

Activity and performance

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

January to March 2020



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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.

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 January to March 2020, an unprecedented quarter for the people of the state and their healthcare system.

At the beginning of 2020, the bushfire crisis was at its peak and continued through January, making it the most devastating bushfire season on record.

Meanwhile, what would eventually become the COVID-19 pandemic was continuing to develop overseas and would go on to dramatically and rapidly change the world we live in well before the end of March.

Healthcare workers in public health, community care, NSW Ambulance and hospitals are on the frontline, responding to an ongoing series of challenges never experienced before while continuing to care for patients.

“ The majority of people confirmed to have contracted COVID-19, have remained outside of hospital settings, including ‘health hotels’ and at home, to recover. ”

The relationship between each of these crises and the impact on the activity and performance measures in this report is far from straightforward. As I outlined previously in relation to the October to December 2019 quarter, there were a range of factors at play in bushfire-affected areas that may have reduced hospital and ambulance demand, including road closures, holidaymakers staying away and people with less urgent health issues avoiding emergency departments (EDs).

The impact of COVID-19 on activity and performance is also not straightforward. The arrival of COVID-19 has had far-reaching impacts on the way people live their lives, from rigorous hand hygiene to social distancing, alongside the many other actions taken to protect the health and safety of the community.

At the same time, the health system shifted into emergency response mode, including freeing up capacity in hospitals and making significant changes in service delivery, from the rapid introduction of new virtual models of care to the establishment of dedicated COVID-19 testing clinics. From 26 March, non-urgent elective surgery was suspended.

The majority of people confirmed to have contracted COVID-19, have remained outside of hospital settings, including ‘health hotels’ and at home, to recover. While, sadly, people have also required care in intensive care units (ICUs) and there has been tragic loss of life, the scale of the impact of the virus on both the population and health services has been far less than initially feared, thanks primarily to the efforts and sacrifices of the people of NSW.

Overall, the full scale of the impact of COVID-19 on activity and performance measures for the full January to March quarter is not always easily discernible, including at a local level. Due to the many factors at play, primarily the significant changes to how health services are delivered and how we all live our lives, caution should also be taken when comparing the results of January to March 2020 with the first quarter of previous years, whether those results compare favourably or not. These comparisons will continue to need to be addressed with caution in future quarters.

The *COVID-19 Supplement* released with this report provides additional information on hospital and ambulance activity at NSW level during March, when cases peaked. This is intended to provide greater insights into the impact of the pandemic on the public health system.

Now more than ever, it is vital that the Bureau of Health Information (BHI) continues to report on the performance of the NSW public healthcare system, providing transparency for the wider community and providing useful information to healthcare professionals making critical decisions about the management of their services, to ensure that patients in NSW receive the best possible experiences and outcomes of care during this very difficult period.

Dr Diane Watson

Chief Executive, Bureau of Health Information

10 key findings

January to March 2020

- 1 There were 764,658 emergency department attendances in the January to March 2020 quarter, up 1.1% (8,581) compared with the same quarter the previous year.**
Triage category 5 (non-urgent) saw the largest change in emergency presentations, up 27.0% (19,219) to 90,271 presentations.
- 2 More than seven in 10 emergency department patients (74.1%) were treated within clinically recommended time frames.** This was 2.1 percentage points higher than the same quarter the previous year (72.0%).
- 3 Around seven in 10 patients (70.6%) spent four hours or less in the emergency department, unchanged from the same quarter the previous year.** The median time patients spent in the emergency department was 2 hours and 47 minutes, down 7 minutes.
- 4 The percentage of patients who had their care transferred from paramedics to hospital staff within 30 minutes was 88.5%, down 0.3 percentage points.** The number of arrivals to emergency departments by ambulance was up 1.1% (1,884) to 172,250 arrivals.
- 5 The number of ambulance responses, where a vehicle was dispatched, remained stable at 309,528 (up 0.6%) compared with the same quarter the previous year.** Cases classified as emergencies (priority 1) were up 2.8% (3,776) to 140,044 responses.
- 6 Paramedics reached more than five in 10 (55.3%) emergency (priority 1) cases within 15 minutes, down 4.6 percentage points.** The percentage of urgent (priority 2) cases reached within 30 minutes was down 4.8 percentage points to 63.2%.
- 7 The median response time for life-threatening (priority 1A) cases was 7.8 minutes, up 0.3 minutes.** The number of responses to life-threatening cases was up 5.3% (339) to 6,719 responses.
- 8 There were 732 seclusion events (up 146) and 909 physical restraint events (up 69) in specialised acute mental health inpatient units.** The average duration of seclusion events was 6 hours and 21 minutes, up 30 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 50,810, down 4.4% (2,325) compared with the same quarter the previous year.** The number of urgent procedures was up 2.6%, while the numbers of semi-urgent and non-urgent procedures were down 3.8% and 7.3%, respectively.
- 10 The median waiting times for elective surgery were 10 days for urgent procedures (unchanged), 50 days for semi-urgent procedures (up three days) and 260 days for non-urgent procedures (up 29 days).** Most elective surgical procedures (93.9%) were performed within clinically recommended time frames.

Healthcare Quarterly – Activity

Emergency department activity		January to March 2020	January to March 2019	Difference	% change
All arrivals at NSW EDs by ambulance		172,250	170,366	1,884	1.1%
ED attendances		764,658	756,077	8,581	1.1%
Emergency presentations		742,458	729,870	12,588	1.7%
Triage category	T1: Resuscitation	5,312	5,013	299	6.0%
	T2: Emergency	94,052	94,231	-179	-0.2%
	T3: Urgent	253,161	255,889	-2,728	-1.1%
	T4: Semi-urgent	299,662	303,685	-4,023	-1.3%
	T5: Non-urgent	90,271	71,052	19,219	27.0%
Admissions to hospital from NSW EDs		182,226	191,015	-8,789	-4.6%

Ambulance activity		January to March 2020	January to March 2019	Difference	% change
Calls		326,601	309,011	17,590	5.7%
Responses		309,528	307,749	1,779	0.6%
Priority category	P1: Emergency	140,044	136,268	3,776	2.8%
	P1A: Highest priority	6,719	6,380	339	5.3%
	P2: Urgent	147,517	148,355	-838	-0.6%
	P3: Time-critical	13,704	14,402	-698	-4.8%
	P4–9: Non-emergency	8,263	8,718	-455	-5.2%
Incidents		244,797	238,771	6,026	2.5%
Patient transports		185,072	183,604	1,468	0.8%

Admitted patient activity		January to March 2020	January to March 2019	Difference	% change
All admitted patient episodes		460,964	469,601	-8,637	-1.8%
Acute episodes		433,097	441,141	-8,044	-1.8%
Overnight episodes		228,459	237,398	-8,939	-3.8%
Same-day episodes		204,638	203,743	895	0.4%
Non-acute episodes		16,599	16,981	-382	-2.2%
Mental health episodes		11,268	11,479	-211	-1.8%
All episodes		3.6	3.5	0.1	
Average length of stay (days)	Acute episodes	2.9	2.9	0.0	
	Non-acute episodes	13	12.4	0.6	
	Mental health episodes	19.7	16.5	3.2	
All bed days		1,679,252	1,660,172	19,080	1.1%
Hospital bed days	Acute bed days	1,242,311	1,260,440	-18,129	-1.4%
	Non-acute bed days	215,479	209,907	5,572	2.7%
	Mental health bed days	221,462	189,825	31,637	16.7%
Babies born in NSW public hospitals		17,750	17,985	-235	-1.3%

Elective surgery activity		January to March 2020	January to March 2019	Difference	% change
Elective surgical procedures performed		50,810	53,135	-2,325	-4.4%
Urgency category	Urgent surgery	10,906	10,633	273	2.6%
	Semi-urgent surgery	16,390	17,040	-650	-3.8%
	Non-urgent surgery	20,837	22,467	-1,630	-7.3%
Patients on waiting list ready for elective surgery at end of quarter		90,602	83,510	7,092	8.5%
Urgency category	Urgent surgery	1,782	2,020	-238	-11.8%
	Semi-urgent surgery	12,734	12,734	0	0.0%
	Non-urgent surgery	76,086	68,756	7,330	10.7%

Note: Ambulance activity data do not include outage estimates. Data drawn on: 24 April 2020 (Emergency department), 10 April 2020 (Ambulance), 22 April 2020 (Admitted patients), 21 April 2020 (Elective surgery).

Healthcare Quarterly – Performance

Emergency department performance			January to March 2020	January to March 2019	Difference
Percentage of patients transferred from ambulance to ED within 30 minutes			88.5%	88.8%	-0.3 percentage points
Time to treatment by triage category	T2: Emergency	Median	9 mins	9 mins	0 mins
		90th percentile	26 mins	27 mins	-1 mins
	T3: Urgent	Median	21 mins	21 mins	0 mins
		90th percentile	72 mins	78 mins	-6 mins
	T4: Semi-urgent	Median	26 mins	28 mins	-2 mins
		90th percentile	104 mins	112 mins	-8 mins
	T5: Non-urgent	Median	20 mins	24 mins	-4 mins
		90th percentile	96 mins	109 mins	-13 mins
All patients			74.1%	72.0%	2.1 percentage points
Percentage of patients whose treatment started on time	T2: Emergency (Recommended: 80% in 10 minutes)		62.4%	63.2%	-0.8 percentage points
	T3: Urgent (Recommended: 75% in 30 minutes)		68.7%	66.7%	2.0 percentage points
	T4: Semi-urgent (Recommended: 70% in 60 minutes)		77.3%	75.1%	2.2 percentage points
	T5: Non-urgent (Recommended: 70% in 120 minutes)		93.8%	92.1%	1.7 percentage points
Median time spent in the ED			2h 47m	2h 54m	-7 mins
90th percentile time spent in the ED			7h 31m	7h 32m	-1 mins
Percentage of patients who spent four hours or less in the ED			70.6%	70.6%	0 percentage points

Ambulance performance			January to March 2020	January to March 2019	Difference
Call to ambulance arrival time					
Percentage of P1 call to ambulance arrival within 15 minutes			55.3%	59.9%	-4.6 percentage points
Percentage of P1 call to ambulance arrival within 30 minutes			91.9%	93.4%	-1.5 percentage points
Percentage of P2 call to ambulance arrival within 30 minutes			63.2%	68.0%	-4.8 percentage points
Percentage of P2 call to ambulance arrival within 60 minutes			87.8%	91.8%	-4.0 percentage points
Response time					
Percentage of P1A responses within 10 minutes			68.5%	71.6%	-3.1 percentage points

Elective surgery performance		January to March 2020	January to March 2019	Difference
Median waiting time (days)	Urgent surgery	10 days	10 days	0 days
	Semi-urgent surgery	50 days	47 days	3 days
	Non-urgent surgery	260 days	231 days	29 days
	All surgeries	93.9%	96.4%	-2.5 percentage points
Elective surgeries performed on time	Urgent surgery (Recommended: 30 days)	99.9%	99.9%	0.0 percentage points
	Semi-urgent surgery (Recommended: 90 days)	92.7%	95.8%	-3.1 percentage points
	Non-urgent surgery (Recommended: 365 days)	91.8%	95.2%	-3.4 percentage points

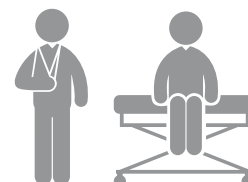
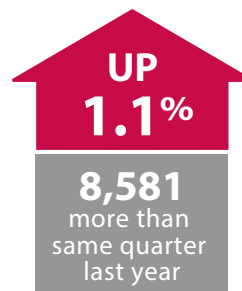
Notes: Data drawn on: 24 April 2020 (Emergency department), 10 April 2020 (Ambulance), 21 April 2020 (Elective surgery).

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. Time frames to treat other triage categories are recommended by the Australasian College for Emergency Medicine.

In the January to March 2020 quarter...

Emergency department

There were **764,658**
emergency department attendances



74.1% of patients' treatment
started on time



70.6% of patients spent
four hours or less in the
emergency department

UNCHANGED

Ambulance

There were **309,528**
ambulance responses



55.3% of priority 1 cases had a
call to ambulance arrival time
of 15 minutes or less



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



Admitted patients

There were **460,964**
admitted patient episodes of care

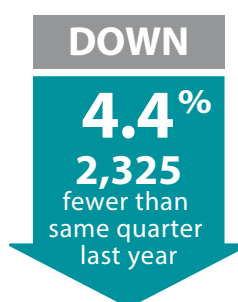


52.8%
of acute admitted patient
episodes were for overnight stays



Elective surgery

There were **50,810**
elective surgical
procedures performed



Most (93.9%) were performed within
recommended time frames

Median waiting times remained unchanged
for urgent (10 days), increased by three days
for semi-urgent (50 days), and by 29 days for
non-urgent procedures (260 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 24 April 2020
- **NSW Ambulance Computer Aided Dispatch (CAD) system** – provided on 10 April 2020
- **Admitted Patient Data Collection (APDC)** – data drawn from the HIE on 22 April 2020
- **Seclusion and Restraint Data Collection** – data drawn from the HIE on 22 April 2020, and manually collected measures received from InforMH, System Information and Analytics Branch, Ministry of Health on 5 May 2020
- **Waiting List Collection Online System (WLCOS)** – data drawn on 21 April 2020.

Hospital data are transmitted by the State's hospitals to centralised data warehouses administered by the NSW Ministry of Health and are extracted by BHI from the NSW 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 percentages, 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 fewer 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 mechanical restraint, it is only reported at NSW level to respect patient privacy.

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 department (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 the 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 764,658 ED attendances in the January to March 2020 quarter across more than 170 public hospitals, up 1.1% compared with the same quarter the previous year. The number of ambulance arrivals was up 1,884 (1.1%) to 172,250 (Figure 1).

The numbers of patient presentations for triage categories 1 and 5 were higher this quarter than the same quarter the previous year. For triage categories 2 to 4, the number of patient presentations decreased this quarter compared with the same quarter the previous year. Triage 5 (non-urgent) saw the largest change in presentations, up 27.0% (19,219) to 90,271 presentations (Figure 1).

Most attendances (97.1%) were classified as emergency presentations. The remaining 22,200 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, January to March 2020

		This quarter	Same quarter previous year	Change since one year ago
ED attendances		764,658	756,077	1.1%
Emergency presentations by triage category		742,458	729,870	1.7%
Triage 1: Resuscitation	0.7%	5,312	5,013	6.0%
Triage 2: Emergency	12.7%	94,052	94,231	-0.2%
Triage 3: Urgent	34.1%	253,161	255,889	-1.1%
Triage 4: Semi-urgent	40.4%	299,662	303,685	-1.3%
Triage 5: Non-urgent	12.2%	90,271	71,052	27.0%
Ambulance arrivals		172,250	170,366	1.1%

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.

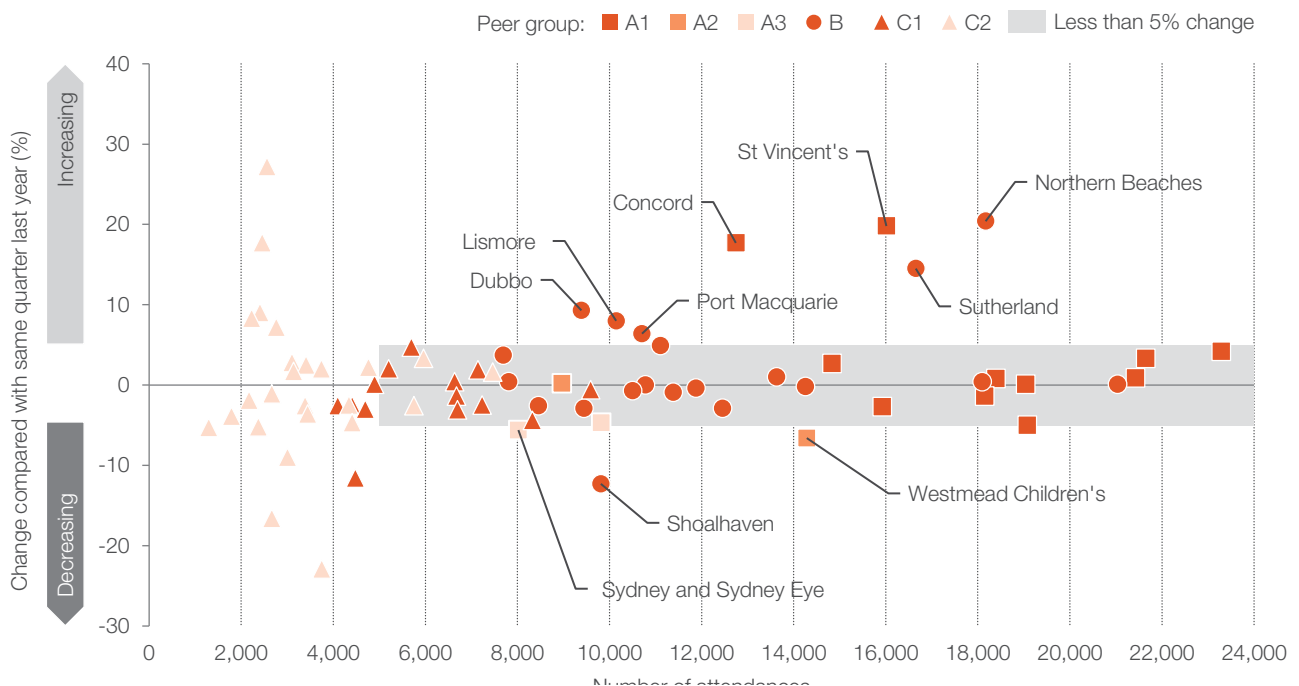
Compared with the same quarter the previous year, the number of ED attendances was higher this quarter in 39 out of the 77 large public hospital EDs reported on individually in *Healthcare Quarterly*.

Hospitals identified in Figure 2 had more than 5,000 ED attendances this quarter and more than a 5% 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 (%)
Northern Beaches	B	18,169	20.4
St Vincent's	A1	16,014	19.8
Royal Prince Alfred	A1	25,121	18.8
Concord	A1	12,744	17.7
Sutherland	B	16,652	14.5
Shoalhaven	B	9,812	-12.3

Figure 2 Change in number of emergency department attendances compared with the same quarter the previous year, hospitals by peer group, January to March 2020
















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 January to March 2020 quarter, 74.1% of ED patients' treatment started within clinically recommended time frames, 2.1 percentage points higher than the same quarter the previous year. The percentage of patients starting treatment on time was slightly lower for triage category 2, and higher for triage categories 3 to 5 (Figure 3).

The median time to treatment was unchanged for triage categories 2 and 3, and shorter for triage categories 4 and 5 compared with the same quarter the previous year. The 90th percentile time to treatment was slightly shorter across triage categories 2 to 5 (Figure 3).

Figure 3 Percentage of patients whose treatment started on time, by triage category, January to March 2020

	This quarter	Same quarter previous year	Percentage point change since one year ago
Emergency presentations	 74.1%	72.0%	2.1
Triage 2: Emergency	 62.4%	63.2%	-0.8
Triage 3: Urgent	 68.7%	66.7%	2.0
Triage 4: Semi-urgent	 77.3%	75.1%	2.2
Triage 5: Non-urgent	 93.8%	92.1%	1.7
	This quarter	Same quarter previous year	Change since one year ago
Triage 2 Emergency (e.g. chest pain, severe burns): 92,832 presentations			
Median time to start treatment	 9m	9m	0m
90th percentile time to start treatment	 26m	27m	-1m
Triage 3 Urgent (e.g. moderate blood loss, dehydration): 246,182 presentations			
Median time to start treatment	 21m	21m	0m
90th percentile time to start treatment	 1h 12m	1h 18m	-6m
Triage 4 Semi-urgent (e.g. sprained ankle, earache): 279,149 presentations			
Median time to start treatment	 26m	28m	-2m
90th percentile time to start treatment	 1h 44m	1h 52m	-8m
Triage 5 Non-urgent (e.g. small cuts or abrasions): 78,318 presentations			
Median time to start treatment	 20m	24m	-4m
90th percentile time to start treatment	 1h 36m	1h 49m	-13m

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. Time frames to treat other triage categories are recommended by the Australasian College for Emergency Medicine.

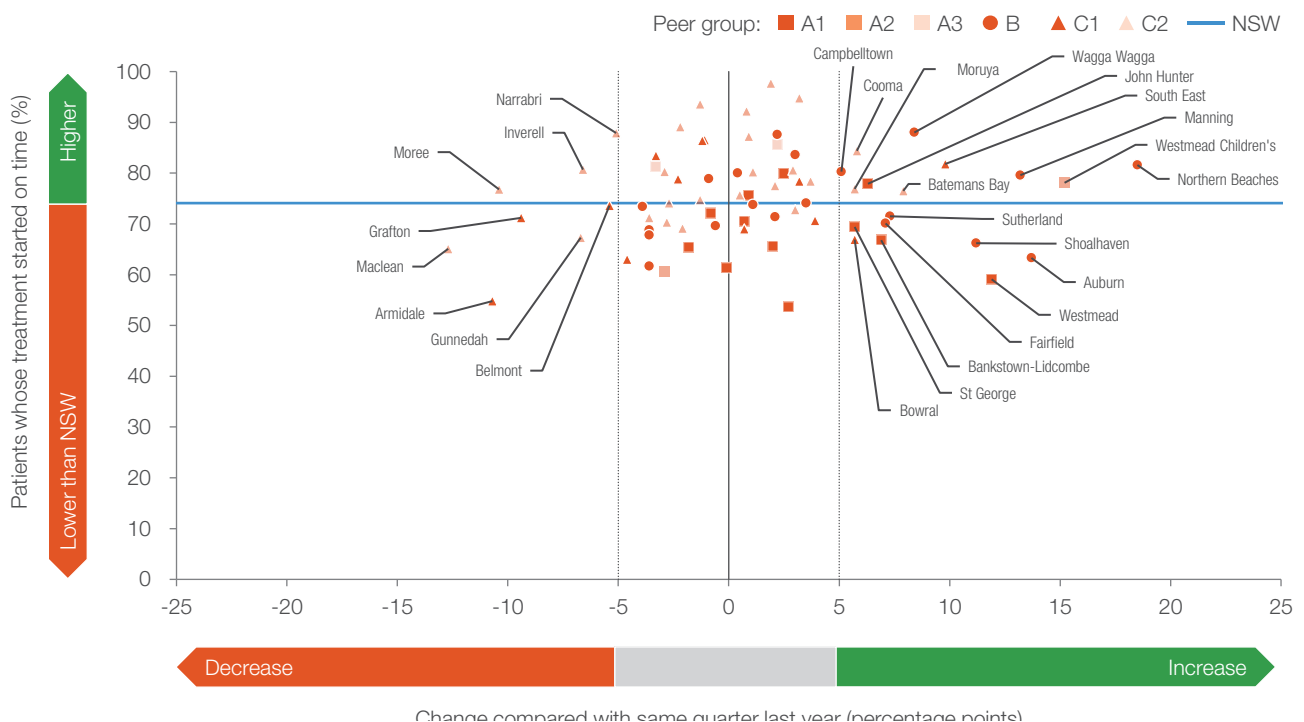
Nine hospitals saw a change of more than 10 percentage points in patients whose treatment started on time.

Figure 4 presents hospital results this quarter compared with the same quarter the previous year. Hospitals labelled had a more than 5 percentage point change in patients whose treatment started on time, compared with the same quarter the previous year. Eight hospitals had a more than 5 percentage point decrease in patients whose treatment started on time. Eighteen hospitals had a more than 5 percentage point increase in patients whose treatment started on time (Figure 4).

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
Northern Beaches	B	81.6	18.5
Westmead Children's	A2	78.1	15.2
Auburn	B	63.3	13.7
Manning	B	79.6	13.2
Westmead	A1	59.1	11.9
Shoalhaven	B	66.2	11.2
Moree	C2	76.8	-10.4
Armidale	C1	54.8	-10.7
Maclean	C2	65.1	-12.7

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, January to March 2020



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 January to March 2020 quarter, 70.6% of patients spent four hours or less in the ED, unchanged from 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. Fewer 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 3.1 percentage points to 43.2% (Figure 6).

Figure 5 Percentage of patients who presented to the emergency department, by mode of separation, January to March 2020











		This quarter	Same quarter previous year	Change since one year ago
Treated and discharged	 65.9%	504,208	484,021	4.2%
Treated and admitted to hospital	 23.8%	182,226	191,015	-4.6%
Left without, or before completing, treatment	 6.6%	50,094	50,573	-0.9%
Transferred to another hospital	 2.1%	15,698	16,772	-6.4%
Other	 1.6%	12,432	13,696	-9.2%

Figure 6 Percentage of patients who spent four hours or less in the emergency department, by mode of separation, January to March 2020

	Number	This quarter	Same quarter previous year	Change since one year ago
ED attendances	539,927	 70.6%	70.6%	0.0
Treated and discharged	410,187	 81.4%	81.5%	-0.1
Treated and admitted	69,091	 37.9%	39.4%	-1.5
Left without, or before completing, treatment	42,544	 84.9%	85.7%	-0.8
Transferred to another hospital	6,778	 43.2%	46.3%	-3.1

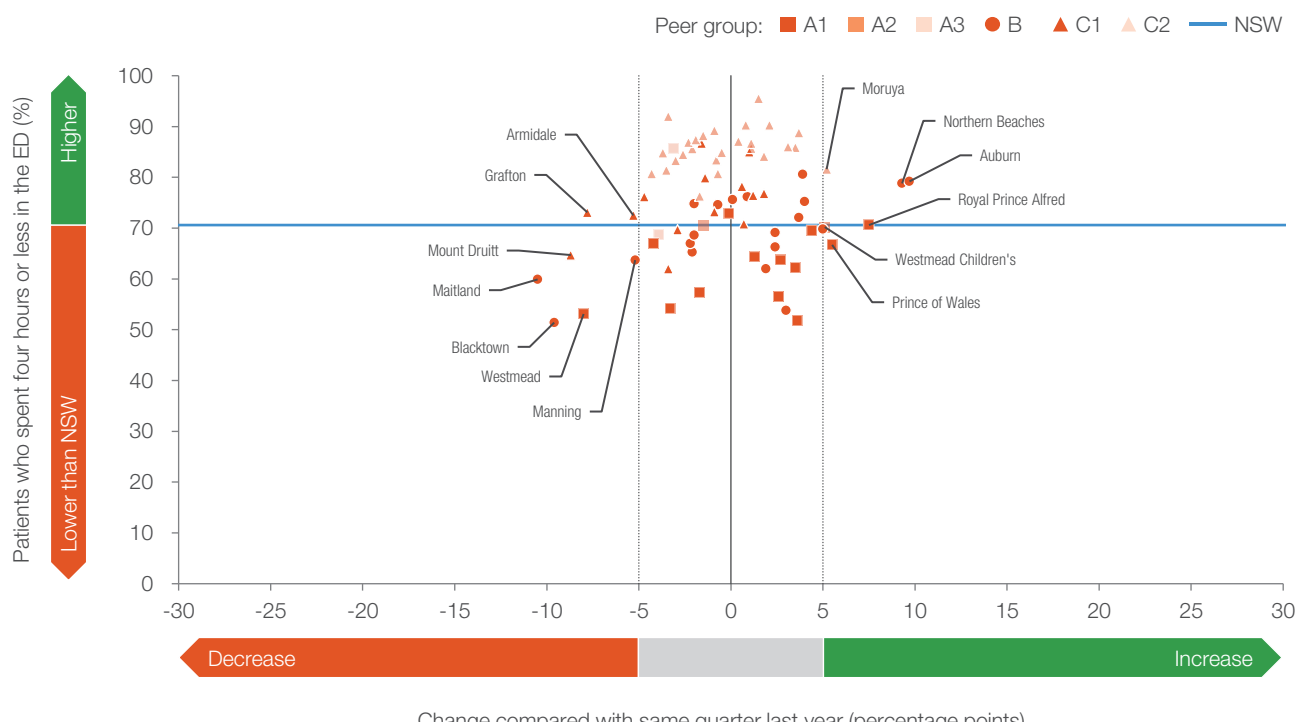
Compared with the same quarter the previous year, for the 77 large public hospital EDs (peer groups A1, A2, A3, B, C1 and C2) reported on individually in *Healthcare Quarterly*:

- In 37 hospitals, the percentage of patients who spent four hours or less in the ED was higher (Figure 7).
- In 40 hospitals, there was a drop in the percentage of patients who spent four hours or less in the ED (Figure 7). One hospital had a decrease of more than 10 percentage points: Maitland (10.5%).

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
Maitland	B	59.9	-10.5

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, January to March 2020



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 January to March 2020 quarter, 88.5% of patients who arrived by ambulance had their care transferred within 30 minutes which was relatively stable (down 0.3 percentage points) compared with the same quarter the previous year (Figure 8).

The median time for patient care to be transferred from paramedics to ED staff in the January to March 2020 quarter was 12 minutes, unchanged from the same quarter the previous year (Figure 8).

The number of ambulance arrivals was up by more than 10% in 11 hospitals. Narrabri saw the biggest change, up 31.6% to 225 ambulance arrivals. The number of ambulance arrivals was down by more than 10% in seven hospitals. Kurri Kurri saw the biggest change, down 59.3% to 22 ambulance arrivals.

Figure 8 Emergency presentations, ambulance arrivals and transfer of care time, January to March 2020

	This quarter	Same quarter previous year	Change since one year ago
Emergency presentations	742,458	729,870	1.7%
ED transfer of care time			
Median time	12m	12m	0m
90th percentile time	32m	32m	0m
Percentage of patients transferred from ambulance to ED within 30 minutes	88.5%	88.8%	-0.3 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 the January to March 2020 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 (%)
Narrabri	C2	225	31.6
Moree	C2	322	23.4
Gunnedah	C2	245	23.1
Mudgee	C2	385	20.7
Queanbeyan	C2	775	16.9
Mount Druitt	C1	1586	16.2
Maitland	B	2856	12.9
Belmont	C1	1631	11.9
Muswellbrook	C2	426	11.5
Grafton	C1	980	11.1
Coffs Harbour	B	3019	10.1
Moruya	C2	694	-10.8
Griffith	C1	882	-11.1
Casino	C2	345	-12.2
Cessnock	C2	567	-12.6
Milton	C2	491	-22.9
Sydney and Sydney Eye	A2	791	-28.0
Kurri Kurri	C2	22	-59.3



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 January to March 2020 quarter, there were 326,601 calls and 244,797 incidents, up 5.7% and 2.5%, respectively, compared with the same quarter the previous year. There were 309,528 responses (up 0.6%) with most categorised as emergency – priority 1 (P1: 45.2%), and urgent – priority 2 (P2: 47.7%) (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 55.3% in January to March 2020, down 4.6 percentage points compared with the same quarter the previous year. The percentage of P2 call to ambulance arrival times within 30 minutes was 63.2%, down 4.8 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, January to March 2020

		This quarter	Same quarter previous year	Change since one year ago
Calls		326,601	309,011	5.7%
Incidents		244,797	238,771	2.5%
All responses		309,528	307,749	0.6%
P1: Emergency	<div style="width: 45.2%;"></div> 45.2%	140,044	136,268	2.8%
P1A: Highest priority	<div style="width: 4.8%;"></div> 4.8%	6,719	6,380	5.3%
P2: Urgent	<div style="width: 47.7%;"></div> 47.7%	147,517	148,355	-0.6%
P3: Time-critical	<div style="width: 4.4%;"></div> 4.4%	13,704	14,402	-4.8%
P4–9: Non-emergency	<div style="width: 2.7%;"></div> 2.7%	8,263	8,718	-5.2%
Patient transports		185,072	183,604	0.8%

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 January to March 2020 quarter, median response times for the high volume response categories were 12.0 minutes for emergency – priority 1 (P1) cases, and 21.5 minutes for urgent – priority 2 (P2) cases, slightly longer than the same quarter the previous year (Figure 11).

Within the 140,044 P1 responses, there were 6,719 of the highest priority 1A (P1A) cases, up 5.3% 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 was 7.8 minutes, slightly longer than the same quarter the previous year (Figure 11).

The percentage of P1A responses within 10 minutes in January to March 2020 was 68.5%, down 3.1 percentage points compared with the same quarter in 2019 (Figure 11).

Figure 10 Call to ambulance arrival time, by priority category, NSW, January to March 2020

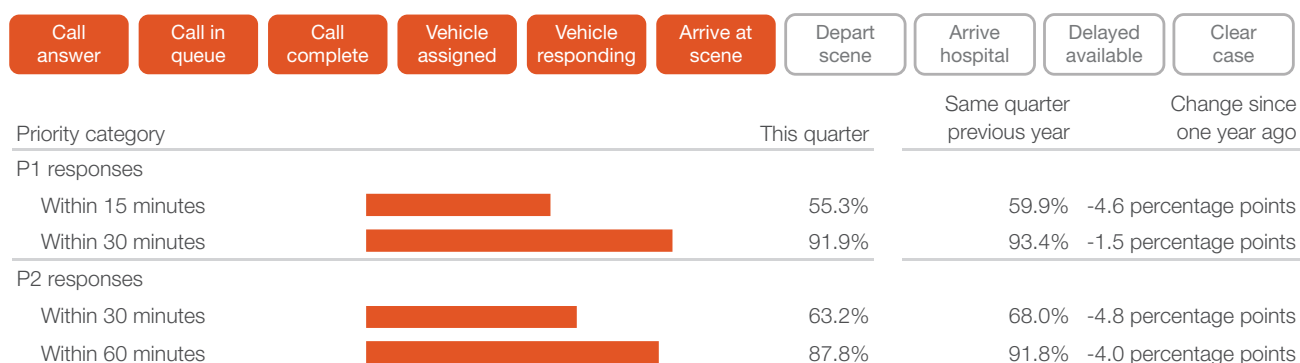
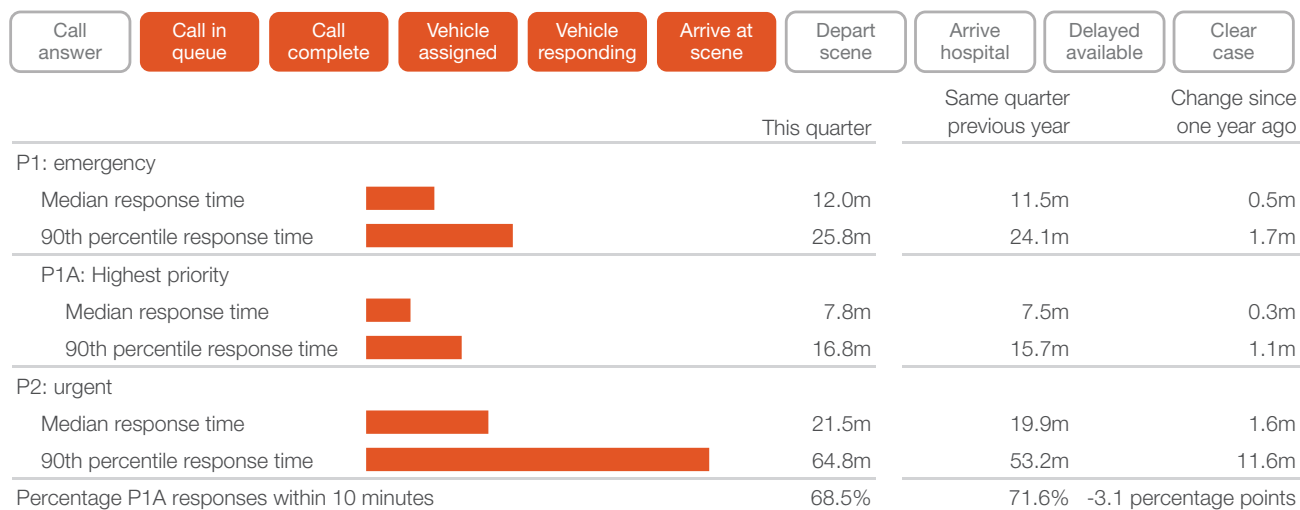


Figure 11 Ambulance response time by priority category, NSW, January to March 2020



Ambulance activity

Regional, rural and remote NSW

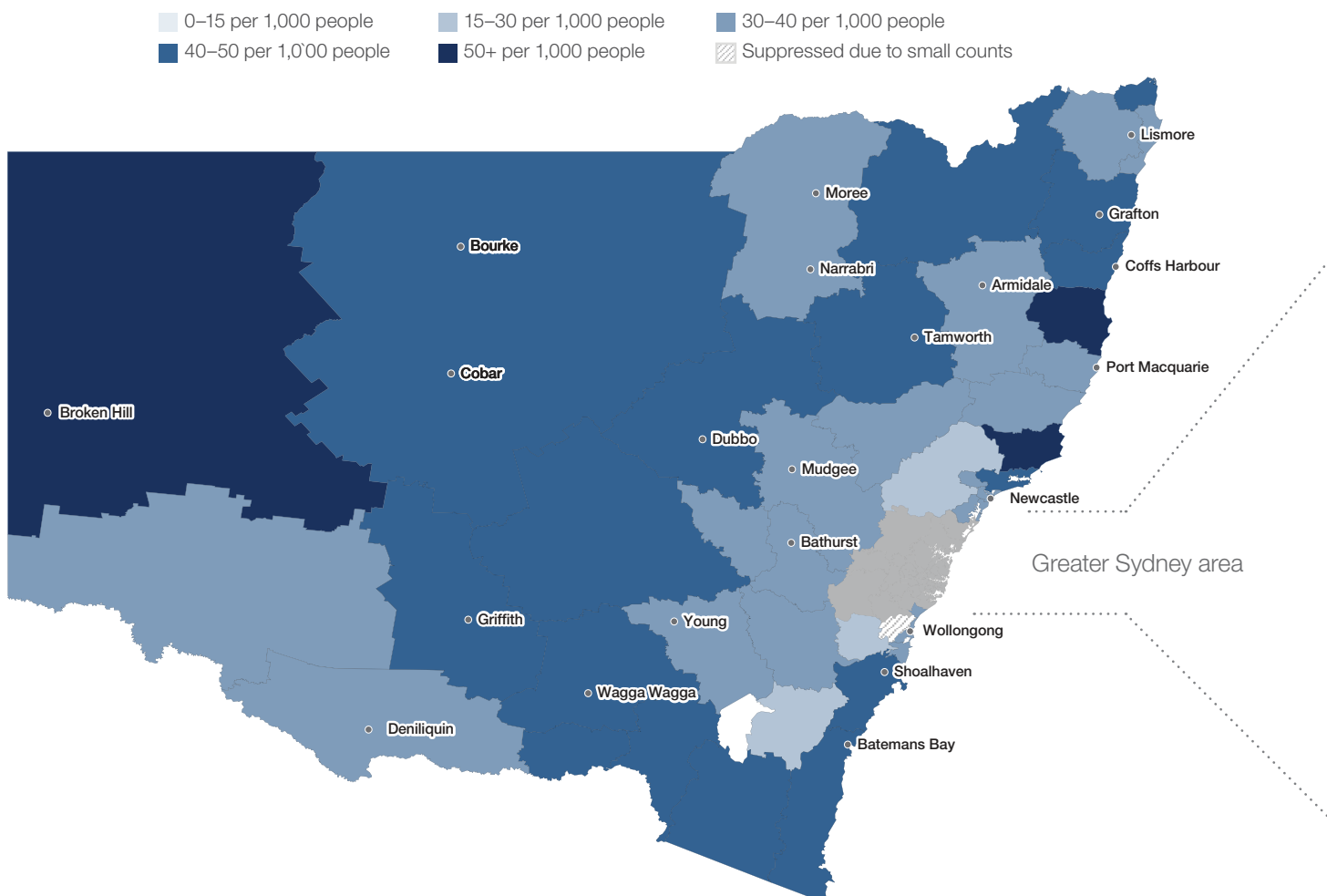
The rate of incidents requiring an ambulance is the number of incidents for every 1,000 people living in an area. Any case requiring dispatch of one or more ambulance vehicles is defined as an incident.

Across the 43 statistical areas level 3 (SA3s) in regional, rural and remote NSW, the incident rate ranged from 25.3 to 69.8 per 1,000 people during the January to March 2020 quarter. Broken Hill and Far West had the highest rate in NSW at 69.8 incidents per 1,000 people. There were three regional, rural and remote SA3s with an incident rate below 30 per 1,000 people: Queanbeyan (25.3), Lower Hunter (29.2), and Southern Highlands (29.8) (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, January to March 2020



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.

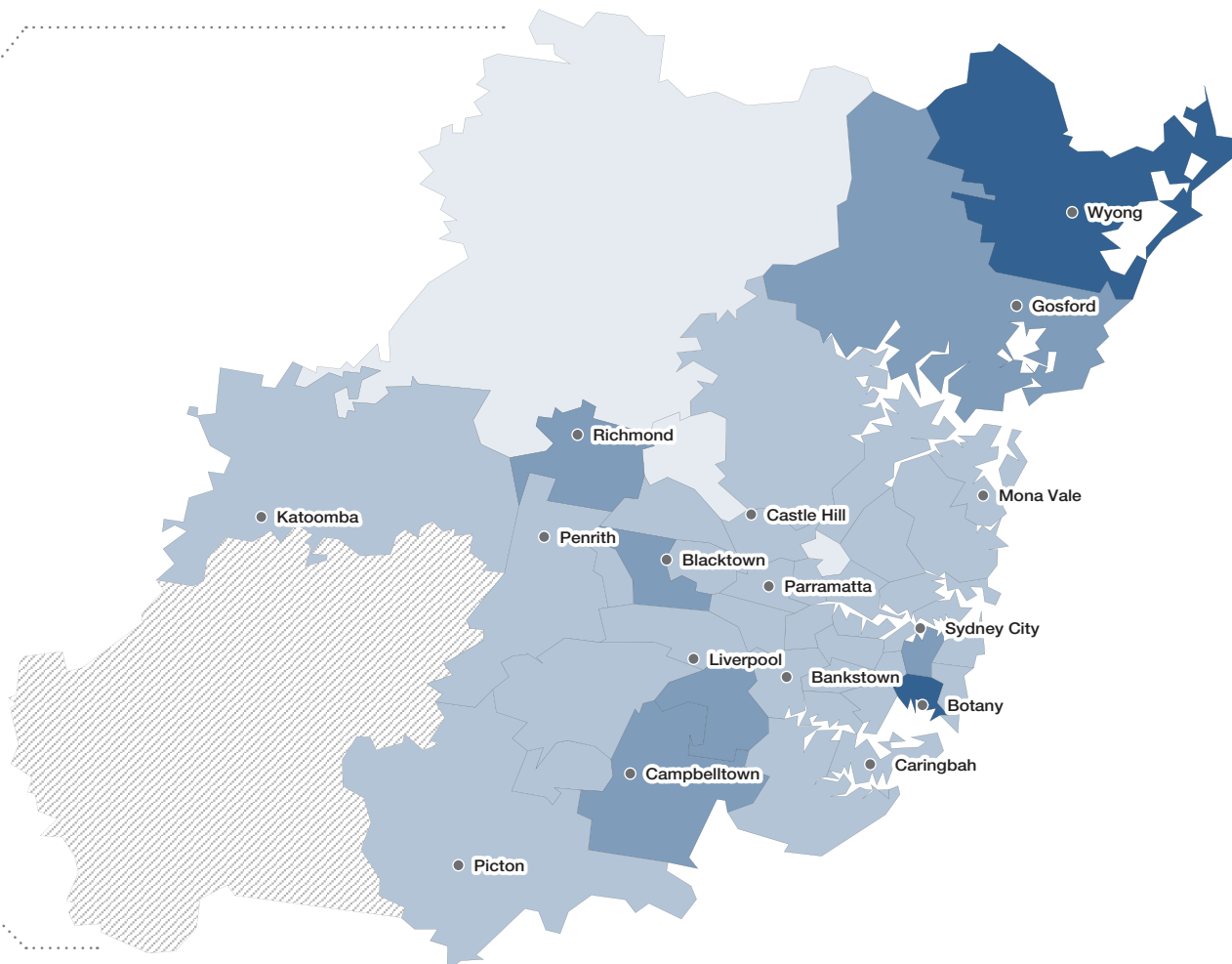
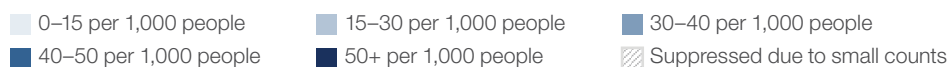
Greater Sydney area

Across the 46 SA3s in the Greater Sydney area, the incident rate for the January to March 2020 quarter ranged from 12.6 to 49.3 per 1,000 people.

There were 38 SA3s in Greater Sydney with incident rates below 30 per 1,000 people. The three SA3s in NSW with an incident rate below 15 per 1,000 people, all within Greater Sydney, were: Pennant Hills – Epping (12.6), Hawkesbury (13.8), and Rouse Hill – McGraths Hill (14.5) (Figure 13).

Eight SA3s in Greater Sydney had incident rates above 30 per 1,000 people: Botany (49.3), Wyong (41.0), Richmond – Windsor (36.1), Sydney Inner City (35.8), Gosford (35.2), Mount Druitt (33.1), Campbelltown (32.4), and Liverpool (30.5) (Figure 13).

Figure 13 Incident rate by statistical area level 3, per 1,000 people, Greater Sydney, January to March 2020



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 140,044 P1 responses across NSW in the January to March 2020 quarter.

Statewide, 55.3% of P1 call to ambulance arrival times were within 15 minutes, down 4.6 percentage points compared with the same quarter the previous year (Figure 10).

Regional, rural and remote NSW

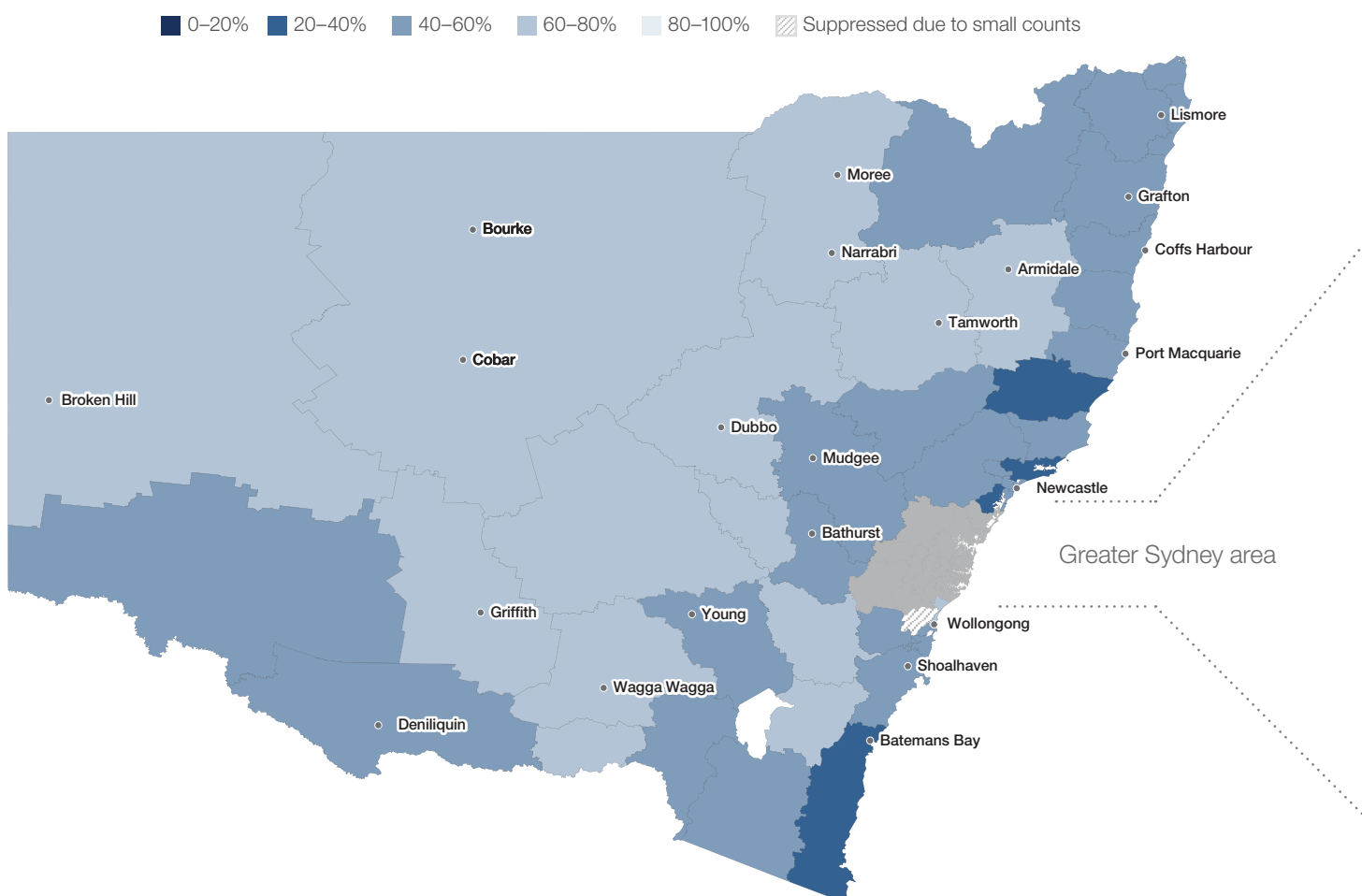
Regional, rural and remote NSW has a higher proportion of non-24-hour ambulance stations than in metropolitan Sydney, and longer distances between

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 January to March 2020 quarter: Broken Hill and Far West (75.5%) and Armidale (71.2%). Overall, results in regional, rural and remote NSW ranged from 34.6% (South Coast) to 75.5% (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, January to March 2020

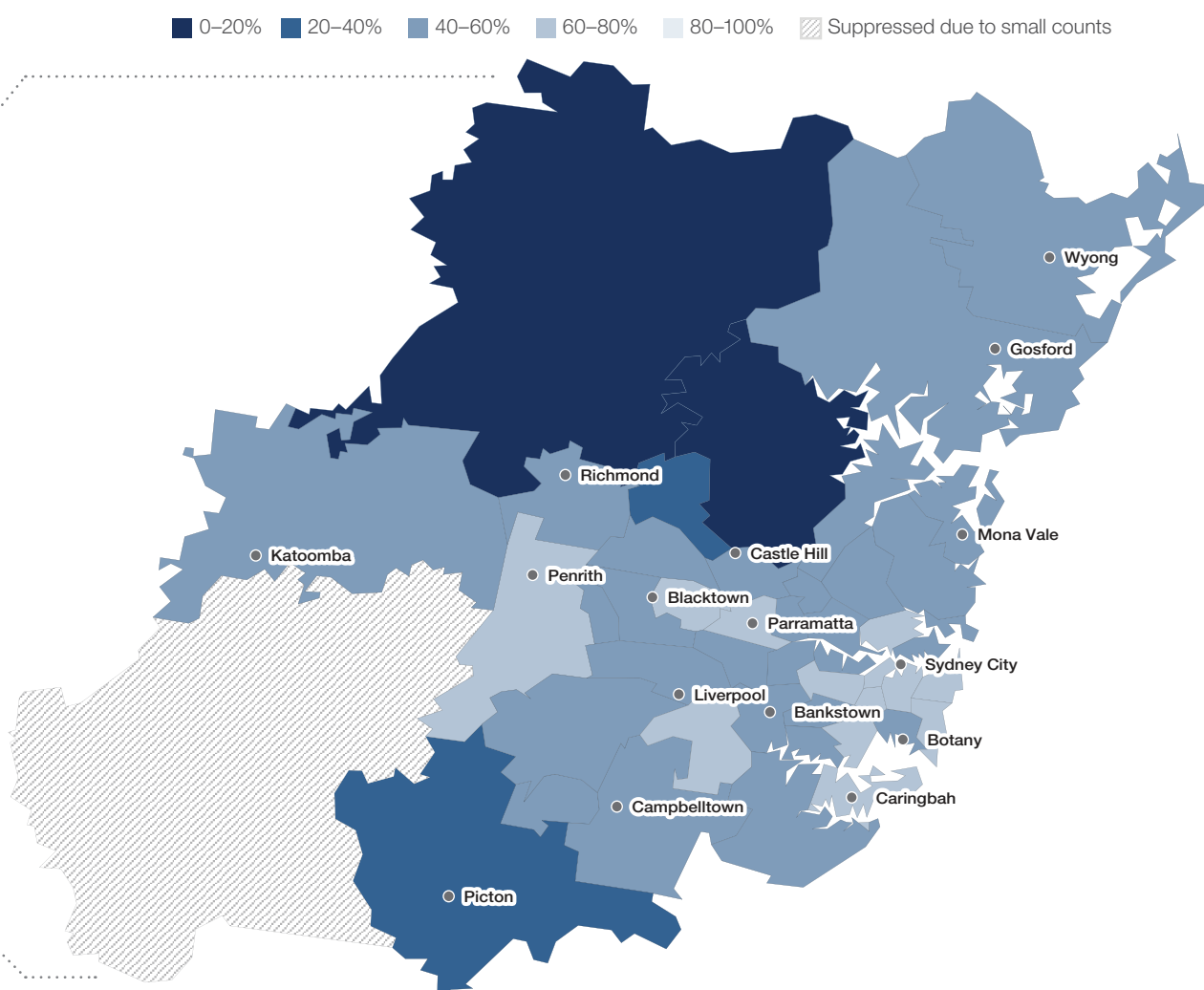


Greater Sydney area

For emergency – priority 1 (P1) cases, there were two SA3s out of 46 in Greater Sydney with more than 70% of call to ambulance arrival times within 15 minutes: Sydney Inner City (73.6%) and Cronulla – Miranda – Caringbah (73.2%). Overall, results in Greater Sydney ranged from 11.2% (Hawkesbury) to 73.6% (Sydney Inner City) (Figure 15).

Three SA3s in Greater Sydney had less than 30% of P1 call to ambulance arrival times within 15 minutes: Wollondilly (27.8%), Dural – Wisemans Ferry (13.3%), and Hawkesbury (11.2%) (Figure 15).

Figure 15 Percentage of emergency (P1) call to ambulance arrival times under 15 minutes by statistical area level 3, Greater Sydney, January to March 2020





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 460,964 admitted patient episodes in NSW public hospitals in the January to March 2020 quarter, down 1.8% 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 11,268 mental health episodes in the January to March 2020 quarter, down 1.8% compared with the same quarter the previous year. (Figure 16). The use of restrictive practices in acute mental health units is reported in the seclusion and restraint section of this report (Pages 32–38).

Figure 16 Total number of admitted patient episodes, by stay type, January to March 2020

		This quarter	Same quarter previous year	Change since one year ago
All episodes*		460,964	469,601	-1.8%
Acute	94.0%	433,097	441,141	-1.8%
Non-acute	3.6%	16,599	16,981	-2.2%
Mental health	2.4%	11,268	11,479	-1.8%
		This quarter	Same quarter previous year	Change since one year ago
Acute				
Overnight	52.8%	228,459	237,398	-3.8%
Same-day	47.2%	204,638	203,743	0.4%
Non-acute				
Overnight	83.3%	13,822	14,149	-2.3%
Same-day	16.7%	2,777	2,832	-1.9%
Mental health				
Overnight	87.7%	9,877	9,832	0.5%
Same-day	12.3%	1,391	1,647	-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 1,679,252 in the January to March 2020 quarter – up 1.1% compared with the same quarter the previous year.

Total bed days for acute admitted patients episodes were down by 1.4%, and up for non-acute and mental health admitted patient episodes by 2.7% and 16.7%

respectively compared with the same quarter the previous year (Figure 17).

The increase in mental health bed days is due to an increase in the average length of stay of patients discharged in this quarter. This is due, in part, to the number of long-stay patients discharged (see *Healthcare Quarterly – Trend report, January to March 2020*).

Figure 17 Total number of hospital bed days, by episode type, January to March 2020

		This quarter	Same quarter previous year	Change since one year ago
Total bed days		1,679,252	1,660,172	1.1%
Acute	 74.0%	1,242,311	1,260,440	-1.4%
Non-acute	 12.8%	215,479	209,907	2.7%
Mental health	 13.2%	221,462	189,825	16.7%



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 may be 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 January to March 2020 quarter (Figure 18).

The percentage of acute mental health episodes of care with at least one seclusion event was 3.8%, up 0.8 percentage points 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 4.6%, up 0.7 percentage points compared with the same quarter the previous year (Figure 18, Table 3).

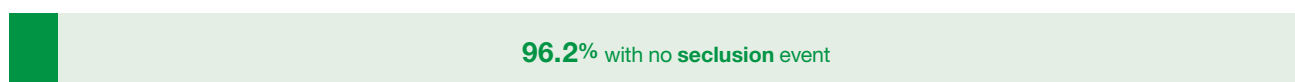
There is variability across public hospitals in the use of these interventions (Table 3).

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.

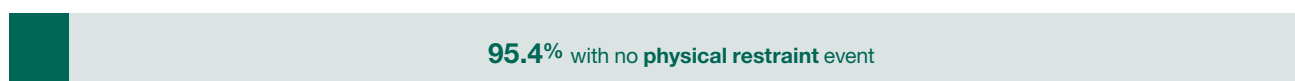
A **restraint event** occurs when the patient's freedom of movement is restricted by physical means (i.e. the hands-on immobilisation by health care staff), or mechanical means (i.e. application of devices).

Figure 18 Percentage of acute mental health episodes of care occurring in specialised acute mental health inpatient units with at least one seclusion or physical restraint event, January to March 2020*

3.8% with ≥ 1 **seclusion event**



4.6% with ≥ 1 **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, January to March 2020*

			Seclusion		Physical restraint		
Number of acute mental health episodes of care			% 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	
Hospital							
NSW†			11,915	3.8	0.8	4.6	0.7
No mental health intensive care unit	Armidale	74	0	0	0	0	
	Bankstown–Lidcombe	198	2.5	-3.1	4.5	-1.1	
	Bathurst	87	0	0	0	0	
	Blacktown	359	1.7	-0.9	3.1	1.8	
	Blue Mountains	112	0	-2.6	0	-3.5	
	Braeside	62	0	0	0	-10.3	
	Broken Hill	57	7.0	2.2	7.0	2.2	
	Campbelltown	525	3.6	2.4	5.1	2.7	
	Coffs Harbour	241	1.7	0.6	3.7	0.7	
	Dubbo	95	3.2	2.1	3.2	1.1	
	Gosford	161	2.5	1.9	2.5	-1.2	
	Goulburn	257	3.5	2.6	6.2	0.4	
	Greenwich	46	0	0	0	-3.3	
	John Hunter	92	1.1	1.1	14.1	5.8	
	Kempsey	78	0	0	1.3	1.3	
	Lismore	235	2.6	0.1	4.3	-2.2	
	Liverpool	521	7.9	5.4	4.8	2.3	
	Macquarie	62	1.6	0.2	3.2	1.8	
	Maitland	195	6.7	4.3	5.6	3.2	
	Manning	130	0.8	-2.1	0	0	
	Morisset	17	0	0	11.8	11.8	
	Nepean	602	4.0	1.7	3.7	0.9	
	Port Macquarie	108	1.9	-2.3	2.8	-3.9	
	Royal North Shore	329	1.2	-0.2	4.0	1.8	
	Royal Prince Alfred	563	2.0	-0.3	3.0	0	
	Shellharbour	376	8.2	1.9	6.9	1.4	
	South East Regional	89	2.2	1.0	6.7	4.3	
	St George	284	1.1	-0.6	5.3	-0.6	
	St Joseph's	30	0	0	0	-4.4	
	St Vincent's	378	2.9	0.5	4.8	2.4	
	Sutherland	197	2.5	2.0	3.6	-0.8	
	Sydney Children's	68	1.5	-3.0	1.5	-9.9	
	Tamworth	244	2.9	0.2	5.3	-0.1	
	Tweed	164	2.4	1.2	4.9	3.4	
	Wagga Wagga	297	3.0	1.7	3.7	1.5	
	Westmead	147	0	0	3.4	2.7	
	Westmead Children's	77	1.3	1.3	3.9	-4.9	
	Wollongong	307	5.5	2.2	4.9	0	
	Wyong	330	5.2	1.3	3.3	0.4	
MHICU	Concord	987	7.6	0.6	5.4	-0.7	
	Cumberland	810	7.5	1.2	6.0	0.9	
	Hornsby	357	4.2	1.9	7.0	1.9	
	Hunter New England Mater MH	775	3.7	0.7	5.9	1.8	
	Orange	327	2.4	0	1.8	-2.6	
JH	Prince of Wales	465	0.6	-2.0	5.6	-0.2	
	The Forensic Hospital†	61	26.2	-1.1	26.2	-10.2	

* 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.

Results for Northern Beaches Hospital are not included, as complete data for admissions to acute mental health units are not 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 732 seclusion events in the January to March 2020 quarter, up 146 events compared with the same quarter the previous year. There were 909 physical restraint events, up 69 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 at 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 January to March 2020 quarter, the NSW rate of seclusion was 5.6, up 0.9 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: Broken Hill (15.9); Liverpool (15.5); Shellharbour (12.7); Goulburn (11.3); Cumberland (10.4); Wollongong (10.0); Concord (9.5); Lismore (9.3); Maitland (8.9); Tamworth (7.6); Wagga Wagga (6.7); Nepean (6.2); Wyong (6.1); Sutherland (5.4); and Hornsby (5.1) (Table 4).

There were 55 mechanical restraint events in NSW public hospitals with specialised acute mental health units (excluding the Forensic Hospital). This was up by 29 events compared with the same quarter the previous year (data not shown by hospital due to small numbers). At the Forensic Hospital, there were 95 mechanical restraint events, up by 64 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, January to March 2020

		Seclusion			Physical restraint		
Hospital		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†		732	146	5.6	909	69	7.0
No mental health intensive care unit	Armidale	0	0	0	0	0	0
	Bankstown–Lidcombe	6	-12	2.1	9	-10	3.1
	Bathurst	0	0	0	0	0	0
	Blacktown	8	-3	2.6	11	6	3.5
	Blue Mountains	0	-3	0	0	-7	0
	Braeside	0	0	0	0	-18	0
	Broken Hill	7	4	15.9	5	2	11.4
	Campbelltown	26	18	4.4	40	22	6.8
	Coffs Harbour	<5	-1	1.2	19	4	5.9
	Dubbo	<5	2	3.6	<5	1	3.6
	Gosford	<5	3	1.7	<5	-4	1.7
	Goulburn	25	23	11.3	32	5	14.5
	Greenwich	0	0	0	0	-2	0
	John Hunter	<5	3	4.5	26	17	39.2
	Kempsey	0	0	0	<5	1	1.3
	Lismore	31	24	9.3	34	-6	10.3
	Liverpool	81	57	15.5	49	23	9.4
	Macquarie	<5	0	0.8	<5	1	2.5
	Maitland	18	9	8.9	23	12	11.4
	Manning	<5	-2	0.8	0	0	0
	Morisset	0	0	0	<5	4	5
	Nepean	36	15	6.2	37	13	6.4
	Port Macquarie	<5	-4	3.7	<5	-7	2.8
	Royal North Shore	<5	-1	1.5	16	6	5.8
	Royal Prince Alfred	14	-5	2.6	38	8	7.0
	Shellharbour	49	4	12.7	37	4	9.6
	South East Regional	<5	-10	2.7	8	5	7.1
	St George	<5	-3	1.2	27	3	10.4
	St Joseph's	0	0	0	0	-2	0
	St Vincent's	13	2	4.9	31	22	11.7
	Sutherland	11	10	5.4	20	10	9.8
	Sydney Children's	<5	-23	1.2	<5	-28	2.5
	Tamworth	14	4	7.6	22	5	12.0
	Tweed	<5	-2	1.7	17	13	7.2
	Wagga Wagga	20	5	6.7	20	2	6.7
	Westmead	0	0	0	9	8	4.0
	Westmead Children's	<5	1	2.2	<5	-7	6.6
	Wollongong	30	15	10.0	21	-10	7.0
	Wyong	23	7	6.1	16	8	4.3
MHICU	Concord	112	-2	9.5	85	-32	7.2
	Cumberland	90	26	10.4	63	-2	7.3
	Hornsby	25	14	5.1	46	19	9.4
	Hunter New England Mater MH	41	-7	4.9	71	15	8.5
	Orange	13	-9	4.3	11	-20	3.6
JH	Prince of Wales	<5	-13	0.5	43	-15	7.5
	The Forensic Hospital†	280	190	68.5	224	105	54.8

† 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.

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

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 21 minutes in the January to March 2020 quarter, up 30 minutes compared with the same quarter the previous year (Table 5).

The average duration of seclusion events was less than four hours in 24 hospitals. The average duration was longer than four hours in seven hospitals: Cumberland (15h 27m); Concord (9h 58m); Liverpool (9h 36m); Broken Hill (5h 46m); Wollongong (4h 57m); Hunter New England Mater Mental Health Centre (4h 56m); and Shellharbour (4h 24m) (Table 5).

In the January to March 2020 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 36 minutes. This was up 37 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 32 minutes, up three 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, January to March 2020

		Seclusion		Physical restraint	
Hospital		Average duration	Change since one year ago	Average duration	Change since one year ago
NSW†		6h 21m	30m	5m	-1m
No mental health intensive care unit	Armidale	0m	0m	0m	0m
	Bankstown–Lidcombe	2h 22m	-38m	2m	1m
	Bathurst	0m	0m	0m	0m
	Blacktown	3h 37m	-3h 31m	1m	-1m
	Blue Mountains	0m	\$	0m	-10m
	Braeside	0m	0m	0m	-2m
	Broken Hill	5h 46m	\$	1m	\$
	Campbelltown	1h 55m	50m	3m	1m
	Coffs Harbour	‡	\$	4m	-1m
	Dubbo	‡	\$	‡	\$
	Gosford	‡	\$	‡	\$
	Goulburn	1h 54m	\$	2m	0m
	Greenwich	0m	0m	0m	\$
	John Hunter	‡	\$	6m	-1m
	Kempsey	0m	0m	‡	\$
	Lismore	3h 18m	1h 19m	3m	-8m
	Liverpool	9h 36m	5h 47m	2m	1m
	Macquarie	‡	\$	‡	\$
	Maitland	2h 46m	-40m	3m	-9m
	Manning	‡	\$	0m	0m
	Morisset	0m	0m	‡	\$
	Nepean	2h 3m	-5h 55m	2m	-1m
	Port Macquarie	‡	\$	‡	\$
	Royal North Shore	‡	\$	2m	0m
	Royal Prince Alfred	3h 30m	1h 6m	13m	7m
	Shellharbour	4h 24m	-8h 40m	4m	-1m
	South East Regional	‡	\$	4m	\$
	St George	‡	\$	1m	-1m
	St Joseph's	0m	0m	0m	\$
	St Vincent's	1h 24m	10m	2m	0m
	Sutherland	51m	\$	1m	-10m
	Sydney Children's	‡	\$	‡	\$
	Tamworth	2h 45m	49m	2m	-3m
	Tweed	‡	\$	1m	\$
	Wagga Wagga	54m	-37m	2m	-1m
	Westmead	0m	0m	1m	\$
	Westmead Children's	‡	\$	‡	\$
	Wollongong	4h 57m	3h 48m	3m	-2m
	Wyong	3h 22m	-17m	5m	1m
MHICU	Concord	9h 58m	2h 16m	8m	0m
	Cumberland	15h 27m	4h 51m	2m	0m
	Hornsby	1h 45m	-1m	10m	-8m
	Hunter New England Mater MH	4h 56m	-1h 32m	9m	1m
	Orange	1h 7m	8m	25m	13m
JH	Prince of Wales	‡	\$	4m	0m
	The Forensic Hospital†	16h 50m	-46h 4m	4m	-3m

† 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.

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



Elective surgery activity and performance

Elective surgery

In the January to March 2020 quarter, 50,810 elective surgical procedures were performed, down 4.4% 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 (53.8%) 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 January to March 2020 quarter, the number of procedures performed was up by more than 10% in three hospitals and down by more than 10% in seven hospitals.

In response to the COVID-19 pandemic, a range of measures were implemented to free up capacity in hospitals and make significant changes in service delivery. The Commonwealth Government's National Cabinet suspended all non-urgent (category 3) elective surgery from 26 March, with all urgent (category 1) and some exceptional semi-urgent (category 2) surgery continuing until further notice.

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

Hospital	Peer group	Number of procedures	Change (%)
Auburn	B	677	14.9
Northern Beaches	B	718	13.6
Blacktown	B	760	13.4
Concord	A1	1765	-11.2
Royal North Shore	A1	1451	-13.1
St Vincent's	A1	645	-13.1
Royal Prince Alfred	A1	1986	-16.7
Manning	B	512	-17.2
Shoalhaven	B	766	-17.9
Kurri Kurri	C2	591	-22.4

Figure 19 Elective surgical procedures performed, by urgency category, January to March 2020

		This quarter	Same quarter previous year	Change since one year ago
Total number of elective surgical procedures		50,810	53,135	-4.4%
Urgent	21.5%	10,906	10,633	2.6%
Semi-urgent	32.3%	16,390	17,040	-3.8%
Non-urgent	41.0%	20,837	22,467	-7.3%
Staged*	5.3%	2,677	2,995	-10.6%

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

Note: The Commonwealth Government's National Cabinet suspended all non-urgent (category 3) elective surgery from 26 March, with all urgent (category 1) and some exceptional semi-urgent (category 2) surgery continuing until further notice.





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 (93.9%) were performed within recommended time frames, down 2.5 percentage points compared with the same quarter the previous year (Figure 20).

Compared with the same quarter the previous year, median waiting times in the January to March 2020 quarter were 10 days for urgent (unchanged), 50 days for semi-urgent (up three days) and 260 days for non-urgent procedures (up 29 days) (Figure 20).

Figure 20 Percentage of elective surgical procedures performed on time and waiting times, by urgency category, January to March 2020

		This quarter	Same quarter previous year	Percentage point change since one year ago
All procedures		93.9%	96.4%	-2.5
Urgent	Recommended: 30 days 	99.9%	99.9%	0.0
Semi-urgent	Recommended: 90 days 	92.7%	95.8%	-3.1
Non-urgent	Recommended: 365 days 	91.8%	95.2%	-3.4

		This quarter	Same quarter previous year	Change since one year ago
Urgent: 10,906 patients				
Median time to receive surgery		10 days	10 days	0 days
90th percentile time to receive surgery		26 days	26 days	0 days
Semi-urgent: 16,390 patients				
Median time to receive surgery		50 days	47 days	3 days
90th percentile time to receive surgery		88 days	85 days	3 days
Non-urgent: 20,837 patients				
Median time to receive surgery		260 days	231 days	29 days
90th percentile time to receive surgery		363 days	358 days	5 days

Note: The Commonwealth Government's National Cabinet suspended all non-urgent (category 3) elective surgery from 26 March, with all urgent (category 1) and some exceptional semi-urgent (category 2) surgery continuing until further notice.

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 January to March 2020 quarter, the percentage of elective surgical procedures performed on time for different specialities ranged from 88.2% for ear, nose and throat surgery to 99.1% for medical procedures (Figure 22).

The percentage of elective surgical procedures performed on time for different common procedures ranged from 71.9% for myringoplasty/tympanoplasty to 97.2% for 'other – general' surgical procedures. The percentage of myringoplasty/tympanoplasty performed on time was down 11.2 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, January to March 2020

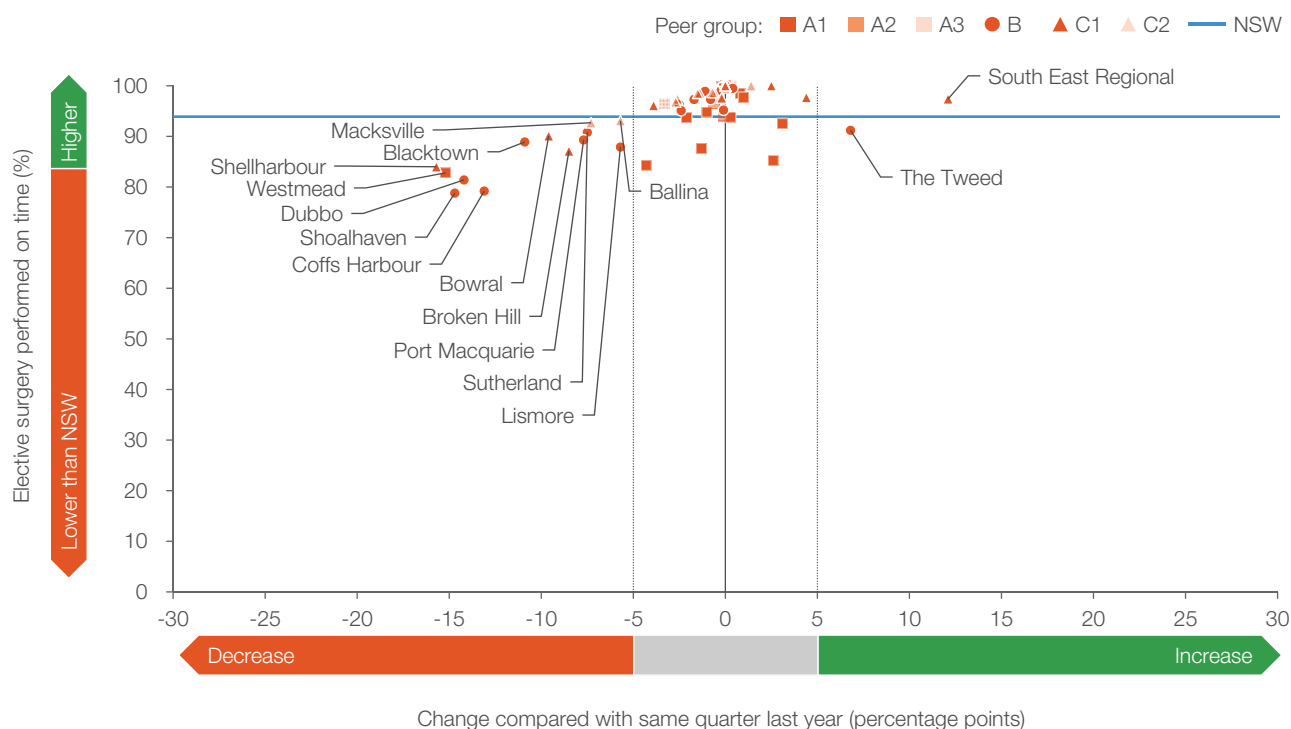


Figure 22 Percentage of elective surgical procedures performed on time, by specialty, January to March 2020

	Number of procedures	Percentage on time	Same quarter previous year	Percentage point change since one year ago
Medical	455	99.1%	98.9%	0.2
Vascular surgery	1,617	96.8%	98.7%	-1.9
Gynaecology	6,390	96.3%	98.0%	-1.7
General surgery	12,116	96.0%	97.9%	-1.9
Neurosurgery	1,014	95.8%	95.6%	0.2
Plastic surgery	2,228	95.4%	96.4%	-1.0
Ophthalmology	7,030	93.3%	99.5%	-6.2
Orthopaedic surgery	8,003	92.3%	93.4%	-1.1
Cardiothoracic surgery	868	91.7%	95.6%	-3.9
Urology	7,596	91.7%	95.6%	-3.9
Ear, nose and throat surgery	3,493	88.2%	89.4%	-1.2

Figure 23 Percentage of elective surgical procedures performed on time, by common procedure, January to March 2020

	Number of procedures	Percentage on time	Same quarter previous year	Percentage point change since one year ago
Other – General	1,544	97.2%	98.3%	-1.1
Hysteroscopy	2,234	96.8%	97.8%	-1.0
Varicose veins stripping and ligation	285	95.8%	96.6%	-0.8
Abdominal hysterectomy	544	95.3%	97.3%	-2.0
Cholecystectomy	1,375	94.4%	96.3%	-1.9
Haemorrhoidectomy	269	93.2%	96.1%	-2.9
Inguinal herniorrhaphy	1,244	93.1%	97.4%	-4.3
Cataract extraction	5,627	92.8%	99.8%	-7.0
Myringotomy	27	92.6%	100.0%	-7.4
Cystoscopy	3,198	90.4%	96.2%	-5.8
Prostatectomy	615	90.1%	92.8%	-2.7
Tonsillectomy	1,090	89.4%	87.2%	2.2
Total hip replacement	843	89.2%	91.5%	-2.3
Total knee replacement	1,557	85.5%	86.5%	-1.0
Coronary artery bypass graft	192	84.8%	92.0%	-7.2
Septoplasty	355	77.7%	87.2%	-9.5
Myringoplasty / tympanoplasty	90	71.9%	83.1%	-11.2

Elective surgery waiting time by specialty and procedure

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

In the January to March 2020 quarter, the median waiting time for different specialties ranged from 14 days for medical to 273 days for ophthalmology surgery. The median waiting time for ophthalmology surgery was up 58 days compared with the same quarter the previous year. The median waiting time for ear, nose and throat surgery was down 11 days compared with the same quarter the previous year (Figure 24).

The median waiting time for different common procedures ranged from 26 days for 'other – general' surgical procedures to 331 days for septoplasty. The median waiting time for cataract extraction was up 54 days compared with the same quarter the previous year. The median waiting time for myringotomy was down 25 days compared with the same quarter the previous year (Figure 25).

Figure 24 Median waiting time for patients who received elective surgery, by specialty, January to March 2020

	Number of procedures	This quarter	Same quarter previous year	Change since one year ago
Ophthalmology	7,030	273 days	215 days	58 days
Ear, nose and throat surgery	3,493	202 days	213 days	-11 days
Orthopaedic surgery	8,003	126 days	128 days	-2 days
Neurosurgery	1,014	64 days	57 days	7 days
Gynaecology	6,390	49 days	44 days	5 days
General surgery	12,116	46 days	43 days	3 days
Urology	7,596	37 days	41 days	-4 days
Plastic surgery	2,228	31 days	40 days	-9 days
Cardiothoracic surgery	868	27 days	26 days	1 day
Vascular surgery	1,617	24 days	22 days	2 days
Medical	455	14 days	19 days	-5 days

Note: 'Medical' refers to surgery performed by a non-specialist medical practitioner.

Figure 25 Median waiting time for patients who received elective surgery, by common procedure, January to March 2020

	Number of procedures	This quarter	Same quarter previous year	Change since one year ago
Septoplasty	355	331 days	330 days	1 day
Myringoplasty / tympanoplasty	90	309 days	323 days	-14 days
Total knee replacement	1,557	309 days	294 days	15 days
Cataract extraction	5,627	301 days	247 days	54 days
Tonsillectomy	1,090	294 days	314 days	-20 days
Total hip replacement	843	230 days	225 days	5 days
Varicose veins stripping and ligation	285	192 days	211 days	-19 days
Inguinal herniorrhaphy	1,244	90 days	85 days	5 days
Haemorrhoidectomy	269	84 days	74 days	10 days
Prostatectomy	615	80 days	73 days	7 days
Abdominal hysterectomy	544	73 days	63 days	10 days
Myringotomy	27	68 days	93 days	-25 days
Cholecystectomy	1,375	66 days	66 days	unchanged
Hysteroscopy	2,234	48 days	46 days	2 days
Coronary artery bypass graft	192	32 days	37 days	-5 days
Cystoscopy	3,198	31 days	32 days	-1 day
Other – General	1,544	26 days	24 days	2 days

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 90,602 patients on the elective surgery waiting list as at 31 March 2020, up 8.5% compared with the same quarter the previous year. The number of patients on the waiting list was down 11.8% (238) to 1,782 for urgent surgery, remained unchanged at 12,734 for semi-urgent surgery and up 10.7% (7,330) to 76,086 for non-urgent surgery (Figure 26).

There were 1,408 patients still waiting after more than 12 months on the waiting list, up 796 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 (15.2%), vascular surgery (13.9%), cardiothoracic surgery (10.5%), and urology (10.2%). Medical saw a decrease of 14.4% in the number of patients on the waiting list at the end of the quarter (Figure 27).

Eight 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 (35.3%), abdominal hysterectomy (25.1%), 'other – general' procedures (17.9%), hysteroscopy (11.4%), cystoscopy (11.3%), myringoplasty/tympanoplasty (11.1%), total hip replacement (11.0%), and varicose veins stripping and ligation (10.9%) (Figure 28).

Figure 26 Elective surgery waiting list, by urgency category, as at 31 March 2020

		This quarter	Same quarter previous year	Change since one year ago
Patients ready for surgery on waiting list as at 31 March 2020		90,602	83,510	8.5%
Urgent	 2.0%	1,782	2,020	-11.8%
Semi-urgent	 14.1%	12,734	12,734	0.0%
Non-urgent	 84.0%	76,086	68,756	10.7%
Patients not ready for surgery on waiting list at the end of quarter		16,545	14,750	12.2%

Note: The Commonwealth Government's National Cabinet suspended all non-urgent (category 3) elective surgery from 26 March, with all urgent (category 1) and some exceptional semi-urgent (category 2) surgery continuing until further notice.

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 March 2020

	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	90,602	83,510	8.5	1408	612
Ophthalmology	22,657	20,925	8.3	173	7
Orthopaedic surgery	21,516	19,872	8.3	480	230
General surgery	15,652	14,456	8.3	211	79
Ear, nose and throat surgery	11,543	10,673	8.2	318	226
Gynaecology	8,138	7,066	15.2	94	16
Urology	5,108	4,635	10.2	54	23
Plastic surgery	2,500	2,519	-0.8	46	18
Neurosurgery	1,568	1,603	-2.2	20	11
Vascular surgery	1,280	1,124	13.9	7	<5
Cardiothoracic surgery	420	380	10.5	<5	0
Medical	220	257	-14.4	<5	0

Note: 'Medical' refers to surgery performed by a non-specialist medical practitioner.

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 March 2020

Procedure	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
Cataract extraction	19,905	18,297	8.8	144	0
Total knee replacement	6,749	6,136	10.0	174	104
Tonsillectomy	4,358	4,029	8.2	91	66
Total hip replacement	3,149	2,836	11.0	105	52
Inguinal herniorrhaphy	2,678	2,436	9.9	48	24
Hysteroscopy	2,218	1,991	11.4	17	<5
Cholecystectomy	1,890	1,796	5.2	15	5
Septoplasty	1,624	1,612	0.7	60	45
Other – General	1,468	1,245	17.9	18	6
Cystoscopy	1,372	1,233	11.3	0	<5
Abdominal hysterectomy	1,100	879	25.1	24	<5
Prostatectomy	855	801	6.7	18	7
Varicose veins stripping and ligation	781	704	10.9	5	<5
Haemorrhoidectomy	504	466	8.2	6	<5
Myringoplasty / tympanoplasty	409	368	11.1	14	12
Coronary artery bypass graft	115	85	35.3	0	0
Myringotomy	77	78	-1.3	0	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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