Healthcare Quarterly

Activity and performance

Emergency department, ambulance, admitted patients, seclusion and restraint, and elective surgery

October to December 2019

Full results for *Healthcare Quarterly* are available through BHI's interactive data portal, Healthcare Observer.
Results are reported at a state, local health district, hospital peer group and hospital level for public hospitals and
at a state level and by statistical area level 3 (SA3) for ambulance services.

Figures published in Healthcare Observer may differ from those in published reports and information products
due to subsequent changes in data coverage and analytic methods, and updates to databases. At any time, the
most up-to-date results are available in Healthcare Observer and supersede all previously published figures.

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Foreword

This issue of *Healthcare Quarterly* covers public hospital and ambulance activity and performance in NSW during October to December 2019, a three-month period when large parts of the State were ravaged by bushfires.

Whole communities have been devastated by the fires, which continued to burn into 2020, and the effects will be felt for a long time to come as people rebuild not just their homes and businesses, but their lives.

The efforts, led by our firefighters, to protect lives, properties, and wildlife and their habitats, have been extraordinary. One of the many groups working tirelessly to help those affected by bushfires are our healthcare professionals, who have gone above and beyond to care for patients and the wider community. Many of those healthcare professionals working in affected areas have done so despite being directly impacted by the bushfires themselves.

It may be reasonable, given the scale of the bushfire crisis, for people to expect to see in this report that emergency departments (EDs) and ambulance services in affected areas experienced large spikes in activity at times during November and December. However, the relationship between the bushfires and people attending EDs and seeking help from paramedics is not straightforward.

In areas affected directly by bushfires, there were many other factors at play, several of which may have served to reduce ED and ambulance demand, including road closures, holidaymakers staying away from affected areas, and people with less urgent health issues avoiding seeking emergency care.

During this period, hazardous bushfire smoke also intermittently covered heavily populated areas throughout NSW that were some distance from fires. While *Healthcare Quarterly* does not include condition-specific analysis, we know that both EDs and NSW Ambulance saw higher activity related to breathing and respiratory issues during November and December. However, these conditions still represent a relatively small proportion of overall ED attendances and ambulance responses, so the impact on overall activity and performance for the quarter is not easily discernible, even at local level.

Since the first issue of *Healthcare Quarterly* in 2010, BHI has never reported more ED attendances than the 776,593 seen during the October to December 2019 quarter. NSW Ambulance also continues to experience very high demand for its services, with 317,390 responses during the quarter. These high levels of activity reflect ongoing trends at State level and cannot be directly attributed to the impact of the bushfires.

The bushfire crisis certainly presented significant challenges for healthcare professionals, including the personal impacts they were experiencing while caring for others and the many and varied challenges associated with caring for patients in affected areas. That they rose to these challenges during what was yet another very busy quarter is testament to the commitment and resilience of our healthcare professionals in times of crisis.

Dr Diane Watson
Chief Executive, Bureau of Health Information

10 key findings

1 **There were 776,593 emergency department attendances in the October to December 2019 quarter, up 3.6% (26,787) compared with the same quarter the previous year.** The number of attendances was higher in 59 large emergency departments.

2 **Around seven in 10 (72.6%) emergency department patients were treated within clinically recommended timeframes.** This was 1.3 percentage points lower than the same quarter the previous year (73.4%).

3 **Almost seven in 10 (69.8%) patients spent four hours or less in the emergency department, down 2.3 percentage points.** The median time patients spent in the emergency department was 2 hours and 55 minutes, up 6 minutes.

4 **The percentage of patients who had their care transferred from paramedics to hospital staff within 30 minutes was 87.9%, down 2.2 percentage points.** The number of arrivals to emergency departments by ambulance was up 5.5% (9,370) to 178,465 arrivals.

5 **The number of ambulance responses, where a vehicle was dispatched, was up 3.5% (10,651) to 317,390 compared with the same quarter the previous year.** Cases classified as emergencies (priority 1) were up 4.3% (5,933) to 143,844 responses.

6 **Paramedics reached almost six in 10 (57.4%) emergency (priority 1) cases within 15 minutes, down 3.2 percentage points.** The percentage of urgent (priority 2) cases reached within 30 minutes was down 4.2 percentage points to 64.4%.

7 **The median response time for life-threatening (priority 1A) cases remained unchanged at 7.6 minutes.** The number of responses to life-threatening cases was up 5.2% (335) to 6,717 responses.

8 **There were 689 seclusion events (down 106) and 921 physical restraint events (down 20) in specialised acute mental health inpatient units.** The average duration of seclusion events was 6 hours and 20 minutes, down 15 minutes compared with the same quarter the previous year. The average duration of physical restraint events was 5 minutes, down 1 minute.

9 **The number of elective surgical procedures performed was 57,614, up 2.4% (1,347) compared with the same quarter the previous year.** The numbers of urgent and non-urgent procedures were up 5.3% and 5.5% respectively, while the number of semi-urgent procedures was down 2.6%.

10 **The median waiting times for elective surgery were 11 days for urgent procedures (up one day), 46 days for semi-urgent procedures (up two days) and 237 days for non-urgent surgeries (up 15 days).** Most elective surgical procedures (95.7%) were performed within clinically recommended timeframes.

Healthcare Quarterly – Activity

Emergency department activity	October to December 2019	October to December 2018	Difference	% change
All arrivals at NSW EDs by ambulance	178,465	169,095	9,370	5.5%
ED attendances	**776,593**	**749,806**	**26,787**	**3.6%**
Emergency presentations	753,357	724,550	28,807	4.0%
Triage category — T1: Resuscitation	5,466	5,292	174	3.3%
Triage category — T2: Emergency	98,896	95,272	3,624	3.8%
Triage category — T3: Urgent	269,840	253,415	16,425	6.5%
Triage category — T4: Semi-urgent	309,109	298,877	10,232	3.4%
Triage category — T5: Non-urgent	70,046	71,694	-1,648	-2.3%
Admissions to hospital from NSW EDs	197,835	191,740	6,095	3.2%

Ambulance activity	October to December 2019	October to December 2018	Difference	% change
Calls	328,228	307,866	20,362	6.6%
Responses	**317,390**	**306,739**	**10,651**	**3.5%**
Priority category — P1: Emergency	143,844	137,911	5,933	4.3%
Priority category — P1A: Highest priority	6,717	6,382	335	5.2%
Priority category — P2: Urgent	149,617	145,465	4,152	2.9%
Priority category — P3: Time-critical	14,898	14,590	308	2.1%
Priority category — P4–9: Non-emergency	9,031	8,769	262	3.0%
Incidents	249,255	237,787	11,468	4.8%
Patient transports	192,334	182,556	9,778	5.4%

Admitted patient activity	October to December 2019	October to December 2018	Difference	% change
All admitted patient episodes	**491,025**	**483,517**	**7,508**	**1.6%**
Acute episodes	461,749	454,341	7,408	1.6%
Overnight episodes	243,675	242,821	854	0.4%
Same-day episodes	218,074	211,520	6,554	3.1%
Non-acute episodes	17,749	17,650	99	0.6%
Mental health episodes	11,527	11,526	1	0.0%
Average length of stay (days) — **All episodes**	**3.5**	**3.5**	**0.0**	
Average length of stay (days) — Acute episodes	2.8	2.8	0.0	
Average length of stay (days) — Non-acute episodes	12.5	12.5	0.0	
Average length of stay (days) — Mental health episodes	17.2	16.1	1.1	
Hospital bed days — **All bed days**	**1,722,014**	**1,697,654**	**24,360**	**1.4%**
Hospital bed days — Acute bed days	1,302,279	1,292,065	10,214	0.8%
Hospital bed days — Non-acute bed days	221,234	220,254	980	0.4%
Hospital bed days — Mental health bed days	198,501	185,335	13,166	7.1%
Babies born in NSW public hospitals	17,703	17,943	-240	-1.3%

Elective surgery activity	October to December 2019	October to December 2018	Difference	% change
Elective surgical procedures performed	**57,614**	**56,267**	**1,347**	**2.4%**
Urgency category — Urgent surgery	13,179	12,520	659	5.3%
Urgency category — Semi-urgent surgery	18,391	18,882	-491	-2.6%
Urgency category — Non-urgent surgery	23,258	22,046	1,212	5.5%
Patients on waiting list ready for elective surgery at end of quarter	**88,247**	**80,642**	**7,605**	**9.4%**
Urgency category — Urgent surgery	945	939	6	0.6%
Urgency category — Semi-urgent surgery	12,624	11,785	839	7.1%
Urgency category — Non-urgent surgery	74,678	67,918	6,760	10.0%

Note: Ambulance activity data do not include outage estimates. Data drawn on: 21 January 2020 (Emergency department), 8 January 2020 (Ambulance), 21 January 2020 (Admitted patients), 17 January 2020 (Elective surgery).

Healthcare Quarterly – Performance

Emergency department performance			October to December 2019	October to December 2018	Difference
Percentage of patients transferred from ambulance to ED within 30 minutes			87.9%	90.1%	-2.2 percentage points
Time to treatment by triage category	T2: Emergency	Median	9 mins	8 mins	1 mins
		90th percentile	26 mins	26 mins	0 mins
	T3: Urgent	Median	21 mins	20 mins	1 mins
		90th percentile	74 mins	72 mins	2 mins
	T4: Semi-urgent	Median	27 mins	26 mins	1 mins
		90th percentile	108 mins	104 mins	4 mins
	T5: Non-urgent	Median	24 mins	23 mins	1 mins
		90th percentile	108 mins	104 mins	4 mins
Percentage of patients whose treatment started on time	All patients		**72.6%**	**73.9%**	**-1.3 percentage points**
	T2: Emergency (Recommended: 80% in 10 minutes)		63.0%	65.4%	-2.4 percentage points
	T3: Urgent (Recommended: 75% in 30 minutes)		67.6%	68.9%	-1.3 percentage points
	T4: Semi-urgent (Recommended: 70% in 60 minutes)		76.2%	77.1%	-0.9 percentage points
	T5: Non-urgent (Recommended: 70% in 120 minutes)		92.2%	92.9%	-0.7 percentage points
Median time spent in the ED			2h 55m	2h 49m	6 mins
90th percentile time spent in the ED			7h 40m	7h 18m	22 mins
Percentage of patients who spent four hours or less in the ED			69.8%	72.1%	-2.3 percentage points

Ambulance performance	October to December 2019	October to December 2018	Difference
Call to ambulance arrival time			
Percentage of P1 call to ambulance arrival within 15 minutes	57.4%	60.6%	-3.2 percentage points
Percentage of P1 call to ambulance arrival within 30 minutes	92.3%	93.5%	-1.2 percentage points
Percentage of P2 call to ambulance arrival within 30 minutes	64.4%	68.6%	-4.2 percentage points
Percentage of P2 call to ambulance arrival within 60 minutes	88.7%	91.8%	-3.1 percentage points
Response time			
Percentage of P1A responses within 10 minutes	69.6%	70.7%	-1.1 percentage points

| Elective surgery performance		October to December 2019	October to December 2018	Difference
Median waiting time (days)	Urgent surgery	11 days	10 days	1 day
	Semi-urgent surgery	46 days	44 days	2 days
	Non-urgent surgery	237 days	222 days	15 days
Elective surgeries performed on time	All surgeries	**95.7%**	**97.4%**	**-1.7 percentage points**
	Urgent surgery (Recommended: 30 days)	99.9%	99.9%	0.0 percentage points
	Semi-urgent surgery (Recommended: 90 days)	96.0%	97.5%	-1.5 percentage points
	Non-urgent surgery (Recommended: 365 days)	93.1%	95.8%	-2.7 percentage points

Notes: Data drawn on: 21 January 2020 (Emergency department), 8 January 2020 (Ambulance), 17 January 2020 (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 October to December 2019 quarter...

Emergency department

There were **776,593** emergency department attendances
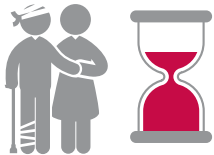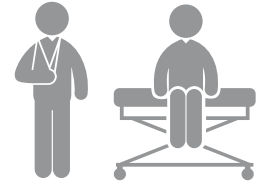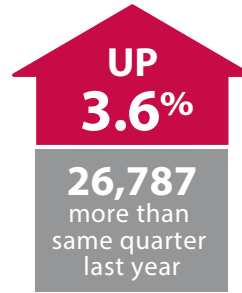
UP 3.6%

26,787 more than same quarter last year

72.6% of patients' treatment **started on time**

DOWN 1.3 PERCENTAGE POINTS

69.8% of patients spent **four hours or less** in the emergency department

DOWN 2.3 PERCENTAGE POINTS

Ambulance

There were **317,390** ambulance responses

UP 3.5%

10,651 more than same quarter last year

57.4% of priority 1 cases had a call to ambulance arrival time of 15 minutes or less

DOWN 3.2 PERCENTAGE POINTS

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

Admitted patients

There were **491,025** admitted patient episodes of care

52.8% of acute admitted patient episodes were for overnight stays

Elective surgery

There were **57,614** elective surgical procedures performed

UP 2.4%

1,347 more than same quarter last year
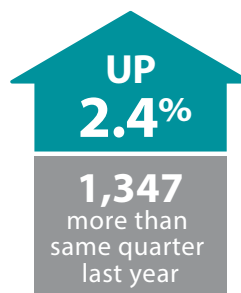
Almost all (95.7%) were performed within recommended time frames

Median waiting times increased by one day for urgent (11 days), by two days for semi-urgent (46 days), and by 15 days for non-urgent surgeries (237 days)
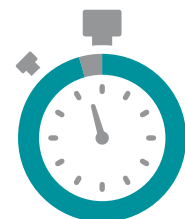
Note: All comparisons are in reference to the same quarter the previous year.

About this report

The data

Healthcare Quarterly draws on five main data sources:

- **Emergency Department Data Collection (EDDC)** – data drawn from the Health Information Exchange (HIE) on 21 January 2020

- **NSW Ambulance Computer Aided Dispatch (CAD) system** – provided on 8 January 2020

- **Admitted Patient Data Collection (APDC)** – data drawn from the HIE on 21 January 2020

- **Seclusion and Restraint Data Collection** – data drawn from the HIE on 22 January 2020, and manually collected measures received from InforMH, System Information and Analytics Branch, Ministry of Health on 5 February 2020

- **Waiting List Collection Online System (WLCOS)** – data drawn on 17 January 2020.

Hospital data are transmitted by the State's hospitals to centralised data warehouses administered by NSW Ministry of Health and are extracted by the Bureau of Health Information (BHI) from the NSW HIE. Ambulance data are provided directly to BHI by NSW Ambulance and resultant information is calculated by BHI. Seclusion and restraint events, manually collected by InforMH, Ministry of Health, are provided to BHI and resultant information is calculated by BHI.

The analyses and measures

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 ambulance analyses, results are reported by statistical area level 3 (SA3). SA3s are geographical areas created under the Australian Bureau of Statistics' geographical regional framework. For both the hospital-based and ambulance-based indicators, stratification by acuity or urgency are also used to report on performance.

For seclusion and restraint analysis, results are reported for 46 public hospitals that have one or more specialised acute mental health inpatient units. There

are six Mental Health Intensive Care Units (MHICUs) in these hospitals, providing treatment for patients with a higher level of severity and complexity. These six hospitals are grouped together for reporting. The Justice Health and Forensic Mental Health Network (JHFMHN) provides specialised mental health services for forensic patients.

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.

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 more than five percentage point threshold is used to highlight hospitals with marked variation in results – either over time, or relative to the NSW result.

Reporting

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 NSW level and by SA3. Results for two SA3s, Blue Mountains – South, and Illawarra Catchment Reserve, are suppressed because the estimated resident population is below 1,000. SA3s with less than 10 incidents in a quarter are also suppressed.

For seclusion and restraint reporting, episode numbers are displayed as <5 if there are fewer than five seclusion or physical restraint events. Due to the infrequent use of mechnical restraint, it is only reported at NSW level to respect the privacy of patients.

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 performance 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.
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.
Seclusion and restraint	
Rate of seclusion/physical restraint	Number of seclusion/physical restraint events per 1,000 bed days.
Frequency of seclusion/physical restraint	Percentage of acute mental health admitted episodes of care where at least one seclusion/ physical restraint event occurs.
Average duration of seclusion/ physical restraint	The average duration in hours of seclusion events / minutes of restraint events.
Elective surgery	
Elective surgery waiting time	The number of days from a patient's placement on the elective surgery waiting list until 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 activity and performance

Emergency department activity

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.

There were 776,593 ED attendances in the October to December 2019 quarter across more than 170 public hospitals, up 3.6% compared with the same quarter the previous year. The number of ambulance arrivals was up 9,370 (5.5%) to 178,465 (Figure 1).

Across triage categories 1 to 4, the number of patient presentations was higher this quarter than the same quarter the previous year. Triage 3 (urgent) saw the largest change in presentations, up 6.5% (16,425 more patients) to 269,840 presentations (Figure 1).

Most attendances (97.0%) were classified as emergency presentations. The remaining 23,236 attendances to EDs were for non-emergency reasons such as a planned return visit (Figure 1).

Figure 1   Emergency department activity and ambulance arrivals at NSW emergency departments, October to December 2019

	This quarter	Same quarter previous year	Change since one year ago
ED attendances	776,593	749,806	3.6%
Emergency presentations by triage category	753,357	724,550	4.0%
Triage 1: Resuscitation 0.7%	5,466	5,292	3.3%
Triage 2: Emergency 13.1%	98,896	95,272	3.8%
Triage 3: Urgent 35.8%	269,840	253,415	6.5%
Triage 4: Semi-urgent 41.0%	309,109	298,877	3.4%
Triage 5: Non-urgent 9.3%	70,046	71,694	-2.3%
Ambulance arrivals	178,465	169,095	5.5%

Note: 'ED attendances' includes every patient visit to the ED during the defined period. The vast majority of ED attendances are classified as 'emergency presentations'. The remaining ED attendances include non-emergency visits such as planned returns, pre-arranged admissions, some outpatient visits and private referrals.

Compared with the same quarter the previous year, the number of ED attendances was higher this quarter in 59 out of the 77 large public hospital EDs reported on individually in *Healthcare Quarterly.*

Hospitals identified in Figure 2 had more than 5,000 ED attendances this quarter and more than a 10% change in the number of attendances compared with the same quarter the previous year.

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

Hospital	Peer group	All presentations	Change (%)
Griffith	C1	6230	15.1
Port Macquarie	B	11023	13.3
Dubbo	B	9796	11.9
Mount Druitt	C1	9722	11.0

Figure 2   Change in number of emergency department attendances compared with the same quarter the previous year, hospitals by peer group, October to December 2019
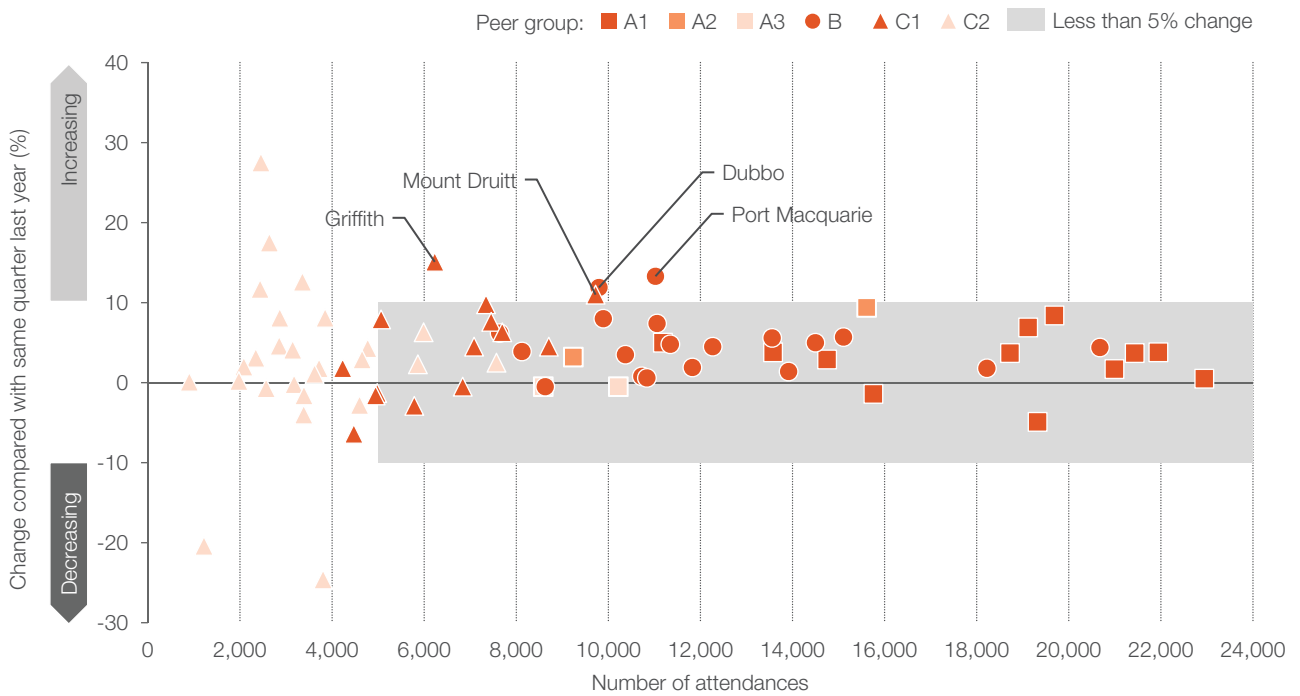
Time to treatment

On arrival at the ED, patients are allocated to one of five triage categories, based on urgency. Each category has a maximum 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 October to December 2019 quarter, 72.6% of ED patients' treatment started within clinically recommended timeframes, 1.3 percentage points lower than the same quarter the previous year. The percentage of patients starting treatment on time was slightly lower across triage categories 2 to 5 (Figure 3).

The median time to treatment was one minute longer across triage categories 2 to 5. The 90th percentile time to treatment for triage 2 remained unchanged, and was slightly longer for triage categories 3 to 5 (Figure 3).

Figure 3   Percentage of patients whose treatment started on time, by triage category, October to December 2019

	This quarter	Same quarter previous year	Percentage point change since one year ago
Emergency presentations	72.6%	73.9%	-1.3
Triage 2: Emergency (Recommended: 80% in 10 minutes)	63.0%	65.4%	-2.4
Triage 3: Urgent (Recommended: 75% in 30 minutes)	67.6%	68.9%	-1.3
Triage 4: Semi-urgent (Recommended: 70% in 60 minutes)	76.2%	77.1%	-0.9
Triage 5: Non-urgent (Recommended: 70% in 120 minutes)	92.2%	92.9%	-0.7

	This quarter	Same quarter previous year	Change since one year ago
Triage 2 Emergency (e.g. chest pain, severe burns): 97,681 presentations			
Median time to start treatment	9m	8m	1m
90th percentile time to start treatment	26m	26m	0m
Triage 3 Urgent (e.g. moderate blood loss, dehydration): 262,240 presentations			
Median time to start treatment	21m	20m	1m
90th percentile time to start treatment	1h 14m	1h 12m	2m
Triage 4 Semi-urgent (e.g. sprained ankle, earache): 286,840 presentations			
Median time to start treatment	27m	26m	1m
90th percentile time to start treatment	1h 48m	1h 44m	4m
Triage 5 Non-urgent (e.g. small cuts or abrasions): 59,962 presentations			
Median time to start treatment	24m	23m	1m
90th percentile time to start treatment	1h 48m	1h 44m	4m

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.

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

Figure 4 presents hospital results this quarter compared with the same quarter the previous year. Hospitals labelled had a more than 10 percentage point change in patients whose treatment started on time, compared with the same quarter the previous year.

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

Hospital	Peer group	Emergency visits treated on time (%)	Percentage point change
Westmead Children's	A2	77.8	14.6
Manning	B	80.8	12.3
Blacktown	B	71.1	-10.2
Ballina	C2	71.8	-11.0
Maclean	C2	64.7	-11.4
Moree	C2	73.5	-12.6
Gunnedah	C2	66.7	-14.3
Armidale	C1	53.7	-18.2

Figure 4   Percentage of patients whose treatment started on time, and percentage point change compared with the same quarter the previous year, hospitals by peer group, October to December 2019

Change compared with same quarter last year (percentage points)
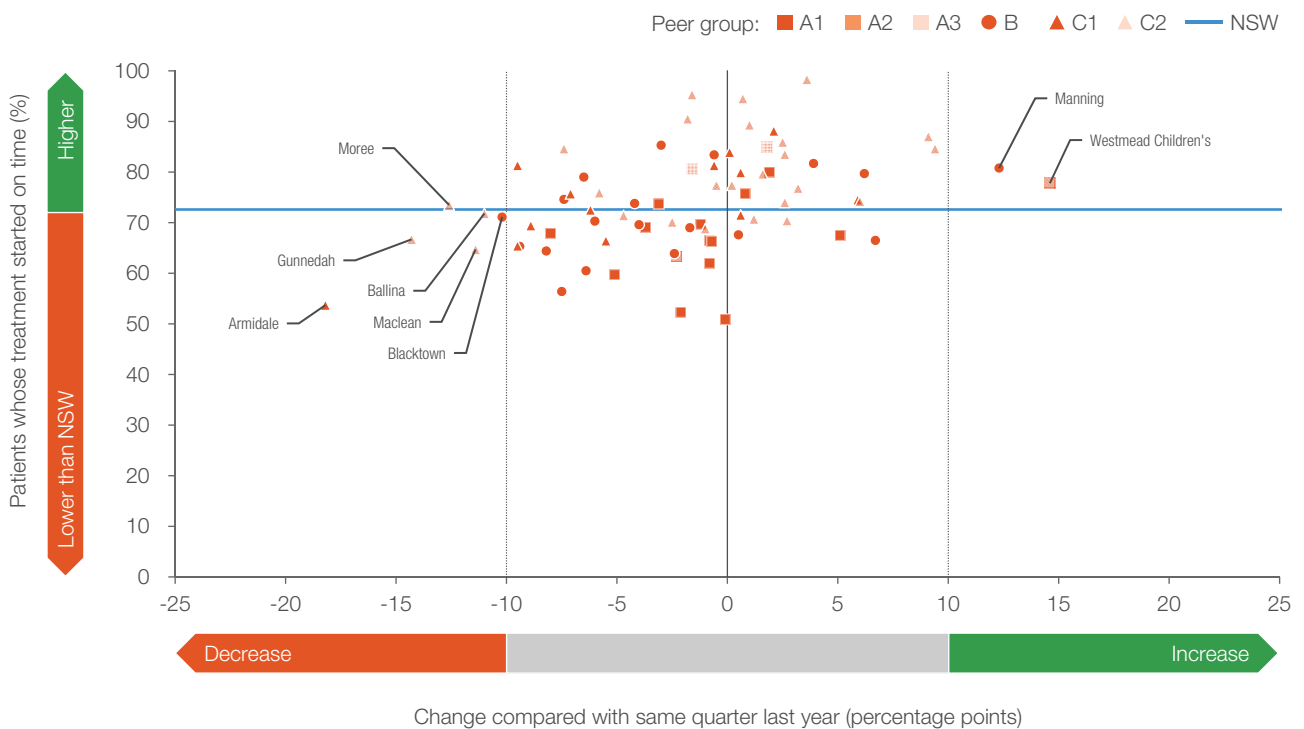
Time spent in the emergency department

Following treatment in the ED, the majority of patients are either discharged home or admitted to hospital. Some patients choose not to wait for treatment and leave, and others are transferred to a different hospital. Collectively, these categories are referred to as the 'mode of separation' (Figure 5).

In the October to December 2019 quarter, 69.8% of patients spent four hours or less in the ED, 2.3 percentage points lower than the same quarter the previous year (Figure 6).

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 (Figure 6).

The percentage of patients spending four hours or less in the ED was lower across all modes of separation, particularly for those who were transferred to another hospital, which was down 3.9 percentage points to 43.0% (Figure 6).

Figure 5   Percentage of patients who presented to the emergency department, by mode of separation, October to December 2019

	This quarter		Same quarter previous year	Change since one year ago
Treated and discharged	64.0%	496,990	481,521	3.2%
Treated and admitted to hospital	25.5%	197,835	191,740	3.2%
Left without, or before completing, treatment	6.6%	51,541	45,155	14.1%
Transferred to another hospital	2.2%	17,307	16,325	6.0%
Other	1.7%	12,920	15,065	-14.2%

Figure 6   Percentage of patients who spent four hours or less in the emergency department, by mode of separation, October to December 2019

	Number	This quarter		Same quarter previous year	Change since one year ago
ED attendances	541,795	69.8%		72.1%	-2.3
Treated and discharged	400,996	80.7%		83.1%	-2.4
Treated and admitted	77,947	39.4%		41.3%	-1.9
Left without, or before completing, treatment	43,538	84.5%		86.8%	-2.3
Transferred to another hospital	7,450	43.0%		46.9%	-3.9

Compared with the same quarter the previous year, for large public hospital EDs in peer groups A1, A2, A3, B, C1 and C2 reported on individually in *Healthcare Quarterly*:

- In 22 hospitals, the percentage of patients who spent four hours or less in the ED was higher (Figure 7).

- In 54 hospitals, there was a drop in the percentage of patients who spent four hours or less in the ED. Four hospitals had a decrease of more than 10 percentage points: Blacktown (14.7%), Mount Druitt (14.4%), Westmead (14,3%), and Campbelltown (12.4%) (Figure 7).

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

Hospital	Peer group	Left ED within four hours (%)	Percentage point change
Campbelltown	B	48.1	-12.4
Westmead	A1	50.0	-14.3
Mount Druitt	C1	65.3	-14.4
Blacktown	B	51.1	-14.7

Figure 7   **Percentage of patients who spent four hours or less in the emergency department, and percentage point change since the same quarter the previous year, hospitals by peer group, October to December 2019**
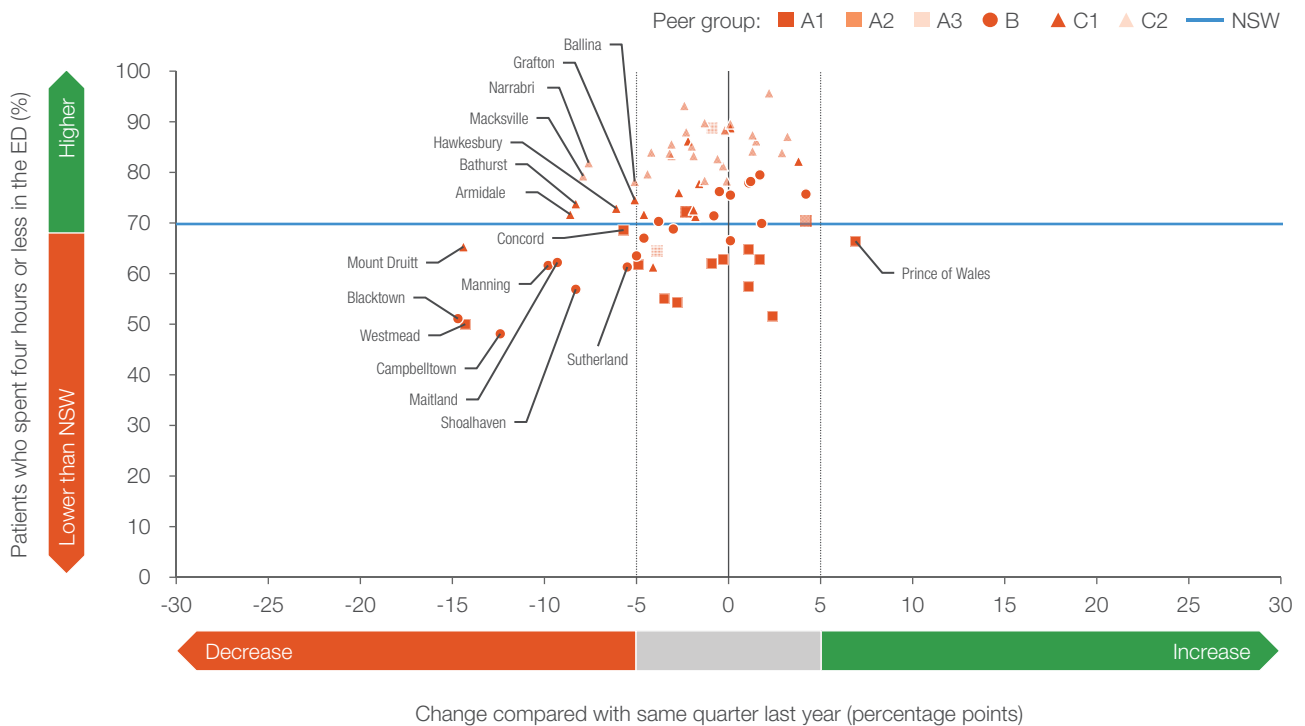
Transfer of care

In NSW, the target for transfer of care from paramedics to ED staff is within 30 minutes for at least 90% of patients. In the October to December quarter, 87.9% of patients who arrived by ambulance had their care transferred within 30 minutes, down 2.2 percentage points from the same quarter the previous year (Figure 8).

The median time for patient care to be transferred from paramedics to ED staff in the October to December 2019 quarter was 12 minutes, unchanged compared with the same quarter the previous year (Figure 8).

The number of ambulance arrivals was up by more than 10% in 12 hospitals. Mount Druitt saw the biggest change, up 33.8% to 1,748 ambulance arrivals. The number of ambulance arrivals was down by more than 10% for Sydney and Sydney Eye (16.9%).

Figure 8   **Emergency presentations, ambulance arrivals and transfer of care time, October to December 2019**

	This quarter	Same quarter previous year	Change since one year ago
Emergency presentations	753,357	724,550	4.0%
ED transfer of care time			
Median time	12m	12m	0m
90th percentile time	33m	29m	4m
Percentage of patients transferred from ambulance to ED within 30 minutes	87.9%	90.1%	-2.2 percentage points

Note: Transfer of care time requires matched records between ambulance service and ED data. The number of ambulance arrivals used to calculate transfer of care time in October to December 2019 quarter was 159,598 arrivals, up 6.5% compared with the same quarter the previous year.

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

Hospital	Peer group	Ambulance arrivals	Change (%)
Mount Druitt	C1	1748	33.8
Fairfield	B	2340	19.1
Sydney Children's	A2	836	19.1
Goulburn	C1	1061	18.8
Byron Central	C2	636	16.7
Coffs Harbour	B	3025	16.4
Campbelltown	B	6168	15.7
Kempsey	C2	1037	14.7
Maitland	B	2984	12.7
Bowral	C1	1231	12.1
Blue Mountains	C2	1160	11.6
Bathurst	C1	1251	10.1
Sydney and Sydney Eye	A3	941	-16.9

Emergency department activity and performance

Ambulance activity and performance

Ambulance activity and performance

Activity

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

In the October to December 2019 quarter, there were 328,228 calls and 249,255 incidents, up 6.6% and 4.8%, respectively, compared with the same quarter the previous year. There were 317,390 responses (up 3.5%) with most categorised as emergency – priority 1 (P1: 45.3%), and urgent – priority 2 (P2: 47.1%) (Figure 9).

Call to ambulance arrival time

Call to ambulance arrival time covers the period from when a Triple Zero (000) call is first answered in the ambulance control centre (phone pick-up), to the time the first ambulance arrives at the scene (Figure 10).

The percentage of P1 call to ambulance arrival times within 15 minutes was 57.4% in October to December 2019, down 3.2 percentage points compared with the same quarter the previous year. The percentage of P2 call to ambulance arrival times within 30 minutes was 64.4%, down 4.2 percentage points (Figure 10).

Table 2   Definition of calls, incidents, responses and patient transports

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

Note: Ambulance activity data do not include Computer-Aided Dispatch (CAD) outages and activity estimates. Patient Transport Service (formerly known as NEPT or Non-Emergency Patient Transport) activity is not included in ambulance activity data. For more information refer to this report's technical supplement.

Figure 9   Ambulance calls, incidents, responses and transports, NSW, October to December 2019

		This quarter	Same quarter previous year	Change since one year ago
Calls		328,228	307,866	6.6%
Incidents		249,255	237,787	4.8%
All responses		317,390	306,739	3.5%
P1: Emergency	45.3%	143,844	137,911	4.3%
P1A: Highest priority	4.7%	6,717	6,382	5.2%
P2: Urgent	47.1%	149,617	145,465	2.9%
P3: Time-critical	4.7%	14,898	14,590	2.1%
P4–9: Non-emergency	2.8%	9,031	8,769	3.0%
Patient transports		192,334	182,556	5.4%

Note: 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.

Response time

In NSW, ambulance response time refers to the period from the placement of a Triple Zero (000) call 'in queue' for an ambulance dispatch until the first vehicle arrives at the scene (Figure 11).

In the October to December 2019 quarter, median response times for the high volume response categories were 11.7 minutes for emergency – priority 1 (P1) cases, and 21.1 minutes for urgent – priority 2 (P2) cases, slightly longer than the same quarter the previous year (Figure 11).

Within the 143,844 P1 responses, there were 6,717 of the highest priority 1A (P1A) cases, up 5.2% compared with the same quarter the previous year (Figure 9). In NSW, the benchmark for the median P1A response time is 10 minutes. The median response time for P1A cases remained unchanged at 7.6 minutes (Figure 11).

The percentage of P1A responses within 10 minutes in October to December 2019 was 69.6%, down 1.1 percentage points compared with the same quarter in 2018 (Figure 11).

Figure 10   **Call to ambulance arrival time, by priority category, NSW, October to December 2019**

Call answer	Call in queue	Call complete	Vehicle assigned	Vehicle responding	Arrive at scene	Depart scene	Arrive hospital	Delayed available	Clear case

Priority category	This quarter	Same quarter previous year	Change since one year ago
P1 responses			
Within 15 minutes	57.4%	60.6%	-3.2 percentage points
Within 30 minutes	92.3%	93.5%	-1.2 percentage points
P2 responses			
Within 30 minutes	64.4%	68.6%	-4.2 percentage points
Within 60 minutes	88.7%	91.8%	-3.1 percentage points

Figure 11   **Ambulance response time by priority category, NSW, October to December 2019**

Call answer	Call in queue	Call complete	Vehicle assigned	Vehicle responding	Arrive at scene	Depart scene	Arrive hospital	Delayed available	Clear case

	This quarter	Same quarter previous year	Change since one year ago
P1: emergency			
Median response time	11.7m	11.3m	0.4m
90th percentile response time	25.3m	24.0m	1.3m
P1A: Highest priority			
Median response time	7.6m	7.6m	0.0m
90th percentile response time	15.8m	15.6m	0.2m
P2: urgent			
Median response time	21.1m	19.6m	1.5m
90th percentile response time	62.2m	53.1m	9.1m
Percentage P1A responses within 10 minutes	69.6%	70.7%	-1.1 percentage points

Ambulance activity

Regional, rural and remote NSW

The rate of incidents requiring an ambulance is the number of incidents for every 1,000 people living in an area. Any case requiring dispatch of one or more ambulance vehicles is defined as an incident.

Across the 43 statistical areas level 3 (SA3s) in regional, rural and remote NSW, the incident rate ranged from 24.5 to 67.2 per 1,000 people during the October to December 2019 quarter. Broken Hill and Far West had the highest rate in NSW at 67.2 incidents per 1,000 people. Queanbeyan (24.5) was the only regional, rural and remote SA3 with an incident rate below 30 per 1,000 people (Figure 12).

A summary of results by SA3 is available online through BHI's ambulance performance tool: **bhi.nsw.gov.au/search-ambulance-performance**

Full activity and performance results by SA3, including trends over time, are available on BHI's interactive data portal, **Healthcare Observer**.

Figure 12   Incident rate by statistical area level 3, per 1,000 people, regional, rural and remote NSW, October to December 2019
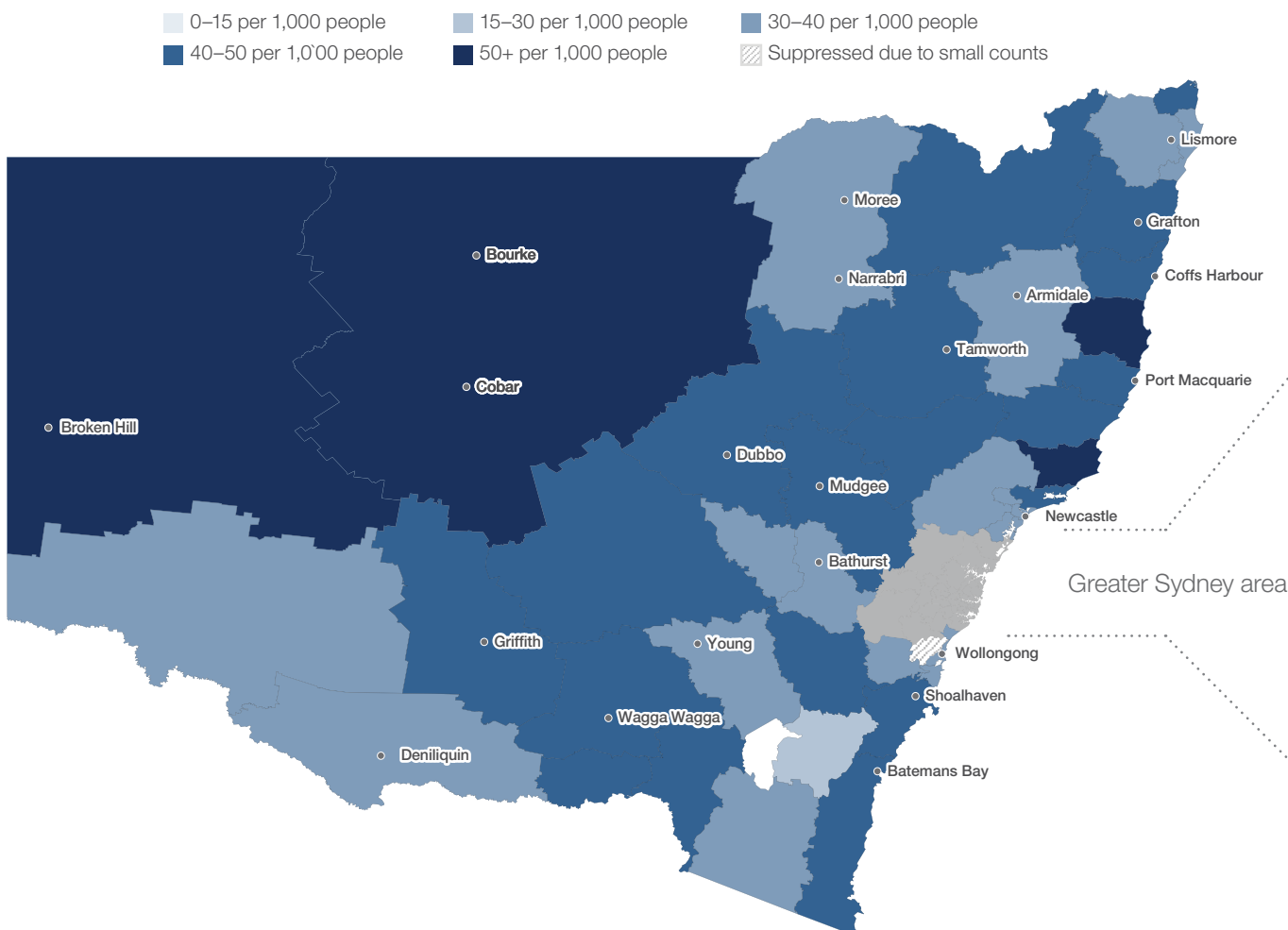
Note: Statistical areas level 3 (SA3) are geographical areas defined by the Australian Bureau of Statistics and used by BHI for reporting ambulance activity and performance. See the technical supplement to this report for more information.

Greater Sydney area

Across the 46 SA3s in the Greater Sydney area, the incident rate for the October to December 2019 quarter ranged from 12.7 to 46.0 per 1,000 people.

There were 36 SA3s in Greater Sydney area with incident rates below 30 per 1,000 people. Pennant Hills – Epping (12.7) was the only SA3 in NSW with an incident rate below 15 per 1,000 people (Figure 13).

Ten SA3s in Greater Sydney had incident rates above 30 per 1,000 people: Botany (46.0), Wyong (40.3), Richmond – Windsor (37.7), Sydney Inner City (37.3), Gosford (36.0), Mount Druitt (33.7), Campbelltown (33.4), Liverpool (32.1), Merrylands – Guildford (30.8), and Penrith (30.2) (Figure 13).

Figure 13   Incident rate by statistical area level 3, per 1,000 people, Greater Sydney, October to December 2019

- ☐ 0–15 per 1,000 people
- ☐ 15–30 per 1,000 people
- ☐ 30–40 per 1,000 people
- ☐ 40–50 per 1,000 people
- ☐ 50+ per 1,000 people
- ▨ Suppressed due to small counts
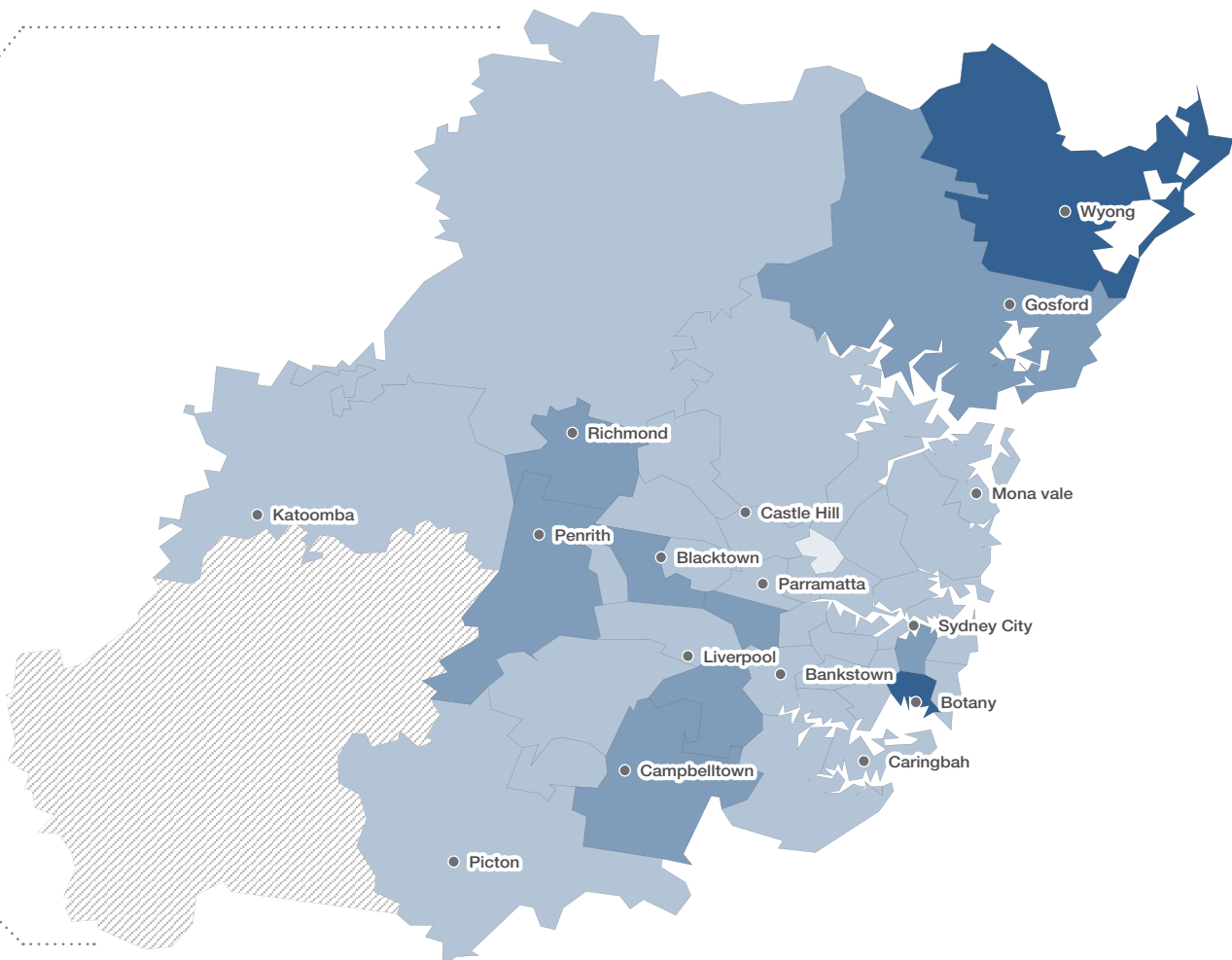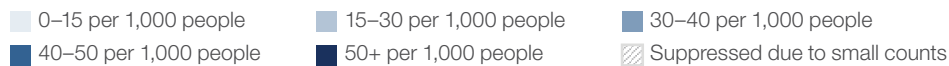
Call to ambulance arrival times

Emergency cases are classified as priority 1 (P1) by NSW Ambulance and require an immediate response under lights and siren. There were 143,844 P1 responses across NSW in the October to December 2019 quarter.

Statewide, 57.4% of P1 call to ambulance arrival times were within 15 minutes, down 3.2 percentage points compared with the same quarter the previous year (Figure 10).

Regional, rural and remote NSW

Regional, rural and remote NSW has a higher proportion of non-24-hour ambulance stations than in metropolitan Sydney, and longer distances between incidents and major hospitals, which can affect the time it takes for paramedics to reach patients.

In some of these areas, NSW Ambulance-trained first responders are also available, who can arrive on scene to deliver first aid and defibrillation before the first paramedic crew arrives, and transport patients if needed.

Two of the 43 SA3s in regional, rural and remote NSW had more than 70% of P1 call to ambulance arrival times within 15 minutes in the October to December 2019 quarter: Broken Hill and Far West (74.3%) and Armidale (72.1%). Overall, results in regional, rural and remote NSW ranged from 37.6% (Lake Macquarie – West) to 74.3% (Broken Hill and Far West) (Figure 14).

Figure 14   Percentage of emergency (P1) call to ambulance arrival times under 15 minutes by statistical area level 3, regional, rural and remote NSW, October to December 2019
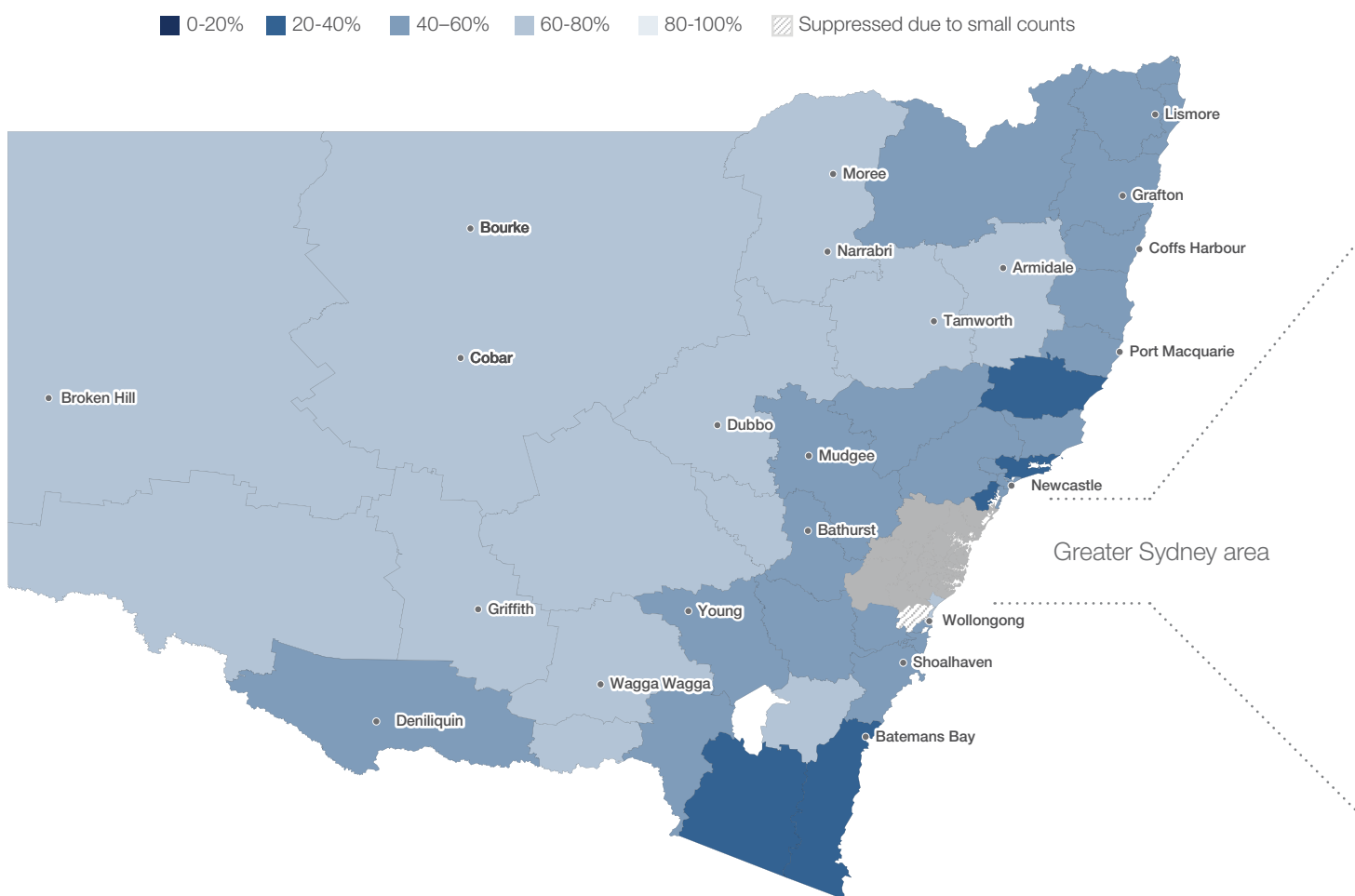
Greater Sydney area

For emergency – priority 1 (P1) cases, there were six SA3s out of 46 in Greater Sydney with more than 70% of call to ambulance arrival times within 15 minutes: Sydney Inner City (79.5%); Kogarah – Rockdale (76.9%), Cronulla – Miranda – Caringbah (75.8%), Eastern Suburbs – South (72.3%), Eastern Suburbs – North (71.8%), and Marrickville – Sydenham – Petersham (71.6%). (Figure 15).

Three SA3s in Greater Sydney had less than 30% of P1 call to ambulance arrival times within 15 minutes: Wollondily (23.9%), Dural – Wisemans Ferry (14.7%), and Hawkesbury (12.6%) (Figure 15).

Figure 15   Percentage of emergency (P1) call to ambulance arrival times under 15 minutes by statistical area level 3, Greater Sydney, October to December 2019

Admitted patient activity

Admitted patients

Admitted patient episodes can be acute (short-term admissions for immediate treatment) or non-acute (longer admissions for rehabilitation, palliative care, or other reasons). Admissions that involve treatment for mental health can be acute or non-acute.

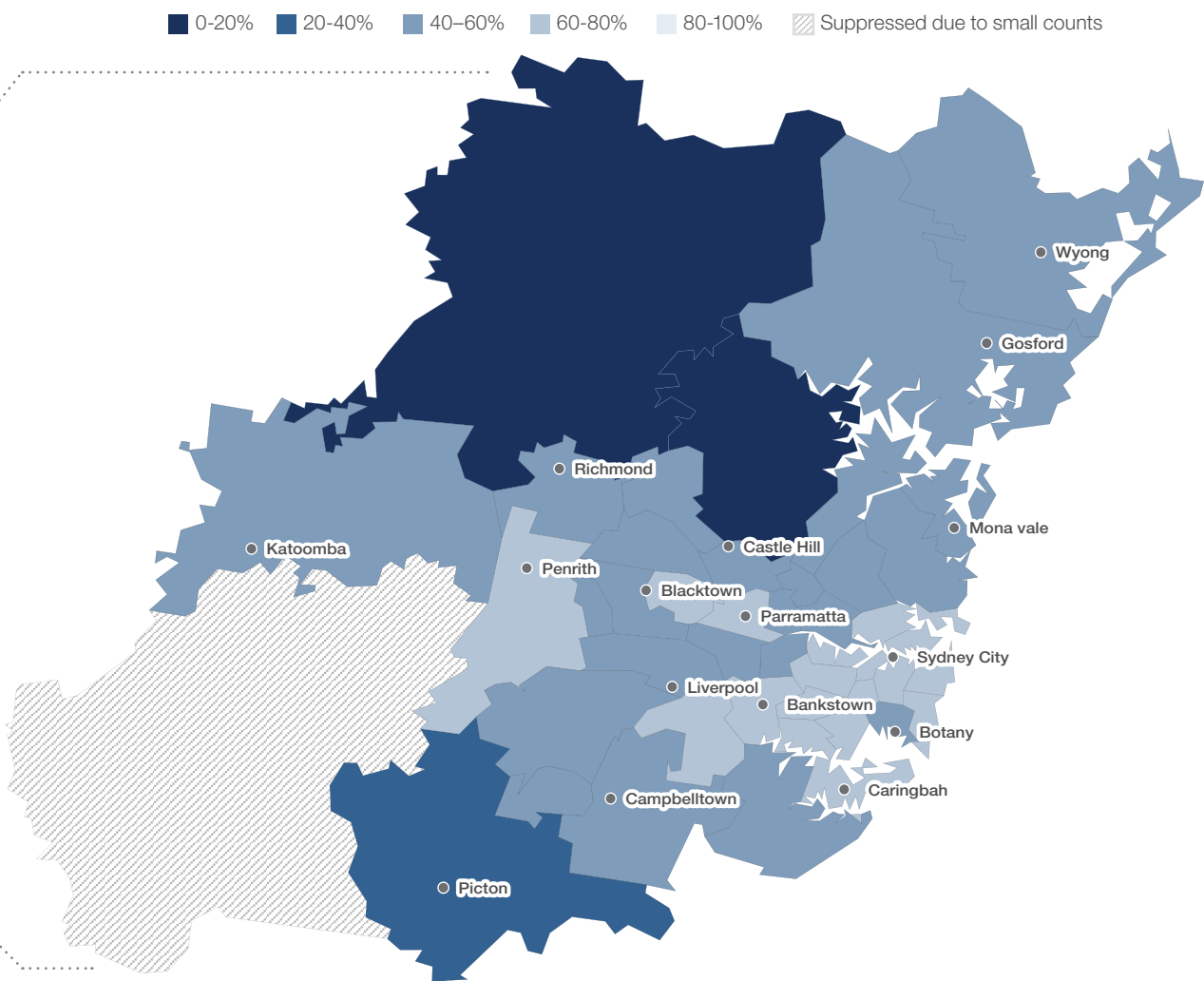There were 491,025 admitted patient episodes in NSW public hospitals in the October to December 2019 quarter – up 1.6% compared with the same quarter the previous year. Among those, 94.0% were acute admitted patient episodes, of which 52.8% were overnight episodes (Figure 16).

There were 11,527 mental health episodes in the October to December 2019 quarter (Figure 16). The use of restrictive practices in acute mental health units is reported in the seclusion and restraint section of this report (Pages 31–37).

Figure 16   Total number of admitted patient episodes, by stay type, October to December 2019

		This quarter	Same quarter previous year	Change since one year ago
All epsiodes*		491,025	483,517	1.6%
Acute	94.0%	461,749	454,341	1.6%
Non-acute	3.7%	17,749	17,650	0.6%
Mental health	2.4%	11,527	11,526	0.0%

		This quarter	Same quarter previous year	Change since one year ago
Acute				
Overnight	52.8%	243,675	242,821	0.4%
Same-day	47.2%	218,074	211,520	3.1%
Non-acute				
Overnight	83.0%	14,733	14,678	0.4%
Same-day	17.0%	3,016	2,972	1.5%
Mental Health				
Overnight	85.6%	9,870	10,091	-2.2%
Same-day	14.4%	1,657	1,435	15.5%

* Episodes of care include same day, overnight completed episodes. Non-completed episodes are excluded.

Bed days are a unit of time used to establish levels of inpatient occupancy, and are calculated for all admitted patient episodes that ended during the period. Total bed days for all admitted patient episodes were 1,722,014 in the October to December 2019 quarter – up 1.4% compared with the same quarter the previous year. Total bed days were up for acute, non-acute, and mental health admitted patient episodes (Figure 17).

Figure 17   Total number of hospital bed days, by episode type, October to December 2019

		This quarter	Same quarter previous year	Change since one year ago
Total bed days		1,722,014	1,697,654	1.4%
Acute	75.6%	1,302,279	1,292,065	0.8%
Non-acute	12.8%	221,234	220,254	0.4%
Mental health	11.5%	198,501	185,335	7.1%

Seclusion and restraint

Seclusion and restraint

Seclusion and restraint involves the use of interventions to restrict the freedom of movement of a patient. These restrictive practices are not therapeutic but may be needed to support care.

In NSW, there are 47 public hospitals with specialised acute mental health units that treat patients with varying severities of mental illness. There are Mental Health Intensive Care Units (MHICUs) in six of these hospitals, providing treatment for patients with a higher level of clinical severity and complexity who are more likely to experience seclusion and restraint.

The Justice Health and Forensic Mental Health Network (JHFMHN) provides specialised mental health services for forensic patients. JHFMHN is reported separately and not included in NSW totals to acknowledge the differences in model of care and the patient cohort.

BHI does not report on seclusion and restraint events in non-acute specialised mental health inpatient units or in emergency departments.

Most episodes of care in acute mental health units did not have a seclusion or restraint event in the October to December 2019 quarter (Figure 18).

The percentage of acute mental health episodes of care with at least one seclusion event was 3.3%, down 0.5 percentage point compared with the same quarter the previous year (Figure 18, Table 3).

The percentage of acute mental health episodes of care with at least one physical restraint event was 4.5%, up 0.3 percentage points compared with the same quarter the previous year (Figure 18, Table 3).

There is variability across public hospitals in the use of these interventions (Table 3).

A **seclusion event** occurs when a patient is placed alone in a room or an area at any time of day or night, with no freedom of exit. The duration of the event, or the size and type of area in which a patient is confined is not relevant in determining what is or is not seclusion.

A **restraint event** occurs when the patient's freedom of movement is restricted by physical means (i.e. the hands-on immobilisation by health care staff), or mechanical means (i.e. application of devices).

Figure 18   Percentage of episodes of care in specialised acute mental health inpatient units with one or more seclusion events or physical restraint events, October to December 2019*

3.3% with ≥1 **seclusion** event

| 96.7% with no **seclusion** event |
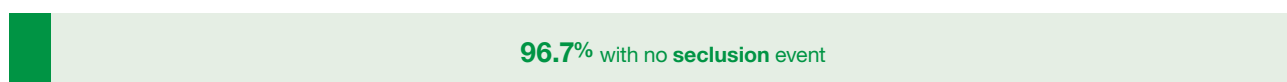
4.5% with ≥1 **physical restraint** event
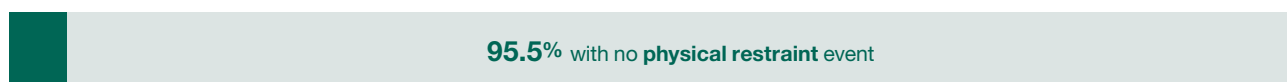
| 95.5% with no **physical restraint** event |

*BHI does not report on seclusion and restraint events in non-acute specialised mental health inpatient units or in emergency departments.

Table 3

Percentage of acute mental health episodes of care occurring in specialised acute mental health inpatient units with at least one seclusion or physical restraint event, by public hospital, October to December 2019*

Hospital	Number of acute mental health episodes of care	Seclusion		Physical restraint	
		% of episodes with at least one event	Percentage point change since one year ago	% of episodes with at least one event	Percentage point change since one year ago
NSW†	**12,293**	**3.3**	**-0.5**	**4.5**	**0.3**
Armidale	82	0	0	0	0
Bankstown–Lidcombe	237	3.8	-2.5	4.2	-3.6
Bathurst	81	0	0	0	0
Blacktown	371	1.9	-1.6	1.6	-0.9
Blue Mountains	88	0	-0.8	1.1	-2.2
Braeside	35	0	0	11.4	-2.5
Broken Hill	53	3.8	3.8	3.8	1.1
Campbelltown	528	4.0	1.5	5.9	3.2
Coffs Harbour	242	3.3	-1.0	4.1	-0.2
Dubbo	90	0	-2.0	0	-2.0
Gosford	169	0.6	-1.7	3.6	2.4
Goulburn	283	3.9	1.8	6.7	0.9
Greenwich	49	0	0	0	-1.6
John Hunter	60	0	-2.2	8.3	2.7
Kempsey	106	0	0	0	0
Lismore	224	2.2	-3.3	3.6	-5.0
Liverpool	527	4.2	0.9	3.2	-0.4
Macquarie	70	0	-1.2	2.9	-0.8
Maitland	219	5.0	0.9	5.9	2.9
Manning	107	2.8	-4.3	3.7	2.7
Morisset	15	0	0	13.3	13.3
Nepean	615	4.2	0.9	4.4	0.8
Port Macquarie	104	2.9	-1.1	0	-2.4
Royal North Shore	332	0.9	-0.4	2.1	0
Royal Prince Alfred	593	2.9	-1.5	4.4	-1.3
Shellharbour	370	6.2	-3.5	4.9	-3.0
South East Regional	99	1.0	1.0	4.0	3.2
St George	305	0	-1.6	3.9	-3.0
St Joseph's	26	0	0	0	-2.3
St Vincent's	398	1.8	-2.1	4.8	0.3
Sutherland	177	1.7	-0.8	2.8	-1.1
Sydney Children's	67	3.0	-3.1	3.0	-9.2
Tamworth	251	3.2	-1.1	4.0	-0.7
Tweed	215	2.8	-1.0	2.8	-0.6
Wagga Wagga	284	1.8	0.2	4.2	0.8
Westmead	141	0	0	4.3	2.0
Westmead Children's	55	1.8	1.8	9.1	6.2
Wollongong	321	5.3	2.1	5.0	1.8
Wyong	308	2.6	-1.6	1.6	-0.6
Concord	1,054	8.3	-0.9	6.7	0.5
Cumberland	887	5.0	-1.1	5.6	0.5
Hornsby	429	1.6	-1.1	5.8	3.3
Hunter New England Mater MH	773	3.4	1.0	5.8	2.0
Orange	334	1.5	-1.0	3.0	-0.5
Prince of Wales	519	1.2	-1.2	5.8	0.9
The Forensic Hospital†	53	17.0	-21.2	20.8	-24.7

Left margin labels: No mental health intensive care unit (Armidale–Wyong); MHICU (Concord–Prince of Wales); JH (The Forensic Hospital†)

Right margin: Seclusion and restraint

* Episodes of care include same day, overnight, completed and non-completed episodes excluding episodes at the Forensic Hospital. Episodes of care for the Forensic Hospital include same day, overnight, completed and non-completed episodes.

† Justice Health (JH) is not included in NSW totals because of the differences in model of care and the patient cohort. For more information, see *Measurement Matters – Reporting on seclusion and restraint in NSW public hospitals*.

Notes: MHICU = Mental Health Intensive Care Unit. JHFMHN = Justice Health and Forensic Mental Health Network. Manly Hospital which was closed on 30 October 2018 was excluded from NSW totals in the October to December 2019 quarter, but included in the same quarter for 2018.

Results for Northern Beaches Hospital are not included, as complete data for admissions to acute mental health units are not yet available for this hospital.

Seclusion and restraint events and rate

Seclusion and restraint interventions are not therapeutic and should only be used as a last resort when other options have been unsuccessful in maintaining safety for the patient, staff or others.

Use of seclusion and restraint in hospitals can be affected by a range of factors including the mix of patients, local models of care, staffing levels and training, and the physical environment of the unit.

Across NSW, there were 689 seclusion events in the October to December 2019 quarter, down 106 events compared with the same quarter the previous year. There were 921 physical restraint events, down 20 compared with the same quarter the previous year (Table 4).

The number of seclusion and restraint events varied across public hospitals. The highest numbers of seclusion and restraint events mostly occurred in hospitals with a MHICU and the Forensic Hospital (Table 4).

The NSW Health Performance Framework includes two key performance indicators (KPIs) related to the use of restrictive practices – the rate and duration of seclusion.

The KPI target for rate of seclusion in 2019–20 is less than 5.1 per 1,000 bed days for each hospital.

In the October to December 2019 quarter, the NSW rate of seclusion was 5.3, down 0.8 compared with the same quarter the previous year (Table 4).

The rate of seclusion was below 5.1 per 1,000 bed days in 30 hospitals. The rate was 5.1 or above in 15 hospitals: Concord (12.8); Shellharbour (12.7); Wollongong (10.7); Gosford (9.9); Broken Hill (8.6); Liverpool (8.6); Goulburn (8.5); Sydney Children's (8.0); Bankstown–Lidcombe (7.7), Maitland (6.9); Cumberland (6.8); Campbelltown (6.2); Wyong (6.2); Tamworth (6.0); and Nepean (5.8) (Table 4).

Statewide, the rate of physical restraint was 7.1, relatively stable compared with the same quarter the previous year (Table 4).

There were 27 mechanical restraint events in NSW public hospitals with specialised acute mental health units (excluding the Forensic Hospital). This was down by five events compared with the same quarter the previous year (data not shown by hospital due to small numbers). At the Forensic Hospital, there were 130 mechanical restraint events, up by 95 events compared with the same quarter the previous year.

For more information on analyses of seclusion and restraint, see *Measurement Matters: Reporting on seclusion and restraint in NSW public hospitals*. **bhi.nsw.gov.au/BHI_reports/ measurement_matters**

Table 4

Number of seclusion and physical restraint events occurring in specialised acute mental health inpatient units, by public hospital, October to December 2019

Hospital	Seclusion			Physical restraint		
	Total number of seclusion events	Change in events since one year ago	Rate per 1,000 bed days	Total number of physical restraint events	Change in events since one year ago	Rate per 1,000 bed days
NSW†	**689**	**-106**	**5.3**	**921**	**-20**	**7.1**
Armidale	0	0	0	0	0	0
Bankstown–Lidcombe	22	-30	7.7	21	-35	7.4
Bathurst	0	0	0	0	0	0
Blacktown	12	-5	3.8	11	-2	3.5
Blue Mountains	0	-1	0	<5	-4	0.8
Braeside	0	0	0	20	13	13.8
Broken Hill	<5	3	8.6	<5	1	5.7
Campbelltown	36	16	6.2	49	28	8.5
Coffs Harbour	8	-13	2.5	16	-3	5.0
Dubbo	0	-2	0	0	-2	0
Gosford	23	19	9.9	16	8	6.9
Goulburn	19	8	8.5	37	18	16.5
Greenwich	0	0	0	0	-1	0
John Hunter	0	-3	0	12	-2	23.4
Kempsey	0	0	0	0	0	0
Lismore	7	-20	2.2	13	-50	4.1
Liverpool	47	26	8.6	24	-7	4.4
Macquarie	0	-1	0	<5	-1	1.9
Maitland	13	4	6.9	14	8	7.5
Manning	<5	-4	2.7	5	4	3.4
Morisset	0	0	0	<5	2	3.1
Nepean	33	-8	5.8	31	1	5.4
Port Macquarie	<5	-6	2.8	0	-7	0
Royal North Shore	<5	-3	1.1	12	4	4.3
Royal Prince Alfred	20	-34	3.6	35	-34	6.4
Shellharbour	50	-4	12.7	28	-15	7.1
South East Regional	<5	1	0.9	5	4	4.4
St George	0	-8	0	26	-9	9.4
St Joseph's	0	0	0	0	-1	0
St Vincent's	8	-11	2.9	25	-1	9.1
Sutherland	11	-13	4.9	24	-19	10.7
Sydney Children's	5	-1	8.0	7	-3	11.2
Tamworth	12	-3	6.0	14	1	7.0
Tweed	11	-1	4.9	9	-3	4.0
Wagga Wagga	8	3	2.8	21	6	7.3
Westmead	0	0	0	10	7	4.1
Westmead Children's	<5	1	1.8	19	13	34.7
Wollongong	33	14	10.7	34	11	11.0
Wyong	24	6	6.2	12	4	3.1
Concord	154	7	12.8	102	6	8.5
Cumberland	58	-2	6.8	69	19	8.1
Hornsby	10	-7	2.0	34	18	6.8
Hunter New England Mater MH	38	-9	4.7	102	45	12.6
Orange	5	-11	1.6	13	-3	4.1
Prince of Wales	7	-11	1.2	44	-30	7.5
The Forensic Hospital†	216	123	54.4	206	35	51.9

Left vertical labels: "No mental health intensive care unit" (Armidale–Wyong), "MHICU" (Concord–Prince of Wales), "JH" (The Forensic Hospital)

† Justice Health (JH) is not included in NSW totals because of the differences in model of care and the patient cohort. For more information, see *Measurement Matters: Reporting on seclusion and restraint in NSW public hospitals.*

Note: MHICU = Mental Health Intensive Care Unit. JHFMHN = Justice Health and Forensic Mental Health Network. Manly Hospital which was closed on 30 October 2018 was excluded from NSW totals in the October to December 2019 quarter, but included in the same quarter for 2018.

Results for Northern Beaches Hospital are not included, as complete data for admissions to acute mental health units are not yet available for this hospital.

Right margin: Seclusion and restraint

Seclusion and restraint duration

While seclusion and restraint is used to maintain safety for a patient, staff or others, the length of time that an individual is exposed to these restrictive interventions should be as short as possible.

When examining average duration of seclusion and restraint events, it should be noted that variation can be affected by a single event lasting considerably longer than others.

The NSW Health Performance KPI target for seclusion duration in 2019–20 is less than four hours for each hospital. Statewide, the average duration of a seclusion event was 6 hours and 20 minutes in the October to December 2019 quarter, down 15 minutes compared with the same quarter the previous year (Table 5).

The average duration of seclusion events was less than four hours in 29 hospitals. The average duration was longer than four hours in 10 hospitals: Coffs Harbour (24h 5m); Concord (11h 5m); Prince of Wales (10h 47m); Cumberland (10h 32m); Liverpool (9h 53m); Tweed (9h 17m); Blacktown (8h 28m); Lismore (8h 0m); Nepean (4h 50m); and Hunter New England Mater Mental Health Centre (4h 9m) (Table 5).

In the October to December 2019 quarter, the average duration of a physical restraint event was five minutes, one minute shorter compared with the same quarter the previous year (Table 5).

The average duration of a mechanical restraint event in NSW public hospitals (excluding the Forensic Hospital) was 1 hour 12 minutes. This was down 17 minutes compared with the same quarter the previous year (data not shown by hospital due to small numbers). At the Forensic Hospital, the average duration of a mechanical restraint event was 29 minutes, down eight minutes compared with the same quarter the previous year.

For more information on analyses of seclusion and restraint, see *Measurement Matters: Reporting on seclusion and restraint in NSW public hospitals*. **bhi.nsw.gov.au/BHI_reports/measurement_matters**

Table 5 Average duration of seclusion and physical restraint events occurring in specialised acute mental health inpatient units, by public hospital, October to December 2019

Hospital	Seclusion		Physical restraint	
	Average duration	Change since one year ago	Average duration	Change since one year ago
NSW†	**6h 20m**	**-15m**	**5m**	**-1m**
Armidale	0m	0m	0m	0m
Bankstown–Lidcombe	1h 30m	-53m	1m	-1m
Bathurst	0m	0m	0m	0m
Blacktown	8h 28m	5h 14m	2m	1m
Blue Mountains	0m	§	‡	§
Braeside	0m	0m	1m	0m
Broken Hill	‡	§	‡	§
Campbelltown	1h 22m	17m	2m	0m
Coffs Harbour	24h 5m	17h 2m	4m	1m
Dubbo	0m	§	0m	§
Gosford	2h 37m	§	3m	-4m
Goulburn	43m	-1h 0m	3m	0m
Greenwich	0m	0m	0m	§
John Hunter	0m	§	4m	-7m
Kempsey	0m	0m	0m	0m
Lismore	8h 0m	5h 3m	4m	-1m
Liverpool	9h 53m	4h 42m	2m	1m
Macquarie	0m	§	‡	§
Maitland	1h 57m	-7m	6m	-8m
Manning	‡	§	9m	§
Morisset	0m	0m	‡	§
Nepean	4h 50m	-24h 0m	2m	-48m
Port Macquarie	‡	§	0m	-4m
Royal North Shore	‡	§	2m	-3m
Royal Prince Alfred	3h 47m	32m	15m	9m
Shellharbour	3h 13m	-35m	3m	0m
South East Regional	‡	§	5m	§
St George	0m	-5h 0m	1m	-1m
St Joseph's	0m	0m	0m	§
St Vincent's	42m	-1h 3m	9m	7m
Sutherland	2h 7m	21m	2m	-2m
Sydney Children's	3h 31m	2h 33m	4m	1m
Tamworth	1h 51m	-34m	3m	-5m
Tweed	9h 17m	4h 59m	1m	0m
Wagga Wagga	1h 40m	1h 2m	2m	0m
Westmead	0m	0m	1m	§
Westmead Children's	‡	§	4m	-2m
Wollongong	2h 38m	34m	4m	0m
Wyong	2h 23m	-2h 58m	4m	1m
Concord	11h 5m	1h 21m	5m	0m
Cumberland	10h 32m	-1h 38m	3m	1m
Hornsby	1h 33m	-2h 25m	8m	0m
Hunter New England Mater MH	4h 9m	-1h 43m	8m	-1m
Orange	2h 36m	1h 59m	3m	3m
Prince of Wales	10h 47m	5h 2m	3m	-3m
The Forensic Hospital†	20h 22m	-54h 6m	4m	-1m

Row group labels (left margin): No mental health intensive care unit (Armidale–Wyong); MHICU (Concord–Prince of Wales); JH (The Forensic Hospital).

† Justice Health (JH) is not included in NSW totals because of the differences in model of care and the patient cohort. For more information, see *Measurement Matters: Reporting on seclusion and restraint in NSW public hospitals.*

‡ Suppressed due to small number of seclusion/physical restraint events in the reporting period, to protect patient privacy.

§ Suppressed due to small number of seclusion/physical restraint events in the reporting period or in the same quarter the previous year, to protect patient privacy.

Note: MHICU = Mental Health Intensive Care Unit. JHFMHN = Justice Health and Forensic Mental Health Network. Manly Hospital which was closed on 30 October 2018 was excluded from NSW totals in the October to December 2019 quarter, but included in the same quarter for 2018.

Results for Northern Beaches Hospital are not included, as complete data for admissions to acute mental health units is not yet available for this hospital.

Elective surgery activity and performance

Elective surgery

In the October to December 2019 quarter, 57,614 elective surgical procedures were performed, up 2.4% compared with the same quarter the previous year (Figure 19).

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. More than half (54.8%) of all procedures performed this quarter were either urgent or semi-urgent (Figure 19).

Of the hospitals that performed more than 500 elective surgical procedures in the October to December 2019 quarter, the number was up by more than 10% in eight hospitals and down by more than 10% in two hospitals.

Hospitals with 10% change in elective surgical procedures, compared with the same quarter the previous year

Hospital	Peer group	Number of procedures	Change (%)
The Tweed	B	1022	19.8
Blacktown	B	899	18.3
Sydney Children's	A2	925	16.1
Belmont	C1	822	15.3
Wollongong	A1	1767	13.9
Liverpool	A1	2124	11.1
Grafton	C1	563	10.8
Campbelltown	B	1336	10.4
Coffs Harbour	B	797	-10.9
Shoalhaven	B	771	-17.7

Figure 19   Elective surgical procedures performed, by urgency category, October to December 2019

	This quarter	Same quarter previous year	Change since one year ago
Total number of elective surgical procedures	57,614	56,267	2.4%
Urgent — 22.9%	13,179	12,520	5.3%
Semi-urgent — 31.9%	18,391	18,882	-2.6%
Non-urgent — 40.4%	23,258	22,046	5.5%
Staged* — 4.8%	2,786	2,819	-1.2%

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

Elective surgery waiting time by urgency category

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

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. Most procedures (95.7%) were performed within recommended timeframes (Figure 20).

Compared with the same quarter the previous year, median waiting times in the October to December 2019 quarter were 11 days for urgent (up one day), 46 days for semi-urgent (up two days) and 237 days for non-urgent procedures (up 15 days) (Figure 20).

Figure 20   Percentage of elective surgical procedures performed on time and waiting times, by urgency category, October to December 2019

		This quarter	Same quarter previous year	Percentage point change since one year ago
All procedures		95.7%	97.4%	-1.7
Urgent	Recommended: 30 days	99.9%	99.9%	0.0
Semi-urgent	Recommended: 90 days	96.0%	97.5%	-1.5
Non-urgent	Recommended: 365 days	93.1%	95.8%	-2.7

		This quarter	Same quarter previous year	Change since one year ago
Urgent: 13,179 patients				
Median time to receive surgery		11 days	10 days	1 day
90th percentile time to receive surgery		26 days	26 days	0 days
Semi-urgent: 18,391 patients				
Median time to receive surgery		46 days	44 days	2 days
90th percentile time to receive surgery		84 days	83 days	1 day
Non-urgent: 23,258 patients				
Median time to receive surgery		237 days	222 days	15 days
90th percentile time to receive surgery		361 days	356 days	5 days

Elective surgery activity and performance

Percentage of elective surgery on time

The hospital-level results for this quarter are presented on two axes: the percentage of elective surgical procedures performed on time (Y-axis), and the percentage point change since the same quarter the previous year (X-axis). For hospitals shown above the blue NSW line, a higher percentage of procedures were performed on time this quarter compared with the overall NSW result. Hospitals are named if they had more than a five percentage point change in performance (Figure 21).

In the October to December 2019 quarter, the percentage of elective surgical procedures performed on time for different specialities ranged from 89.2% for ear, nose and throat surgey to 98.5% for medical procedures (Figure 22).

The percentage of elective surgical procedures performed on time for different common procedures ranged from 69.1% for myringoplasty/tympanoplasty to 98.2% for myringotomy. The percentage of myringoplasty/tympanoplasty performed on time was down 15.1 percentage points compared with the same quarter the previous year (Figure 23).

Figure 21   Percentage of elective surgical procedures performed on time and percentage point change since the same quarter the previous year, hospitals by peer group, October to December 2019
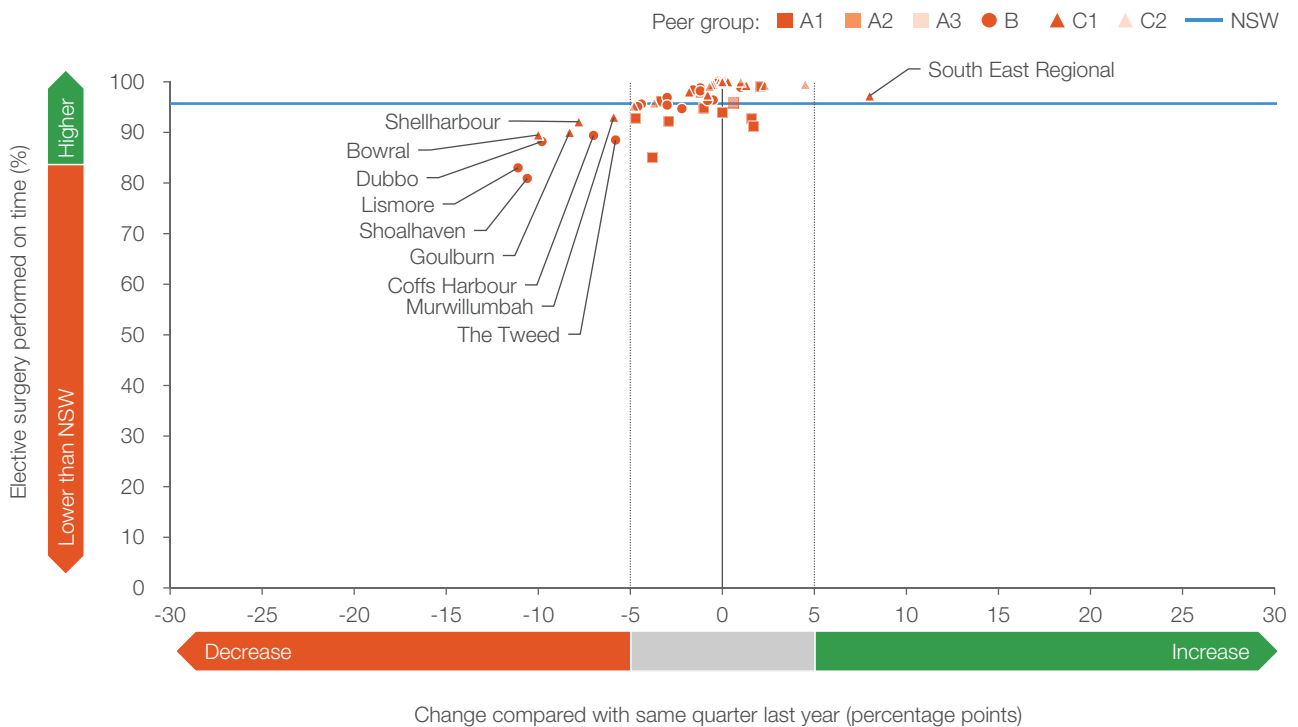
Figure 22   Percentage of elective surgical procedures performed on time, by specialty, October to December 2019

	Number of procedures	Percentage on time		Same quarter previous year	Percentage point change since one year ago
Medical	546		98.5%	99.2%	-0.7
Vascular surgery	1,671		98.3%	98.8%	-0.5
Gynaecology	7,411		97.5%	98.6%	-1.1
Cardiothoracic surgery	953		97.1%	98.3%	-1.2
Neurosurgery	1,155		97.1%	96.3%	0.8
Urology	8,284		97.1%	96.9%	0.2
General surgery	13,618		96.6%	98.4%	-1.8
Ophthalmology	7,987		96.0%	99.3%	-3.3
Plastic surgery	2,690		95.6%	96.8%	-1.2
Orthopaedic surgery	9,094		93.8%	95.2%	-1.4
Ear, nose and throat surgery	4,205		89.2%	93.0%	-3.8

Figure 23   Percentage of elective surgical procedures performed on time, by common procedure, October to December 2019

	Number of procedures	Percentage on time		Same quarter previous year	Percentage point change since one year ago
Myringotomy	55		98.2%	100.0%	-1.8
Hysteroscopy	2,544		97.8%	98.7%	-0.9
Other - General	1,643		97.3%	98.7%	-1.4
Cystoscopy	3,308		97.0%	97.6%	-0.6
Varicose veins stripping and ligation	281		96.4%	97.3%	-0.9
Coronary artery bypass graft	184		96.1%	96.4%	-0.3
Cataract extraction	6,442		95.7%	99.4%	-3.7
Haemorrhoidectomy	327		95.7%	97.7%	-2.0
Inguinal herniorrhaphy	1,396		94.9%	97.5%	-2.6
Cholecystectomy	1,494		94.7%	98.7%	-4.0
Abdominal hysterectomy	612		94.3%	97.2%	-2.9
Prostatectomy	676		93.8%	93.1%	0.7
Total hip replacement	1,051		89.3%	94.2%	-4.9
Total knee replacement	1,660		88.7%	92.4%	-3.7
Tonsillectomy	1,293		88.5%	93.4%	-4.9
Septoplasty	456		81.1%	87.6%	-6.5
Myringoplasty / Tympanoplasty	97		69.1%	84.2%	-15.1

Elective surgery activity and performance

Elective surgery waiting time by specialty and procedure

The median waiting time refers to the number of days it took for half of patients to be admitted to hospital and undergo surgery. The other half of patients waited the same amount of time or longer.

In the October to December 2019 quarter, the median waiting time for different specialties ranged from 14 days for medical procedures to 237 days for ophthalmology surgery. The median waiting time for ophthalmology surgery was up 34 days compared with the same quarter the previous year (Figure 24).

The median waiting time for different common procedures ranged from 23 days for coronary artery bypass graft procedures to 330 days for myringoplasty/tympanoplasty. The median waiting time for myringoplasty/tympanoplasty was up 49 days compared with the same quarter the previous year (Figure 25).

Figure 24   **Median waiting time for patients who received elective surgery, by specialty, October to December 2019**

	Number of procedures	This quarter	Same quarter previous year	Change since one year ago
Ophthalmology	7,987	237 days	203 days	34 days
Ear, nose and throat surgery	4,205	180 days	156 days	24 days
Orthopaedic surgery	9,094	98 days	105 days	-7 days
Gynaecology	7,411	42 days	36 days	6 days
General surgery	13,618	41 days	33 days	8 days
Neurosurgery	1,155	39 days	36 days	3 days
Urology	8,284	32 days	35 days	-3 days
Plastic surgery	2,690	28 days	38 days	-10 days
Cardiothoracic surgery	953	20 days	22 days	-2 days
Vascular surgery	1,671	20 days	20 days	0 days
Medical	546	14 days	20 days	-6 days

Figure 25 Median waiting time for patients who received elective surgery, by common procedure, October to December 2019

	Number of procedures	This quarter	Same quarter previous year	Change since one year ago
Myringoplasty / Tympanoplasty	97	330 days	281 days	49 days
Septoplasty	456	326 days	333 days	-7 days
Total knee replacement	1,660	282 days	264 days	18 days
Tonsillectomy	1,293	274 days	297 days	-23 days
Cataract extraction	6,442	272 days	237 days	35 days
Total hip replacement	1,051	194 days	203 days	-9 days
Varicose veins stripping and ligation	281	173 days	186 days	-13 days
Myringotomy	55	81 days	78 days	3 days
Inguinal herniorrhaphy	1,396	77 days	74 days	3 days
Abdominal hysterectomy	612	71 days	56 days	15 days
Haemorrhoidectomy	327	71 days	65 days	6 days
Prostatectomy	676	65 days	64 days	2 days
Cholecystectomy	1,494	57 days	51 days	6 days
Hysteroscopy	2,544	41 days	35 days	6 days
Cystoscopy	3,308	28 days	29 days	-1 day
Other - General	1,643	24 days	22 days	2 days
Coronary artery bypass graft	184	23 days	29 days	-6 days

Elective surgery activity and performance

End of quarter elective surgery waiting list

The waiting list is dynamic and the information about the number of patients still waiting for surgery is a snapshot of the list on a single day. In this case, it is the number of patients who were ready for surgery on the last day of the quarter. A patient would not be considered ready for surgery if, for example, they were receiving a staged procedure (i.e. their medical condition does not require, or is not amenable to, surgery until a future date) or the patient is unavailable for personal reasons.

There were 88,247 patients on the elective surgery waiting list as at 31 December 2019, up 9.4% compared with the same quarter the previous year. The number of patients on the waiting list was up across all urgency categories: 0.6% for urgent surgery, 7.1% for semi-urgent surgery and 10.0% for non-urgent surgery (Figure 26).

There were 802 patients still waiting after more than 12 months on the waiting list, up 374 compared with the same quarter the previous year. Four specialties saw an increase of more than 10% in the number of patients on the waiting list at the end of quarter: gynaecology (19.0%), cardiothoracic surgery (14.1%), opthalmology (12.8%), and general surgery (10.1%). Medical procedures saw a decrease of 10.2% in the number of patients on the waiting list at the end of the quarter (Figure 27).

Nine common procedures saw an increase of more than 10% in the number of patients on the waiting list at the end of the quarter: coronary artery bypass graft (51.1%), abdominal hysterectomy (36.5%), cystoscopy (17.9%), myringoplasty/tympanoplasty (15.6%), inguinal herniorrhaphy (14.5%), 'other-general' procedures (13.8%), haemorrhoidectomy (13.7%), cataract extraction (13.2%), and and hysteroscopy (12.5%) (Figure 28).

Figure 26   Elective surgery waiting list, by urgency category, as at 31 December 2019

		This quarter	Same quarter previous year	Change since one year ago
Patients ready for surgery on waiting list as at 31 December 2019		88,247	80,642	9.4%
Urgent	1.1%	945	939	0.6%
Semi-urgent	14.3%	12,624	11,785	7.1%
Non-urgent	84.6%	74,678	67,918	10.0%
Patients not ready for surgery on waiting list at the end of quarter		16,649	15,851	5.0%

Figure 27 Patients on elective surgery waiting list at end of quarter, and patients still waiting after more than 12 months on waiting list at end of quarter, by specialty, as at 31 December 2019

	Patients on waiting list at end of quarter			Patients still waiting after more than 12 months	
	This quarter	Same quarter previous year	Percentage change since one year ago	This quarter	Same quarter previous year
All specialties	**88,247**	**80,642**	**9.4**	**802**	**428**
Ophthalmology	22,551	19,999	12.8	76	10
Orthopaedic surgery	21,097	19,586	7.7	306	193
General surgery	14,870	13,500	10.1	108	30
Ear, nose and throat surgery	11,331	10,648	6.4	224	142
Gynaecology	7,681	6,454	19.0	38	7
Urology	4,900	4,529	8.2	26	9
Plastic surgery	2,325	2,509	-7.3	5	21
Neurosurgery	1,637	1,693	-3.3	7	14
Vascular surgery	1,147	1,047	9.6	8	<5
Cardiothoracic surgery	469	411	14.1	<5	0
Medical	239	266	-10.2	<5	0

Figure 28 Patients on elective surgery waiting list at end of quarter, and patients still waiting after more than 12 months on waiting list at end of quarter, by common procedure, as at 31 December 2019

	Patients on waiting list at end of quarter			Patients still waiting after more than 12 months	
Procedure	This quarter	Same quarter previous year	Percentage change since one year ago	This quarter	Same quarter previous year
Cataract extraction	19,760	17,458	13.2	57	0
Total knee replacement	6,649	6,061	9.7	106	90
Tonsillectomy	4,239	4,058	4.5	47	40
Total hip replacement	2,990	2,729	9.6	44	33
Inguinal herniorrhaphy	2,622	2,290	14.5	26	8
Hysteroscopy	2,015	1,791	12.5	8	0
Cholecystectomy	1,747	1,755	-0.5	<5	7
Septoplasty	1,636	1,634	0.1	52	25
Other - General	1,385	1,217	13.8	9	<5
Cystoscopy	1,278	1,084	17.9	0	0
Abdominal hysterectomy	1,044	765	36.5	<5	<5
Prostatectomy	839	791	6.1	7	<5
Varicose veins stripping and ligation	685	662	3.5	<5	0
Haemorrhoidectomy	513	451	13.7	8	<5
Myringoplasty / Tympanoplasty	414	358	15.6	11	11
Coronary artery bypass graft	133	88	51.1	0	0
Myringotomy	75	83	-9.6	<5	0

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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