to ambulance arrival times within 30 minutes was lower (72.6%; down 2.2 percentage points) (Figure 16).

Among local response areas (LRAs), roughly seven in 10 (72.5%) met a 90% threshold for the percentage of priority 1 call to ambulance arrival times within 30 minutes. This was a lower proportion compared with the same quarter last year (74.5%) (Figure 18).

For priority 2 responses, roughly nine in 10 (92.6%) of LRAs met a 90% threshold for the percentage of call to ambulance arrival time within 60 minutes.

Figure 16 Call to ambulance arrival time, by priority category, October to December 2017





Priority category		This quarter	Same quarter last year	Change since one year ago
P1 responses	94,058			
Within 15 minutes		63.2%	62.8%	0.4 percentage points
Within 30 minutes		94.5%	94.3%	0.2 percentage points
Local response areas meeting 90% threshold (arrival within 30 minutes)		108 (of 149)	111 (of 149)	
P2 responses	103,812			
Within 30 minutes		72.6%	74.8%	-2.2 percentage points
Within 60 minutes		94.0%	94.7%	-0.7 percentage points
Local response areas meeting 90% threshold (arrival within 60 minutes)		138 (of 149)	147 (of 149)	

Figure 17 Percentage of priority category 1 responses with call to ambulance arrival time within 30 minutes, October to December quarters, 2012 to 2017

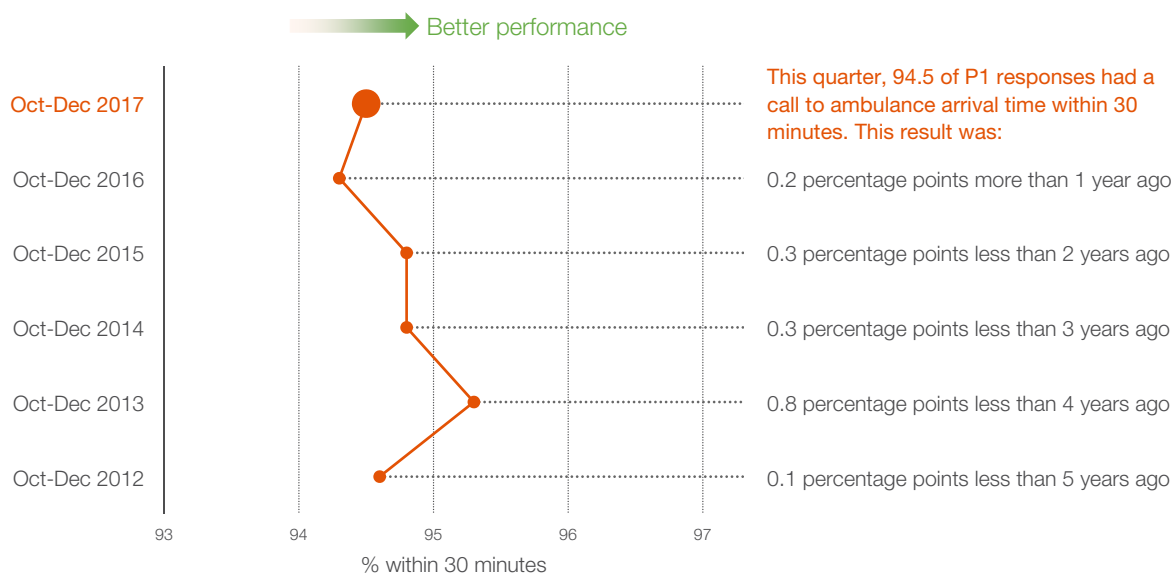
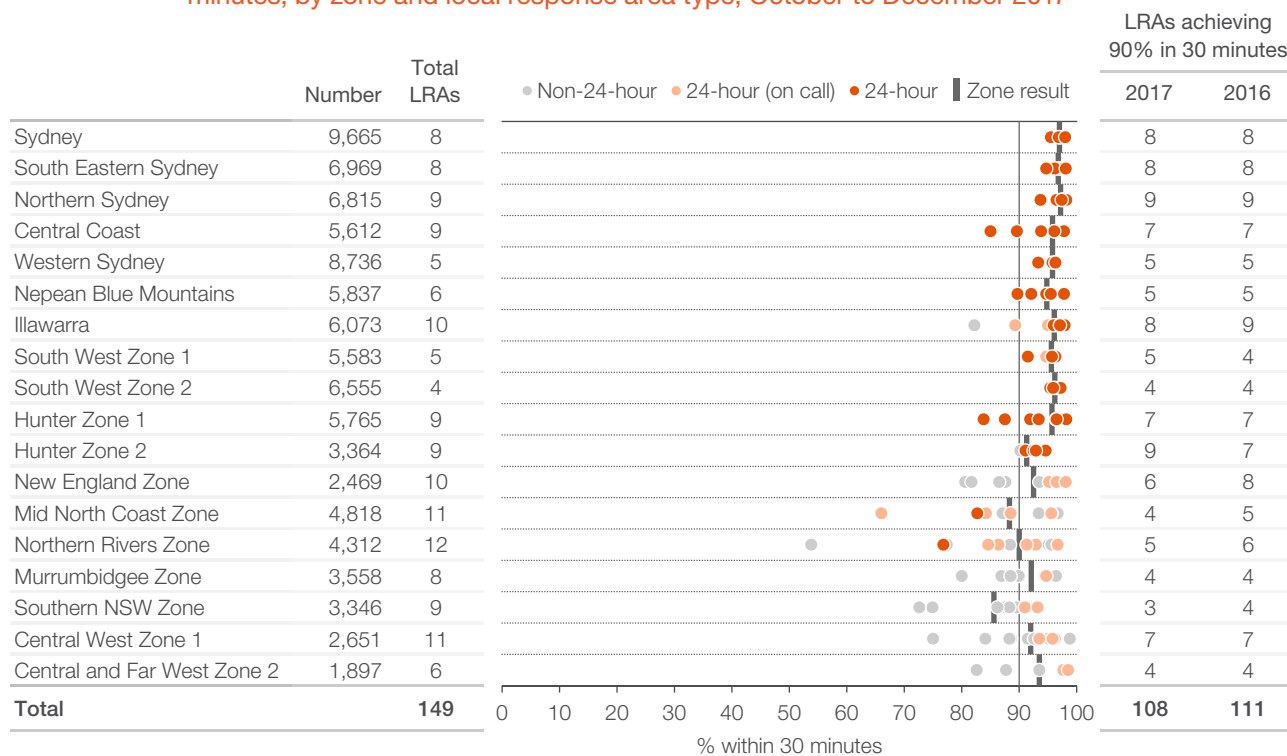


Figure 18 Percentage of priority category 1 responses with a call to ambulance arrival time within 30 minutes, by zone and local response area type, October to December 2017



# Ambulance response time

In NSW, ambulance response time refers to the period from the placement of a triple zero call 'in queue' for ambulance dispatch until the first vehicle arrives at the scene.

In the October to December 2017 quarter, the median response time was 7.4 minutes for priority 1A responses, 11.0 minutes for priority 1 responses, and 18.3 minutes for priority 2 responses (Figure 19).

In NSW, the benchmark for the median priority 1A response time is 10 minutes. On no day this quarter was the median response time above 10 minutes [data not shown].

Over the past five years, the median priority 1 response time has remained relatively steady (Figure 19 and 20). There was more fluctuation for priority 2 response times (up 0.7 minutes compared with the same quarter last year). Part of the overall decrease in response times over the past five years reflects a reclassification of priority categories (priority 1 to priority 2) in 2013, 2015 and 2016.

Figure 21 shows this quarter's priority 1A, 1 and 2 median response times for zones relative to the NSW result. For priority category 2, non-metropolitan zones generally had shorter response times than metropolitan zones.

Figure 19 Ambulance response time (minutes), by priority category, October to December 2017

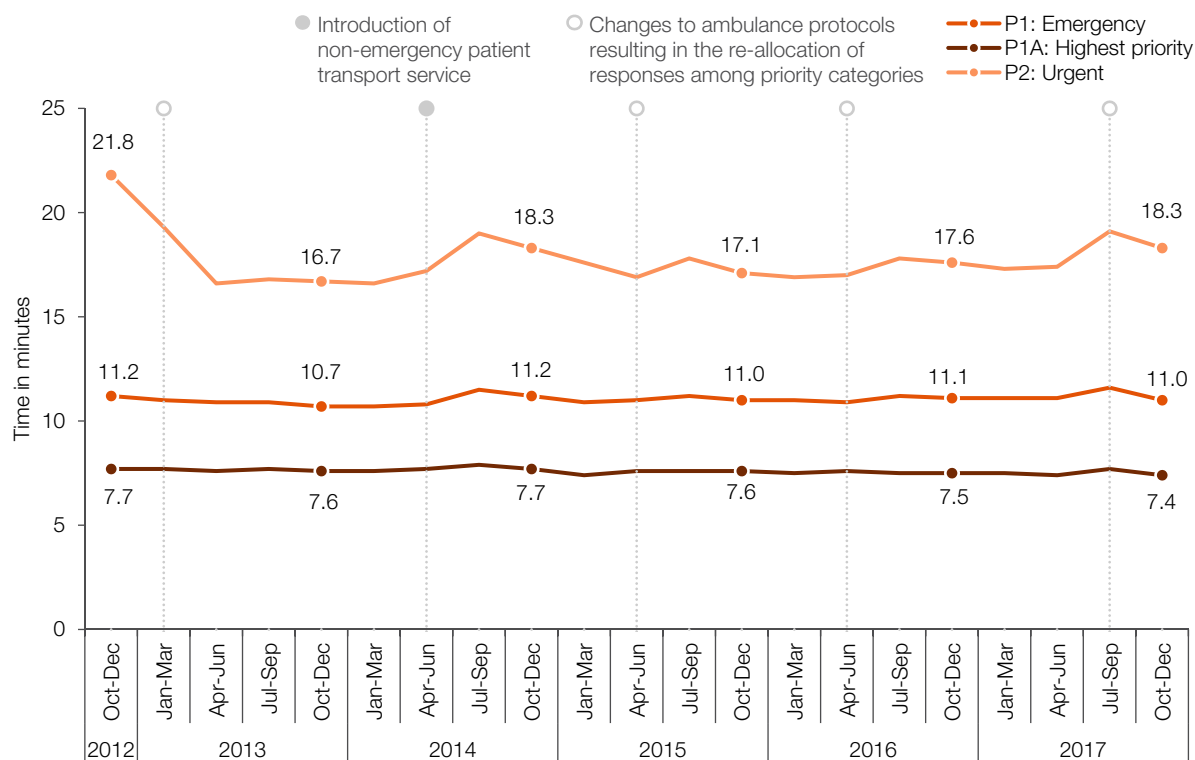




Figure 20 Median priority category 1 response time, October to December quarters, 2012 to 2017

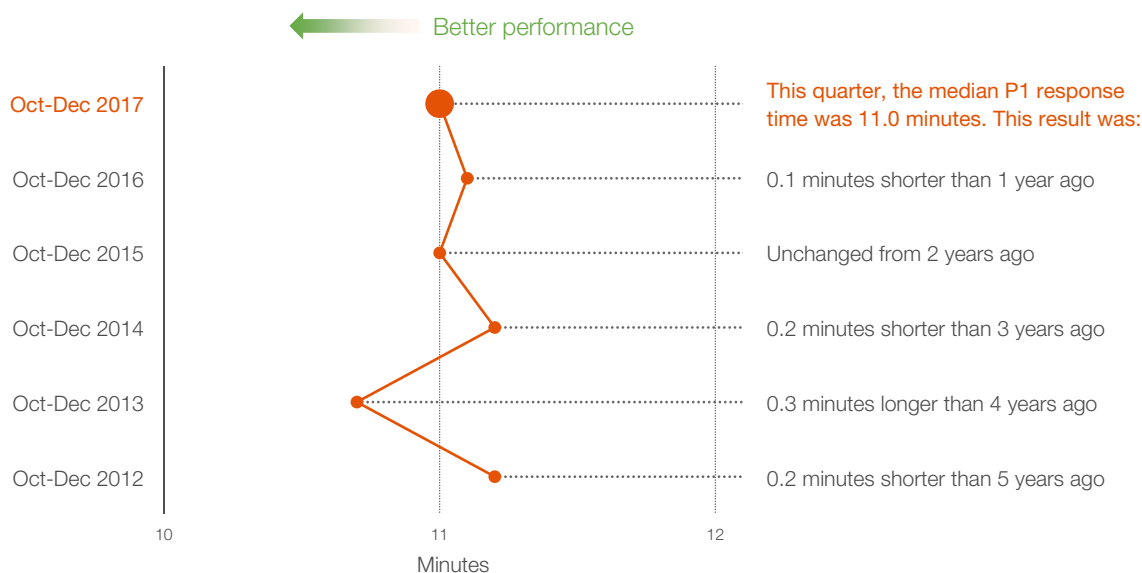
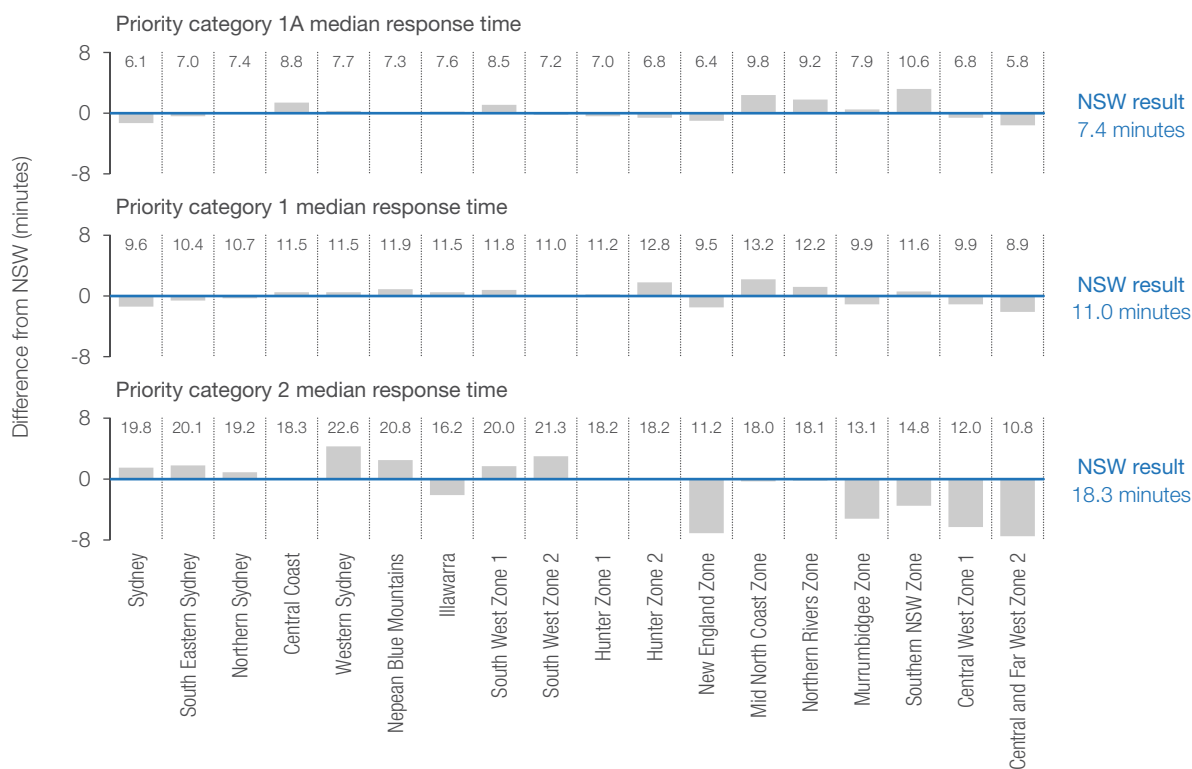


Figure 21 Median ambulance response time, by priority category, October 2012 to December 2017



## Admitted patients

In the October to December 2017 quarter, there were 478,234 admitted patient episodes (down 7,251; 1.5%) [data not shown]. The number of bed days in the October to December 2017 quarter was lower compared with the same quarter last year (1,643,352 bed days; down 2.6%) (Figure 22).

Bed days are calculated for all admitted patient episodes that ended during the period. Total bed days for an overnight episode refers to the difference, in days, between the episode start and end dates, minus the number of episode leave days recorded. Same-day episodes count as one bed day.

Acute and non-acute episodes are not reported in this edition of *Healthcare Quarterly* due to a policy change in the definition of patient stay types. Between July 1, 2016 and June 30, 2017, all local health districts and health networks introduced a mental health stay type when classifying newly admitted or long-standing mental health patients. The new mental health stay type comprises patients who were previously included in the acute and non-acute stay types that are routinely reported by BHI. The impact of the policy change on trends in stay types over time is under review by BHI. Acute, non-acute and mental health care stay types will be reported separately in the next edition of *Healthcare Quarterly*, which covers January to March 2018.

### Hospitals with >10% change in admitted patient episodes, compared with same quarter last year

Hospital	Peer group	Admitted patient episodes	Change (%)
Kempsey	C2	2,774	13.9
Blacktown	B	11,702	13.8
Moree	C2	1,096	13.6
Cooma	C2	1,027	-10.5
Sydney Children's	A2	4,117	-11.0
Maclean	C2	1,020	-13.1
Milton and Ulladulla	C2	539	-14.7
Moruya	C2	1,998	-15.0
Cowra	C2	802	-15.2
Casino	C2	614	-15.7
Shellharbour	C1	3,127	-22.5
Young	C2	661	-23.2
Lithgow	C2	824	-26.0
Queanbeyan	C2	1,821	-29.2
Bateman's Bay	C2	1,162	-29.8
Ballina	C2	1,732	-32.2

Figure 22 Total number of admitted patient episodes and hospital bed days, by episode type, October to December 2017

		This quarter	Same quarter last year	Change since one year ago
Total bed days		1,643,352	1,687,606	-2.6%
Acute	*	*	*	*
Non-acute	*	*	*	*

\* These data are not reported due to a policy change in the definition of patient stay types. A new mental health care stay type has been introduced that comprises patients who were previously included in the acute and non-acute stay types that are routinely reported by BHI. Acute, non-acute and mental health stay types will be reported separately in the next edition of Healthcare Quarterly, which covers January to March 2018.

# Elective surgery

In the October to December 2017 quarter, a total of 55,872 elective surgical procedures were performed; 2.0% more than the same quarter last year and 4.0% more than in 2012 (Figures 23 and 24).





There are three main categories for elective surgery: urgent, semi-urgent and non-urgent. The urgency category is determined by the surgeon and is based on clinical criteria. Over half (55.7%) of all procedures performed this quarter were either urgent or semi-urgent (Figure 23).

There are clear seasonal fluctuations in the number of elective surgical procedures performed. The number of semi-urgent and non-urgent procedures increased over the past five years while the number of urgent and staged procedures has decreased (Figure 25).

## Hospitals with >10% change in elective surgical procedures, compared with same quarter last year

Hospital	Peer group	Procedures	Change (%)
Gunnedah	C2	18	80.0
Forbes	C2	75	70.5
Milton	C2	22	69.2
Young	C2	97	36.6
Grafton	C1	619	29.2
Tamworth	B	999	17.1
Westmead	A1	2,789	16.6
Deniliquin	C2	84	15.1
Hawkesbury	C1	391	15.0
Belmont	C1	810	13.4
Bathurst	C1	549	12.0
Wagga Wagga	B	1,270	-10.6
Mudgee	C2	128	-12.9
Maclean	C2	35	-14.6
Cooma	C2	64	-14.7
Cowra	C2	111	-15.3
Kurri Kurri	C2	596	-16.4
Muswellbrook	C2	89	-21.9
Inverell	C2	52	-22.4
Narrabri	C2	22	-37.1

Figure 23 Elective surgical procedures performed, by urgency category, October to December 2017

		This quarter	Same quarter last year	Change since one year ago
Total number of elective surgical procedures		55,872	54,764	2.0%
Urgent	 22.1%	12,342	12,326	0.1%
Semi-urgent	 33.6%	18,776	18,046	4.0%
Non-urgent	 39.4%	21,986	21,687	1.4%
Staged*	 5.0%	2,768	2,705	2.3%

\* Staged surgery is surgery that, for medical reasons, cannot take place before a certain amount of time has elapsed (includes all non-urgent cystoscopy patients).

Figure 24 Elective surgical procedures performed, October to December quarters, 2012 to 2017

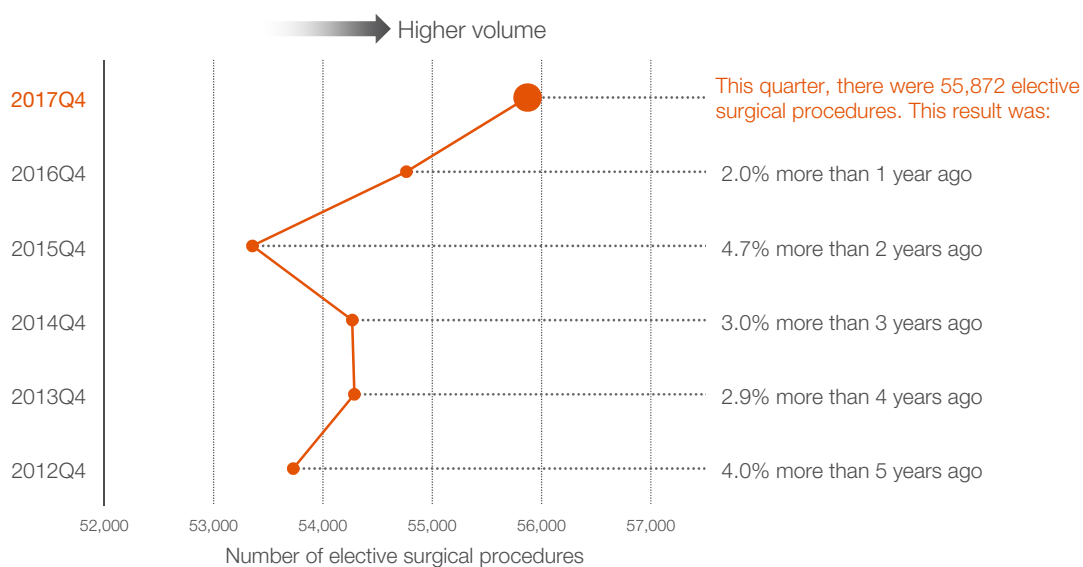
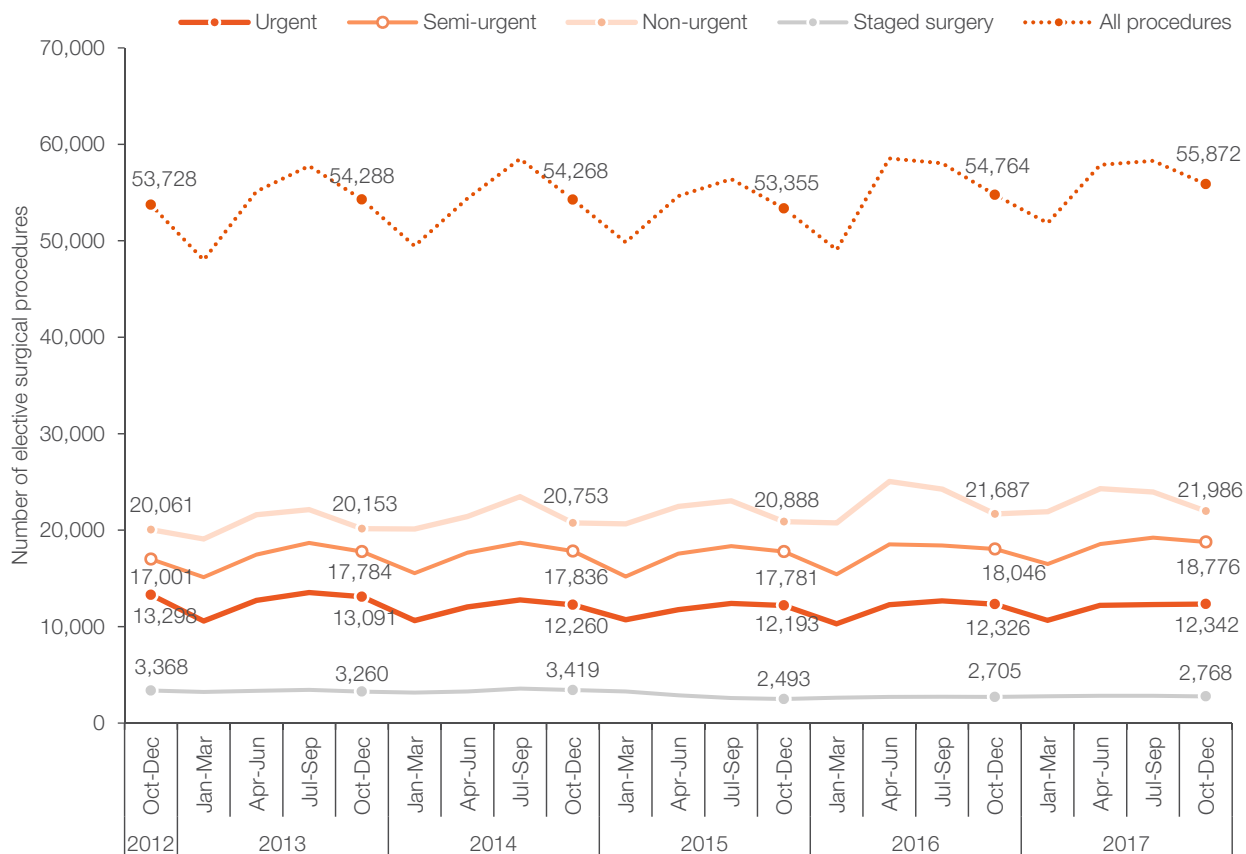


Figure 25 Elective surgical procedures performed, by urgency category, October 2012 to December 2017



# Waiting time for elective surgery





Timeliness of elective surgery is measured by median and 90th percentile waiting times, and the percentage of procedures performed within clinically recommended timeframes.

Results for the October to December 2017 quarter show that in comparison with the same quarter last year, median waiting times were unchanged for urgent surgery, up by one day for semi-urgent surgery and down by two days for non-urgent surgery (Figure 26).

The maximum times by which surgery should be performed are: 30 days for urgent, 90 days for semi-urgent, and 365 days for non-urgent procedures. Almost all procedures (97.5%) were performed within recommended timeframes this quarter (Figure 26).

The percentage of elective surgical procedures performed on time in the October to December quarter was 4.6 percentage points higher in 2017 than in 2012 (Figure 27). Median waiting times decreased between 2012 and 2017 for semi-urgent and non-urgent surgeries (Figure 28).

Figure 26 Percentage of elective surgical procedures performed on time and waiting times, by urgency category, October to December 2017

		This quarter	Same quarter last year	Percentage point change since one year ago
All procedures		97.5%	97.6%	-0.1
Urgent		99.8%	99.8%	unchanged
Semi-urgent		97.2%	97.6%	-0.4
Non-urgent		96.4%	96.4%	unchanged







		This quarter	Same quarter last year	Change since one year ago
Urgent: 12,342 patients				
Median time to receive surgery		10 days	10 days	0 days
90th percentile time to receive surgery		26 days	26 days	0 days
Semi-urgent: 18,776 patients				
Median time to receive surgery		44 days	43 days	1 day
90th percentile time to receive surgery		83 days	83 days	0 days
Non-urgent: 21,986 patients				
Median time to receive surgery		210 days	212 days	-2 days
90th percentile time to receive surgery		354 days	355 days	-1 day

Figure 27      Percentage of elective surgical procedures performed on time, October to December quarters, 2012 to 2017

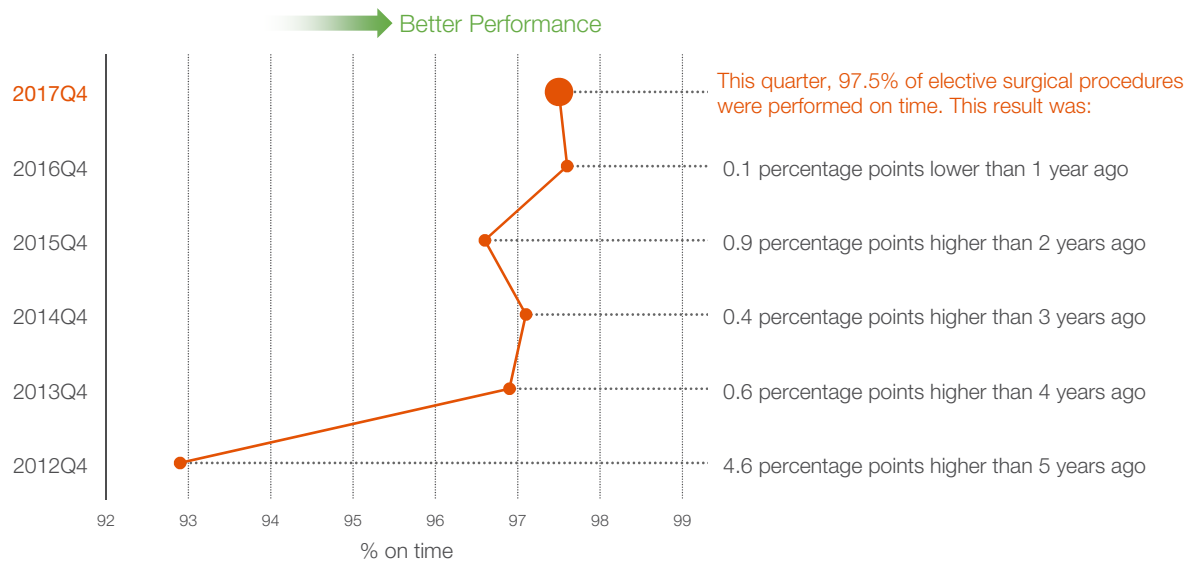
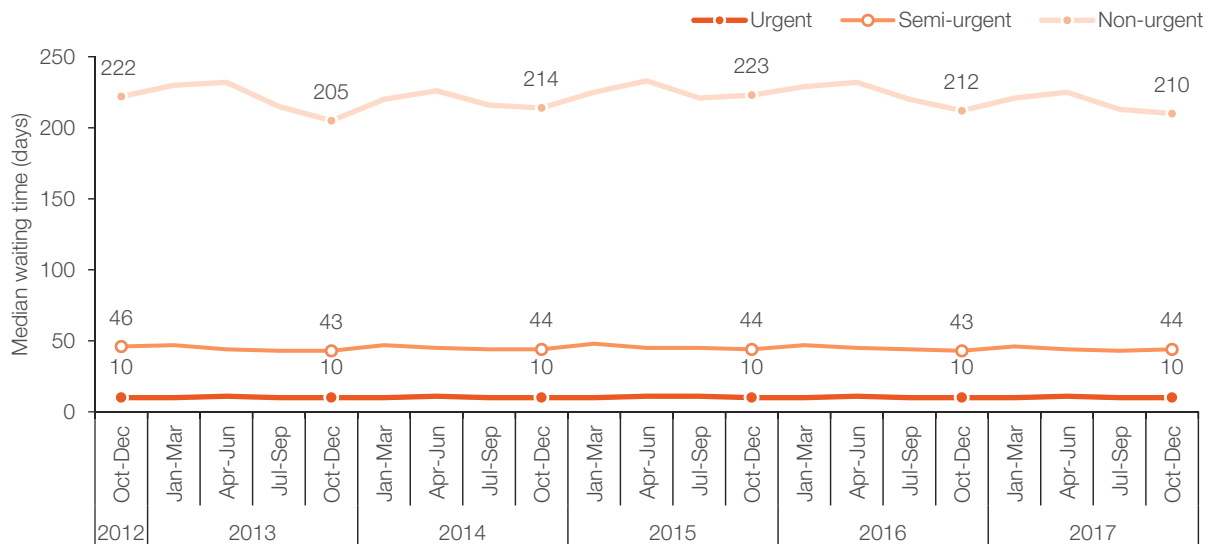


Figure 28      Median waiting times for elective surgery, by urgency category, October to December 2017



# Acknowledgements

The Bureau of Health Information (BHI) is the main source of information for the people of NSW about the performance of their public healthcare system. A board-governed organisation, BHI is led by Chairperson Professor Carol Pollock and Chief Executive Dr Diane Watson.

We would like to thank our expert advisors, colleagues at the Ministry of Health, NSW Ambulance and reviewers who contributed to the report.

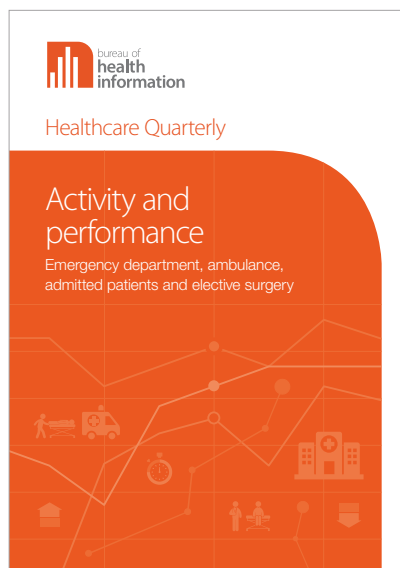
We also acknowledge BHI's dedicated teams of analytics, research, corporate, design and communications professionals whose expertise made this report possible.



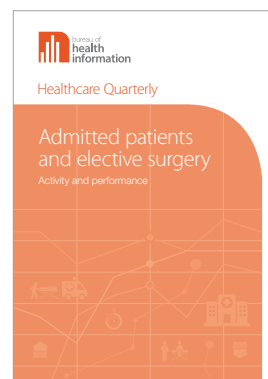
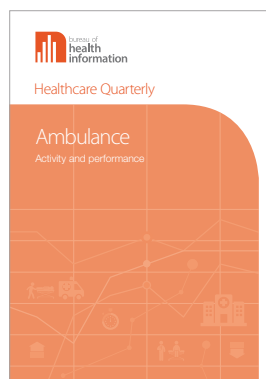
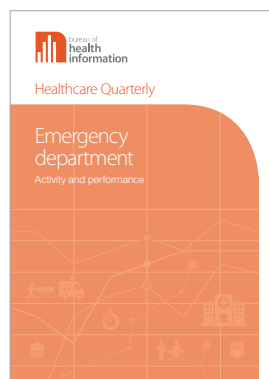
# Healthcare Quarterly

*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.

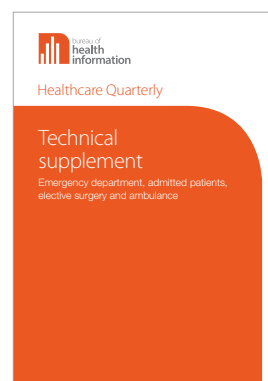
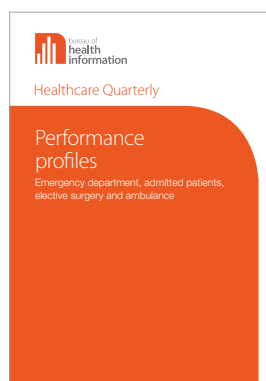
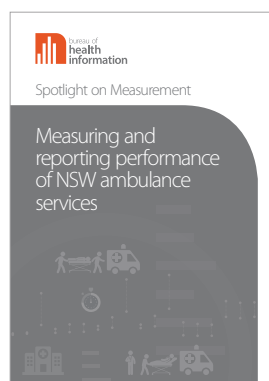
The reports feature key indicators of activity and performance across ambulance and public hospital services in NSW.



*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](http://bhi.nsw.gov.au/healthcare_observer)



All reports and profiles are available at [bhi.nsw.gov.au](http://bhi.nsw.gov.au)

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## About the Bureau of Health Information

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

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

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

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

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

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

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

[bhi.nsw.gov.au](http://bhi.nsw.gov.au)