

Healthcare Quarterly

Activity and performance

Emergency department, ambulance, admitted patients and elective surgery

April to June 2018



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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Changes in data coverage and analytic methods from quarter to quarter mean that figures published in this document are superseded by subsequent reports.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 interactive 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

April to June 2018

- 1 The number of emergency department attendances was 697,623 in the April to June 2018 quarter, up 1.2% compared with the same quarter last year.** Across triage categories, emergency (triage 2) and urgent (triage 3) saw the largest change in the number of presentations, up by 4,581 and 6,845 presentations, respectively.
- 2 More than three-quarters (76.6%) of patients were treated within clinically recommended timeframes in the emergency department.** This was 0.5 percentage points higher compared with the same quarter last year.
- 3 Almost three-quarters of patients (74.0%) spent four hours or less in the emergency department, up 0.2 percentage points over the same quarter last year.** The median time patients spent in the emergency department was relatively stable at two hours and 44 minutes.
- 4 The number of arrivals to the emergency department by ambulance was up 4.5% to 157,376 arrivals.** The percentage of patients who had their care transferred from paramedics to hospital staff within 30 minutes was stable at 91.6%.
- 5 The number of ambulance responses, where a vehicle was dispatched, was up by 8,077 (2.9%), bringing the total number of responses to 282,305.** Cases classified as emergencies (priority 1) were up 3.0%.
- 6 The percentage of emergency (priority 1) cases reached by paramedics within 15 minutes was down 1.4 percentage points to 62.3%.** Of the urgent (priority 2) cases, 72.2% were reached within 30 minutes – down 3.2 percentage points compared with the same quarter last year.
- 7 There were 5,860 life-threatening (priority 1A) cases in the April to June 2018 quarter, 337 more than the same quarter last year.** The percentage of life-threatening cases reached in 10 minutes was down 0.1 percentage points to 72.7%.
- 8 There were 475,050 admitted patient episodes in the April to June 2018 quarter.** Of these episodes, 94.0% were acute, 3.7% were non-acute and 2.3% involved treatment for mental health.
- 9 The number of elective surgical procedures was higher in the April to June 2018 quarter, with 59,176 procedures performed – up 2.2% compared with the same quarter last year.** The number of semi-urgent procedures saw the largest change, up 6.9% to 19,837 surgeries.
- 10 The percentage of elective surgical procedures performed within clinically recommended timeframes was down 0.1 percentage points to 96.9%.** The median wait time was unchanged for urgent procedures (11 days) but longer for semi-urgent surgeries (45 days; up one day) and non-urgent surgeries (234 days; up nine days).

Healthcare Quarterly – Activity

Emergency department activity	April to June 2018	April to June 2017	Difference	% change
All arrivals at NSW EDs by ambulance	157,376	150,647	6,729	4.5%
All ED presentations	697,623	689,061	8,562	1.2%
Emergency presentations	673,192	663,484	9,708	1.5%
Emergency presentations by triage category				
T1: Resuscitation	4,824	4,433	391	8.8%
T2: Emergency	88,647	84,066	4,581	5.4%
T3: Urgent	236,357	229,512	6,845	3.0%
T4: Semi-urgent	276,541	274,305	2,236	0.8%
T5: Non-urgent	66,823	71,168	-4,345	-6.1%
Admissions to hospital from NSW EDs	185,812	180,852	4,960	2.7%

Ambulance activity	April to June 2018	April to June 2017	Difference	% change
Calls	281,491	276,354	5,137	1.9%
Responses	282,305	274,228	8,077	2.9%
Priority category				
P1: Emergency	125,857	122,162	3,695	3.0%
P1A: Highest priority	5,860	5,523	337	6.1%
P2: Urgent	133,442	118,630	14,812	12.5%
P3: Time-critical	14,477	24,186	-9,709	-40.1% [†]
P4–9: Non-emergency	8,529	9,250	-721	-7.8%
Incidents	222,538	218,358	4,180	1.9%
Patient transports	170,310	164,323	5,987	3.6%

Admitted patient activity	April to June 2018	April to June 2017	Difference	% change
All admitted patient episodes	475,050			
All acute episodes	446,341			
Overnight episodes	238,612			
Same-day episodes	207,729			
Non-acute episodes	17,660			
Mental health episodes	11,049			
Average length of stay (days)				
All acute episodes	3.5			
Acute overnight episodes	2.8			
Non-acute episodes	12.2			
Mental health episodes	16			
Hospital bed days				
All bed days	1,657,086			
Acute bed days	1,265,404			
Non-acute bed days	214,967			
Mental health bed days	176,715			
Babies born in NSW public hospitals	18,071	18,001	70	0.4%

Elective surgery activity	April to June 2018	April to June 2017	Difference	% change
Elective surgical procedures performed	59,176	57,881	1,295	2.2%
Urgency category				
Urgent surgery	12,419	12,201	218	1.8%
Semi-urgent surgery	19,837	18,561	1,276	6.9%
Non-urgent surgery	24,136	24,296	-160	-0.7%
Patients on waiting list ready for elective surgery at end of quarter	77,955	74,499	3,456	4.6%
Urgency category				
Urgent surgery	1,838	1,758	80	4.6%
Semi-urgent surgery	12,808	12,274	534	4.4%
Non-urgent surgery	63,309	60,467	2,842	4.7%

Notes: Ambulance activity data do not include outage estimates. Data drawn on: 18 July 2018 (Emergency department), 17 July 2018 (Ambulance), 18 July 2018 (Admitted patients), 16 July 2018 (Elective surgery).

[†] 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, resulting in a decrease in priority 3 responses and an increase in priority 2 responses.

Healthcare Quarterly – Performance

Emergency department performance			April to June 2018	April to June 2017	Difference	
Percentage of patients transferred from ambulance to ED within 30 minutes			91.6%	91.9%	-0.3 percentage points	
Time to treatment by triage category	T2: Emergency	Median	8m	8m	unchanged	
		90th percentile	24m	26m	-2m	
	T3: Urgent	Median	19m	19m	unchanged	
		90th percentile	1h 3m	1h 6m	-3m	
	T4: Semi-urgent	Median	24m	24m	unchanged	
		90th percentile	1h 35m	1h 38m	-3m	
	T5: Non-urgent	Median	21m	21m	unchanged	
		90th percentile	1h 36m	1h 37m	-1m	
	All patients			76.6%	76.1%	+0.5 percentage points
	Percentage of patients whose treatment started on time	T2: Emergency (<i>Recommended: 80% in 10 minutes</i>)		67.4%	66.6%	+0.8 percentage points
T3: Urgent (<i>Recommended: 75% in 30 minutes</i>)		72.0%	71.2%	+0.8 percentage points		
T4: Semi-urgent (<i>Recommended: 70% in 60 minutes</i>)		79.7%	79.2%	+0.5 percentage points		
T5: Non-urgent (<i>Recommended: 70% in 120 minutes</i>)		94.2%	93.9%	+0.3 percentage points		
Median time spent in the ED			2h 44m	2h 42m	2m	
90th percentile time spent in the ED			7h 1m	7h 0m	1m	
Percentage of patients who spent four hours or less in the ED			74.0%	73.8%	+ 0.2 percentage points	

Ambulance performance			April to June 2018	April to June 2017	Difference
Call to ambulance arrival time					
Percentage of P1 call to ambulance arrival within 15 minutes			62.3%	63.7%	-1.4 percentage points
Percentage of P1 call to ambulance arrival within 30 minutes			94.6%	95.0%	-0.4 percentage points
Percentage of P2 call to ambulance arrival within 30 minutes			72.2%	75.4%	-3.2 percentage points
Percentage of P2 call to ambulance arrival within 60 minutes			93.8%	95.3%	-1.5 percentage points
Mobilisation time					
P1: Emergency	Median		2.5m	2.4m	0.1m
	Percentage P1 within 3 minutes		61.6%	62.6%	-1.0 percentage points
Response time					
Percentage of P1A responses within 10 minutes			72.7%	72.8%	-0.1 percentage points
Number of days median priority 1A response time > 10 minutes			0 days	1 day	-1 day
Turnaround time					
P1: Emergency	Median		37.3m	36.2m	1.1m
	90th percentile		60.5m	59.2m	1.3m
	Percentage within 45 minutes		68.5%	70.7%	-2.2 percentage points
P2: Urgent	Median		35.3m	34.0m	1.3m
	90th percentile		57.3m	55.6m	1.7m
	Percentage within 45 minutes		73.3%	75.8%	-2.5 percentage points

Elective surgery performance			April to June 2018	April to June 2017	Difference
Median waiting time (days)	Urgent surgery		11 days	11 days	unchanged
	Semi-urgent surgery		45 days	44 days	+1 days
	Non-urgent surgery		234 days	225 days	+9 days
Elective surgeries performed on time	All surgeries		96.9%	97.0%	-0.1 percentage points
	Urgent surgery (<i>Recommended: 30 days</i>)		99.8%	99.7%	+0.1 percentage points
	Semi-urgent surgery (<i>Recommended: 90 days</i>)		97.2%	97.4%	-0.2 percentage points
	Non-urgent surgery (<i>Recommended: 365 days</i>)		95.2%	95.4%	-0.2 percentage points

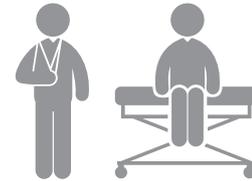
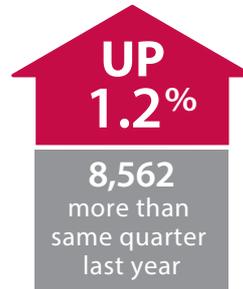
Notes: Data drawn on: 18 July 2018 (Emergency department), 17 July 2018 (Ambulance), 16 July 2018 (Elective surgery).

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 April to June 2018 quarter...

Emergency department

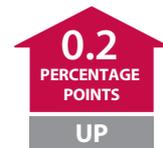
There were **697,623** emergency department presentations



76.6% of patients' treatment started on time



74.0% of patients spent **four hours or less** in the emergency department



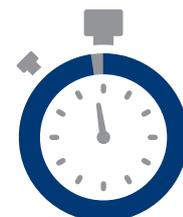
Ambulance



There were **282,305** ambulance responses



94.6% of priority 1 cases had a call to ambulance arrival time of 30 minutes or less



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

Admitted patients

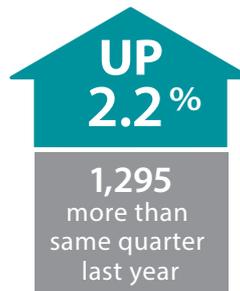
There were
475,050
admitted patient episodes
of care



53.5%
of acute admitted patient
episodes were for overnight stays

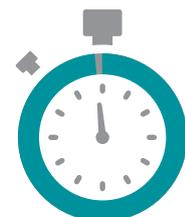
Elective surgery

There were **59,176**
elective surgical
procedures performed



Almost all (96.9%) were performed
within recommended time frames

Median waiting times were longer
for semi- and non-urgent surgery
compared with same quarter last year



11, 45 and 234 days waiting 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 18 July 2018
- **NSW Ambulance Computer Aided Dispatch (CAD) system** – provided on 17 July 2018
- **Admitted Patient Data Collection (APDC)**
– data drawn from the HIE on 18 July 2018
- **Waiting List Collection Online System (WLCOS)**
– data drawn on 16 July 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 the Bureau of Health Information (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).

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. LRA-level measures are based on the location of the patient, not the station from which paramedics respond.

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; 'urgent', 'semi-urgent' and 'non-urgent' for elective surgeries; 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

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

Emergency department (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. Results for LRAs have been shown to be subject to random variation and impacted by non-modifiable factors (e.g. travel time and distance). While some analyses are presented at an LRA-level, the LRAs are not reported by name.

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.

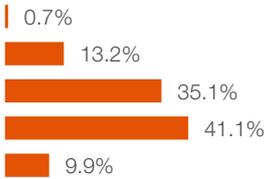
Emergency department presentations

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 April to June 2018 quarter, there were 697,623 visits to NSW public hospital EDs, up 1.2% compared with the same quarter last year. Most presentations (96.5%) were classified as emergency presentations (Figure 1). The remaining 24,431 patients presented to ED for non-emergency reasons such as a planned return visit.

With the exception of triage category 5, the number of emergency presentations was higher in the April to June 2018 quarter. Notably, triage categories 2 and 3 were up by 4,581 (5.4%) and 6,845 (3.0%) presentations, respectively (Figure 1).

Figure 1 Patient presentations and ambulance arrivals at NSW emergency departments, April to June 2018

	This quarter	Same quarter last year	Change since one year ago
All ED presentations	697,623	689,061	1.2%
Emergency presentations by triage category	673,192	663,484	1.5%
Triage 1: Resuscitation 	4,824	4,433	8.8%
Triage 2: Emergency	88,647	84,066	5.4%
Triage 3: Urgent	236,357	229,512	3.0%
Triage 4: Semi-urgent	276,541	274,305	0.8%
Triage 5: Non-urgent	66,823	71,168	-6.1%
Ambulance arrivals	157,376	150,647	4.5%

Compared with the same quarter last year, the number of ED attendances was higher this quarter in 52 out of 78 public hospital EDs in NSW. The number of attendances was down by 10% or more for four hospitals: Milton (10.0%), Cowra (10.4%), Casino (13.0%) and Young (16.5%).

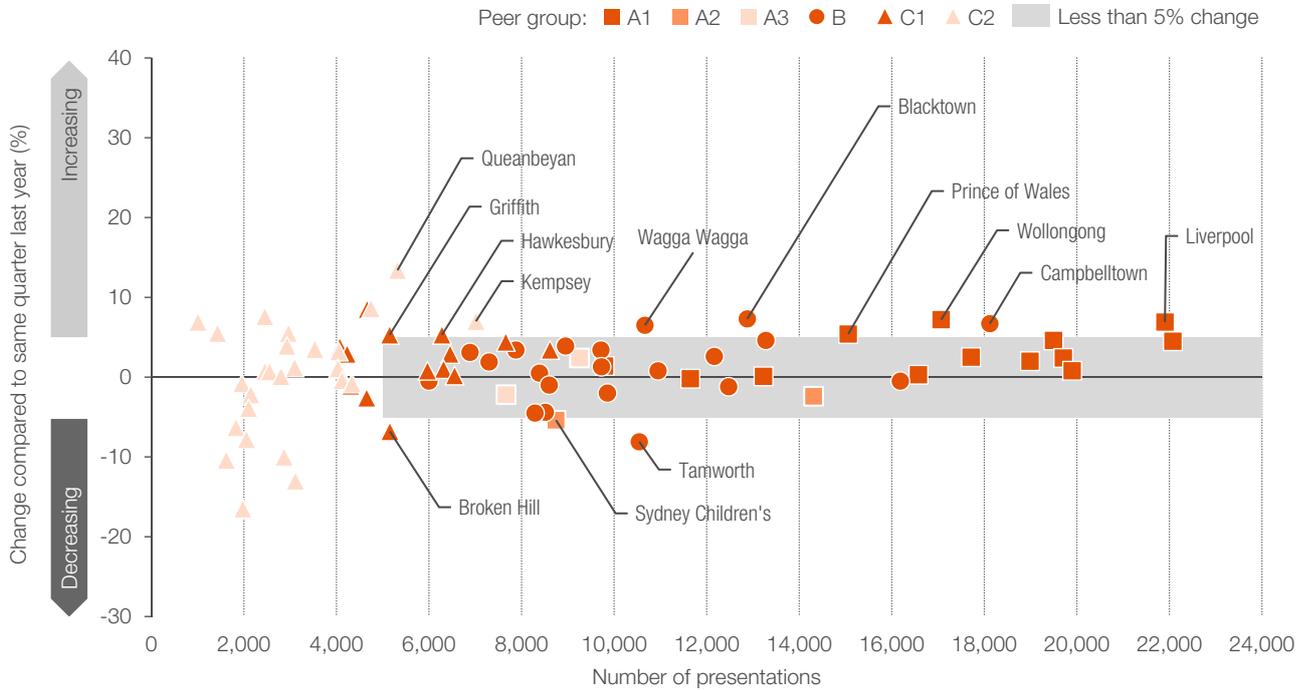
Hospitals identified in Figure 2 had more than 5,000 total presentations this quarter and more than a 5% change in the number of presentations compared with the same quarter last year.

Hospitals with >10% change in the number of ED attendances, compared with same quarter last year

Hospital	Peer group	ED attendances	Change (%)
Queanbeyan	C2	5,319	13.4
Milton	C2	2,869	-10.0
Cowra*	C2	1,619	-10.4
Casino	C2	3,113	-13.0
Young	C2	1,978	-16.5

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

Figure 2 Change in number of total emergency department presentations compared with the same quarter last year, hospitals by peer group, April to June 2018



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 wait time within which treatment should start, ranging from two minutes for triage category 1 to 120 minutes for triage category 5.

In the April to June 2018 quarter, 76.6% of ED patients' treatment started within clinically recommended timeframes, 0.5 percentage points

higher than the same quarter last year. The percentage of patients starting treatment on time was less than one percentage point higher in each triage category (Figure 3).

The median time to treatment was unchanged for triage categories 2, 3, 4 and 5. The 90th percentile time to starting treatment was down across all triage categories.

Figure 3 Percentage of patients whose treatment started on time, by triage category, April to June 2018

	This quarter	Same quarter last year	Percentage point change since one year ago
All emergency presentations	76.6%	76.1%	0.5
Triage category 2	Recommended: 80% in 10 minutes 67.4%	66.6%	0.8
Triage category 3	Recommended: 75% in 30 minutes 72.0%	71.2%	0.8
Triage category 4	Recommended: 70% in 60 minutes 79.7%	79.2%	0.5
Triage category 5	Recommended: 70% in 120 minutes 94.2%	93.9%	0.3

	This quarter	Same quarter last year	Change since one year ago
Triage 2 Emergency (e.g. chest pain, severe burns): 87,665 patients			
Median time to start treatment	8m	8m	unchanged
90th percentile time to start treatment	24m	26m	-2m
Triage 3 Urgent (e.g. moderate blood loss, dehydration): 231,327 patients			
Median time to start treatment	19m	19m	unchanged
90th percentile time to start treatment	1h 3m	1h 6m	-3m
Triage 4 Semi-urgent (e.g. sprained ankle, earache): 258,592 patients			
Median time to start treatment	24m	24m	unchanged
90th percentile time to start treatment	1h 35m	1h 38m	-3m
Triage 5 Non-urgent (e.g. small cuts or abrasions): 58,296 patients			
Median time to start treatment	21m	21m	unchanged
90th percentile time to start treatment	1h 36m	1h 37m	-1m

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.

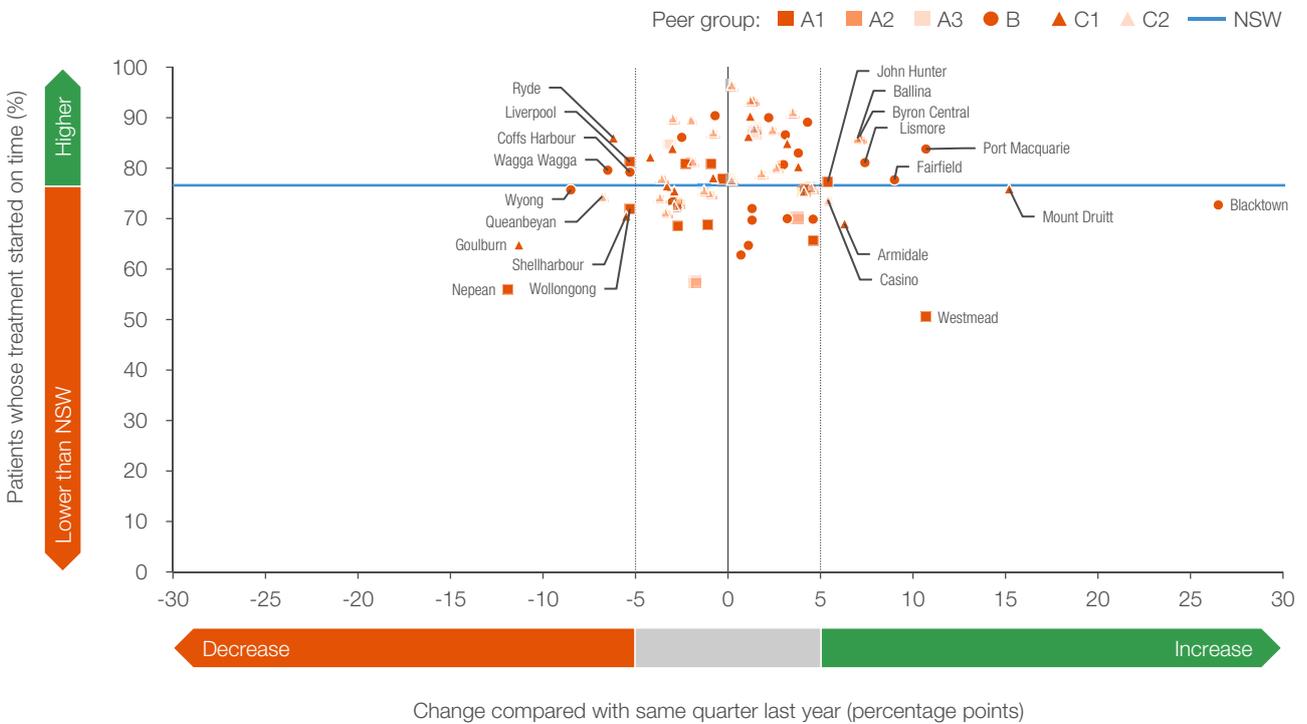
Six hospitals saw a change of more than 10 percentage points in the percentage of patients whose treatment started on time.

Figure 4 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
Blacktown	B	72.7	26.5
Mount Druitt	C1	75.9	15.2
Westmead	A1	50.6	10.7
Port Macquarie	B	83.8	10.7
Goulburn	C1	64.8	-11.3
Nepean	A1	56.0	-11.9

Figure 4 Percentage of patients whose treatment started on time, and percentage point change compared with same quarter last year, hospitals by peer group, April to June 2018



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.

Almost three quarters (74.0%) of patients spent four hours or less in the ED during the April to June 2018 quarter, 0.2 percentage points higher than the same quarter last year (Figure 5).

Patients who require admission to hospital from the ED or who are transferred to another hospital usually have more complex health needs than those who are treated and discharged, and therefore often spend longer periods in the ED. Less than half of these patients left within four hours.

Patients who left without, or before completing, treatment were the only group to see a drop in the percentage leaving in four hours (88.6%, down 2.3 percentage points) (Figure 5).

Figure 5 Percentage of patients who spent four hours or less in the emergency department, by mode of separation, April to June 2018

	Number		This quarter	Same quarter last year	Percentage point change since one year ago
All ED presentations	516,056		74.0%	73.8%	0.2
Treated and discharged	383,770		85.3%	84.7%	0.6
Treated and admitted	82,722		44.5%	44.2%	0.3
Left without, or before completing, treatment	28,763		88.6%	90.9%	-2.3
Transferred to another hospital	7,639		47.9%	47.6%	0.3

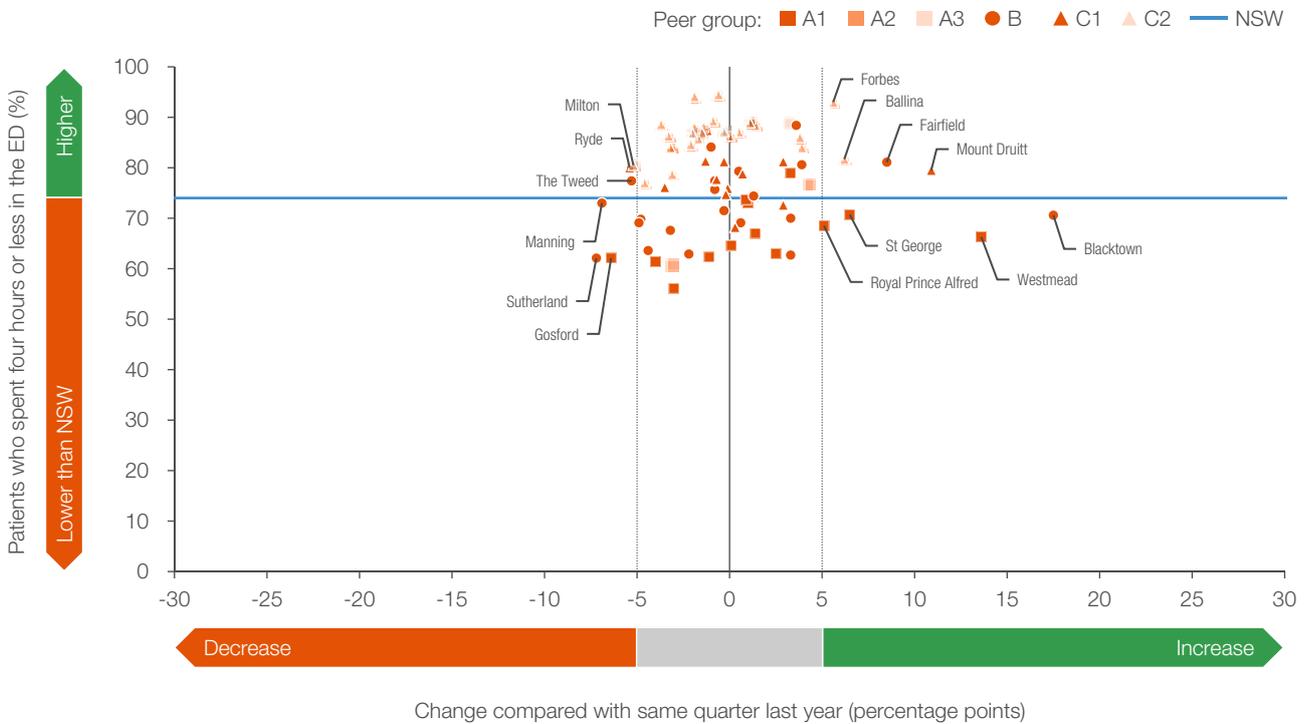
Compared with the same quarter last year:

- In 34 hospitals, the percentage of patients who spent four hours or less in the ED was higher. Of these, three hospitals were up by more than 10 percentage points: Blacktown (17.5 percentage points), Westmead (13.6 percentage points) and Mount Druitt (10.9 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, six hospitals were over five percentage points lower (Figure 6).

Hospitals with >10 percentage point change in the percentage of patients who spent four hours or less in the ED, compared with same quarter last year

Hospital	Peer group	Left ED within four hours (%)	Percentage point change
Blacktown	B	70.6	17.5
Westmead	A1	66.3	13.6
Mount Druitt	C1	79.5	10.9

Figure 6 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, April to June 2018



Transfer of care

The median time for patient care to be transferred from ambulance crews to ED staff in the April to June 2018 quarter was 11 minutes; unchanged from the same quarter last year (Figure 7).

In NSW, transfer of care should occur within 30 minutes for at least 90% of patients. This quarter, 91.6% of patients who arrived by ambulance had their care transferred within 30 minutes, down 0.3 percentage points from the same quarter last year (Figure 7).

Compared with the same quarter last year, the number of ambulance arrivals (used to calculate transfer of care time) in the April to June 2018 quarter was up 6.0% to 138,469 arrivals (Figure 7).

Figure 7 Emergency presentations, ambulance arrivals and transfer of care time, April to June 2018

	This quarter	Same quarter last year	Change since one year ago
Emergency presentations	673,192	663,484	1.5%
Ambulance arrivals (number used to calculate transfer of care time)	138,469	130,672	6.0%
ED transfer of care time			
Median time	11m	11m	unchanged
90th percentile time	27m	27m	unchanged
Percentage of patients transferred from ambulance to ED within 30 minutes	91.6%	91.9%	-0.3 percentage points

Note: Transfer of care time requires matched records between ambulance service and ED data.

Compared with the same quarter last year, the number of ambulance arrivals in 10 hospitals was up by more than 10%. In three of these hospitals, the change was over 20%: Kurri Kurri (62.9%), Mount Druitt (28.5%), Queanbeyan (22.7%).

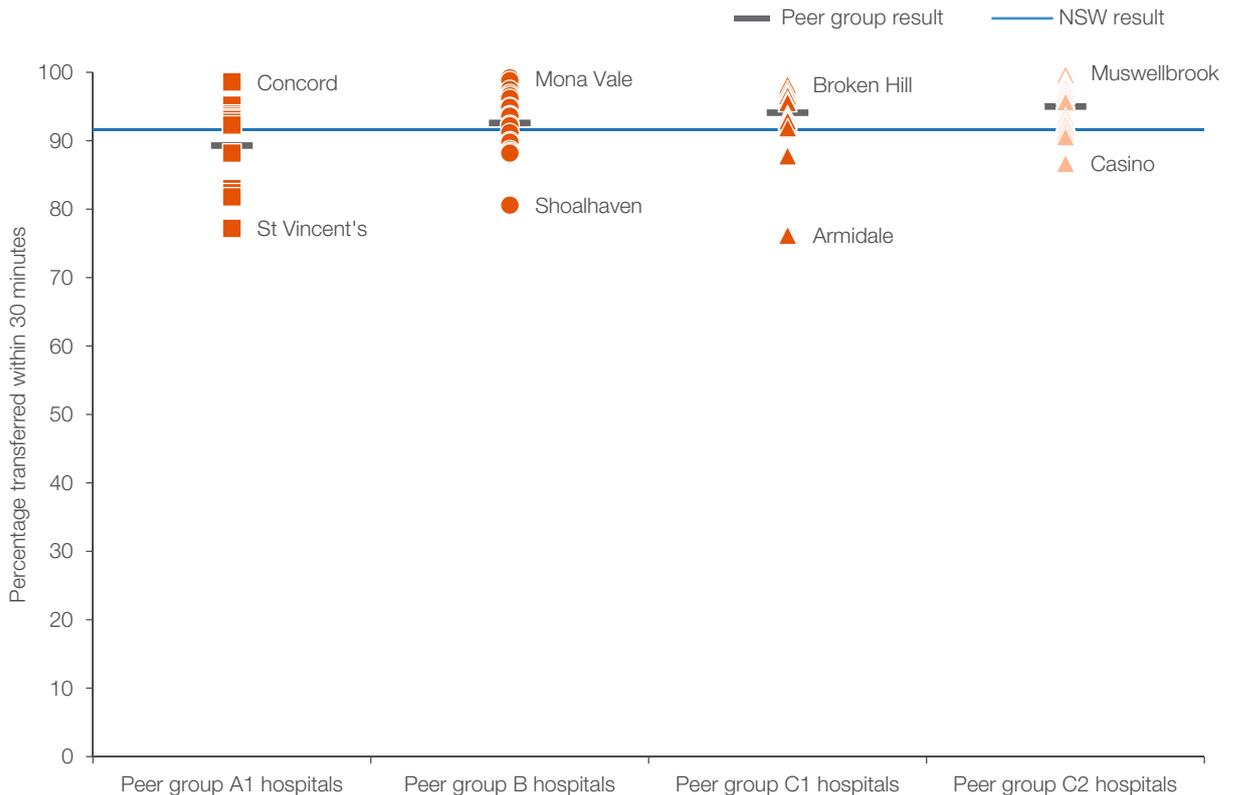
Figure 8 shows variation between and within hospital peer groups in the percentage of patients who had their care transferred within 30 minutes this quarter. District hospitals in peer groups C2 had the highest percentage of patients transferred within 30 minutes (95.0%).

Hospitals with >10% change in the number of ambulance arrivals, compared with same quarter last year

Hospital	Peer group	Emergency presentations	Change (%)
Kurri Kurri	C2	57	62.9
Mount Druitt	C1	1,180	28.5
Queanbeyan	C2	648	22.7
Narrabri*	C2	165	17.9
Auburn	B	1,265	16.2
Shoalhaven	B	2,669	16.1
Cessnock	C2	520	14.8
Milton	C2	488	14.3
Hawkesbury	C1	1,147	10.8
Wagga Wagga	B	2,538	10.7
Ballina*	C2	592	-10.2
Casino	C2	372	-10.6
Deniliquin*	C2	243	-13.5

* Caution - Transfer of care could not be calculated for more than 30% of records in each quarter

Figure 8 Percentage of patients transported to the ED by ambulance whose care was transferred within 30 minutes, by peer group, April to June 2018



Ambulance activity

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

In the April to June 2018 quarter, there were 281,491 calls and 282,305 ambulance responses; up 1.9% and 2.9% over the same quarter last year, respectively (Figure 9).

Most responses were categorised as emergency (priority 1; 44.6%) or urgent (priority 2; 47.3%). Of priority 1 responses, 5,860 (4.7%) were categorised as highest priority (1A) (Figure 9).

Table 2 Description of ambulance activity counts

Calls	Calls received at the ambulance communication (control) centre, requesting an ambulance vehicle.
Incidents	A call that results in the dispatch of one or more ambulance vehicles.
Responses	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 1 (emergency response under lights and sirens; with category 1A as highest acuity); priority 2 (urgent – undelayed response required without lights and sirens); priority 3 (time-critical – undelayed response required); and priority 4-9 (non-emergency).
Patient transports	Number of patients transported by the ambulance service.

Figure 9 Ambulance calls, incidents, responses and transports, April to June 2018

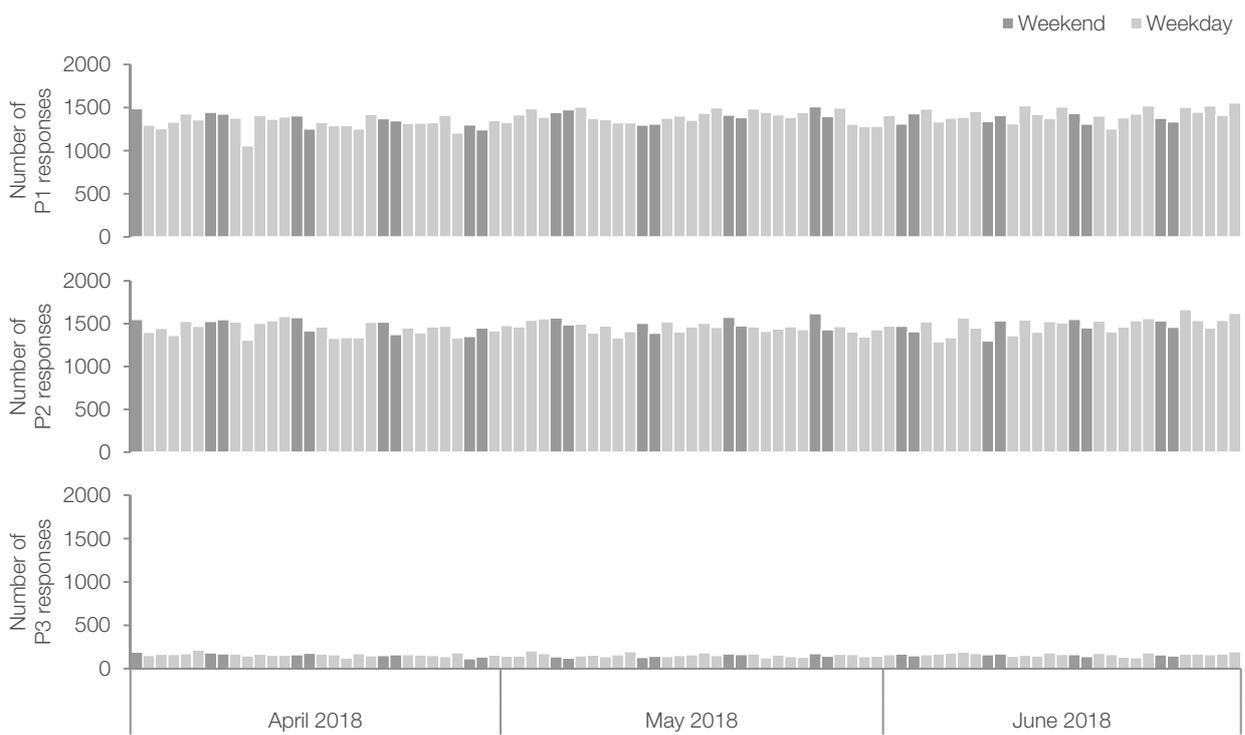
	This quarter	Same quarter last year	Change since one year ago	
Calls	281,491	276,354	1.9%	
Incidents	222,538	218,358	1.9%	
All responses	282,305	274,228	2.9%	
P1: Emergency	44.6%	125,857	122,162	3.0%
P1A: Highest priority	4.7%	5,860	5,523	6.1%
P2: Urgent	47.3%	133,442	118,630	12.5%
P3: Time-critical	5.1%	14,477	24,186	-40.1%*
P4-9: Non-emergency	3.0%	8,529	9,250	-7.8%
Patient transports	170,310	164,323	3.6%	

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, resulting in a decrease in priority 3 responses and an increase in priority 2 responses.

Figure 10 shows the daily number of priority 1, 2 and 3 responses this quarter. The daily number of responses in the April to June 2018 quarter varied by 496 responses for the priority 1 category (Figure 10).

Figure 10 Daily number of priority category 1, 2 and 3 responses, April to June 2018



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.

Compared with the same quarter last year, the percentage of priority 1 call to ambulance arrival times within 15 minutes was lower (62.3%, down 1.4 percentage points). The percentage of priority 2 call to ambulance arrival times within 30 minutes was lower (72.2%, down 3.2 percentage points) (Figure 11).

This quarter, most priority 1 call to ambulance arrival times were within 30 minutes (94.6%, down 0.4 percentage points). A similar percentage of priority 2 responses had a call to ambulance arrival time within 60 minutes (93.8%, down 1.5 percentage points) (Figure 11).

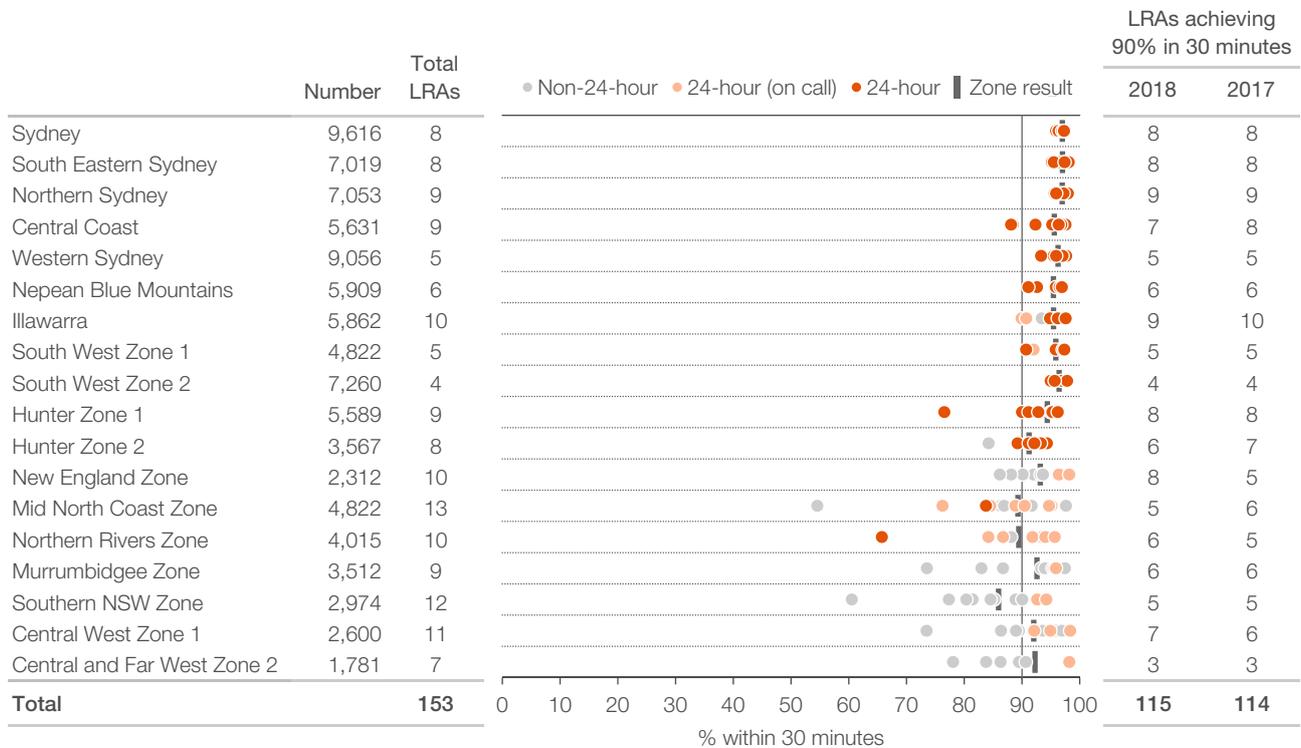
Figure 11 Call to ambulance arrival time, by priority category, April to June 2018

Priority category		This quarter	Same quarter last year	Change since one year ago
P1 responses	93,425			
Within 15 minutes		62.3%	63.7%	-1.4 percentage points
Within 30 minutes		94.6%	95.0%	-0.4 percentage points
Local response areas meeting 90% threshold (arrival within 30 minutes)		115 (of 153)	114 (of 153)	
P2 responses	101,906			
Within 30 minutes		72.2%	75.4%	-3.2 percentage points
Within 60 minutes		93.8%	95.3%	-1.5 percentage points
Local response areas meeting 90% threshold (arrival within 60 minutes)		142 (of 153)	150 (of 153)	

Among local response areas (LRAs), three-quarters met a 90% threshold for the percentage of priority 1 call to ambulance arrival times within 30 minutes. This was similar to the result from the same quarter last year (Figure 12).

For priority 2 responses, nine in 10 LRAs met a 90% threshold for the percentage of call to ambulance arrival times within 60 minutes. This was lower than the same quarter last year when nearly all LRAs (98.0%) surpassed the threshold [data not shown].

Figure 12 Percentage of priority category 1 responses with a call to ambulance arrival time within 30 minutes, by zone and local response area type, April to June 2018



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 April to June 2018 quarter, median response times were 11.2 minutes for priority 1, 7.5 minutes for priority 1A and 18.5 minutes for priority 2 (Figure 13).

In NSW, the benchmark for the median priority 1A response time is 10 minutes. The median response time for priority 1A cases did not exceed 10 minutes on any day during the April to June 2018 quarter [data not shown].

There has been little change in median priority 1 and 1A response times since 2013. Median priority 2 response times showed more variation. This quarter saw the highest median priority 2 response time for an April to June quarter since 2013 (18.5 minutes; up 1.9 minutes) (Figure 13).

Figure 13 Median ambulance response time (minutes), by priority category, April 2013 to June 2018

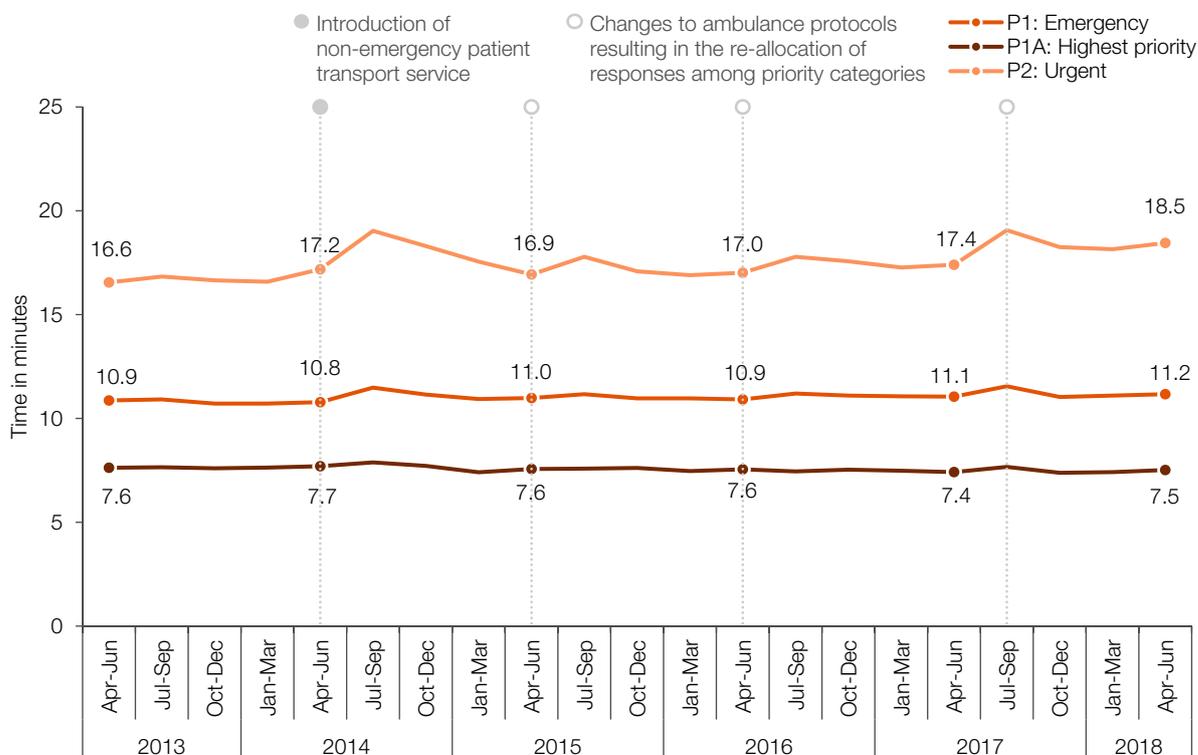
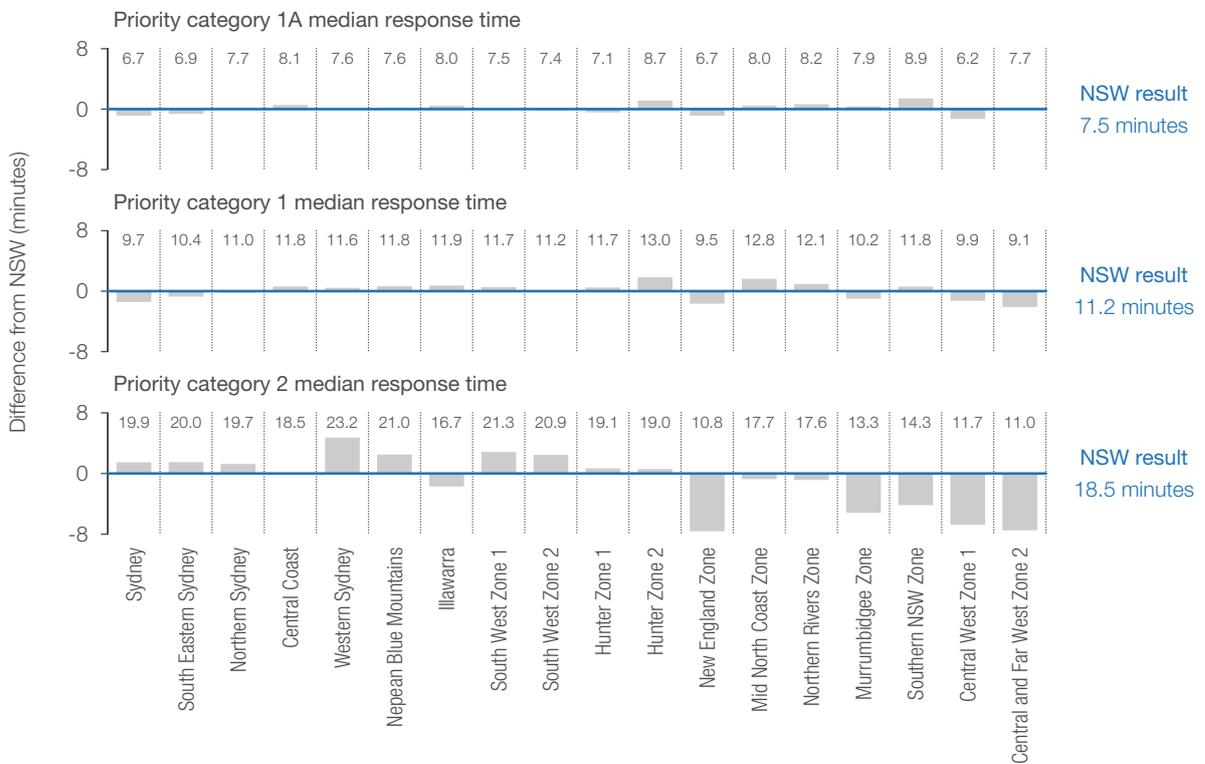


Figure 14 shows this quarter's priority 1A, 1 and 2 median response times for zones relative to the NSW result. For priority category 2, non-metropolitan zones generally had shorter response times than metropolitan zones.

Figure 14 Median ambulance response time, by zone, relative to NSW, April to June 2018



Admitted patients

There were 475,050 admitted patient episodes in NSW public hospitals in the April to June 2018 quarter.

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. In the April to June 2018 quarter, there were 1,657,086 hospital bed days. Mental health bed days accounted for 10.7% of the total (Figure 15).

Phase-in of new policy

Between 1 July 2016 and 30 June 2017, all local health districts (LHDs) 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.

Fair comparisons cannot be made with results from the policy phase-in period due to staggered implementation across LHDs that affected activity counts in the acute, non-acute and mental health categories. Mental health activity counts presented before the introduction of the classification change are estimates that were calculated using a flag for days in a psychiatric unit. Accordingly, comparisons between the pre- and post-policy period should be made with caution.

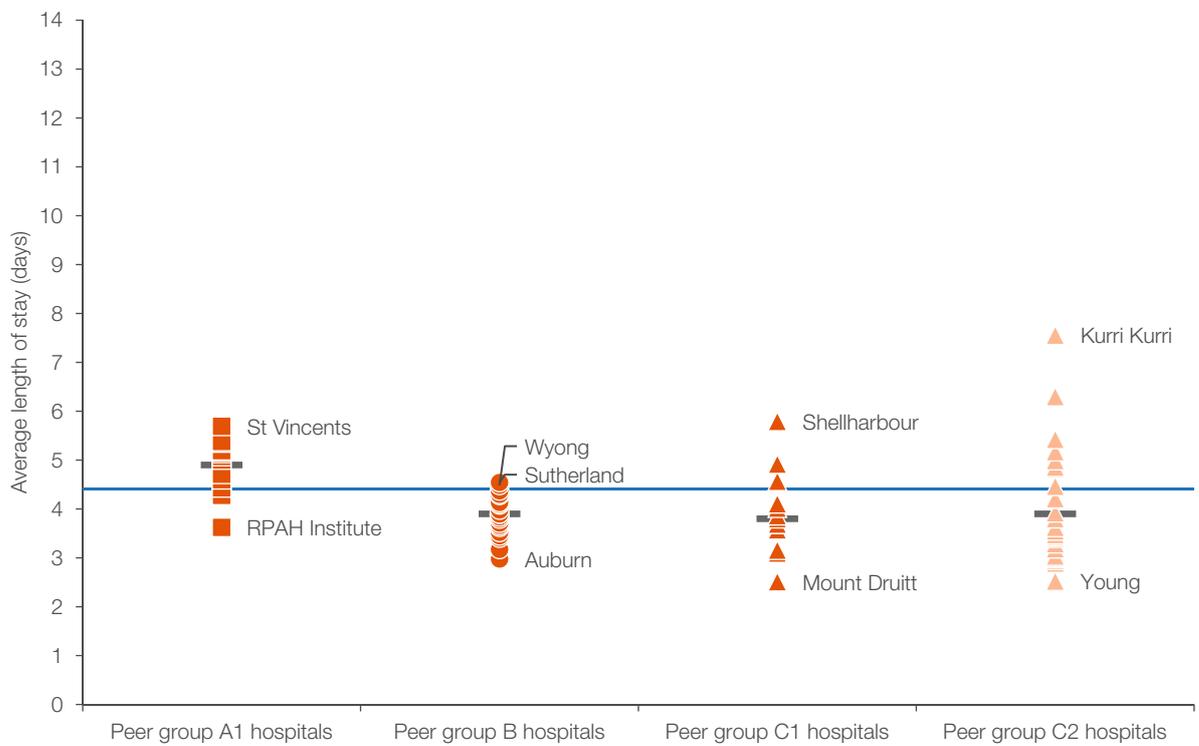
Figure 15 Total number of hospital bed days, by episode type, April to June 2018

		This quarter	Same quarter last year	Change since one year ago
Total bed days		1,657,086	*	*
Acute	 76.4%	1,265,404	*	*
Non-acute	 13.0%	214,967	*	*
Mental health	 10.7%	176,715	*	*

* Between July 1, 2016 and June 30, 2017, a new mental health care stay type was introduced that comprises patients who were previously included in the acute and non-acute stay types that are routinely reported by BHI. Fair comparisons cannot be made with results during this period due to LHDs implementing the policy at different times of the year which affected activity counts for acute, non-acute and mental health categories. Reporting will resume in the July to September 2018 edition of *Healthcare Quarterly*.

There were hospital-level differences in the average length of stay for acute overnight episodes, even within peer groups. Peer group A1 had the longest average length of stay (Figure 16). Length of stay measures were not adjusted for differences in case mix and variation across hospitals should be interpreted with care.

Figure 16 Average length of stay for acute overnight admitted patient episodes, by peer group, April to June 2018



Elective surgery

In the April to June 2018 quarter, 59,176 elective surgical procedures were performed, 2.2% more than the same quarter last year and 7.4% more than the same quarter in 2013 (Figures 17 and 18).

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 (54.5%) of all procedures performed this quarter were either urgent or semi-urgent (Figure 17).

In the April to June 2018 quarter, the number of elective surgical procedures was up by more than 15% in 11 hospitals, compared with the same quarter last year. The procedures were down by more than 15% in six hospitals.

Hospitals with >15% change in elective surgical procedures, compared with same quarter last year

Hospital	Peer group	Procedures	Change (%)
Griffith	C1	346	47.2
Hawkesbury	C1	415	34.3
Shellharbour	C1	939	28.5
Calvary	A3	357	24.8
Cowra	C2	151	20.8
Deniliquin	C2	74	19.4
Queanbeyan	C2	308	18.9
Goulburn	C1	491	18.6
Wollongong	A1	1,840	15.9
Dubbo	B	1,018	15.8
Blue Mountains	C2	2,017	15.4
Macksville	C2	240	-15.5
Kempsey	C2	327	-20.6
Broken Hill	C1	248	-20.8
Cooma	C2	53	-25.4
Moree	C2	83	-31.4
Inverell	C2	52	-32.5

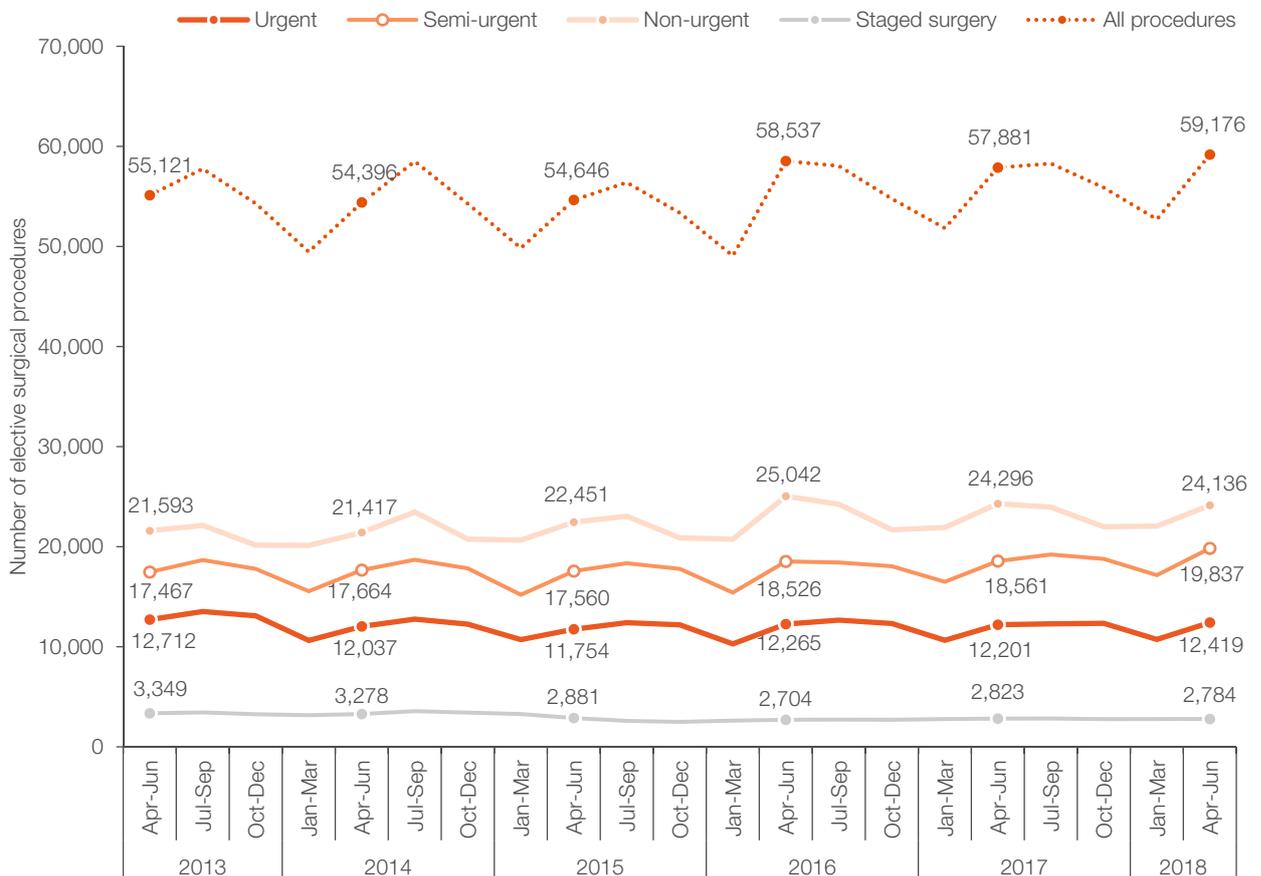
Figure 17 Elective surgical procedures performed, by urgency category, April to June 2018

	This quarter	Same quarter last year	Change since one year ago
Total number of elective surgical procedures	59,176	57,881	2.2%
Urgent  21.0%	12,419	12,201	1.8%
Semi-urgent  33.5%	19,837	18,561	6.9%
Non-urgent  40.8%	24,136	24,296	-0.7%
Staged*  4.7%	2,784	2,823	-1.4%

* 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).

Over five years, the total number of procedures increased by 7.4% (Figure 18). Elective surgical activity is subject to seasonal change. For this reason, comparisons are made with the same quarter in preceding years. Compared with the same quarter in 2013, there was an increase in the number of procedures that were performed in the semi-urgent and non-urgent categories (up 13.6% and 11.8%, respectively).

Figure 18 Elective surgical procedures performed, by urgency category, April 2013 to June 2018



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 time frames.

Compared with the same quarter last year, median waiting times in the April to June 2018 quarter were 11 days for urgent (unchanged), 45 days for semi-urgent (up one day) and 234 days for non-urgent procedures (up nine days) (Figure 19).

The recommended waiting times for elective surgery are up to: 30 days for urgent, 90 days for semi-urgent, and 365 days for non-urgent procedures. Almost all procedures (96.9%) were performed within recommended timeframes this quarter (Figure 19).

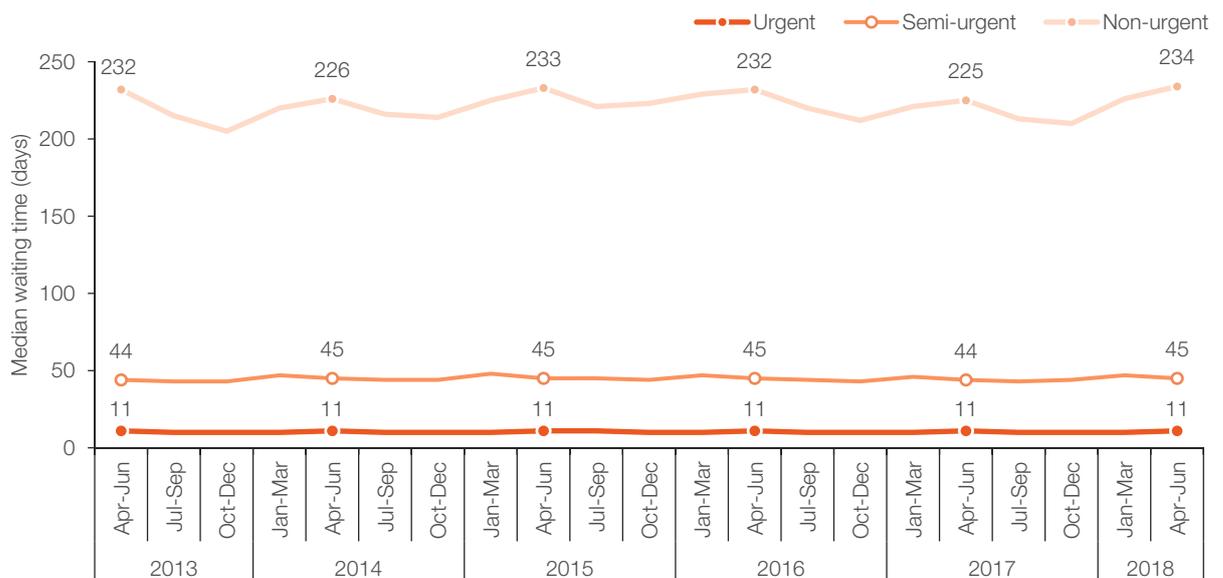
Figure 19 Percentage of elective surgical procedures performed on time and waiting times, by urgency category, April to June 2018

		This quarter	Same quarter last year	Percentage point change since one year ago
All procedures		96.9%	97.0%	-0.1
Urgent	Recommended: 30 days 	99.8%	99.7%	0.1
Semi-urgent	Recommended: 90 days 	97.2%	97.4%	-0.2
Non-urgent	Recommended: 365 days 	95.2%	95.4%	-0.2

		This quarter	Same quarter last year	Change since one year ago
Urgent: 12,419 patients				
Median time to receive surgery		11 days	11 days	unchanged
90th percentile time to receive surgery		26 days	26 days	unchanged
Semi-urgent: 19,837 patients				
Median time to receive surgery		45 days	44 days	1 day
90th percentile time to receive surgery		83 days	83 days	unchanged
Non-urgent: 24,136 patients				
Median time to receive surgery		234 days	225 days	9 days
90th percentile time to receive surgery		357 days	357 days	unchanged

Over a longer time horizon, median waiting times for non-urgent procedures showed more fluctuation than urgent and semi-urgent procedures. Compared with the same quarter five years ago, the median wait time for non-urgent elective surgeries increased by two days and was up by one day for semi-urgent procedures and unchanged for urgent and (Figure 20).

Figure 20 Median waiting times for elective surgery, by urgency category, April 2013 to June 2018



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.

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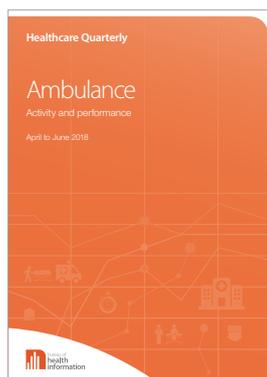
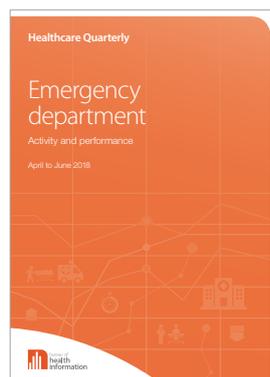
Healthcare Quarterly

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.

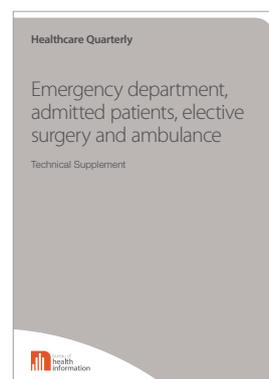
The reports feature key indicators of activity and performance across ambulance and public hospital services in NSW.



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



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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 healthcare system.

BHI was established in 2009 and 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 and outcomes of care in public hospitals and other healthcare facilities.

BHI publishes a range of reports and information products, including interactive tools, that provide objective, accurate and meaningful information about how the health system is performing.

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 supply 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.

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