

# Trend report

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

April to June 2020



## BUREAU OF HEALTH INFORMATION

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State Health Publication Number: (BHI) 200499-2  
ISSN: 2207-9564 (online)

Suggested citation:

Bureau of Health Information. Healthcare Quarterly, Trend report, Emergency department, ambulance, admitted patients and elective surgery, April to June 2020. Sydney (NSW); BHI; 2020.

Please note there is the potential for minor revisions of data in this report.

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

Published September 2020

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.

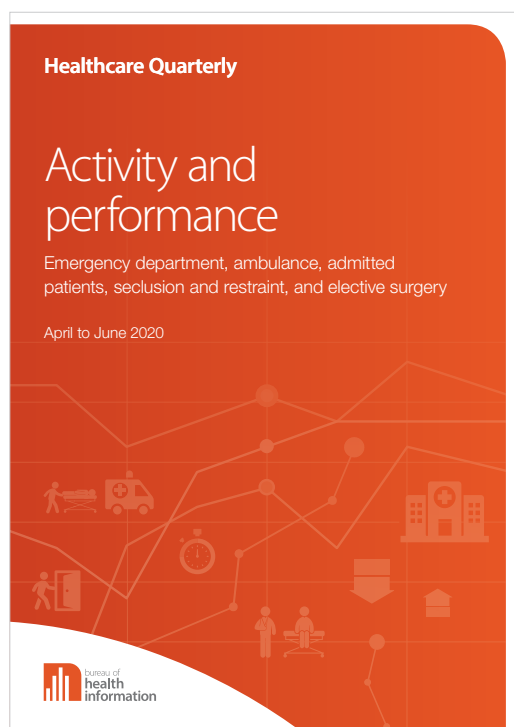
Please visit **[bhi.nsw.gov.au/Healthcare\\_Observer](https://bhi.nsw.gov.au/Healthcare_Observer)**

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# A guide to Healthcare Quarterly

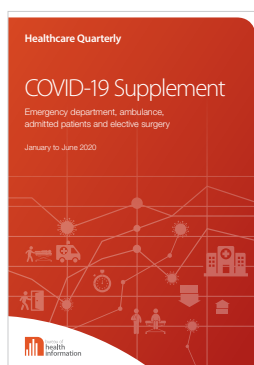
Healthcare Quarterly reports on activity and performance in public hospitals and ambulance services across NSW.



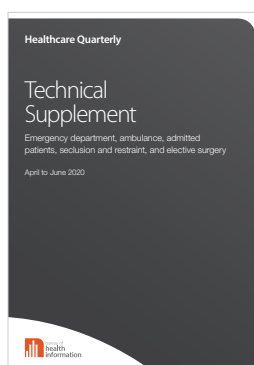
Healthcare Quarterly shows how public hospitals and ambulance services performed in the April to June 2020 quarter. The key measures focus on the timeliness of services delivered to people across NSW.



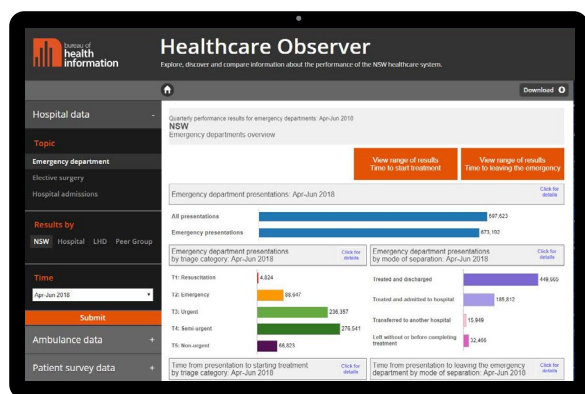
The *Trend report* provides five-year trends in activity and performance for emergency departments, ambulance services, admitted patients and elective surgical procedures.



The *COVID-19 Supplement* for this quarter is the second released by BHI. It tracks activity in the NSW healthcare system from January to June 2020, with a particular focus on April to June 2020.



The technical supplement describes the data, methods and technical terms used to calculate activity and performance measures. It profiles report activity and performance at hospital, peer group and local health district level.



Full results are available from BHI's interactive data portal Healthcare Observer, at [bhi.nsw.gov.au/healthcare\\_observer](http://bhi.nsw.gov.au/healthcare_observer)

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



# About this report

This *Trend report* provides five-year trends in activity and performance for emergency departments (ED), ambulance services, admitted patients and elective surgical procedures.

Activity and performance are reported at NSW level over a five-year period. For hospital-based measures, results are stratified by peer group or acuity. For ambulance-based measures, results are stratified by urgency.

Activity measures are reported by counts of events or proportion within the total events. Timeliness measures are reported based on units of time such as minutes or days using median and 90th percentile times, or based on achievement against a recommended or defined time.

For more information on the April to June 2020 quarter results refer to *Healthcare Quarterly – Activity and Performance*.

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

Emergency departments	
ED attendances	Count of all patient visits to the ED during the defined period.
Emergency presentations	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.
Transfer of care time	For patients who are transported to the 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	
Number of incidents	Count of all events requiring one or more ambulance responses.
Number of responses	Count of all dispatches of an ambulance service vehicle.
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.
Admitted patients	
Total episodes	Episode of care is a period of care in a hospital or other healthcare facility with a defined start and end. Total episodes is the count of all records with an episode end date in the defined period.
Total bed days	Bed days are calculated for all admitted patient episodes completed during the reference period. Total acute bed days is the sum of bed days for all acute episodes with an episode end date within the defined period.
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 attendances

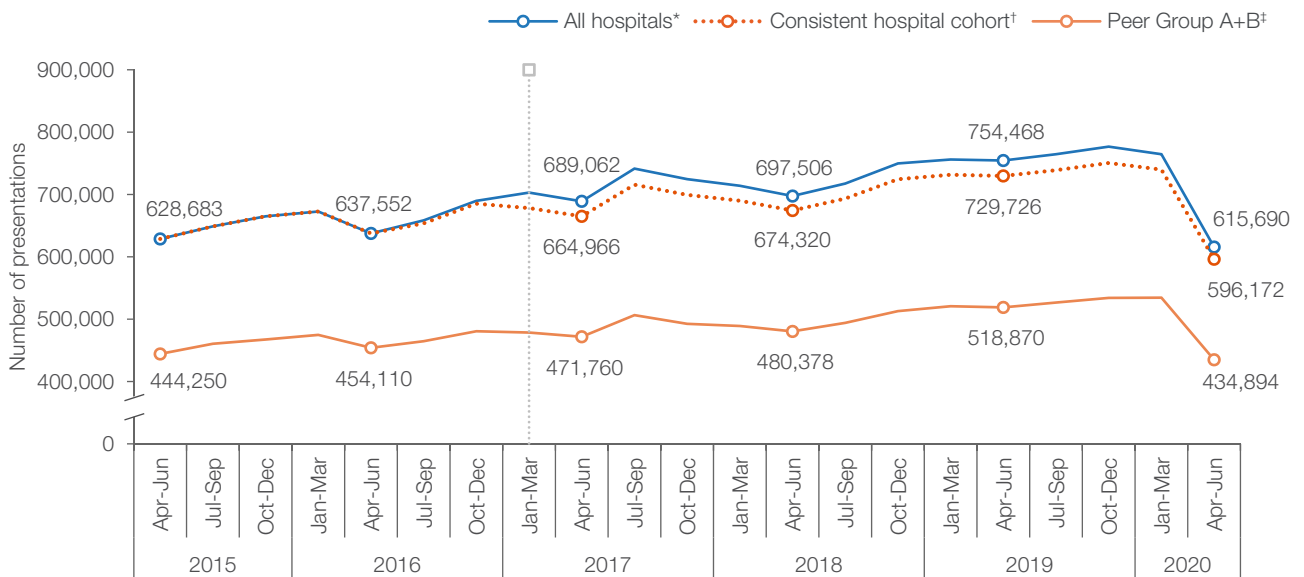
Five-year trends in emergency department (ED) activity show how demands on the system and the supply of services have changed over time. The number of ED presentations can be influenced by factors such as outbreaks, weather events and population growth. Seasonal variation can also play a role when demand for services changes predictably through the year.

ED attendances have increased since the April to June 2015 quarter, and peaked in October to December 2019 in all hospitals and the consistent hospital cohort (Figure 1).

ED attendances for all hospitals in April to June 2020 were the lowest for any quarter over five years at 615,690. This number was down 18.4% (138,778) compared with the same quarter in 2019, the largest decrease over five years (Figure 1). The decrease started in the January to March 2020 quarter and coincided with the emergence of the COVID-19 pandemic.

For more information on ED activity, see *Healthcare Quarterly – COVID-19 Supplement, January to June 2020* at [bhi.nsw.gov.au](http://bhi.nsw.gov.au)

Figure 1 Emergency department attendances, April 2015 to June 2020



\* 'All hospitals' cohort includes all EDs submitting valid data to EDDC in each quarter. This includes more than 170 EDs as of the January to March 2017 quarter.  
 † A consistent cohort of hospitals was used to report ED presentations so that comparisons of presentations over longer intervals will not be affected by inclusion of additional EDs.  
 ‡ Peer group A+B cohort includes all hospitals in peer groups A1, A2, A3 and B.  
 § Change in hospital cohort: in the January to March 2017 quarter, an additional 44 EDs were included in *Healthcare Quarterly*, contributing to activity and performance results. See the technical supplement to this *Healthcare Quarterly* for further information.



# Emergency presentations by triage category

Reporting emergency presentations by triage category provides information on changes in the urgency of patients.

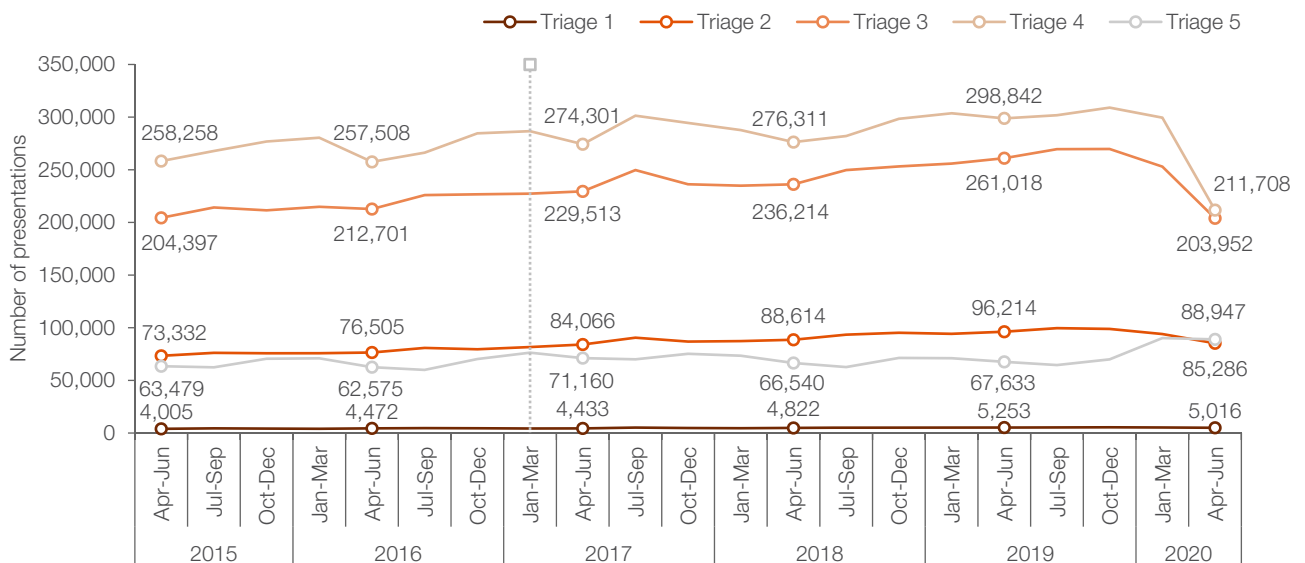
Across all triage categories, triage 3 (urgent) and triage 4 (semi-urgent) had the highest number of emergency presentations for any quarter over the five years. In April to June 2020, emergency presentations for triage categories 3 and 4 were the lowest of any quarter over five years (Figure 2).

## Percentage of emergency presentations by triage category, April to June quarters from 2015 to 2020

Category	April–June					
	2015	2016	2017	2018	2019	2020
Triage 1 (%)	0.7	0.7	0.7	0.7	0.7	0.8
Triage 2 (%)	12.2	12.5	12.7	13.2	13.2	14.3
Triage 3 (%)	33.9	34.7	34.6	35.1	35.8	34.3
Triage 4 (%)	42.8	42.0	41.3	41.1	41.0	35.6
Triage 5 (%)	10.5	10.2	10.7	9.9	9.3	15.0

The increase in triage 5 presentations is primarily due to COVID-19 testing that occurred within EDs or co-located testing clinics. Though many hospitals had emergency presentations for COVID-19 testing, BHI has noted the exact proportion for each hospital which had more than 10% of triage 5 presentations for COVID-19 testing in their activity and performance profiles. Of these 32 hospitals, the proportion of COVID-19 testing ranged from 10% to 94%, with the largest increases at Northern Beaches Hospital and Sutherland Hospital. These triage 5 presentations for COVID-19 testing may have contributed to changes in ED performance. For more information on the impact of COVID-19 testing on ED activity, please see *Healthcare Quarterly – COVID-19 Supplement, January to June 2020*. The activity and performance profiles, and *COVID-19 Supplement* are available at [bhi.nsw.gov.au](http://bhi.nsw.gov.au)

Figure 2 Emergency presentations by triage category, April 2015 to June 2020



Notes: Results are calculated from all EDs submitting data to EDDC in each quarter. In recent years, more than 170 EDs are included in *Healthcare Quarterly*.   
 †: Change in hospital cohort: in the January to March 2017 quarter, an additional 44 EDs were included in *Healthcare Quarterly*, contributing to activity and performance results. See the technical supplement to this *Healthcare Quarterly* for further information.

# Emergency department attendances by mode of arrival

The mode of arrival refers to the form of transport by which the person arrives at the ED.

The number of arrivals at the ED by ambulance has increased since the April to June 2015 quarter, and peaked in July to September 2019, followed by a decrease to 148,731 in April to June 2020 over the five-year period (Figure 3).

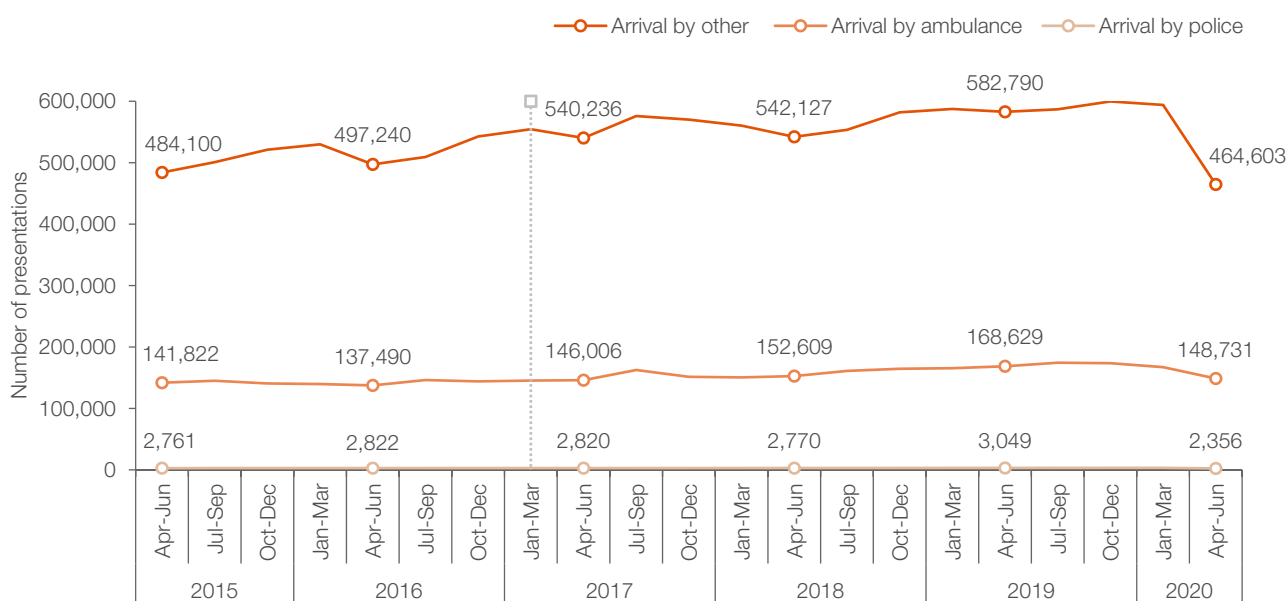
The majority of ED attendances had an arrival mode of 'other', indicating the patient most likely came by: a private vehicle, community/public transport, internal ambulance/transport, or walked into the ED. These arrivals saw the largest decrease in attendances, down 20.3% (118,187) compared with the same quarter in 2019. This was the lowest number of ED attendances of any quarter in the five-year period (Figure 3).

Percentage of ED attendances by mode of arrival, April to June quarters from 2015 to 2020

Mode of arrival	April–June					
	2015	2016	2017	2018	2019	2020
Ambulance (%)	22.6	21.6	21.2	21.9	22.4	24.2
Police (%)	0.4	0.4	0.4	0.4	0.4	0.4
Other (%)	77.0	78.0	78.4	77.7	77.2	75.5

Note: 'Other' mode of arrival includes: private vehicle; community/public transport; no transport (walked in); internal ambulance/transport; other (e.g. undertakers/contractors, retrieval [including NETS], and internal bed/wheelchair. Presentations with missing mode of arrival are also included in this cohort.

Figure 3 Emergency department attendances by mode of arrival, April 2015 to June 2020



Notes: Results are calculated from all EDs submitting data to EDDC in each quarter. In recent years, more than 170 EDs are included in *Healthcare Quarterly*. <sup>†</sup> Change in hospital cohort: in the January to March 2017 quarter, an additional 44 EDs were included in *Healthcare Quarterly*, contributing to activity and performance results. See the technical supplement to this *Healthcare Quarterly* for further information.

# Emergency department attendances by mode of separation

The mode of separation describes the patient's status (discharge/admitted/transfer/death) when they left the ED.

Following treatment in the ED, the majority of patients are either discharged or admitted to hospital. Some patients choose not to wait for treatment and leave, and others are transferred to a different hospital.

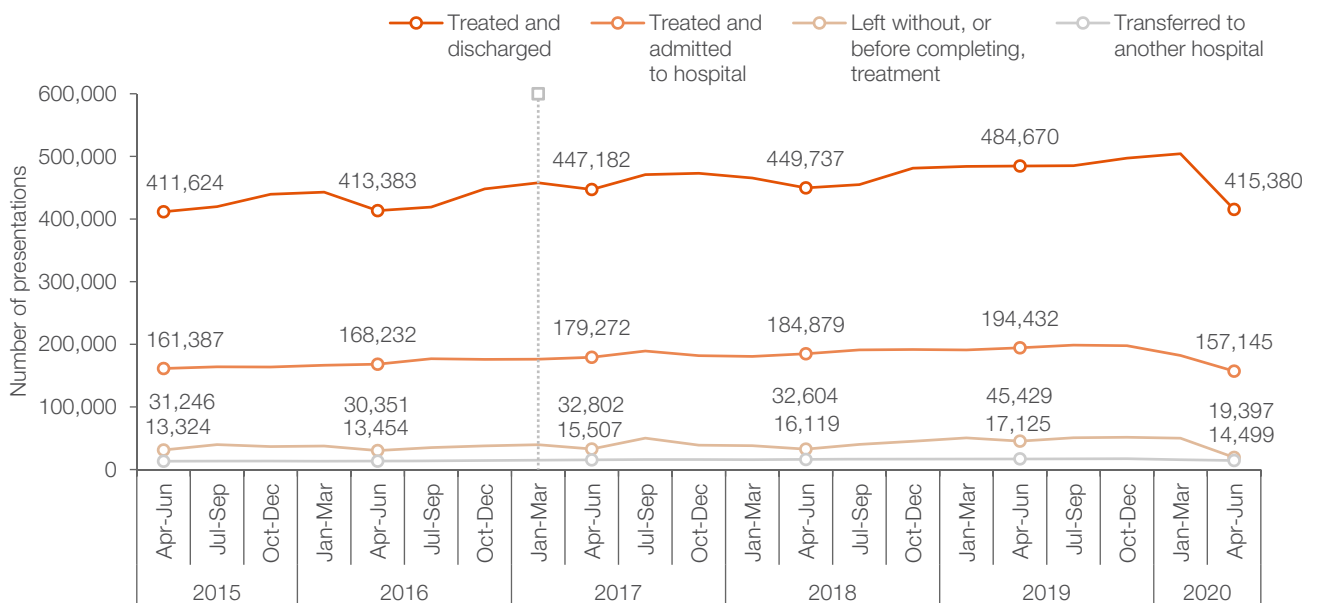
The largest proportionate decrease in ED attendances over the past two quarters was observed for patients who left without, or before completing treatment. This was the lowest number of ED attendances of any quarter in the five-year period (Figure 4).

The April to June 2020 quarter also saw the lowest ED attendances for patients treated and admitted to hospital of any quarter over five years (Figure 4).

Percentage of ED attendances by mode of separation, April to June quarters from 2015 to 2020

Mode of separation	April–June					
	2015	2016	2017	2018	2019	2020
Treated and discharged (%)	65.5	64.8	64.9	64.5	64.2	67.5
Treated and admitted (%)	25.7	26.4	26.0	26.5	25.8	25.5
Transferred (%)	2.1	2.1	2.3	2.3	2.3	2.4
Left without, or before completing, treatment (%)	5.0	4.8	4.8	4.7	6.0	3.2

Figure 4 Emergency department attendances by mode of separation, April 2015 to June 2020



Notes: Results are calculated from all EDs submitting data to EDDC in each quarter. In recent years, more than 170 EDs are included in *Healthcare Quarterly*.  
 †: Change in hospital cohort: in the January to March 2017 quarter, an additional 44 EDs were included in *Healthcare Quarterly*, contributing to activity and performance results. See the technical supplement to this *Healthcare Quarterly* for further information.

# Time to treatment

Upon arrival at the ED, patients are allocated to one of five triage categories, based on urgency. For each category, the Australasian College for Emergency Medicine recommends a threshold waiting time within which treatment should start:

- **Triage 1:** Resuscitation (within 2 minutes)\*
- **Triage 2:** Emergency (80% within 10 minutes)
- **Triage 3:** Urgent (75% within 30 minutes)
- **Triage 4:** Semi-urgent (70% within 60 minutes)
- **Triage 5:** Non-urgent (70% within 120 minutes)

Time to treatment refers to the time between a patient's arrival at the ED and when their treatment began. April to June 2020 had the highest percentage of patients whose treatment started on time for triage categories 3 to 5 of any quarter over five years (Figure 5).

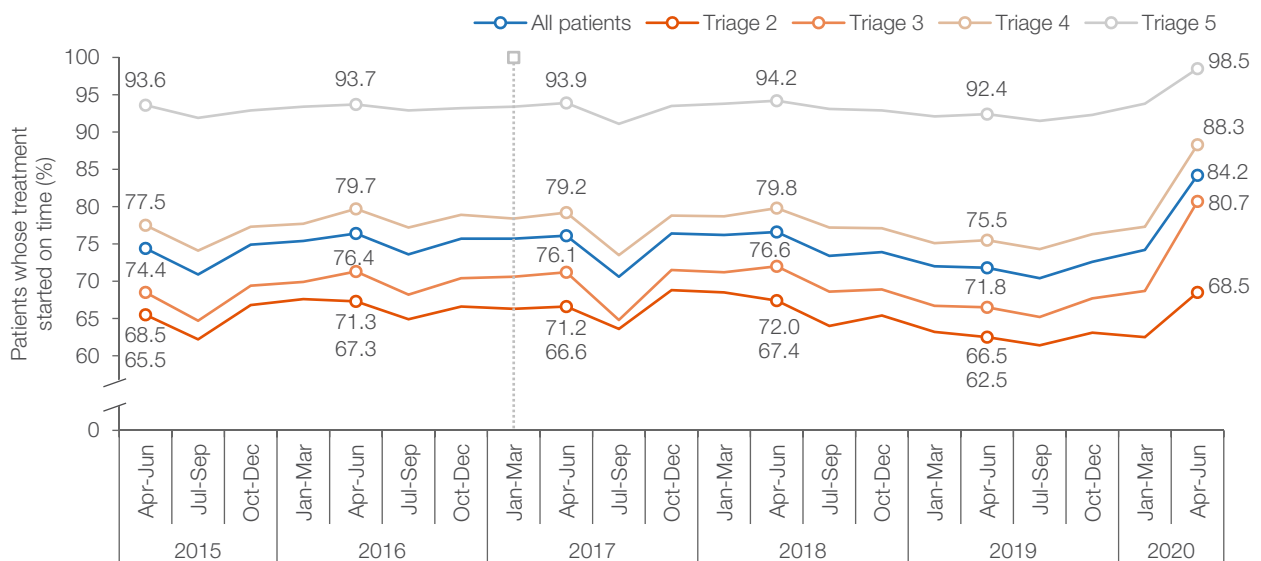
The median time patients waited for treatment refers to the time from arrival at the ED in which half of the patients began treatment. The waiting time for the other half was either equal to this time or longer.

The 90th percentile time gives a sense of the longest waiting times for treatment. It is the time from arrival by which 90% of patients received treatment. The waiting time for the remaining 10% of patients was equal to this time or longer.

The median and 90th percentile times patients waited for treatment remained relatively stable for triage category 2 over five years (Figures 6, 7). The April to June 2020 quarter had the lowest median and 90th percentile times patients waited for treatment for triage categories 3 to 5 of any quarter in the five-year period (Figures 6, 7).

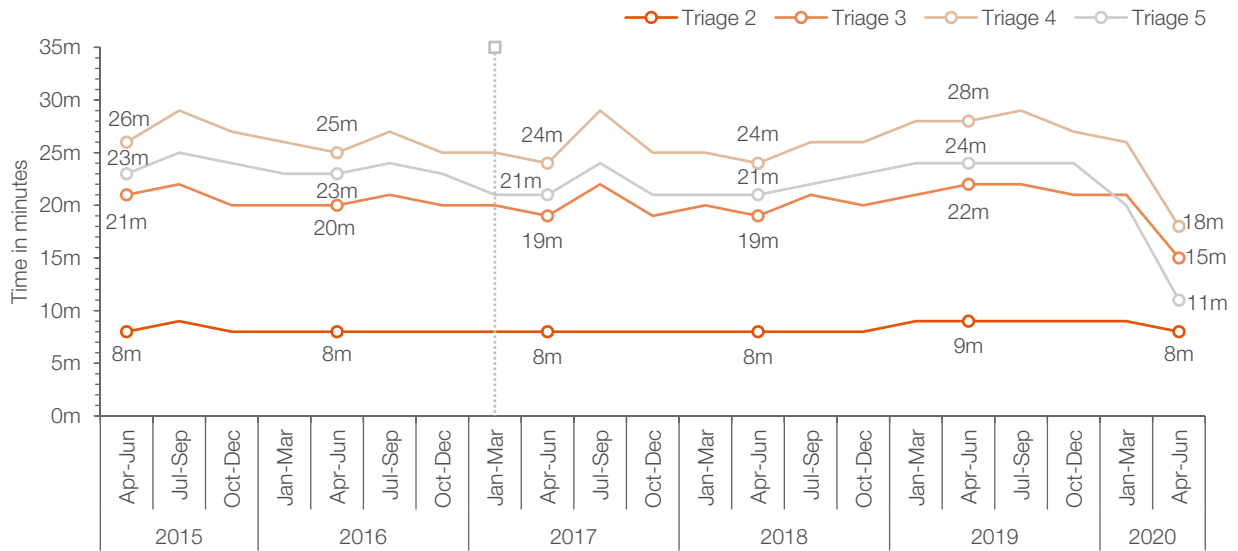
Due to differences in data definitions, period of reporting and the number of hospitals included, *Healthcare Quarterly* results for the percentage of patients whose treatment started on time are not directly comparable with figures reported by other agencies and jurisdictions. For more information refer to the *Healthcare Quarterly* technical supplements at [bhi.nsw.gov.au](http://bhi.nsw.gov.au)

Figure 5 Percentage of patients whose treatment started on time, by triage category\*, April 2015 to June 2020



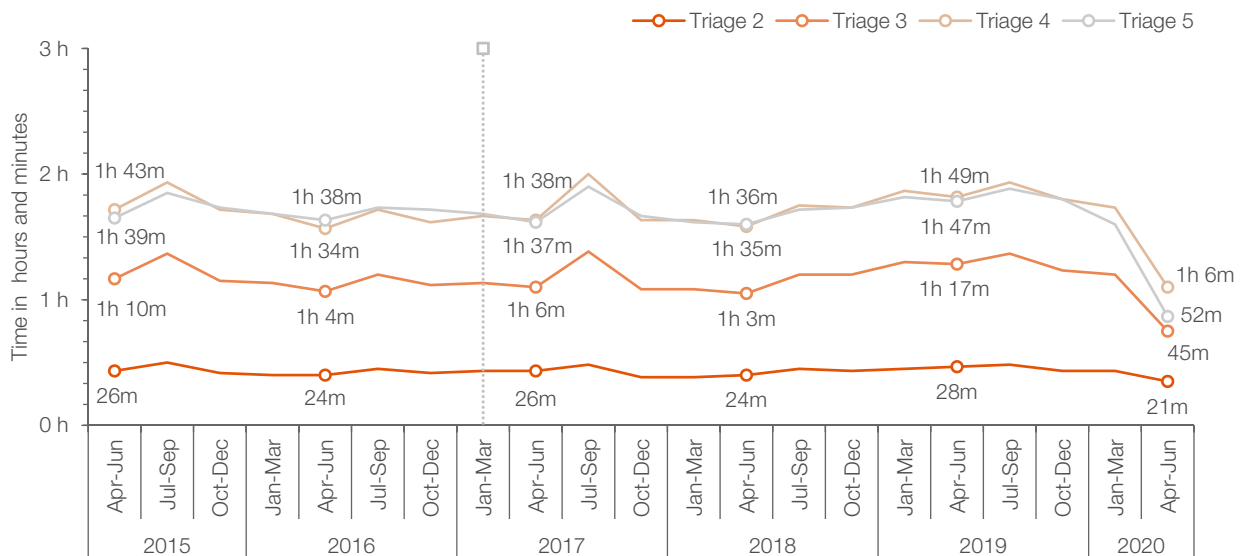
\* Triage 1 patients are the most urgent and are almost all treated within two minutes. Clinicians are focused on providing immediate and essential care, rather than recording times, therefore times to start treatment are generally not reported.  
 Note: Results are calculated from all EDs submitting data to EDDC in each quarter. In recent years, more than 170 EDs are included in *Healthcare Quarterly*.  
 † Change in hospital cohort: in the January to March 2017 quarter, an additional 44 EDs were included in *Healthcare Quarterly*, contributing to activity and performance results. See the technical supplement to this *Healthcare Quarterly* for further information.

Figure 6 Median time from presentation to starting treatment, by triage category\*, April 2015 to June 2020



\* 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.  
 Note: Results are calculated from all EDs submitting data to EDDC in each quarter. In recent years, more than 170 EDs are included in *Healthcare Quarterly*.  
 † Change in hospital cohort: in the January to March 2017 quarter, an additional 44 EDs were included in *Healthcare Quarterly*, contributing to activity and performance results. See the technical supplement to this *Healthcare Quarterly* for further information.

Figure 7 90th percentile time from presentation to starting treatment, by triage category\*, April 2015 to June 2020



\* 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.  
 Note: Results are calculated from all EDs submitting data to EDDC in each quarter. In recent years, more than 170 EDs are included in *Healthcare Quarterly*.  
 † Change in hospital cohort: in the January to March 2017 quarter, an additional 44 EDs were included in *Healthcare Quarterly*, contributing to activity and performance results. See the technical supplement to this *Healthcare Quarterly* for further information.

# Time spent in the emergency department

The length of time patients spent in the ED categorised by mode of separation provides information about the timeliness of transfer from ED to a hospital or ward, or how long patients stayed for treatment before discharge.

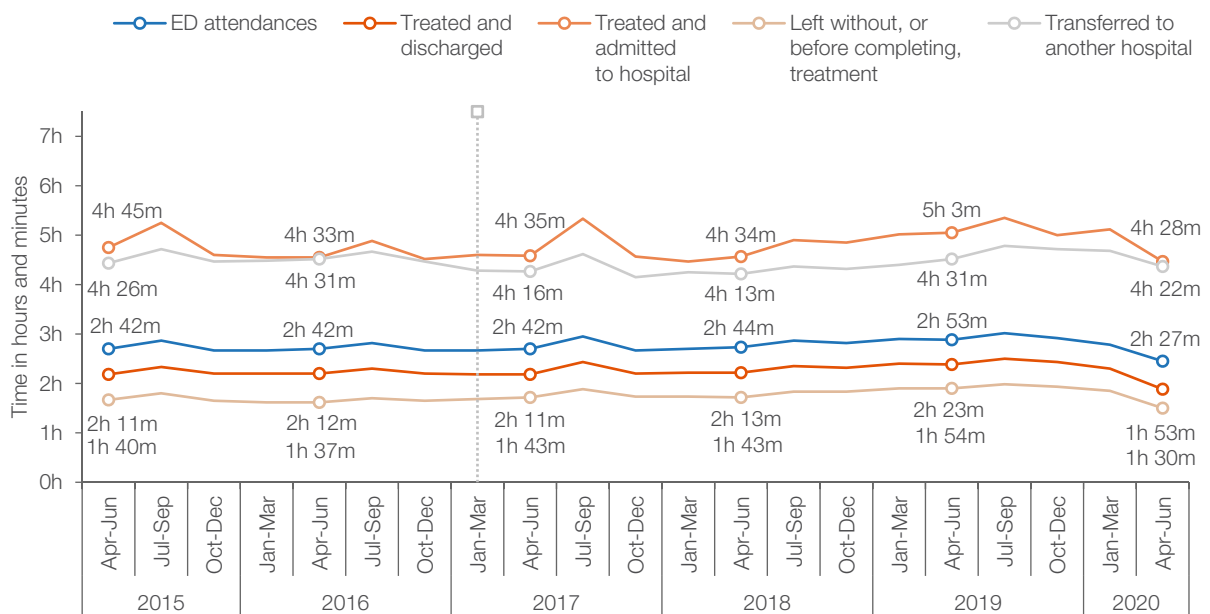
## Median time spent in the ED

The median time patients spent in the ED refers to the time from arrival by which half of the patients had left the ED. The other half of patients spent equal to or longer than this time in the ED.

Seasonal variation is more apparent for patients treated and admitted to hospital or transferred to another hospital (Figure 8).

For patients treated and discharged or admitted to hospital, or left without, or before completing, treatment, April to June 2020 had the shortest median time spent in the ED of any quarter in the five-year period (Figure 8).

Figure 8 Median time patients spent in the emergency department, by mode of separation, April 2015 to June 2020



Notes: Results are calculated from all EDs submitting data to EDDC in each quarter. In recent years, more than 170 EDs are included in *Healthcare Quarterly*.   
 †: Change in hospital cohort: in the January to March 2017 quarter, an additional 44 EDs were included in *Healthcare Quarterly*, contributing to activity and performance results. See the technical supplement to this *Healthcare Quarterly* for further information.

## 90th percentile time spent in the ED

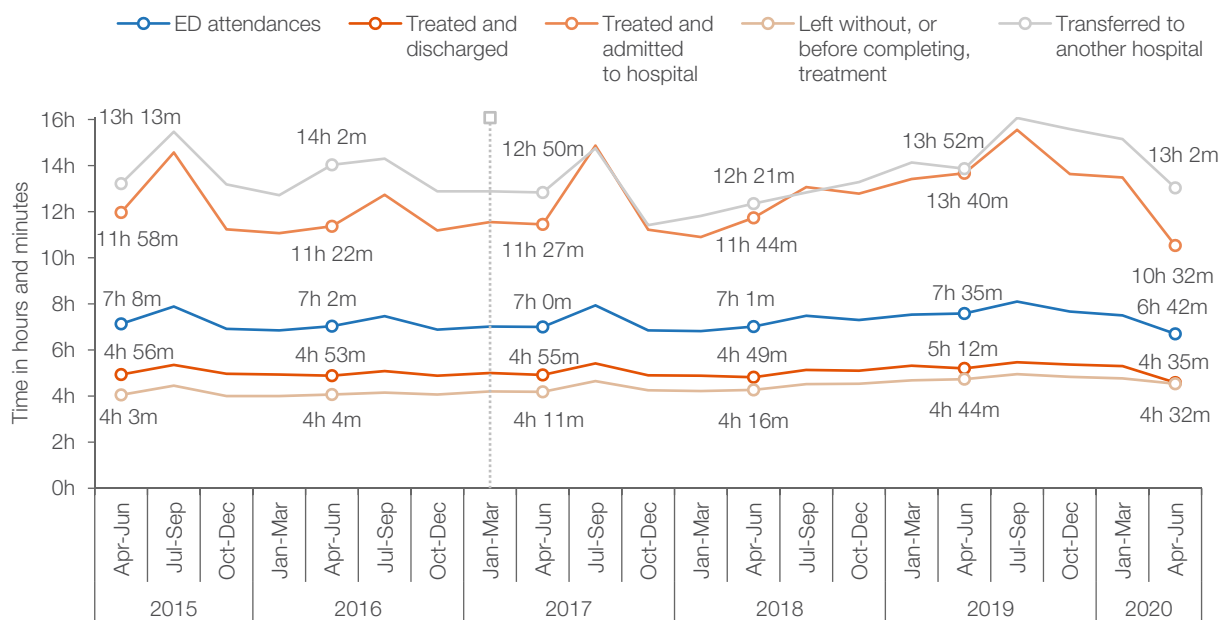
The 90th percentile time gives a sense of the longest time patients spent in the ED. It is the time from arrival by which 90% of patients had left the ED. The time spent in the ED for the remaining 10% of patients was equal to this time or longer.

Seasonal variation is more apparent for patients treated and admitted to hospital or transferred to another hospital (Figure 9).

For patients who left without, or before completing, treatment, the 90th percentile time spent in the ED remained relatively stable over five years.

For patients treated and discharged or admitted to hospital, April to June 2020 had the shortest 90th percentile time spent in the ED of any quarter in the five-year period (Figure 9).

Figure 9 90th percentile time patients spent in the emergency department, by mode of separation, April 2015 to June 2020



Notes: Results are calculated from all EDs submitting data to EDDC in each quarter. In recent years, more than 170 EDs are included in *Healthcare Quarterly*. <sup>†</sup> Change in hospital cohort: in the January to March 2017 quarter, an additional 44 EDs were included in *Healthcare Quarterly*, contributing to activity and performance results. See the technical supplement to this *Healthcare Quarterly* for further information.

# Percentage of patient stays of four hours or less

The percentage of patients who spent four hours or less in the ED was 75.3% in April to June 2020, the highest of any quarter over five years (Figure 10, 11).

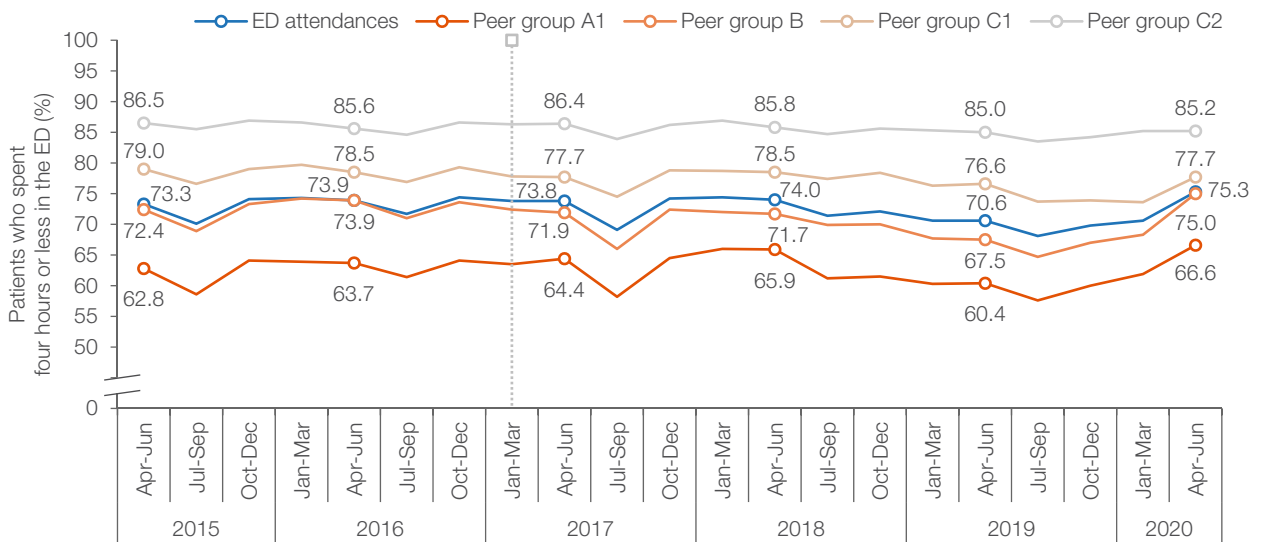
Across EDs in peer groups A1 and B, April to June 2020 saw the highest percentage of patients who spent four hours or less of any quarter in the five-year period (Figure 10).

## Variation by peer group

How long patients spent in the ED is presented by hospital peer group, including: principal referral (peer group A1), major hospitals (peer group B) and district hospitals (peer group C). Presenting the percentage of patients who spent four hours or less in the ED by peer group acknowledges the differences in size and functions between hospitals (Figure 10).

Due to differences in data definitions, period of reporting and the number of hospitals included, *Healthcare Quarterly* results for the percentage of patients who spent four hours or less in the ED are not directly comparable with figures reported by other agencies and jurisdictions. For more information refer to the *Healthcare Quarterly* technical supplements at [bhi.nsw.gov.au](http://bhi.nsw.gov.au)

Figure 10 Percentage of patients who spent four hours or less in the emergency department, by peer group, April 2015 to June 2020



Notes: Results are calculated from all EDs submitting data to EDDC in each quarter. In recent years, more than 170 EDs are included in *Healthcare Quarterly*. <sup>†</sup> Change in hospital cohort: in the January to March 2017 quarter, an additional 44 EDs were included in *Healthcare Quarterly*, contributing to activity and performance results. See the technical supplement to this *Healthcare Quarterly* for further information.



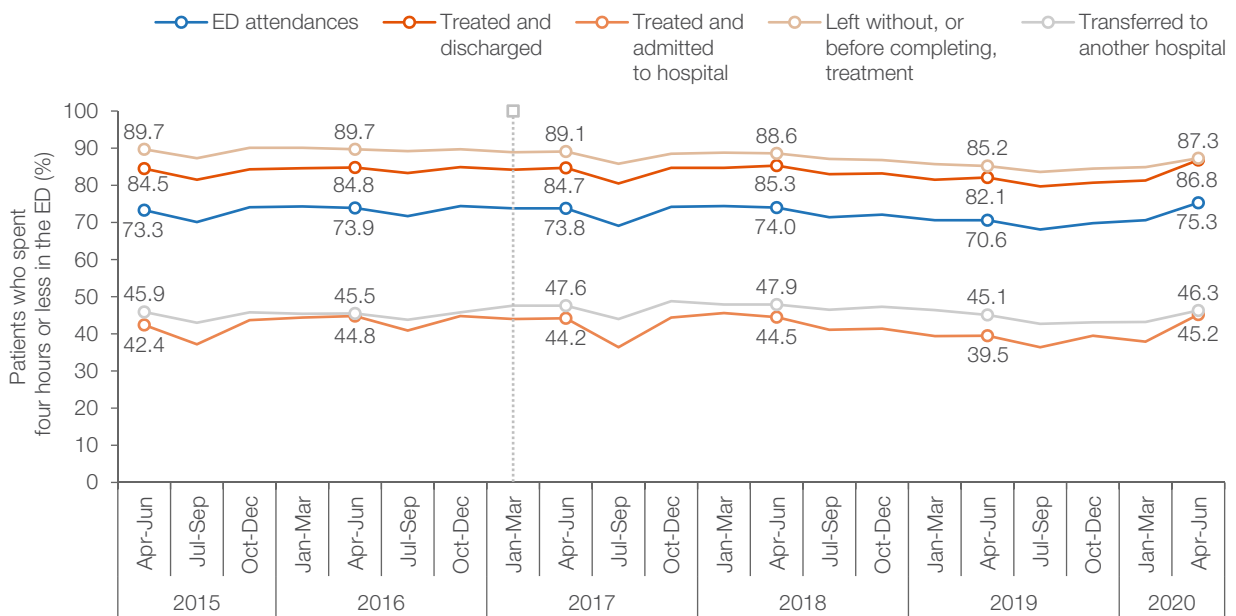
## Variation by mode of separation

How long patients spent in the ED is presented by mode of separation.

Patients who are treated and admitted to hospital from the ED or those who are transferred to another hospital tend to have more complex health needs, and therefore often spend longer periods in the ED (Figure 11).

For patients treated and discharged, April to June 2020 had the highest percentage of patients who spent four hours or less in the ED of any quarter in the five-year period (Figure 11).

Figure 11 Percentage of patients who spent four hours or less in the emergency department, by mode of separation, April 2015 to June 2020



Notes: Results are calculated from all EDs submitting data to EDCC in each quarter. In recent years, more than 170 EDs are included in *Healthcare Quarterly*. <sup>†</sup> Change in hospital cohort: in the January to March 2017 quarter, an additional 44 EDs were included in *Healthcare Quarterly*, contributing to activity and performance results. See the technical supplement to this *Healthcare Quarterly* for further information.

# Transfer of care

When an ambulance arrives at an ED, care for the patient is transferred from the paramedics to ED staff. Transfer of care time is measured from when an ambulance arrives at the hospital to responsibility for a patient's care being transferred to ED staff. In NSW, the target for transfer of care from paramedics to ED staff is within 30 minutes for at least 90% of patients.

The percentage of ambulance arrivals with a transfer of care time within 30 minutes was 93.2% in April to June 2020, the highest of any quarter over five years (Figure 12).

## Median transfer of care time

The median transfer of care time refers to the time by which half of the patients had their care transferred from paramedics to ED staff. The transfer of care time for the other half of patients was either equal to this time or longer.

The median transfer of care time remained relatively stable over five years (Figure 13).

## 90th percentile transfer of care time

The 90th percentile transfer of care time gives a sense of the longest times for a patient's care to be transferred from paramedics to ED staff. It is the time by which 90% of patients had their care transferred from paramedics to ED staff. The transfer of care time for the remaining 10% of patients was equal to this time or longer (Figure 14).

The 90th percentile transfer of care time was 24 minutes in April to June 2020, the shortest of any quarter over five years (Figure 14).

Figure 12 Percentage of ambulance arrivals with transfer of care time within 30 minutes, April 2015 to June 2020

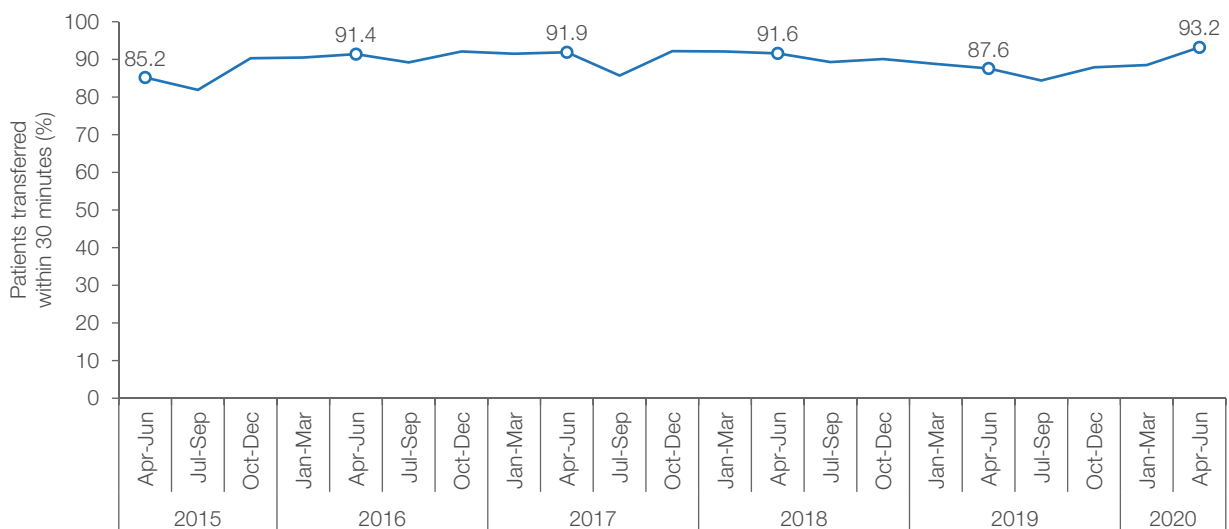


Figure 13 Median transfer of care time, January 2015 to March 2020

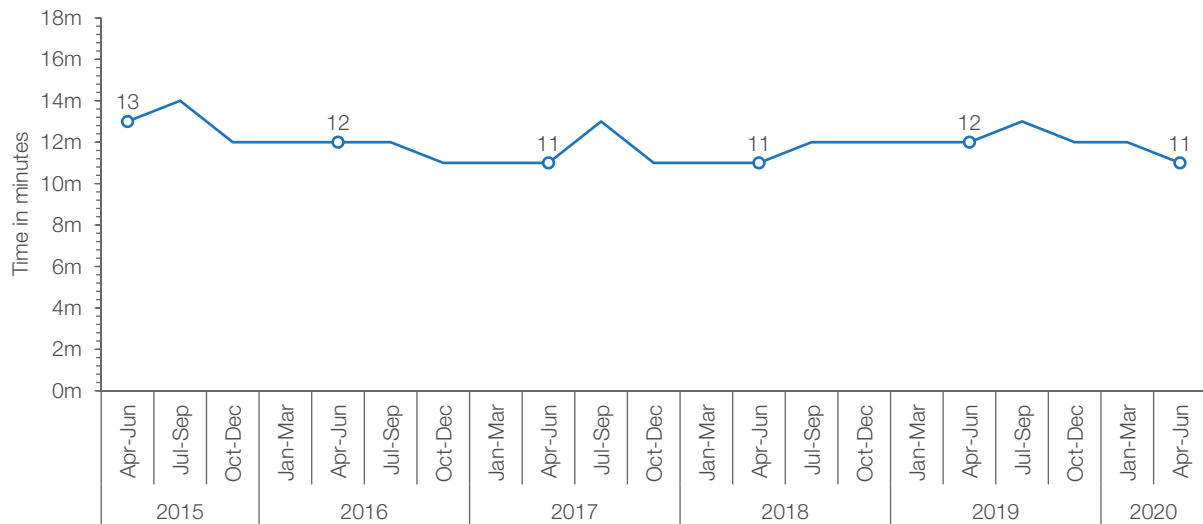
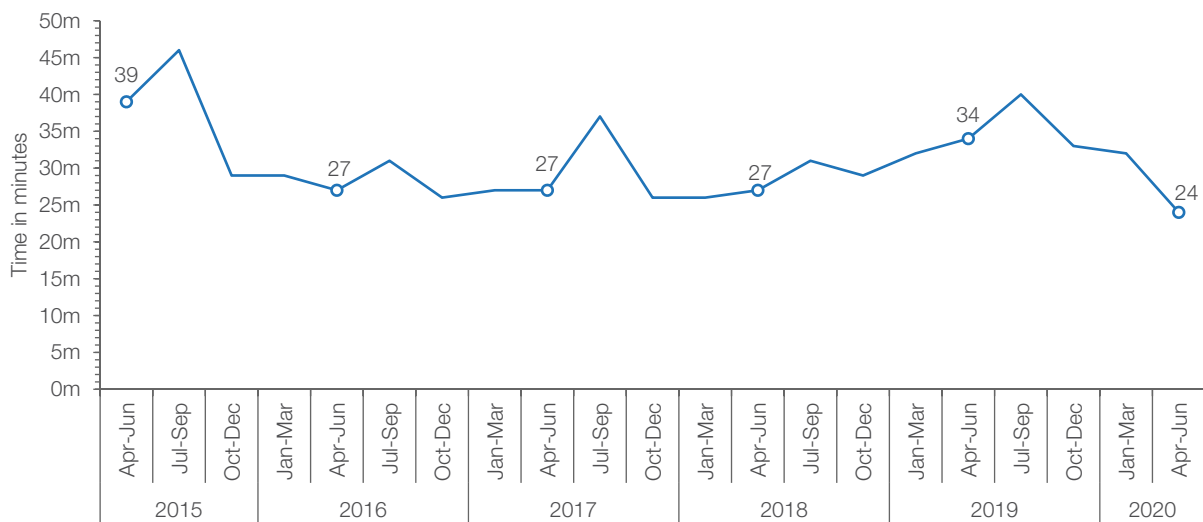


Figure 14 90th percentile transfer of care time, April 2015 to June 2020







# Ambulance activity and performance

# Ambulance activity

Activity is measured as the number of ambulance calls, incidents, responses and patient transports during the quarter. Ambulance activity is generally initiated by a Triple Zero (000) call. An incident is an event that results in a response by one or more ambulances. A response is the dispatch of an ambulance.

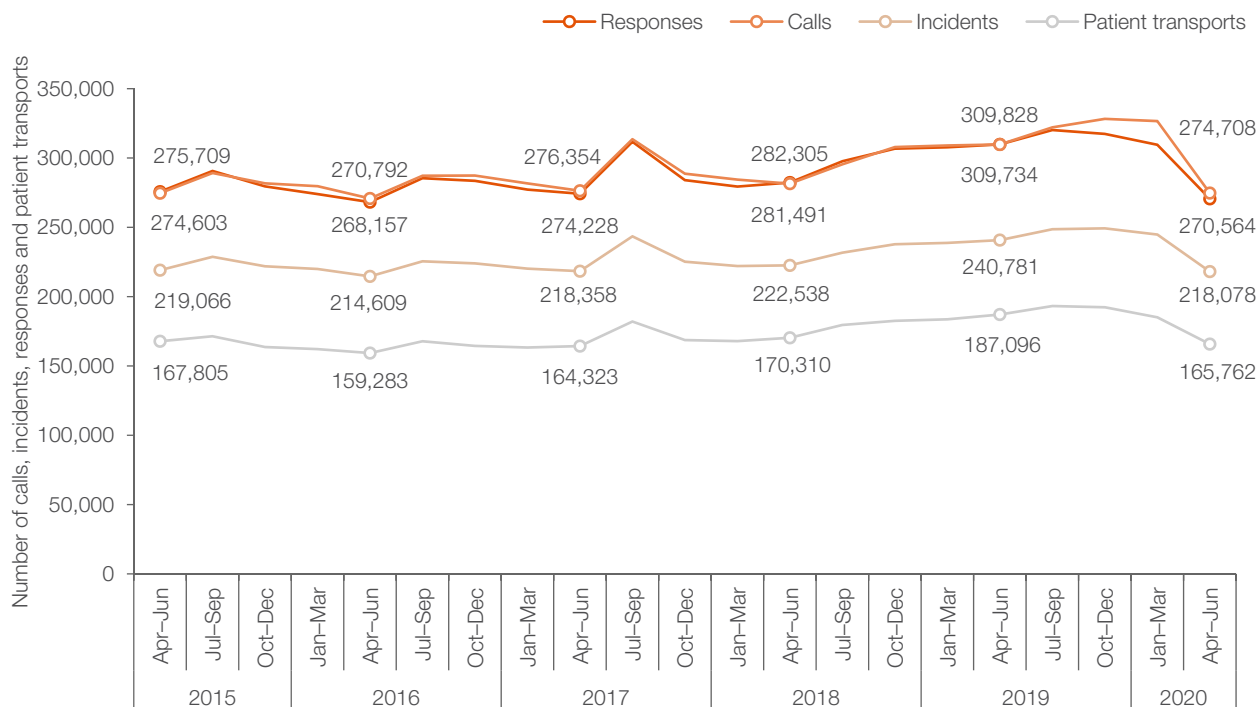
Depending on the seriousness of the incident, or the number of people involved, multiple responses (vehicles) may be required for a single incident. Most incidents have one vehicle assigned. Around two in 10 incidents have multiple vehicles assigned. Some vehicles are cancelled en route.

The number of ambulance responses peaked in the July to September 2019 quarter at 320,177. In the April to June 2020 quarter, there were 270,564 responses, down 15.5% (49,613) (Figures 15, 16).

April to June 2020 saw the largest decrease in the number of ambulance calls, incidents, responses and patient transports (compared with the same quarter the previous year) in the five-year period (Figures 15, 16).

For more information on ambulance activity, see *Healthcare Quarterly – COVID-19 Supplement, January to June 2020* at [bhi.nsw.gov.au](http://bhi.nsw.gov.au)

Figure 15 Ambulance calls, incidents, responses and patient transports, April 2015 to June 2020



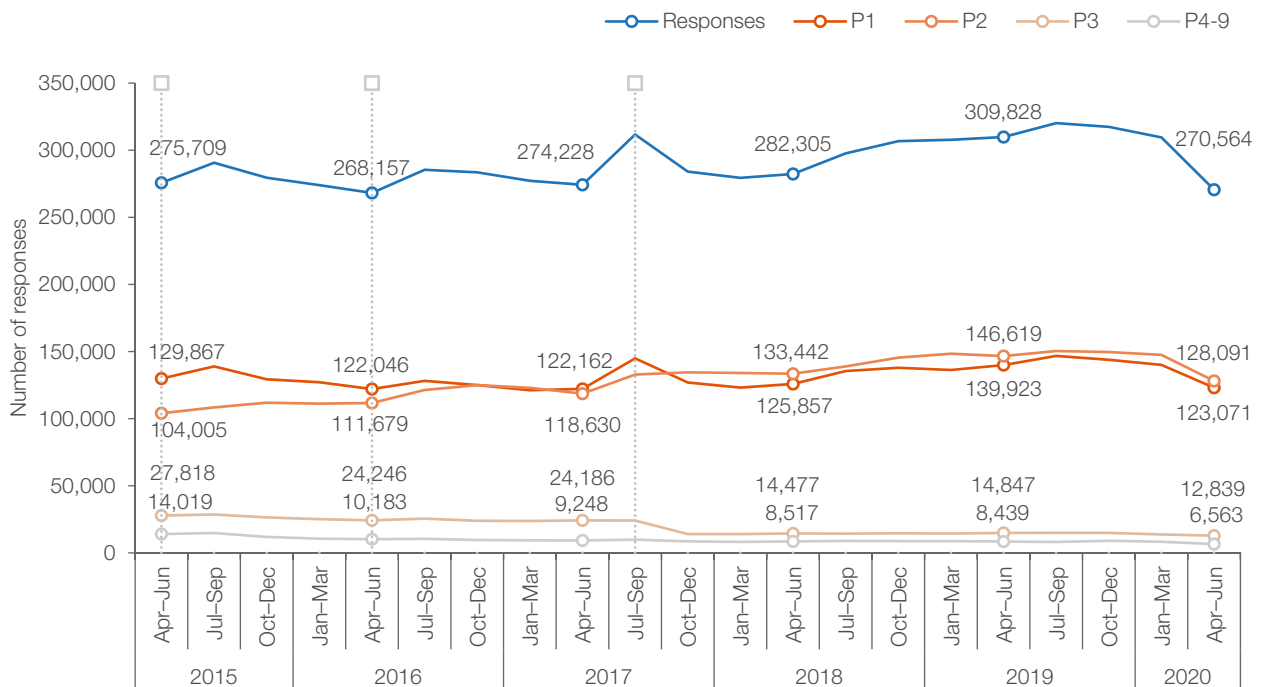
# Ambulance responses by priority

There are nine main ambulance response priority categories. Three of these – priority 1 (P1: emergency), priority 2 (P2: urgent) and priority 3 (P3: time critical) – are commonly used to assess the timeliness of ambulance services. Within the priority 1 category, there is a sub-category of priority 1A (P1A) for life-threatening conditions (e.g. cardiac or respiratory arrest).

The number of ambulance responses for P1 and P2 cases peaked in July to September 2019. In April to June 2020, there were 123,071 and 128,091 responses for P1 and P2 cases, down 16.1% (23,653) and 14.8% (22,292) respectively (Figure 16).

April to June 2020 had the lowest number of ambulance responses for all priority categories of any quarter since October to December 2017 (Figure 16).

Figure 16 Ambulance responses by priority category, April 2015 to June 2020



†: Changes to ambulance protocols resulting in the re-allocation of responses among priority categories.

# Ambulance performance

## Call to ambulance arrival time

Call to ambulance arrival time spans 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 (Figure 17). Two time benchmarks are considered for priority 1 (P1: emergency) and priority 2 (P2: urgent):

- the percentage of P1 call to ambulance arrival times within 15 and 30 minutes
- the percentage of P2 call to ambulance arrival times within 30 and 60 minutes.

The percentage of call ambulance arrival time within each of the benchmarks for P1 and P2 cases increased in April to June 2020 (Figure 18).

## 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.

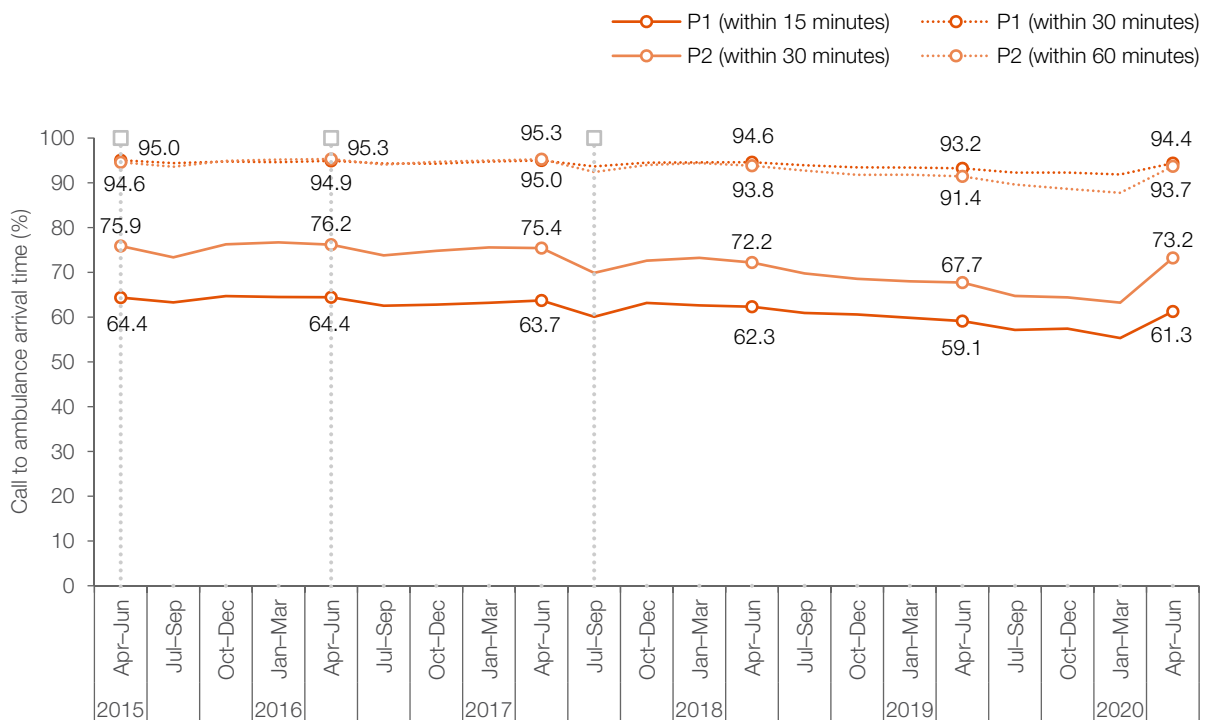
The median ambulance response time for P1 and P1A cases remained relatively stable over the past five years. In NSW, the benchmark for the median P1A response time is 10 minutes. The median ambulance response time for P2 cases has increased and peaked in January to March 2020, followed by a decrease in April to June 2020 (Figure 19).

In NSW, the percentage of P1A response times within 10 minutes has slightly decreased over the five-year period, ranging between 68.5% and 73.7% (Figure 20).

Figure 17 Call to ambulance arrival time intervals, NSW



Figure 18 Percentage of call to ambulance arrival time by priority category, April 2015 to June 2020



□: Changes to ambulance protocols resulting in the re-allocation of responses among priority categories.



Figure 19 Median ambulance response time by priority category, April 2015 to June 2020

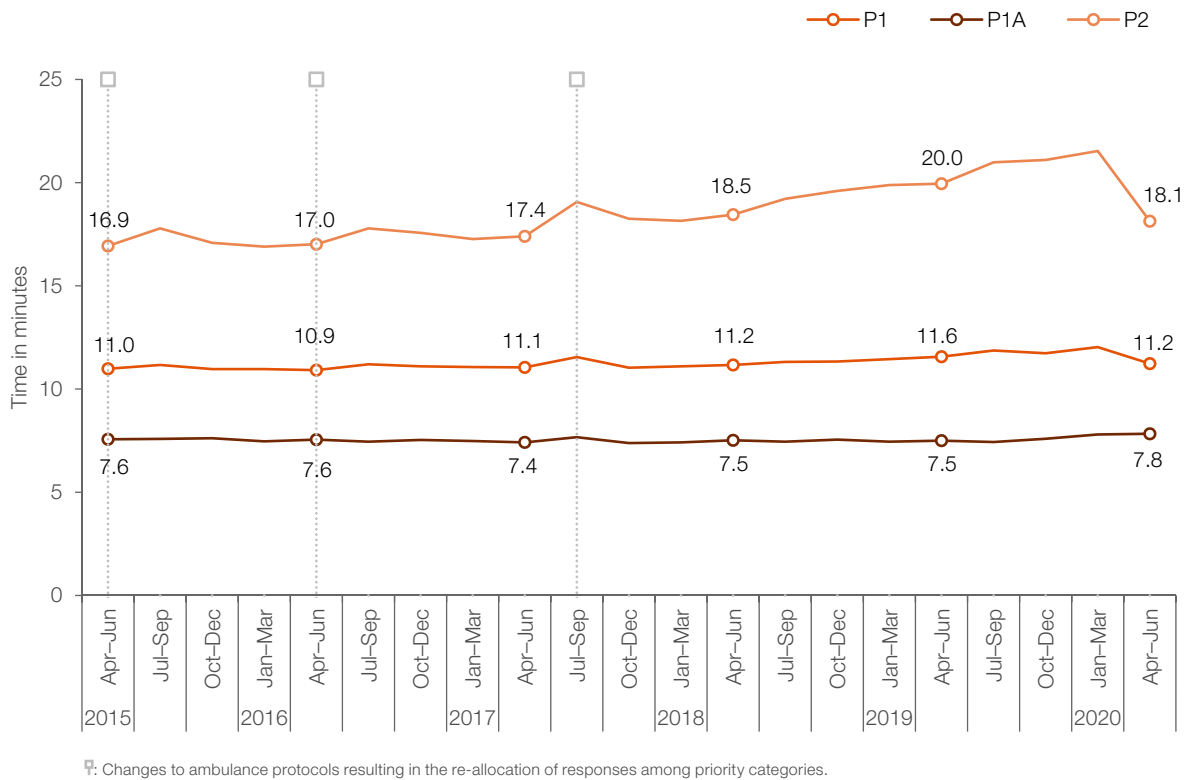
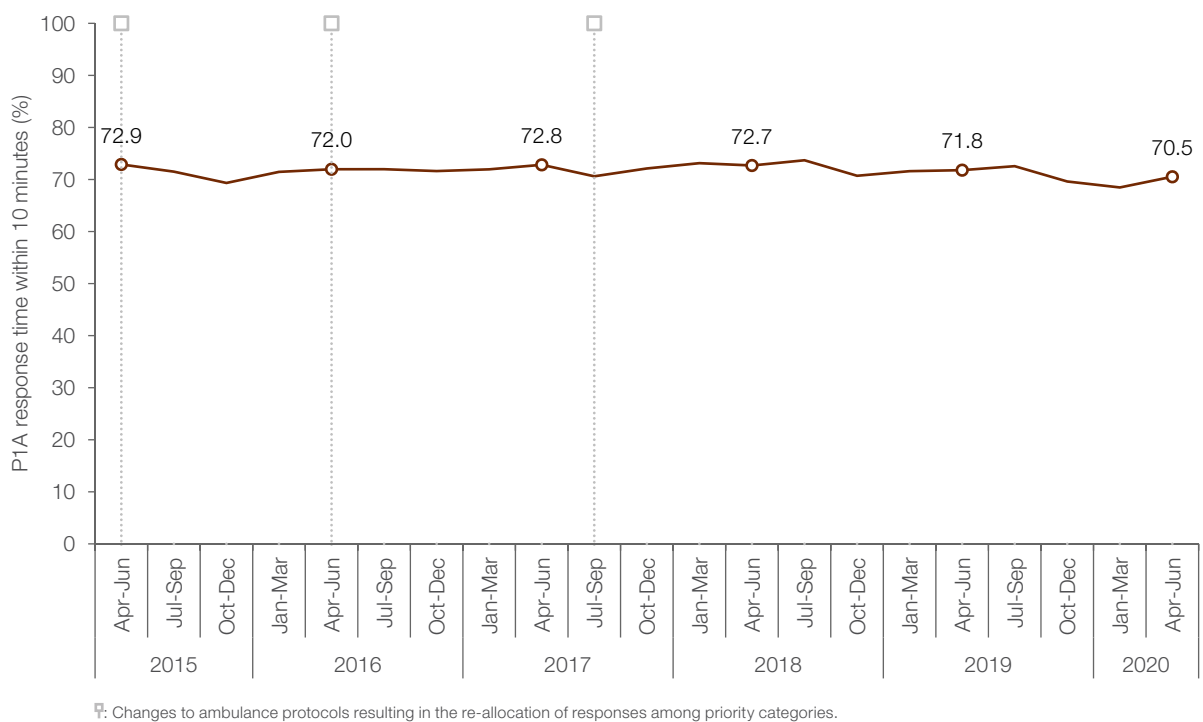


Figure 20 Percentage of Priority 1A (P1A) response time within 10 minutes, April 2015 to June 2020







# 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.

The five-year trend showed seasonal variation in hospital admissions, with both acute and non-acute episodes following a similar pattern. However, admissions have decreased sharply in 2020. April to June 2020 had the lowest number of admitted patient episodes for acute, non-acute and mental health admissions of any quarter in the five-year period (Figure 21).

The majority of admitted patient episodes were acute admissions, representing more than 90% of the total admitted patient episodes over five years. However, there was a sharper decrease in overnight episodes in April to June 2020 (Figure 22).

Admitted patient episodes can be for 'same-day' or 'overnight' care. The five-year trend for both shows a similar seasonal pattern (Figure 22).

For more information on admitted patient activity, see *Healthcare Quarterly – COVID-19 Supplement, January to June 2020* at [bhi.nsw.gov.au](http://bhi.nsw.gov.au)

Figure 21 Total, acute, non-acute and mental health episodes, April 2015 to June 2020

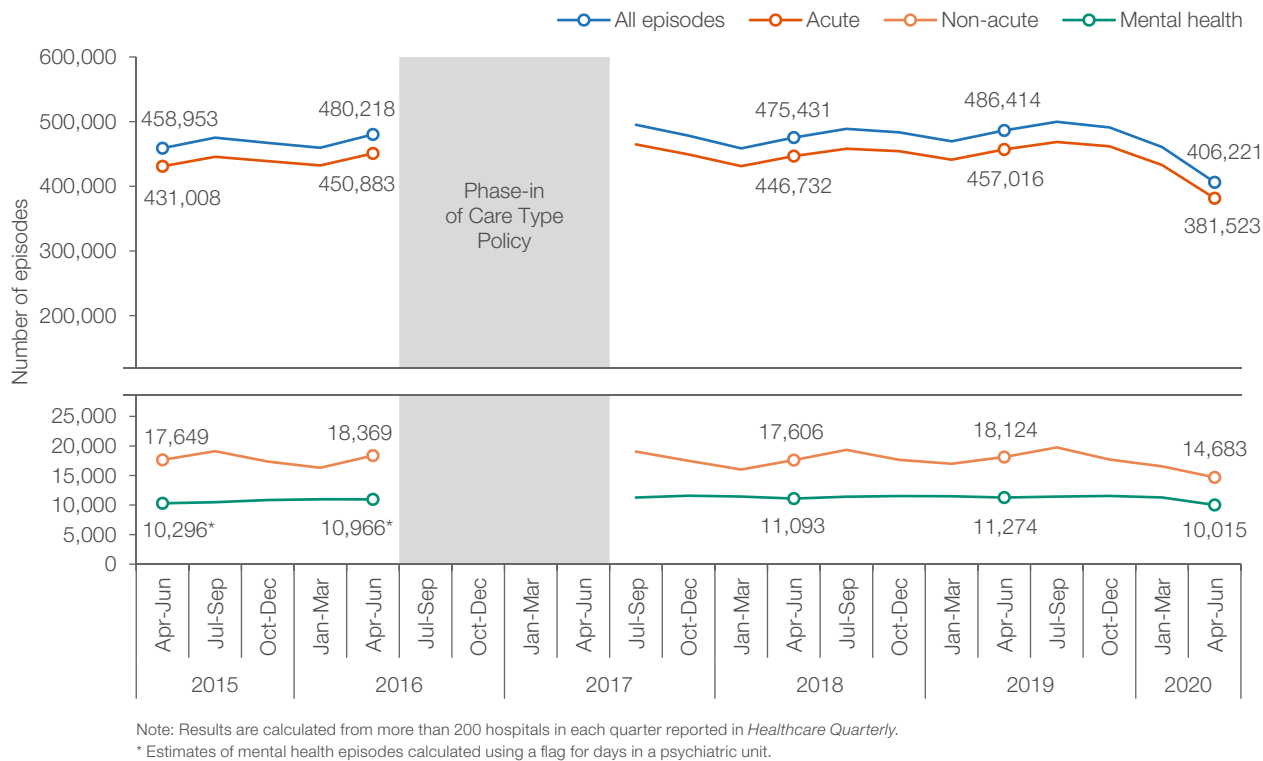
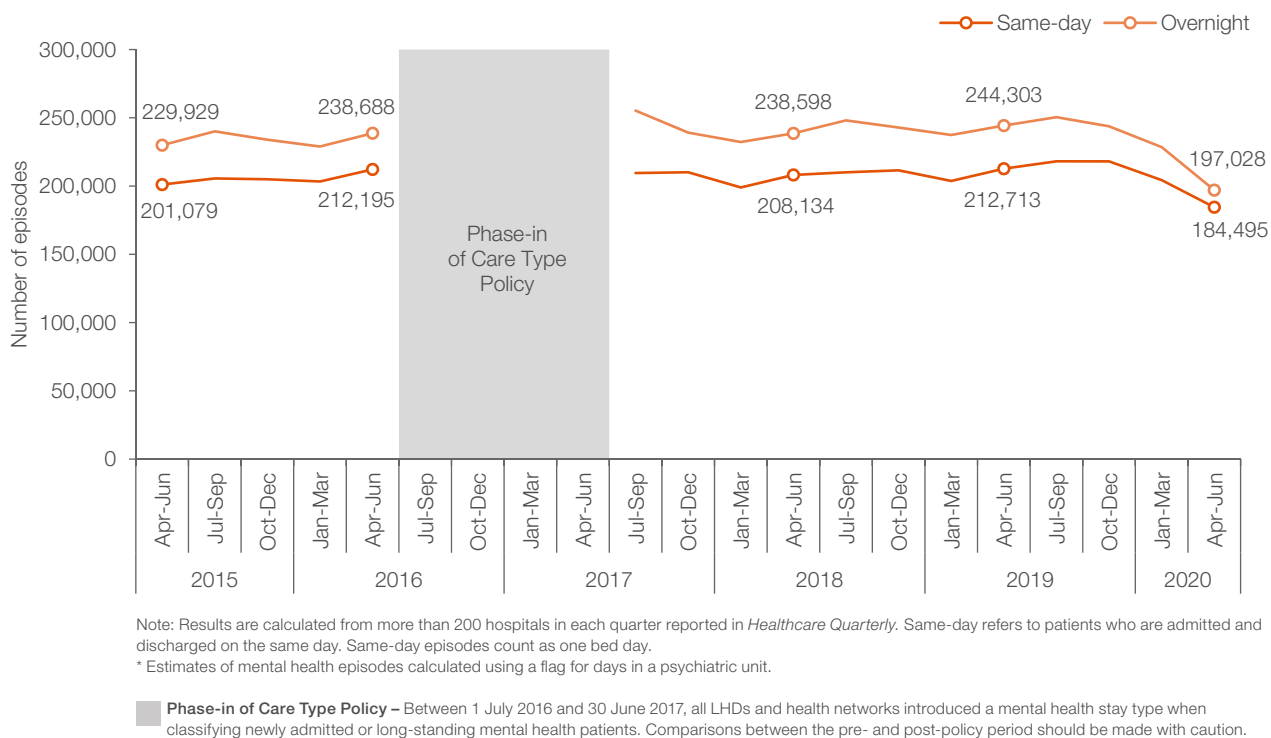


Figure 22 Overnight and same-day acute admitted patient episodes, April 2015 to June 2020



# Hospital bed days for admitted patients

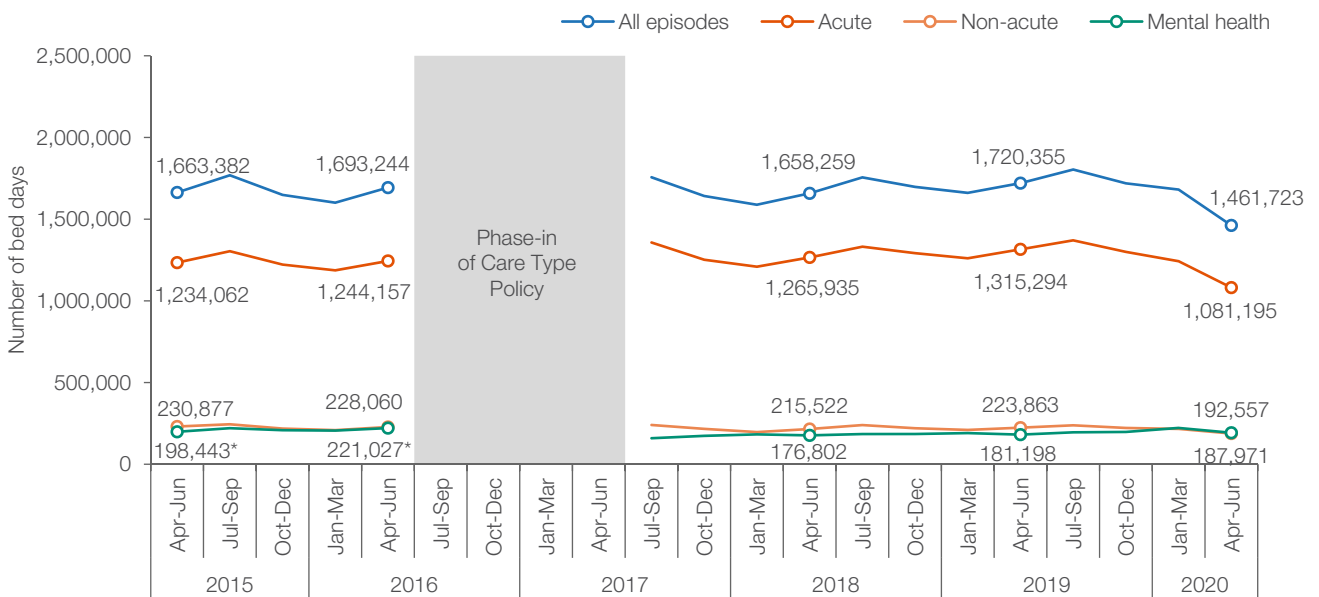
Bed days are used to establish levels of inpatient occupancy. A higher number of bed days suggests that either more patients are being hospitalised or that patients are hospitalised for longer periods, or both.

Total bed days for an overnight episode refers to the difference, in days, between the episode start and end dates, minus the number of episode leave days recorded. Same-day episodes count as one day.

Seasonal variation for total bed days followed a similar pattern to that for admitted patient episodes (Figures 21, 23).

The April to June 2020 quarter had the lowest number of hospital bed days for acute and non-acute admissions of any quarter in the five-year period (Figure 23).

Figure 23 Number of hospital bed days by type of admitted patient episode, April 2015 to June 2020



Note: Results are calculated from more than 200 hospitals in each quarter reported in *Healthcare Quarterly*.  
 \* Estimates of mental health episodes calculated using a flag for days in a psychiatric unit.

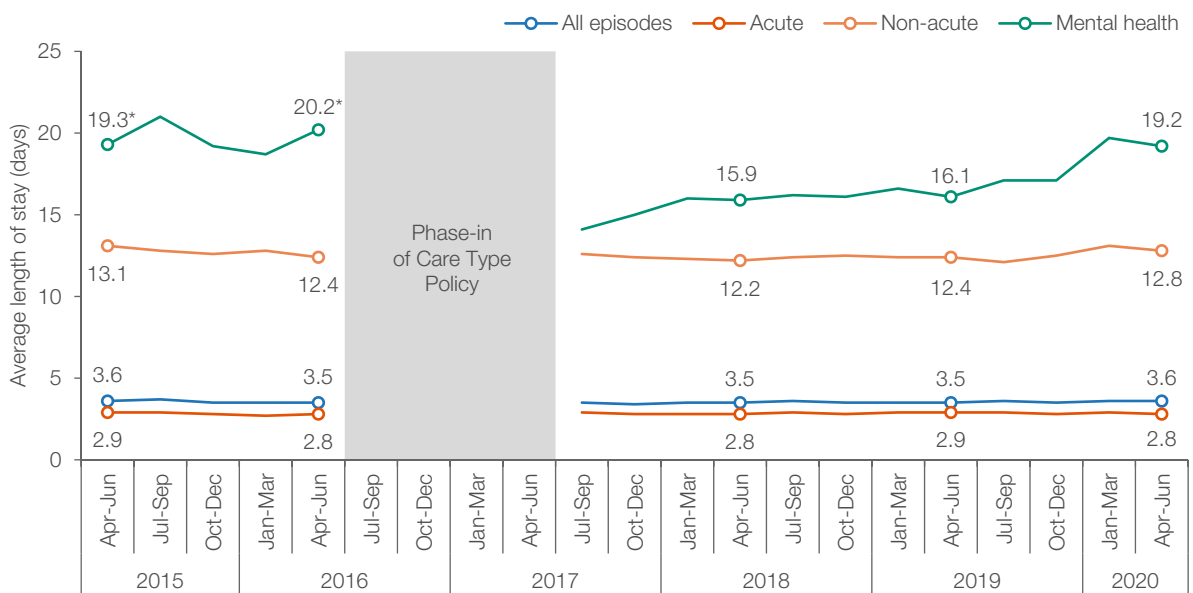
# Average length of stay in hospital

The average length of stay refers to the mean of total bed days for all acute, non-acute or mental health admitted patient episodes.

The average length of stay remained steady for all episodes, acute and non-acute episodes over five years (Figure 24).

Following the reclassification of mental health patients between 1 July 2016 and 30 June 2017, the average length of stay has increased for mental health admitted patient episodes to 19.2 days in April to June 2020 (Figure 24). The increase in average length of stay in this quarter was due, in part, to the number of long-stay patients discharged.

Figure 24 Average length of stay, by type of admitted patient episode, April 2015 to June 2020



Note: Results are calculated from more than 200 hospitals in each quarter reported in *Healthcare Quarterly*.  
 \* Estimates of mental health episodes calculated using a flag for days in a psychiatric unit.

**Phase-in of Care Type Policy** – Between 1 July 2016 and 30 June 2017, all LHDs and health networks introduced a mental health stay type when classifying newly admitted or long-standing mental health patients. Comparisons between the pre- and post-policy period should be made with caution.







# Seclusion and restraint

## Seclusion events and rate

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. Such restrictive intervention is 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. Most episodes of care in acute mental health units in NSW public hospitals do not have a seclusion event. In April to June 2020, 95.7% of acute mental health episodes of care did not have any seclusion event (data not shown).

The number of seclusion events decreased from 1,159 in April to June 2016 to 866 in April to June 2020, down 25.3% (293) over four years. There is a high degree of variability quarter on quarter, but the trend has been rising in recent quarters. There are Mental Health Intensive Care Units (MHICUs) in six hospitals. The number of seclusion events in hospitals with a MHICU decreased from 534 in April to June 2016 to 394 in April to June 2020, down 26.2% (140) over four years (Figure 25).

The rate of seclusion refers to the number of seclusion events per 1,000 bed days. The rate of seclusion decreased from 8.9 per 1,000 bed days in April to June 2016 to 7.3 per 1,000 bed days in April to June 2020. Similarly, the rate of seclusion in hospitals with a MHICU also declined over four years, and was typically higher than that in hospitals without a MHICU (Figure 26).

The NSW Ministry of Health sets a key performance indicator (KPI) for the rate of seclusion. The KPI target for the rate of seclusion since 2018–2019 has been less than 5.1 per 1,000 bed days. The rate of seclusion at NSW level has been above 5.1 per 1,000 bed days since the April to June 2019 quarter (Figure 26).

In *Healthcare Quarterly*, BHI reports on facilities with specialised declared acute mental health units and specialised non-declared acute mental health units, with both voluntary and involuntary episodes of care included. BHI does not report on seclusion and restraint in non-acute specialised mental health inpatient units or in emergency departments.

The Justice Health and Forensic Mental Health Network (JHFMHN) treats a different type of consumer and has different models of care. Therefore, JHFMHN is not included in NSW totals in this report.

There are 46 public hospitals with specialised acute mental health units in NSW, which are grouped into two broad categories for reporting based on the type of services provided: hospitals with a Mental Health Intensive Care Unit (MHICU); and hospitals without a MHICU.

For more information please refer to the technical supplement to this report and *Measurement Matters – reporting on seclusion and restraint in NSW public hospitals*, which are available at [bhi.nsw.gov.au](http://bhi.nsw.gov.au)

Figure 25 Number of seclusion events occurring in specialised acute mental health inpatient units, April 2016 to June 2020

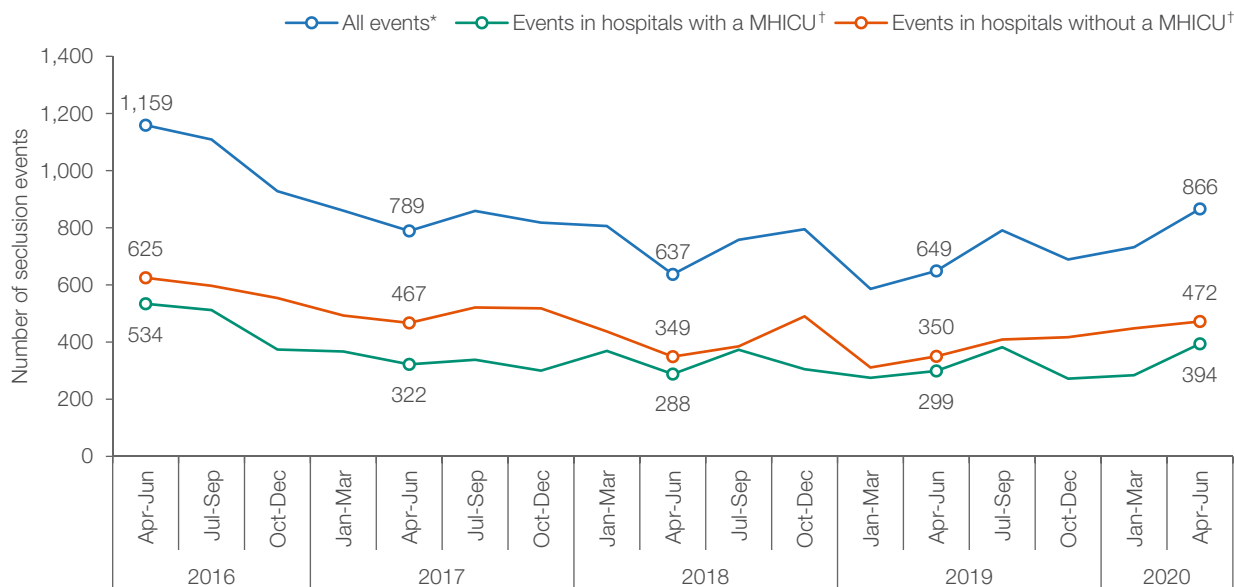
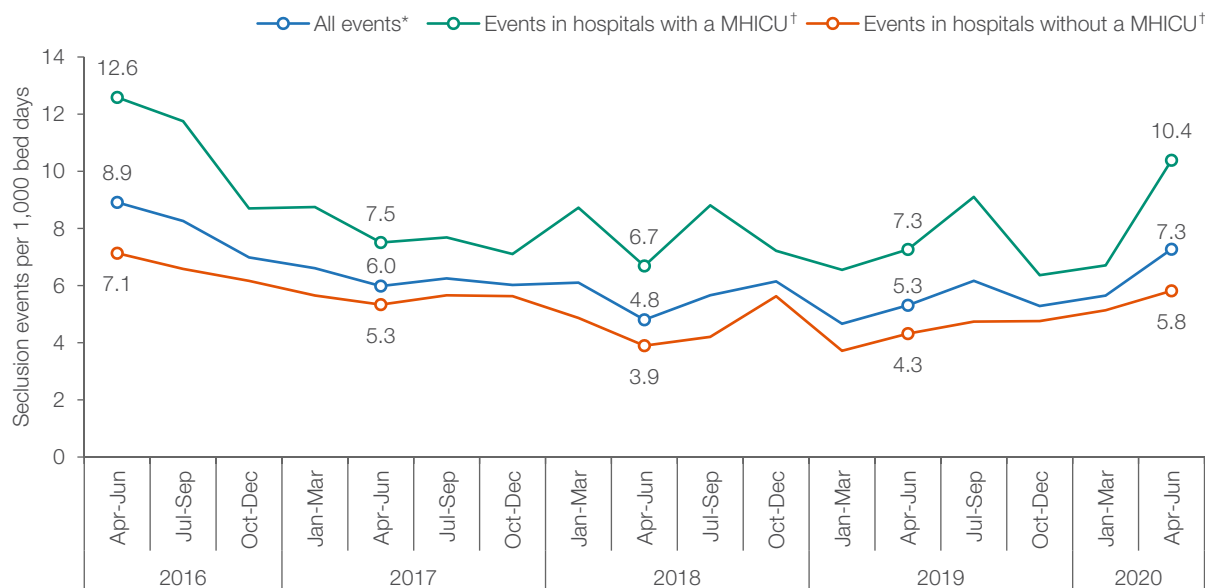


Figure 26 Number of seclusion events per 1,000 bed days in specialised acute mental health inpatient units, April 2016 to June 2020



\* 'All events' includes all seclusion events occurring in specialised acute mental health inpatient units, excluding episodes in the JHFMHN.  
 † MHICU = Mental Health Intensive Care Unit  
 Note: Four-year trend results are included, as data were only available from the July to September 2015 quarter.

## Restraint events and rate

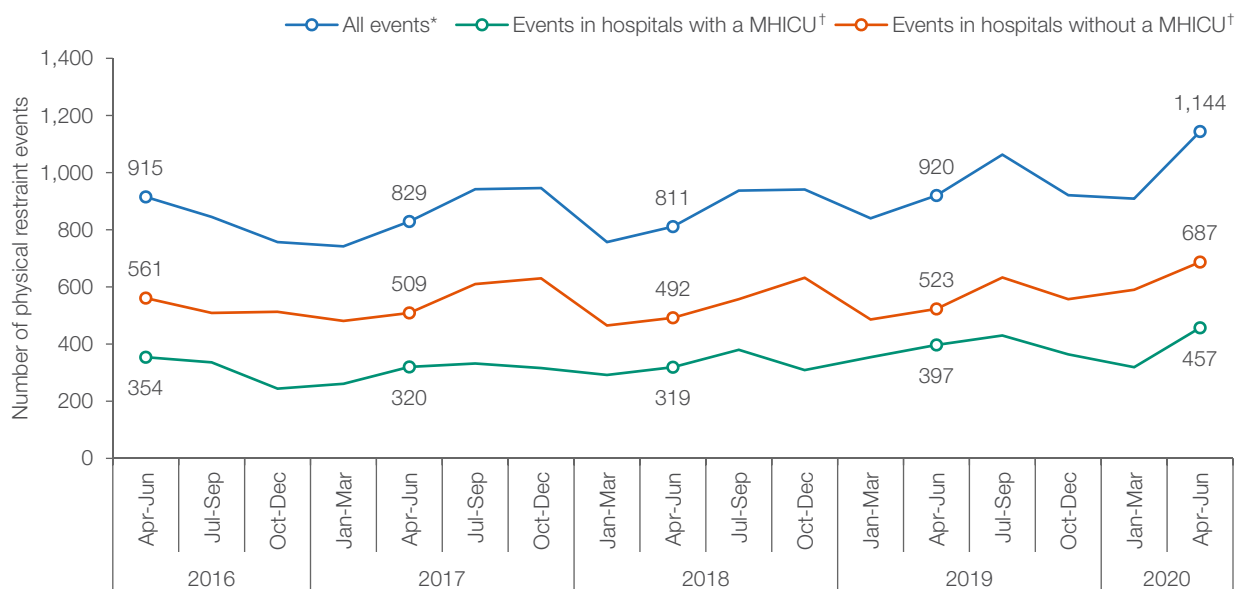
A physical restraint event occurs when the patient's freedom of movement is restricted by physical means (i.e. the hands-on immobilisation by health care staff). Such restrictive intervention is not therapeutic and should only be used as a last resort when other options have been unsuccessful in maintaining safety for the patient, staff or others.

Most episodes of care in acute mental health units in NSW public hospitals do not have a physical restraint event. In April to June 2020, 94.7% of acute mental health episodes of care did not have any physical restraint event (data not shown).

The total number of physical restraint events increased from 915 in April to June 2016 to 1,144 in April to June 2020, up 25.0% (229). The number of physical restraint events showed some seasonal variation over four years, with the trend rising in recent quarters (Figure 27).

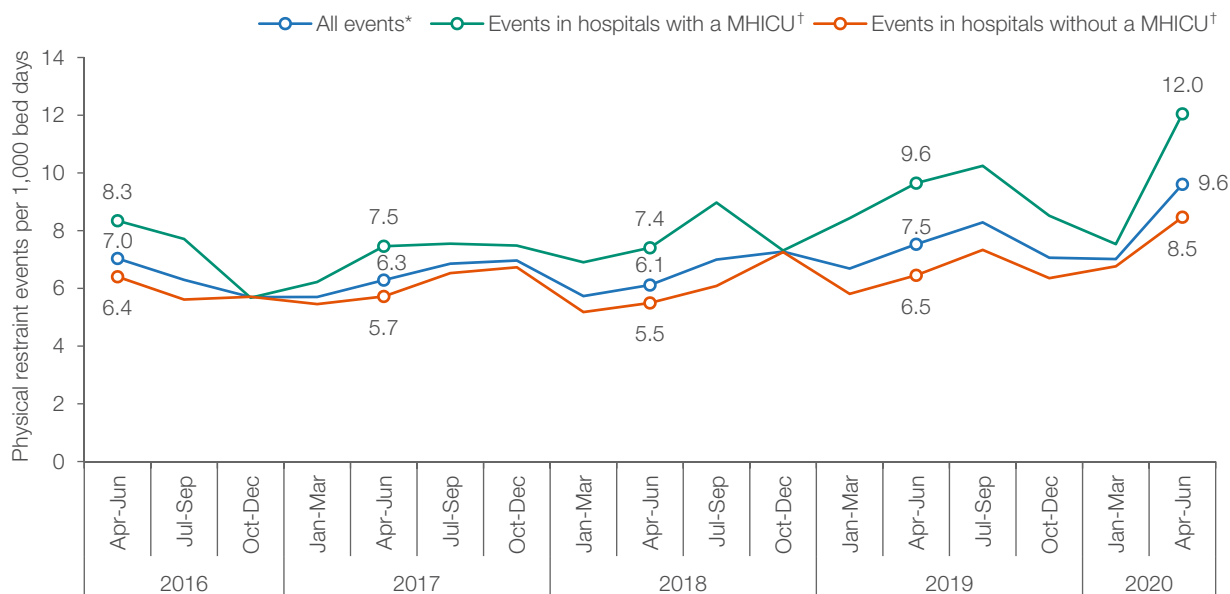
The rate of restraint refers to the number of restraint events per 1,000 bed days. The rate of physical restraint increased from 7.0 per 1,000 bed days in April to June 2016 to 9.6 per 1,000 bed days in April to June 2020. Similarly, the rate of physical restraint in hospitals with a MHICU also increased over four years, and was typically higher than in hospitals without a MHICU (Figure 28).

**Figure 27** Number of physical restraint events occurring in specialised acute mental health inpatient units, April 2016 to June 2020



Note: data collection for physical restraint commenced in 2015-16. The variation in the number of physical restraint events over time may be due to differences in the processes for manual collection of data and/or a maturing understanding of the definition of physical restraint rather than actual differences in the use of physical restraint.

**Figure 28** Number of physical restraint events per 1,000 bed days in specialised acute mental health inpatient units, April 2016 to June 2020



\* 'All events' includes all physical restraint events occurring in specialised acute mental health inpatient units, excluding episodes in the JHFMHN.

† MHICU = Mental Health Intensive Care Unit

Note: Four-year trend results are included, as data were only available from the July to September 2015 quarter.

# Seclusion and restraint duration

While seclusion and restraint are 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.

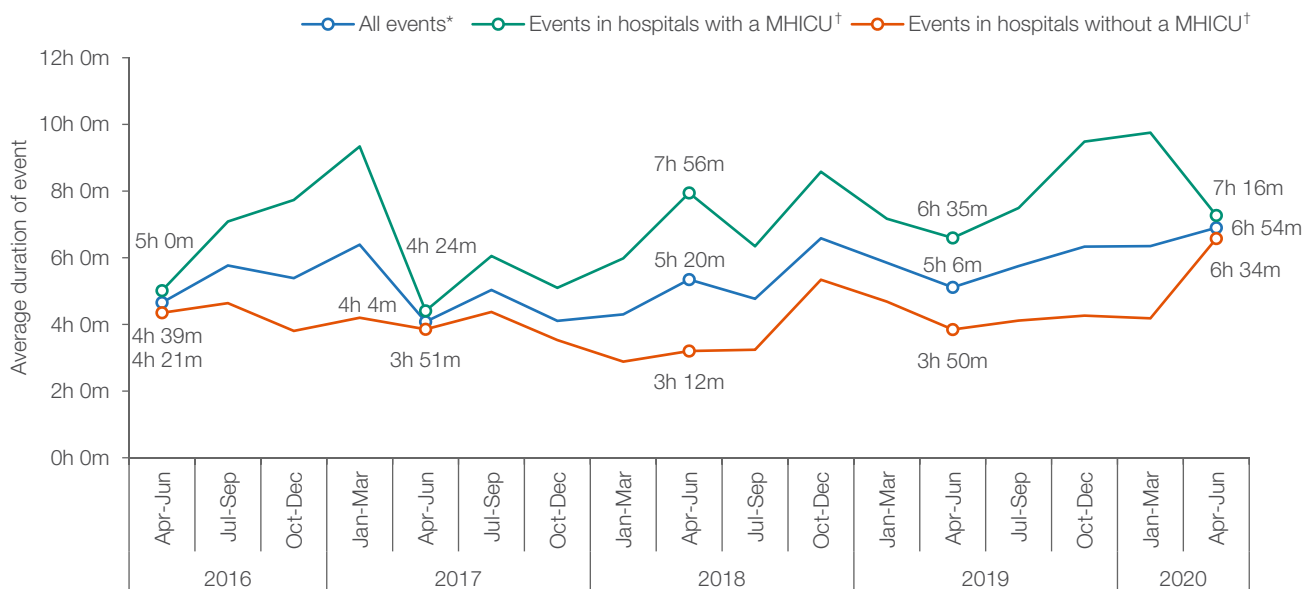
When examining average duration of seclusion and restraint events, it should be noted that variation can be affected by a single event lasting considerably longer than others. NSW Health identifies improvement in the use of restrictive practices as a reduction in the number and duration of seclusion and restraint events, without substitution of other forms of restrictive practices.

Seclusion events in hospitals with a MHICU typically had longer average duration compared with those in hospitals without a MHICU. The average duration of a seclusion event in hospitals with a MHICU peaked at 9 hours and 45 minutes in January to March 2020 and decreased to 7 hours and 16 minutes in April to June 2020 (Figure 29).

The NSW Health Performance KPI target set for seclusion duration has been less than four hours since 2017–18. The average duration of a seclusion event at NSW level has been longer than four hours since July to September 2017 (Figure 29).

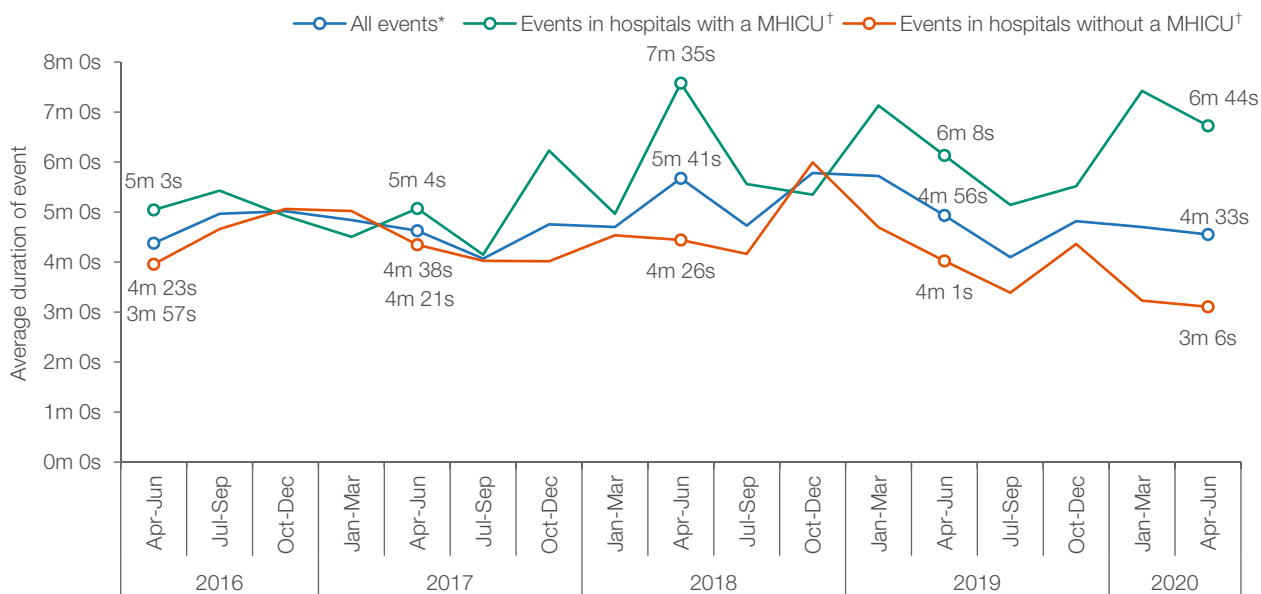
The average duration of physical restraint events varied between 4 minutes and 4 seconds, and 5 minutes and 47 seconds over four years. The average duration of a physical restraint event in hospitals with a MHICU was typically longer than that in hospitals without a MHICU (Figure 30).

**Figure 29** Average duration of seclusion events occurring in specialised acute mental health inpatient units, April 2016 to June 2020



\* 'All events' include all seclusion events occurring in specialised acute mental health inpatient units excluding episodes in Justice Health and Forensic Mental Health Network (JHFMHN).  
 † MHICU = Mental Health Intensive Care Unit  
 ‡ Note: Four-year trend results are included, as data were only available from the July to September 2015 quarter.

**Figure 30** Average duration of physical restraint events occurring in specialised acute mental health inpatient units, April 2016 to June 2020



\* 'All events' includes all physical restraint events occurring in specialised acute mental health inpatient units, excluding episodes in JHFMHN.  
 † MHICU = Mental Health Intensive Care Unit  
 ‡ Note: Four-year trend results are included, as data were only available from the July to September 2015 quarter.







# Elective surgery activity and performance

# Elective surgery

There are three main urgency categories for elective surgery: urgent, semi-urgent and non-urgent. Staged procedures refer to surgeries that for medical reasons, cannot be performed before a certain amount of time has passed. The surgeon decides which urgency category the patient falls into. The surgeon also decides whether a change in the patient's condition warrants a shift to a different urgency category.

April to June 2020 had the lowest number of procedures performed of any quarter in the five-year period (Figure 31).

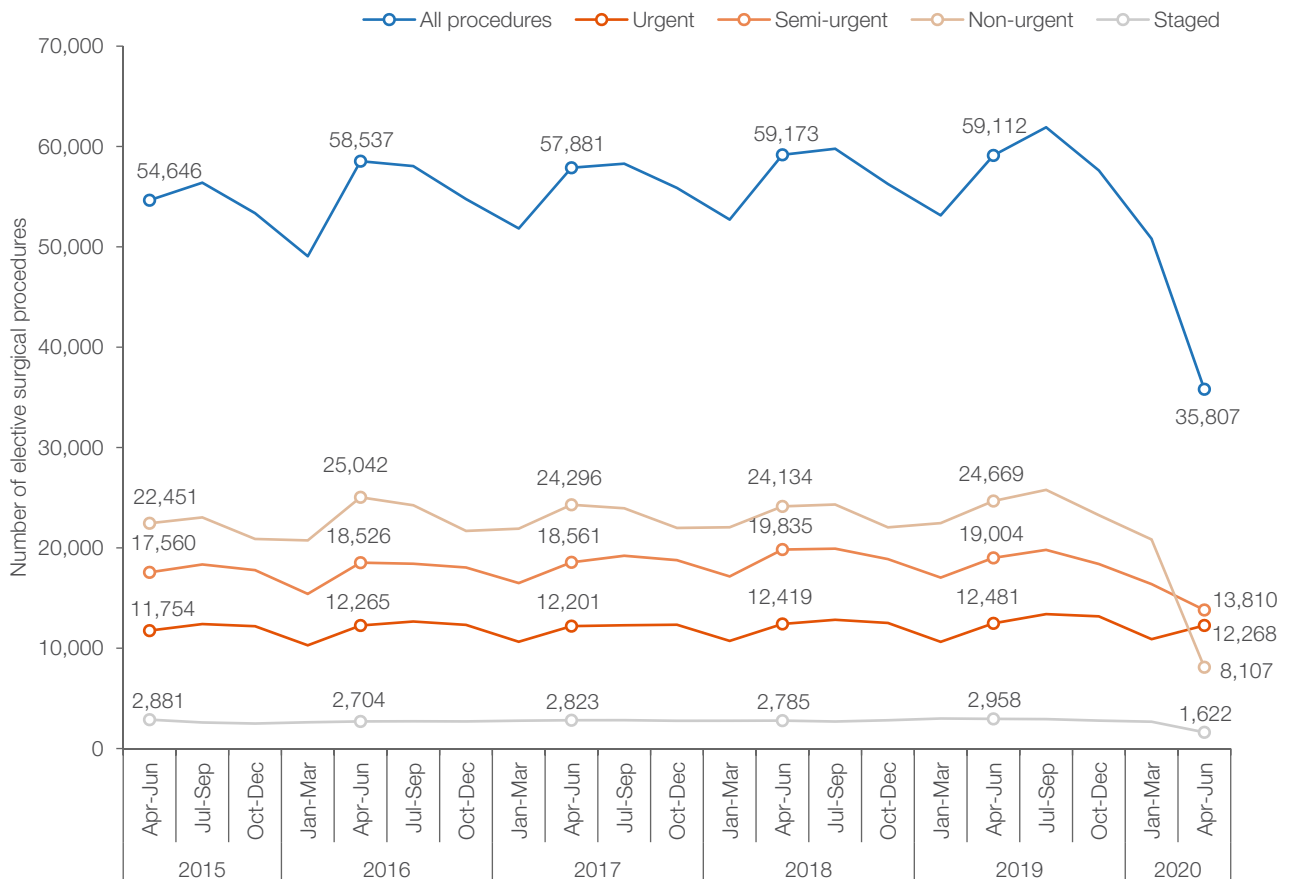
The number of procedures performed for urgent surgery maintained the typical seasonal variation pattern over five years (Figure 31). However, the number of non-urgent and semi-urgent elective

surgical procedures performed has fallen sharply, coinciding with the ongoing COVID-19 pandemic.

Semi-urgent and non-urgent procedures saw the largest decrease in the number of procedures performed in this quarter compared with the same quarter in 2019, down 27.3% (5,194) to 13,810 and 67.1% (16,562) to 8,107 procedures, respectively.

In response to the COVID-19 pandemic, from 26 March 2020, National Cabinet suspended all non-urgent elective surgery. From 27 April, additional elective surgery up to 25% of normal levels was permitted, and from 15 May, three stages for reopening elective surgery were established, to be implemented at the discretion of each jurisdiction.

Figure 31 Elective surgical procedures performed, by urgency category, April 2015 to June 2020



Note: From 26 March 2020, National Cabinet suspended all non-urgent elective surgery. From 27 April, additional elective surgery up to 25% of normal levels was permitted, and from 15 May, three stages for reopening elective surgery were established, to be implemented at the discretion of each jurisdiction.

# Percentage of elective surgery on time

For each urgency category there are clinically recommended time frames within which elective surgical procedures should be performed: 30 days for urgent surgery, 90 days for semi-urgent surgery, and 365 days for non-urgent surgery.

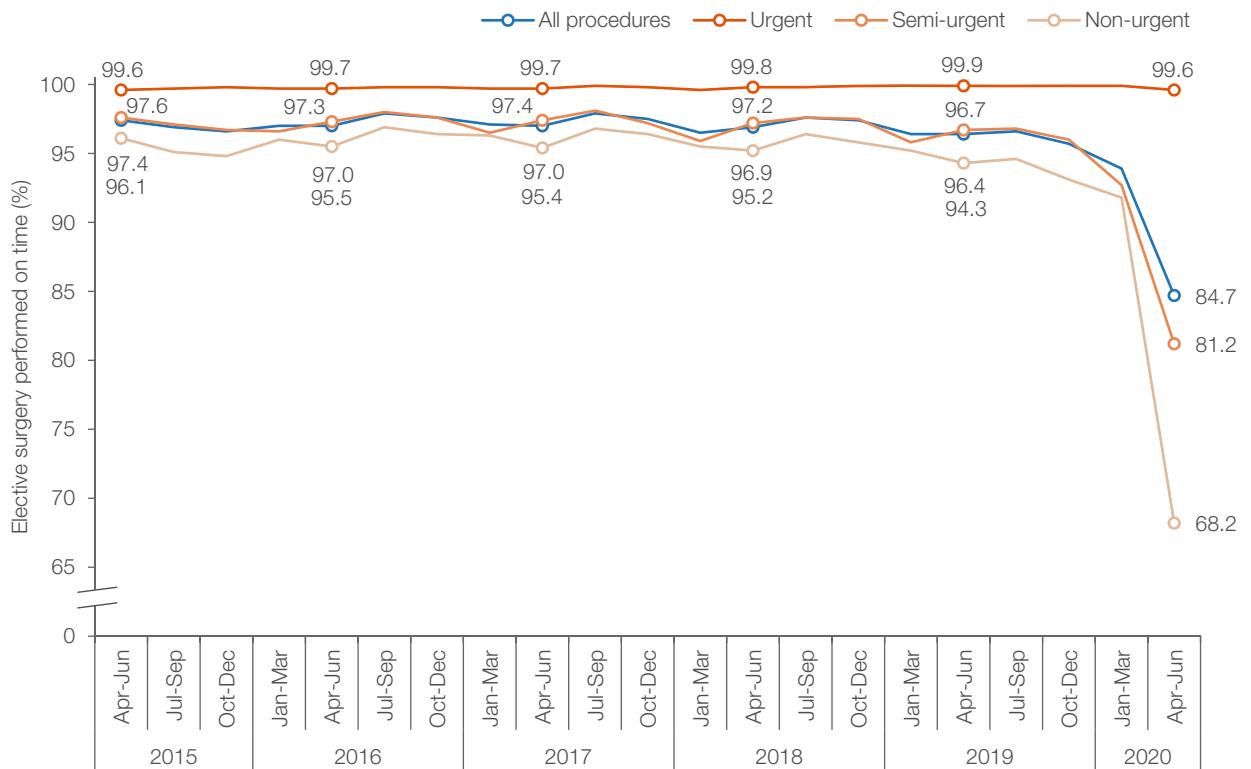
Almost all urgent elective surgical procedures were performed within clinically recommended time frames over five years. The percentage of elective surgical procedures performed on time for other urgency categories was lower than that for urgent elective surgical procedures. The biggest decrease was seen in April to June 2020, which coincided with the ongoing COVID-19 pandemic (Figure 32).

For semi-urgent and non-urgent elective surgical procedures, April to June 2020 had the lowest percentage of procedures performed on time of any quarter in the five-year period.

The percentage of elective surgical procedures performed on time for semi-urgent and non-urgent procedures saw the biggest decrease from 96.7% and 94.3% in April to June 2019 to 81.2% and 68.2%, respectively, in April to June 2020 (Figure 32).

For more information on elective surgery, see *Healthcare Quarterly – COVID-19 Supplement, January to June 2020* at [bhi.nsw.gov.au](http://bhi.nsw.gov.au)

Figure 32 Percentage of elective surgical procedures performed on time, by urgency category, April 2015 to June 2020



Note: From 26 March 2020, National Cabinet suspended all non-urgent elective surgery. From 27 April, additional elective surgery up to 25% of normal levels was permitted, and from 15 May, three stages for reopening elective surgery were established, to be implemented at the discretion of each jurisdiction.

# Waiting time and waiting list for elective surgery

The waiting time for elective surgical procedures is measured as the number of days from when a patient was placed on the list to when they received surgery.

## Median waiting time

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.

The median waiting time remained relatively stable for urgent procedures over five years. April to June 2020 had the longest median waiting time for non-urgent procedures of any quarter in the five-year period (Figure 33).

## 90th percentile waiting time

The 90th percentile gives a sense of the longest waiting times to receive surgery. This measure indicates the number of days it took for 90% of the patients to undergo surgery. The waiting time for the remaining 10% was the same or longer.

April to June 2020 had the longest 90th percentile waiting time for semi-urgent and non-urgent procedures of any quarter in the five-year period (Figure 34).

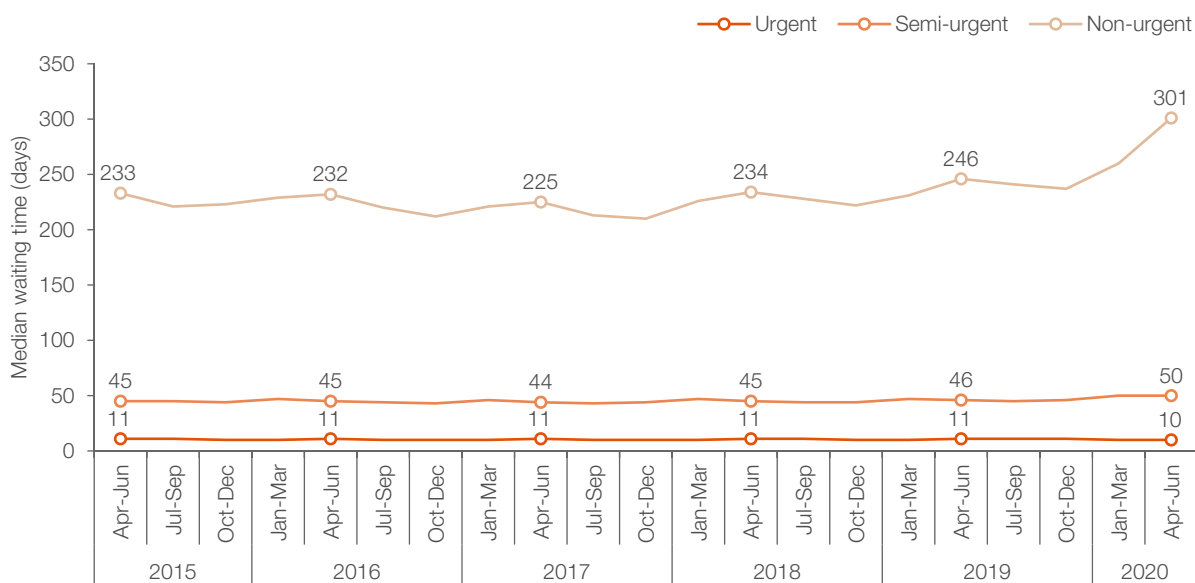
## Waiting list

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.

Across all urgency categories, April to June 2020 had the largest number of patients on the waiting list of any quarter over five years (Figure 35).

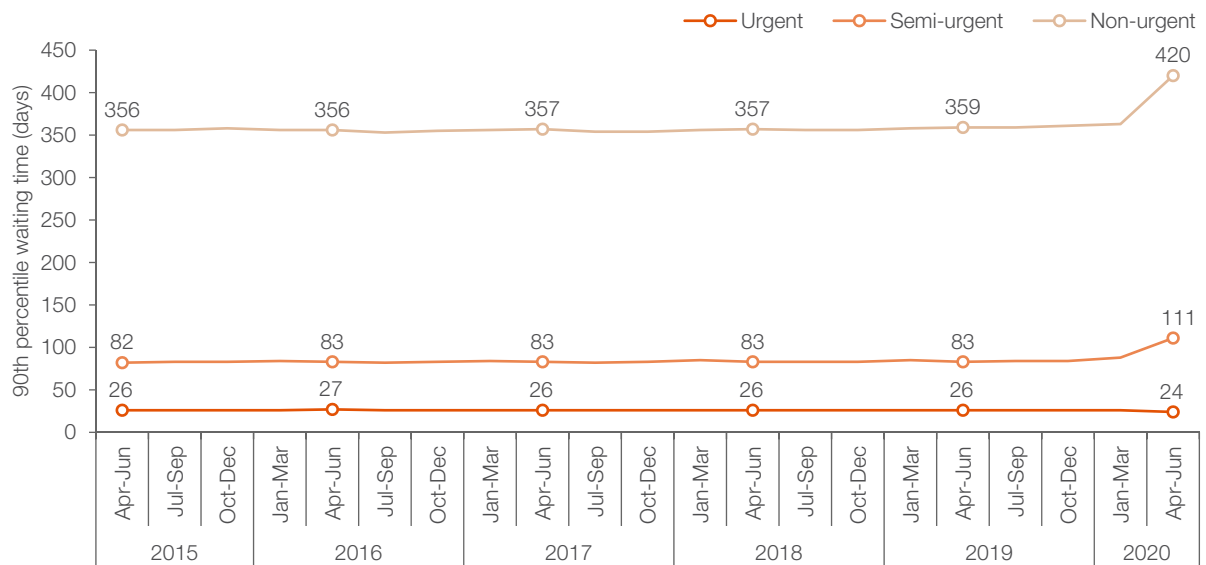
The number of patients on the waiting list for non-urgent procedures was up 43.2% (25,704) over five years, from 59,459 in April to June 2015, to 85,163 in April to June 2020 which saw the largest quarter to quarter increase in the five-year period (Figure 35).

Figure 33 Median waiting time for elective surgery, by urgency category, April 2015 to June 2020



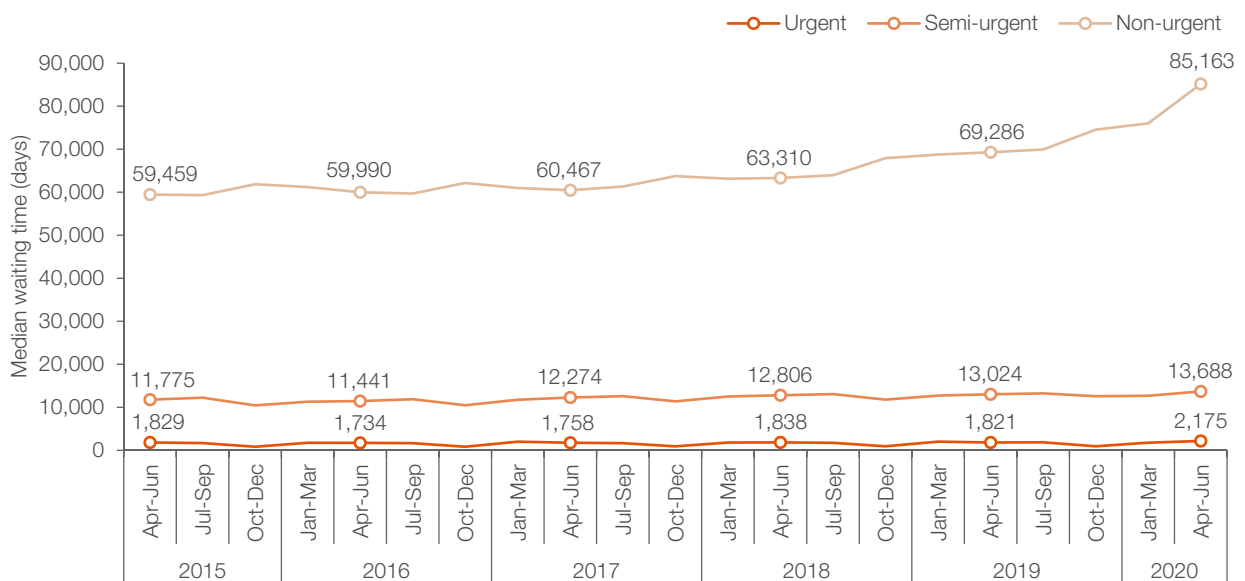
Note: From 26 March 2020, National Cabinet suspended all non-urgent elective surgery. From 27 April, additional elective surgery up to 25% of normal levels was permitted, and from 15 May, three stages for reopening elective surgery were established, to be implemented at the discretion of each jurisdiction.

Figure 34 90th percentile waiting time for elective surgery, by urgency category, April 2015 to June 2020



Note: From 26 March 2020, National Cabinet suspended all non-urgent elective surgery. From 27 April, additional elective surgery up to 25% of normal levels was permitted, and from 15 May, three stages for reopening elective surgery were established, to be implemented at the discretion of each jurisdiction.

Figure 35 Patients on the waiting list for elective surgery at the end of the quarter, by urgency category, April 2015 to June 2020



Note: From 26 March 2020, National Cabinet suspended all non-urgent elective surgery. From 27 April, additional elective surgery up to 25% of normal levels was permitted, and from 15 May, three stages for reopening elective surgery were established, to be implemented at the discretion of each jurisdiction.



## 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.

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