Healthcare Quarterly

Trend report

Emergency department, ambulance, admitted patients and elective surgery

October to December 2019

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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.

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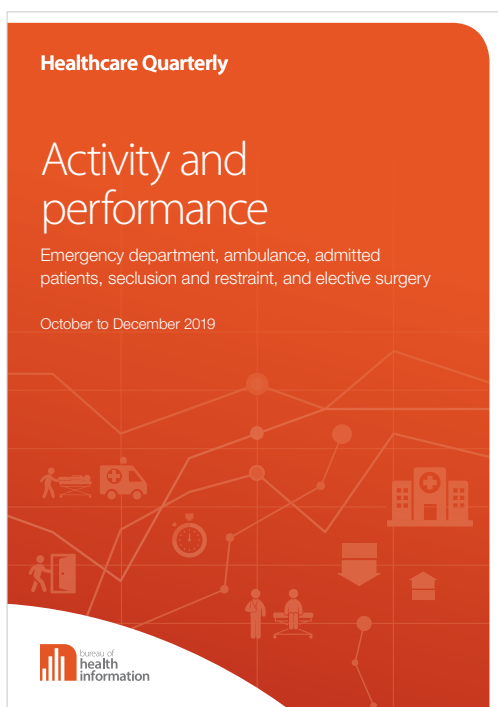
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A guide to Healthcare Quarterly

Healthcare Quarterly reports on activity and performance for public hospital and ambulance services across NSW.

Healthcare Quarterly shows how public hospital and ambulance services performed in the October to December 2019 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.
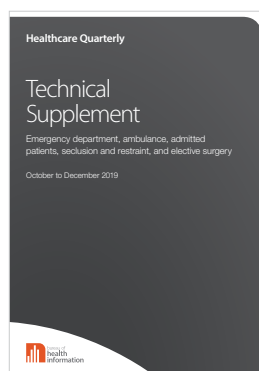
The technical supplement describes the data, methods and technical terms used to calculate activity and performance measures. Profiles report activity and performance at hospital, peer group and local health district level.

Full results are available from BHI's interactive data portal Healthcare Observer, at **bhi.nsw.gov.au/healthcare_observer**

All reports and profiles are available at **bhi.nsw.gov.au**

About this report

This *Trend report* provides five-year trends in activity and performance for emergency departments, 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 October to December 2019 quarter results refer to *Healthcare Quarterly – Activity and Performance.*

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

Emergency departments (ED)	
ED attendances	Count of all patient visits to the emergency department (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.
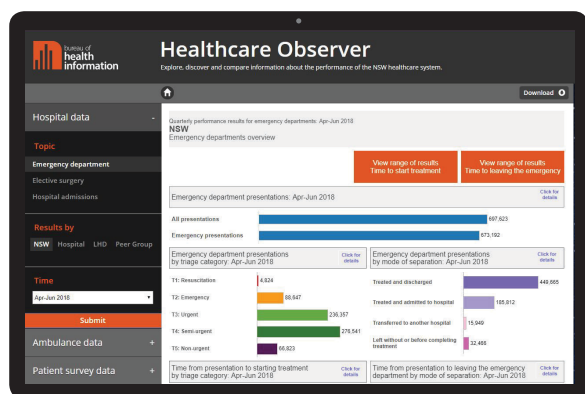
Emergency department activity and performance

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 for all hospitals increased from 653,019 in the October to December 2014 quarter to 776,593 in October to December 2019, up 18.9% (123,574) over five years. October to December 2019 had the highest number of ED attendances of any quarter in the five-year period (Figure 1).

For the consistent hospital cohort, ED attendances increased from 653,019 in October to December 2014 to 750,378 in October to December 2019, up 14.9% over five years (Figure 1).

For the larger EDs in peer groups A and B, attendances increased from 456,894 in October to December 2014 to 534,056 in October to December 2019, up 16.9% over five years (Figure 1).

Hospital EDs in NSW have progressively replaced historical information systems with more contemporary electronic record systems. BHI reports EDs which have an electronic records system in place and report ED data to the Emergency Department Data Collection (EDDC), representing more than 170 public hospitals in the most recent years.

In the January to March 2017 quarter, an additional 44 EDs were included in *Healthcare Quarterly*. These are small EDs that serve regional populations in NSW and account for a relatively small annual number of patient visits. BHI uses a consistent cohort of hospitals to ensure fair comparison of ED presentations over longer intervals.

The change in the number of hospitals can influence the NSW trends in ED activity. Further information on hospital inclusions is available in the technical supplement to *Healthcare Quarterly, October to December 2019*.

Figure 1   Emergency department attendances, October 2014 to December 2019
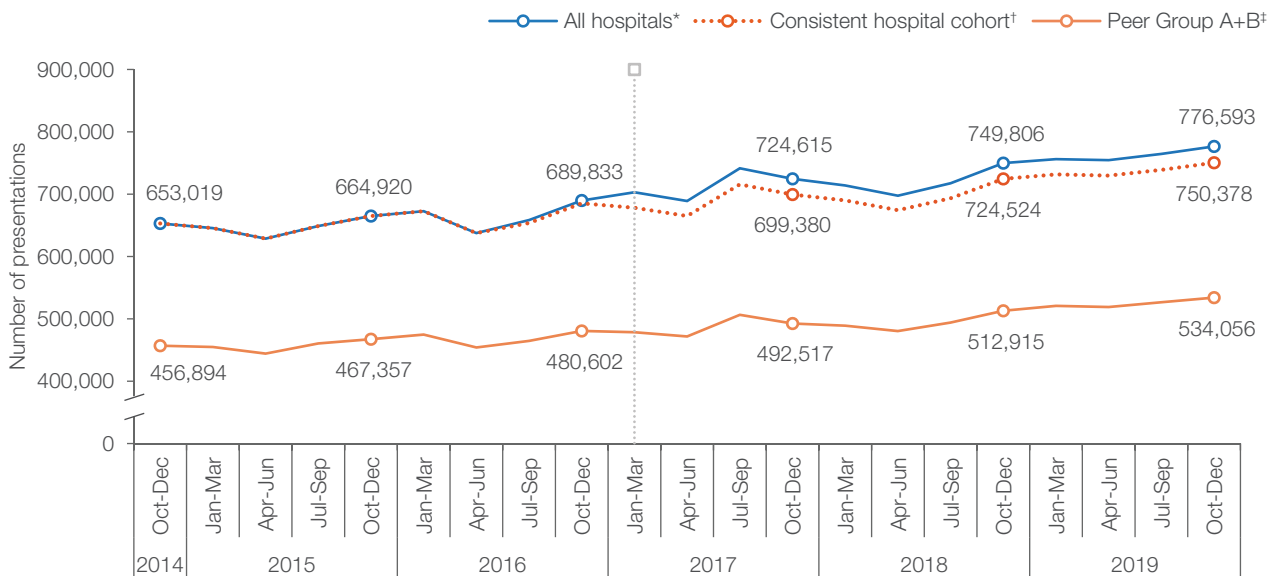
* 'All hospitals' cohort includes all EDs submitting valid data to EDDC in each quarter. This includes more than 170 EDs as of the January to March 2017 quarter.
† A consistent cohort of hospitals was used to report ED presentations so that comparisons of presentations over longer intervals will not be affected by inclusion of additional EDs.
‡ Peer group A+B cohort inlcudes all hospitals in peer groups A1, A2, A3 and B.
Note: 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 technical supplement for further information.

Emergency presentations by triage category

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.

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

Across all triage categories, emergency presentations have increased over time. Triage category 4 had the highest number of emergency presentations.

Triage 2 (emergency) and triage 3 (urgent) had the largest percentage increases in presentations, up 38.4% (27,421) to 98,896, and 33.8% (68,214) to 269,840, respectively, over five years.

The October to December 2019 quarter had the highest number of emergency presentations for triage categories 1, 3 and 4 of any quarter over the five-year period. For triage category 2, this quarter had the second highest number of presentations of any quarter over five years, slightly lower (743 presentations) than the July to September 2019 quarter (Figure 2).

Percentage of emergency presentations by triage category, October to December quarters from 2014 to 2019

| | October–December | | | | | |
Category	2014	2015	2016	2017	2018	2019
Triage 1 (%)	0.7	0.7	0.7	0.7	0.7	0.7
Triage 2 (%)	11.4	11.9	12.0	12.5	13.1	13.1
Triage 3 (%)	32.2	33.1	34.0	33.9	35.0	35.8
Triage 4 (%)	44.0	43.3	42.8	42.2	41.3	41.0
Triage 5 (%)	11.7	11.0	10.6	10.8	9.9	9.3
Emergency presentations (%)	100	100	100	100	100	100

Figure 2   Emergency presentations by triage category, October 2014 to December 2019
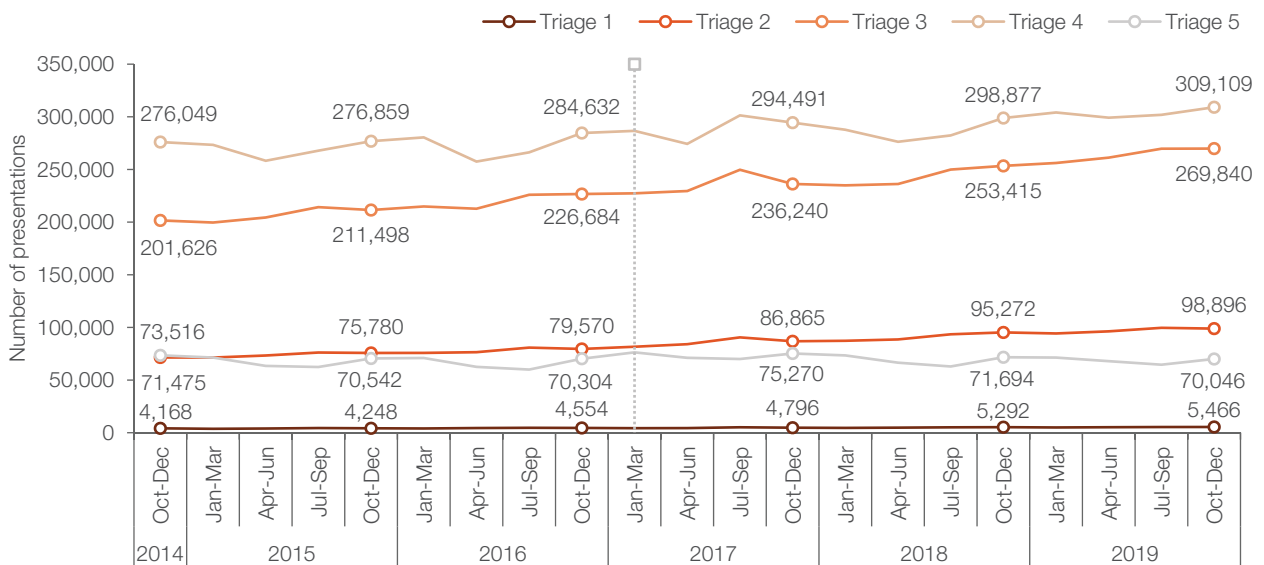
Notes: Results are calculated from all EDs submitting data to EDDC in each quarter. In recent years, more than 170 EDs are included in *Healthcare Quarterly*. Change in hospital cohort: in the January to March 2017 quarter, an additional 44 EDs were included in *Healthcare Quarterly,* contributing to activity and performance results. See technical supplement 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 from 145,614 in the October to December 2014 quarter to 173,601 in October to December 2019, up 19.2% over five years (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 have increased from 504,302 in October to December 2014 to 599,597 in October to December 2019, up 18.9% over five years (Figure 3).

Percentage of ED attendances by mode of arrival, October to December quarters from 2014 to 2019

Mode of arrival	October–December					
	2014	2015	2016	2017	2018	2019
Ambulance (%)	22.3	21.2	20.9	20.9	21.9	22.4
Police (%)	0.5	0.5	0.5	0.4	0.4	0.4
Other (%)	77.2	78.4	78.7	78.7	77.6	77.2
ED attendances (%)	100	100	100	100	100	100

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, October 2014 to December 2019
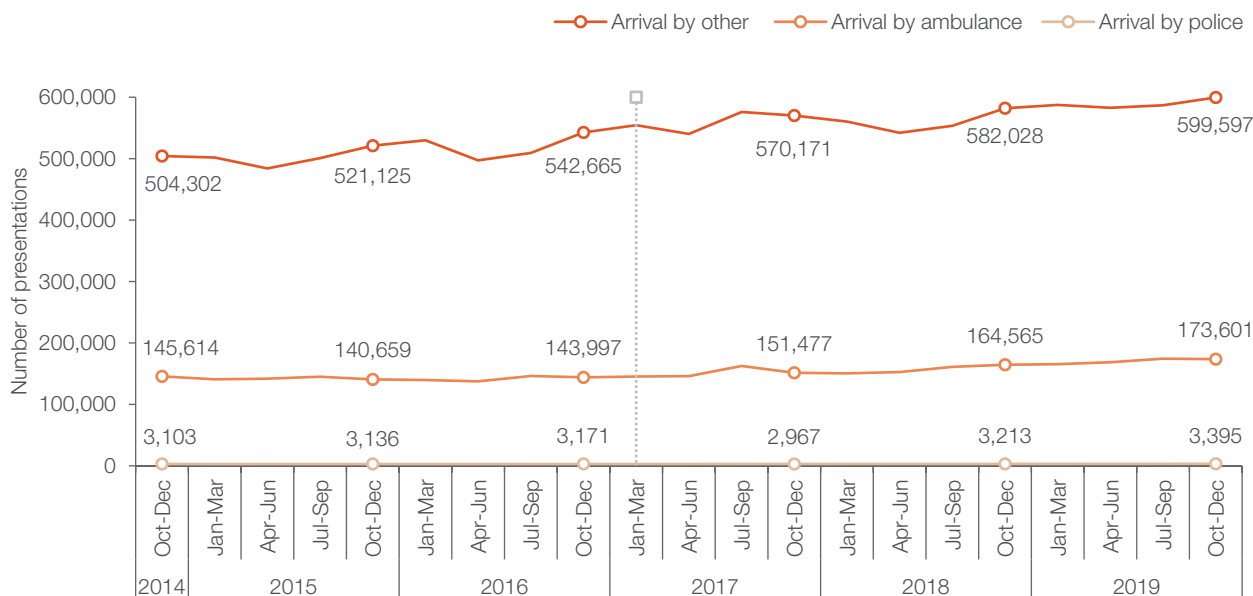
Notes: Results are calculated from all EDs submitting data to EDDC in each quarter. In recent years, more than 170 EDs are included in *Healthcare Quarterly*. Change in hospital cohort: in the January to March 2017 quarter, an additional 44 EDs were included in *Healthcare Quarterly,* contributing to activity and performance results. See technical supplement 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.

Across all modes of separation, ED attendances have increased over time. Between October to December 2014 and October to December 2019, patients who left without, or before completing treatment, had the largest percentage increase, up 47.3% (16,541) to 51,541 over five years (Figure 4).

Percentage of ED attendances by mode of separation, October to December quarters from 2014 to 2019

Mode of separation	October–December					
	2014	2015	2016	2017	2018	2019
Treated and discharged (%)	66.3	66.1	65.0	65.3	64.2	64.0
Treated and admitted (%)	24.6	24.6	25.5	25.1	25.6	25.5
Transferred (%)	2.0	2.0	2.1	2.2	2.2	2.2
Left without, or before completing, treatment (%)	5.4	5.5	5.5	5.4	6.0	6.6

Figure 4   Emergency department attendances by mode of separation, October 2014 to December 2019
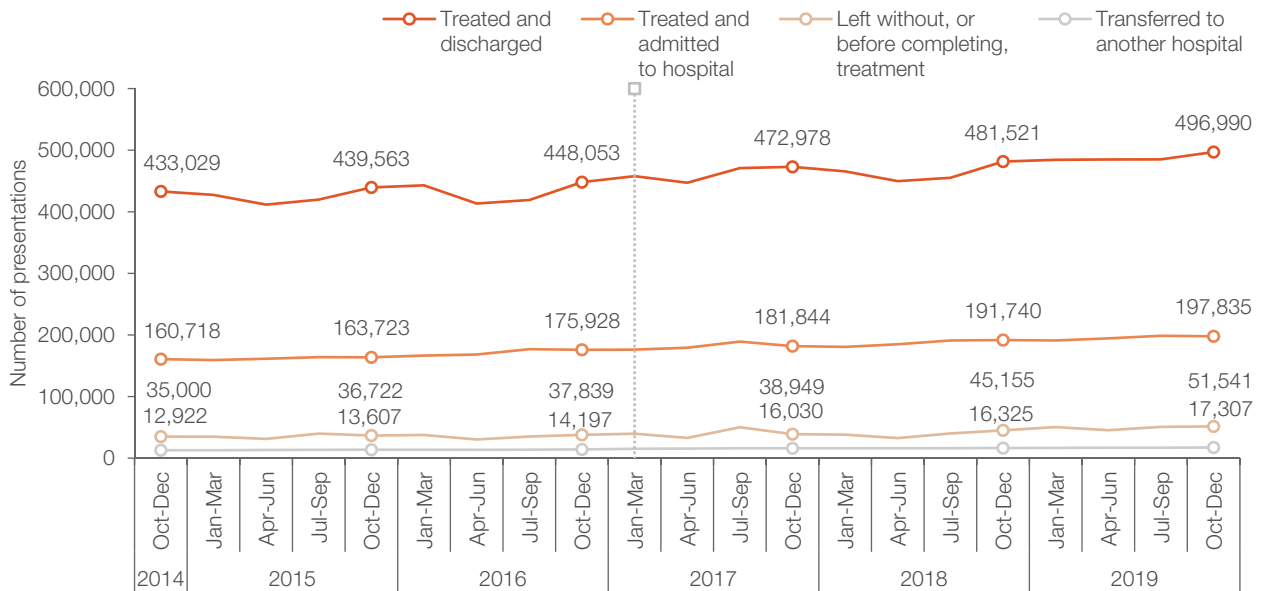
Notes: Results are calculated from all EDs submitting data to EDDC in each quarter. In recent years, more than 170 EDs are included in *Healthcare Quarterly*. Change in hospital cohort: in the January to March 2017 quarter, an additional 44 EDs were included in *Healthcare Quarterly,* contributing to activity and performance results. See technical supplement 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. Across triage categories 2 to 5, the percentage of patients whose treatment started on time showed a similar seasonal variation pattern. The October to December 2019 quarter had the lowest percentage of patients whose treatment started on time across triage categories 2 to 5 in October to December quarters 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 patients began treatment. The waiting time for the other half of patients 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 in the five-year period. Similar seasonal variation was observed in the median and 90th percentile times across triage categories 3 to 5 (Figure 6, 7).
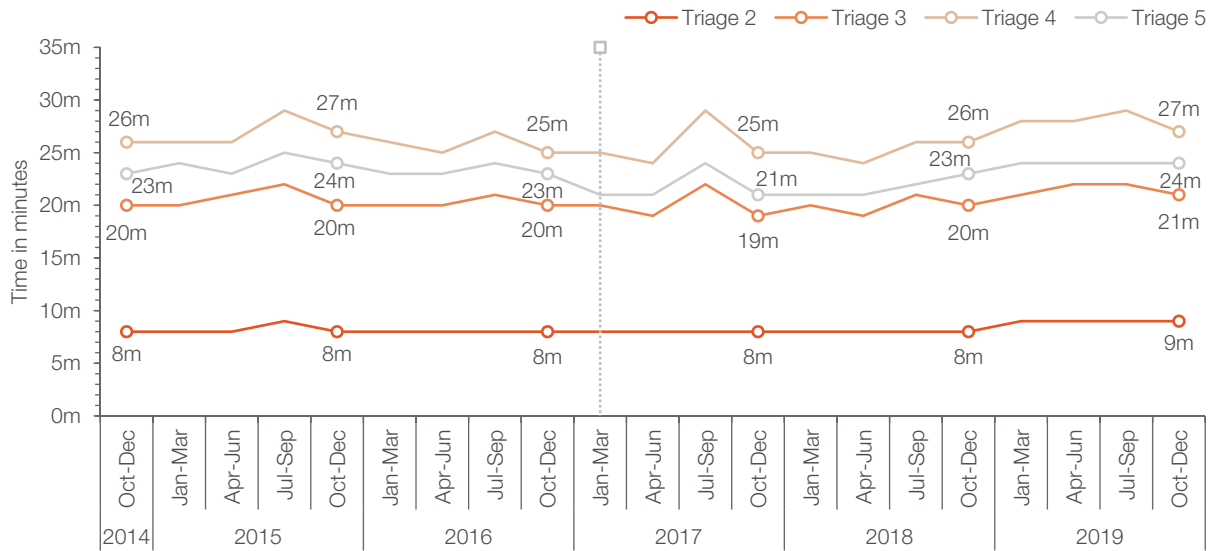
> Due to differences in data definitions, period of reporting and the number of hospitals included, *Healthcare Quarterly* results for the percentage of patients whose treatment started on time are not directly comparable with figures reported by other agencies and jurisdictions. For more information refer to the *Healthcare Quarterly* technical supplements at **bhi.nsw.gov.au**

Figure 5   **Percentage of patients whose treatment started on time, by triage category*, October 2014 to December 2019**
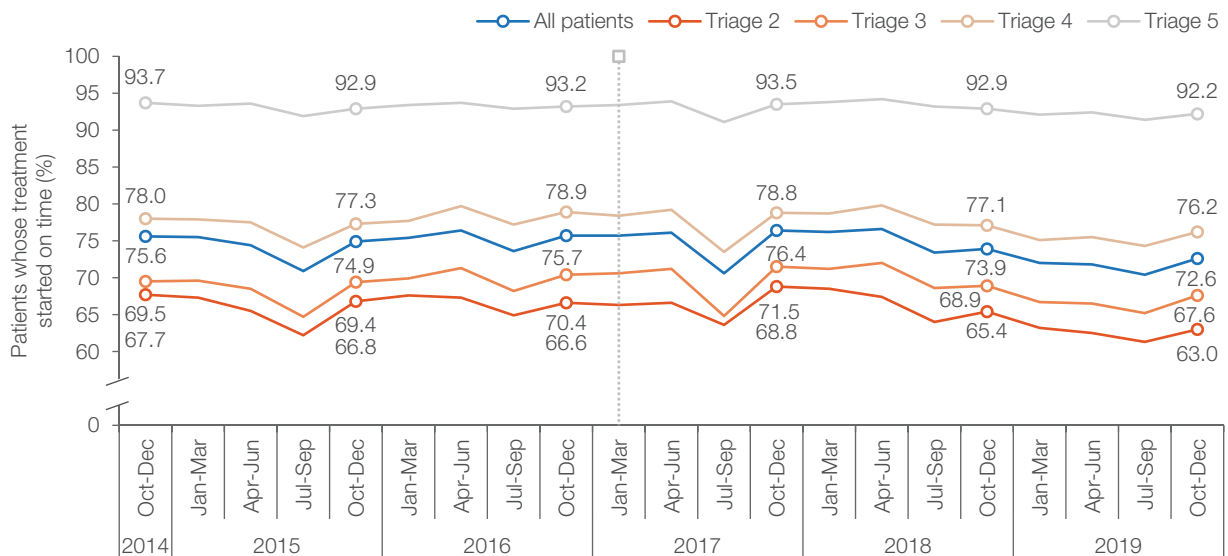
* Triage 1 patients are the most urgent and are almost all treated within two minutes. Clinicians are focused on providing immediate and essential care, rather than recording times, therefore times to start treatment are generally not reported.
Note: Results are calculated from all EDs submitting data 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 technical supplement for further information.

Figure 6 — Median time from presentation to starting treatment, by triage category*, October 2014 to December 2019

Legend: Triage 2, Triage 3, Triage 4, Triage 5

Y-axis: Time in minutes (0m to 35m)

X-axis: Oct-Dec 2014, Jan-Mar, Apr-Jun, Jul-Sep, Oct-Dec 2015, Jan-Mar, Apr-Jun, Jul-Sep, Oct-Dec 2016, Jan-Mar, Apr-Jun, Jul-Sep, Oct-Dec 2017, Jan-Mar, Apr-Jun, Jul-Sep, Oct-Dec 2018, Jan-Mar, Apr-Jun, Jul-Sep, Oct-Dec 2019

Data labels: 26m, 27m, 25m, 26m, 27m (Triage 4); 23m, 24m, 23m, 21m, 23m, 24m (Triage 5); 20m, 20m, 20m, 19m, 20m, 21m (Triage 3); 8m, 8m, 8m, 8m, 8m, 9m (Triage 2)
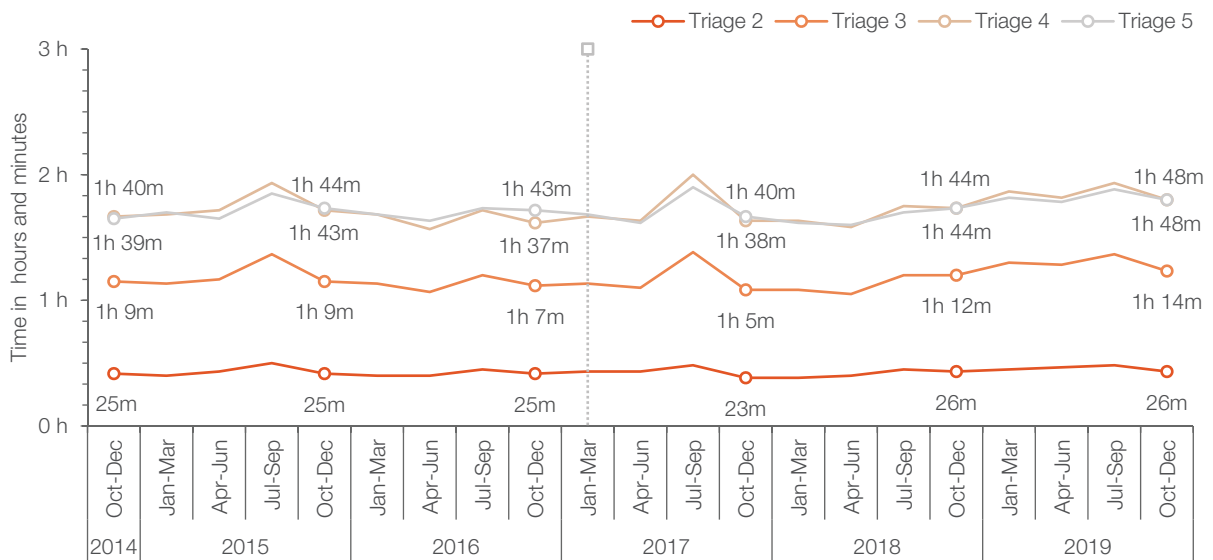
* Triage 1 patients are the most urgent and are almost all treated within two minutes. Clinicians are focused on providing immediate and essential care, rather than recording times, therefore times to start treatment are generally not reported.
Note: Results are calculated from all EDs submitting data 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 technical supplement for further information.

Figure 7 — 90th percentile time from presentation to starting treatment, by triage category*, October 2014 to December 2019

Legend: Triage 2, Triage 3, Triage 4, Triage 5

Y-axis: Time in hours and minutes (0 h to 3 h)

X-axis: Oct-Dec 2014, Jan-Mar, Apr-Jun, Jul-Sep, Oct-Dec 2015, Jan-Mar, Apr-Jun, Jul-Sep, Oct-Dec 2016, Jan-Mar, Apr-Jun, Jul-Sep, Oct-Dec 2017, Jan-Mar, Apr-Jun, Jul-Sep, Oct-Dec 2018, Jan-Mar, Apr-Jun, Jul-Sep, Oct-Dec 2019

Data labels: 1h 40m, 1h 44m, 1h 43m, 1h 40m, 1h 44m, 1h 48m (Triage 4); 1h 39m, 1h 43m, 1h 37m, 1h 38m, 1h 44m, 1h 48m (Triage 5); 1h 9m, 1h 9m, 1h 7m, 1h 5m, 1h 12m, 1h 14m (Triage 3); 25m, 25m, 25m, 23m, 26m, 26m (Triage 2)

* 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 technical supplement for further information.

Emergency department activity and performance

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

The October to December 2019 quarter had the longest median time spent in the ED across all modes of separation in October to December quarters over five years (Figure 8).

Figure 8   Median time patients spent in the emergency department, by mode of separation, October 2014 to December 2019
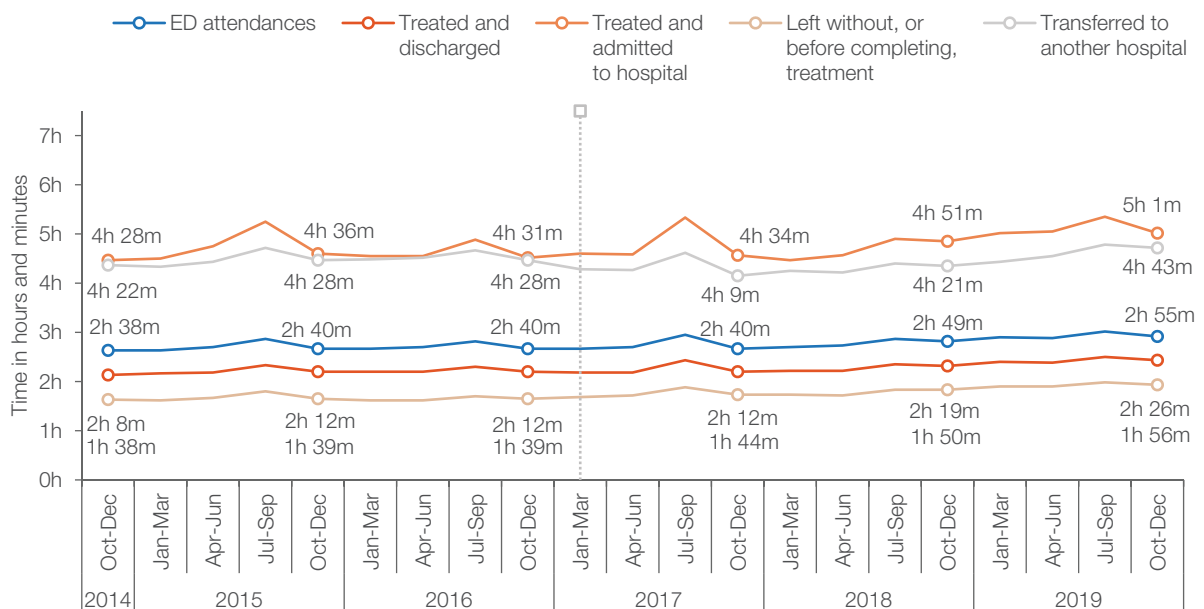
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90th percentile time spent in the ED

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

The October to December 2019 quarter had the longest 90th percentile time spent in the ED across all modes of separation in October to December quarters over five years (Figure 9).

Figure 9   90th percentile time patients spent in the emergency department, by mode of separation, October 2014 to December 2019
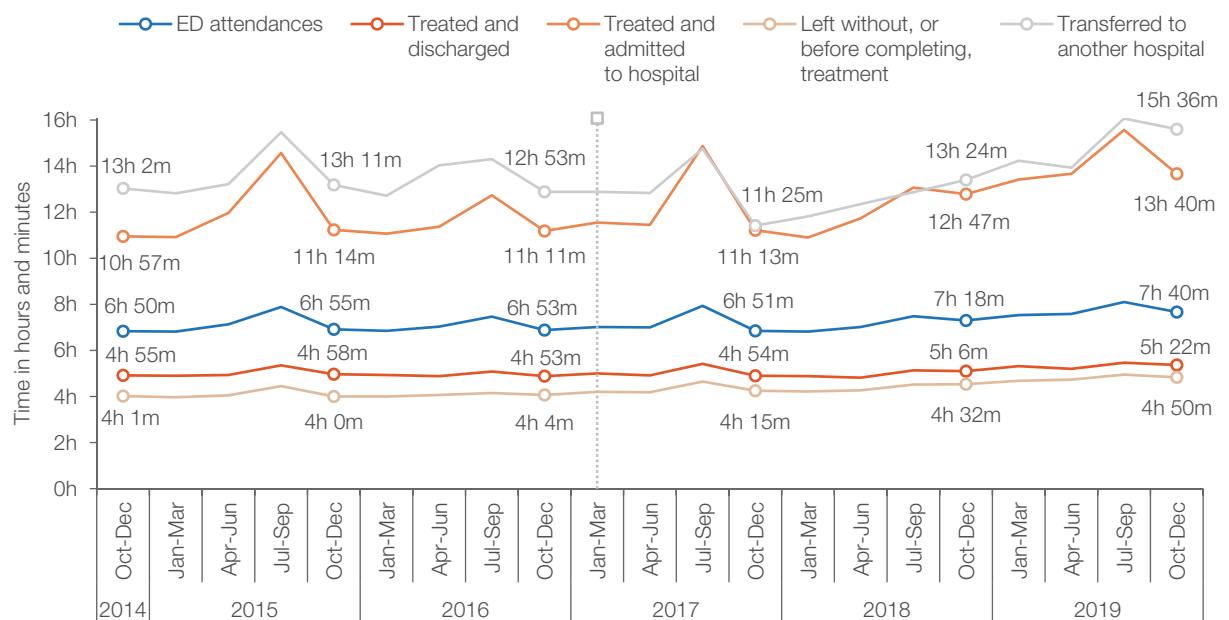
Notes: Results are calculated from all EDs submitting data to EDDC in each quarter. In recent years, more than 170 EDs are included in *Healthcare Quarterly*. Change in hospital cohort: in the January to March 2017 quarter, an additional 44 EDs were included in *Healthcare Quarterly,* contributing to activity and performance results. See technical supplement 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 decreased from 74.7% in the October to December 2014 quarter to 69.8% in the October to December 2019 quarter (Figures 10 and 11).

The October to December 2019 quarter had the lowest percentage of patients who spent four hours or less in October to December quarters over five years (Figure 10 and 11).

Variation by peer group

How long patients spent in the ED is presented by hospital peer group, including: principal referral (peer group A), 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**

Figure 10   Percentage of patients who spent four hours or less in the emergency department, by peer group, October 2014 to December 2019
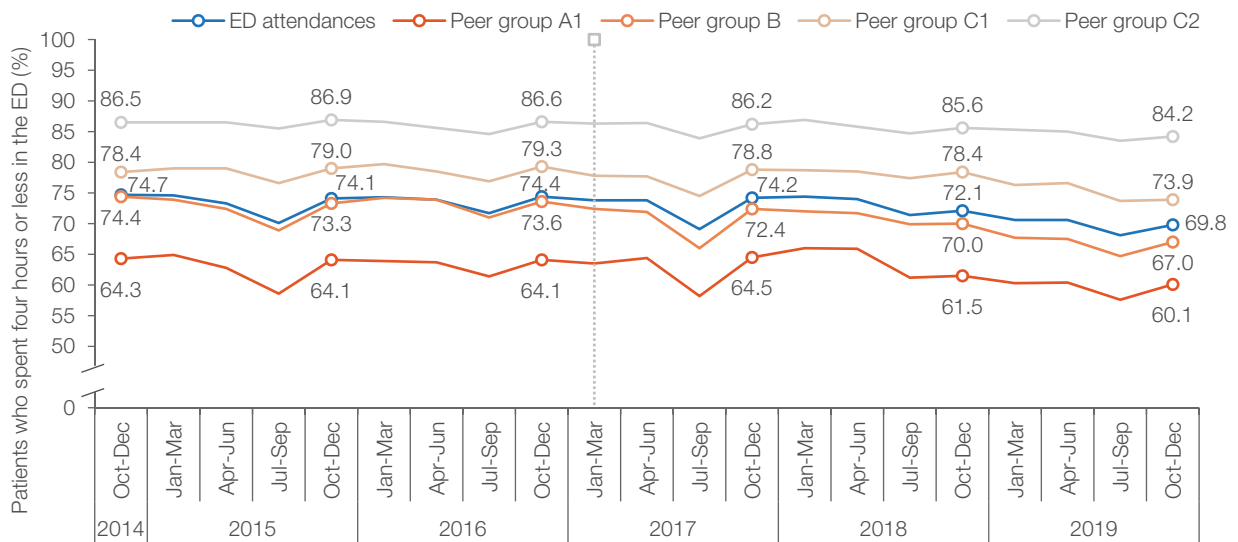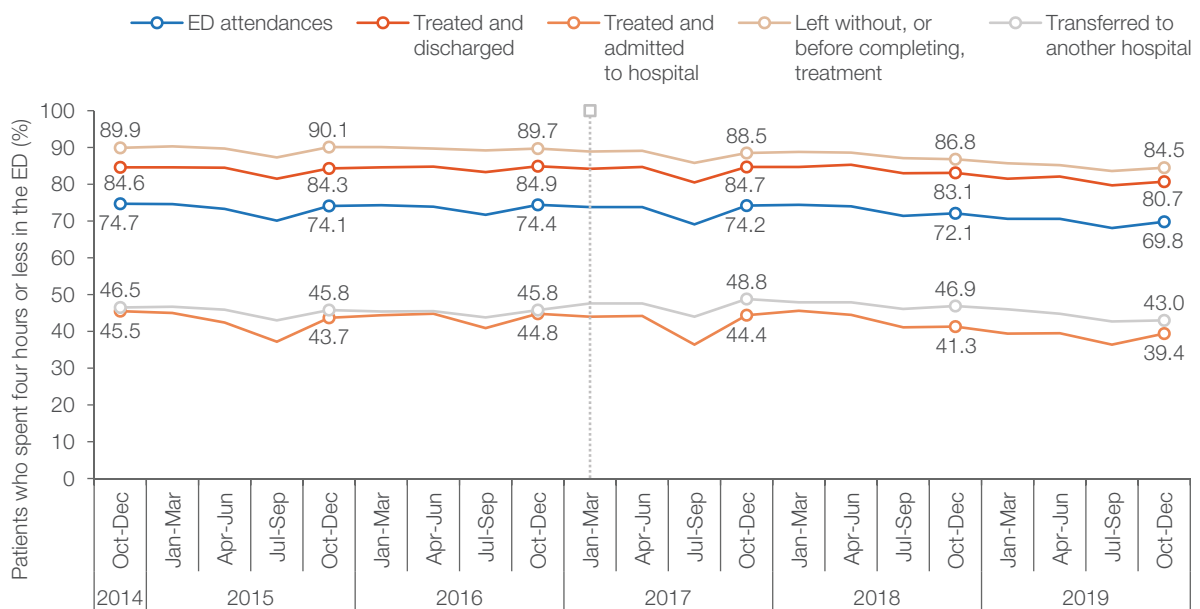

Notes: Results are calculated from all EDs submitting data to EDDC in each quarter. In recent years, more than 170 EDs are included in *Healthcare Quarterly*. Change in hospital cohort: in the January to March 2017 quarter, an additional 44 EDs were included in *Healthcare Quarterly,* contributing to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

Figure 11   Percentage of patients who spent four hours or less in the emergency department, by mode of separation, October 2014 to December 2019

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 technical supplement 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 highest percentage of ambulance arrivals with a transfer of care time within 30 minutes over five years was 92.9% in October to December 2017. It was 87.9% in the October to December 2019 quarter (Figure 12).

Median transfer of care time

The median transfer of care time refers to the time by which half of 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 the five-year period (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).

Figure 12   Percentage of ambulance arrivals with transfer of care time within 30 minutes, October 2014 to December 2019
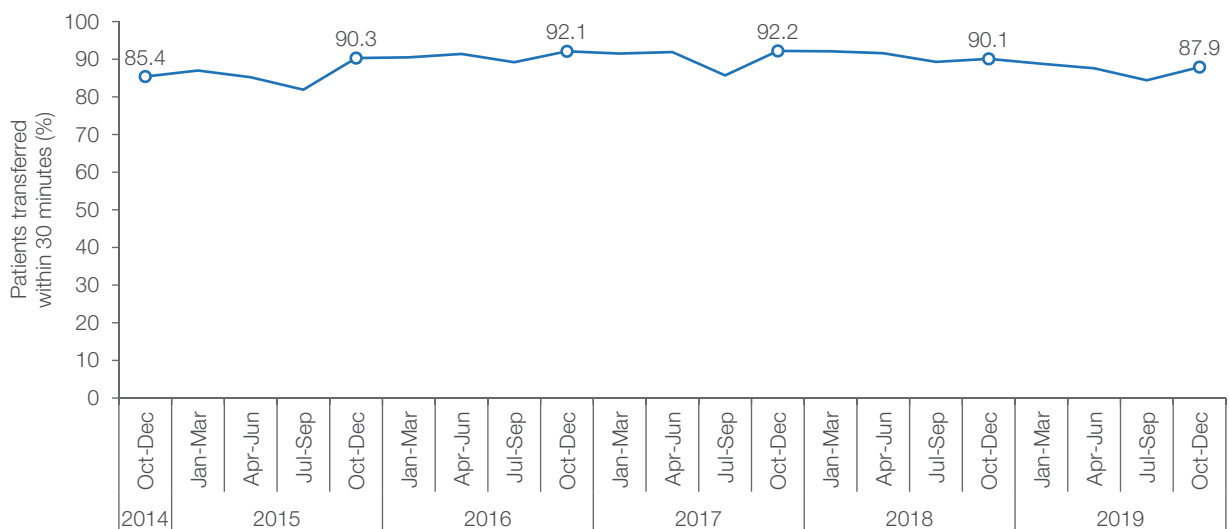
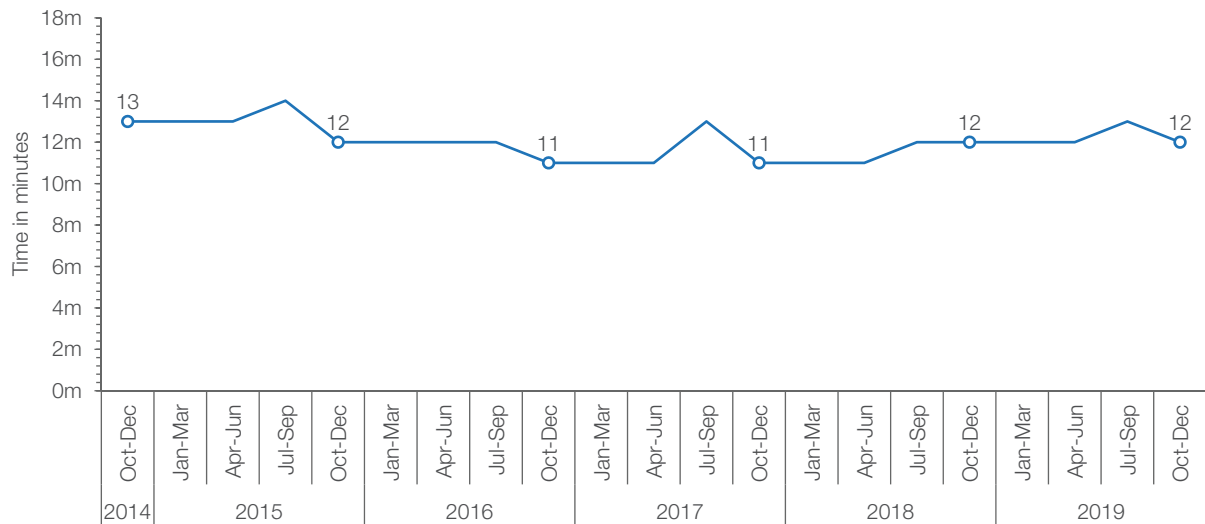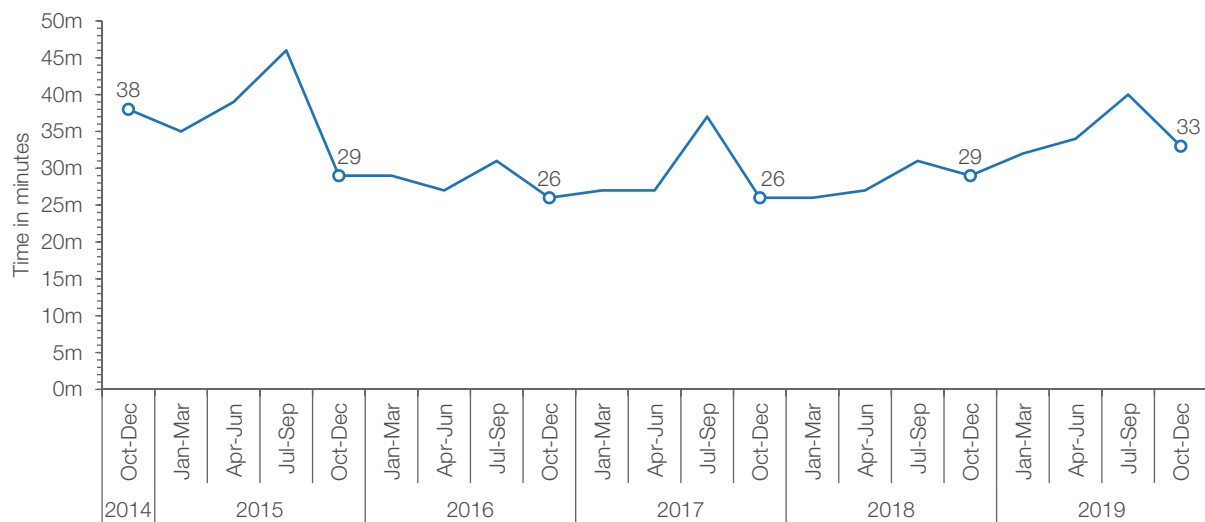Figure 13   Median transfer of care time, July 2014 to September 2019

Figure 14   90th percentile transfer of care time, October 2014 to December 2019

Ambulance activity and performance

Ambulance activity

Activity is measured as the number of ambulance calls, incidents, responses and 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.

Ambulance responses have increased from 283,475 in the October to December 2014 quarter to 317,390 in the October to December 2019 quarter, up 12.0% (33,915 more responses) over five years (Figure 15, 16).

The October to December 2019 quarter had the highest number of ambulance calls and incidents of any quarter in the five-year period (Figure 15).

The October to December 2019 quarter had the highest number of ambulance responses in October to December quarters over five years (Figure 15, 16).


Figure 15   Ambulance calls, incidents, responses and patient transports, October 2014 to December 2019
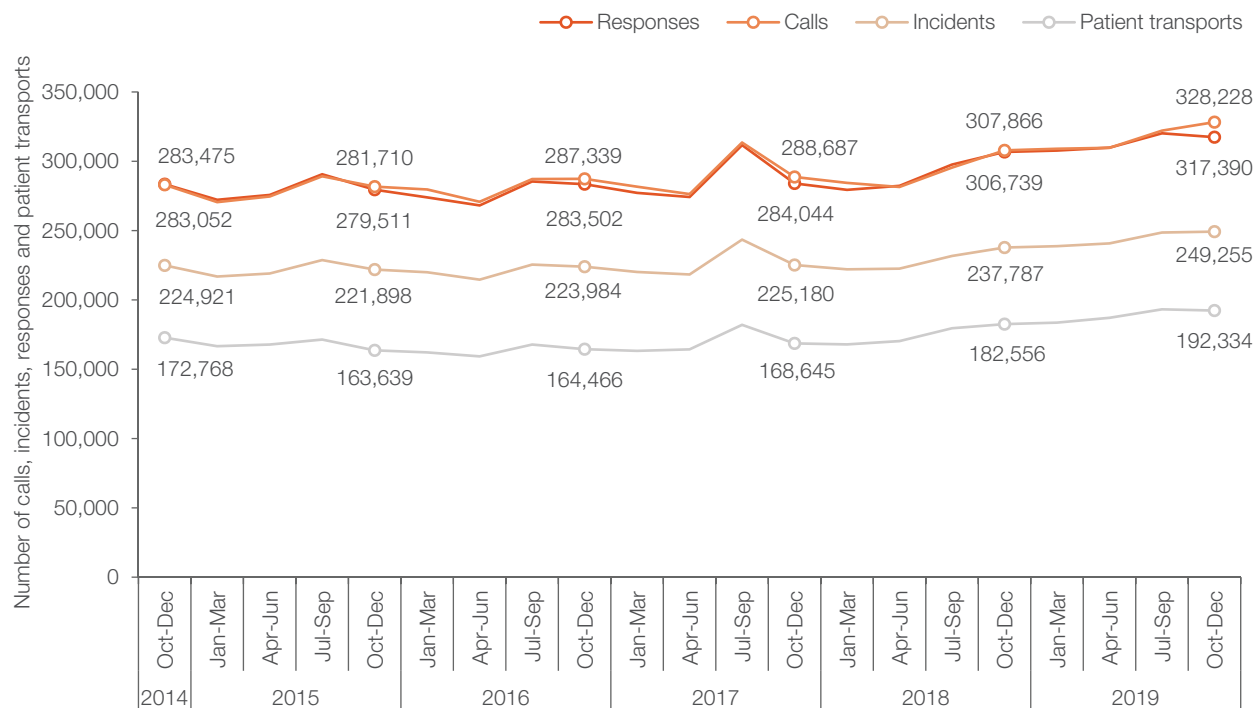
Ambulance responses by priority

There are nine main 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 the sub-category of priority 1A (P1A) for life-threatening conditions (e.g. cardiac or respiratory arrest) (Figure 16).

Figure 16   Ambulance responses by priority, October 2014 to December 2019
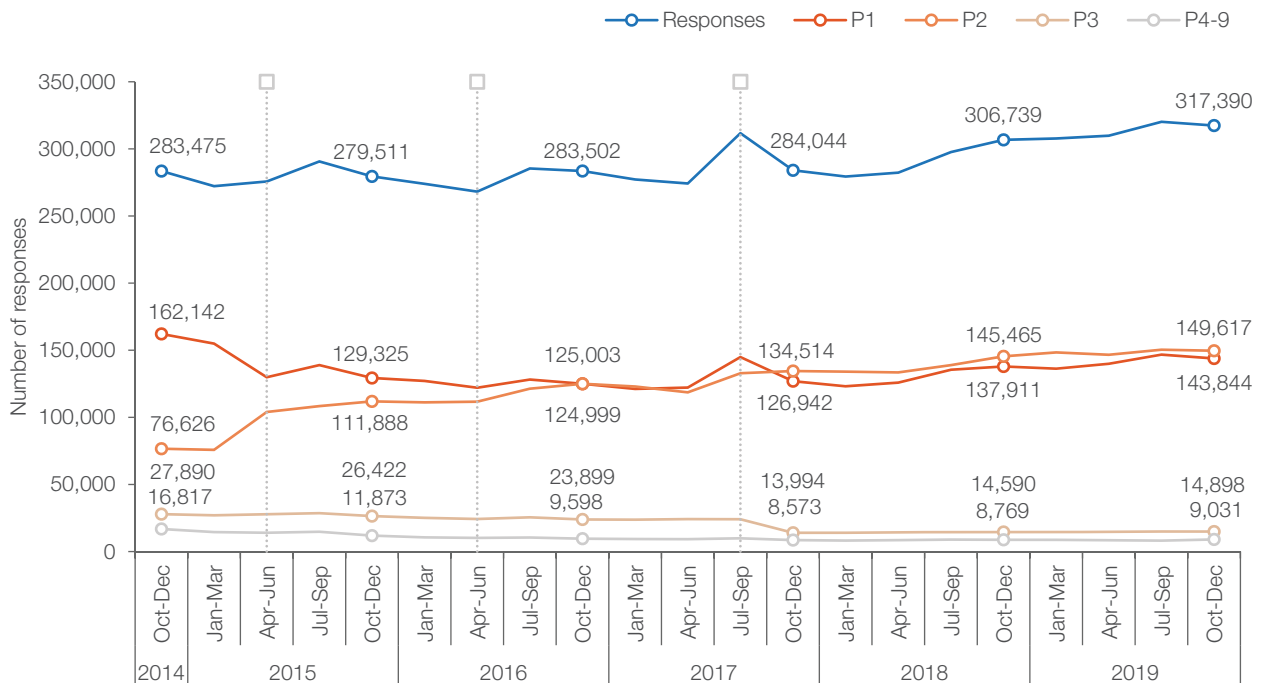
⚑: Changes to ambulance protocols resulting in the re-allocation of responses among priority categories

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 October to December 2019 quarter had the lowest percentage of P1 and P2 call to ambulance arrival time within the benchmarks in October to December quarters over five years (Figure 18).

Reponse 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.
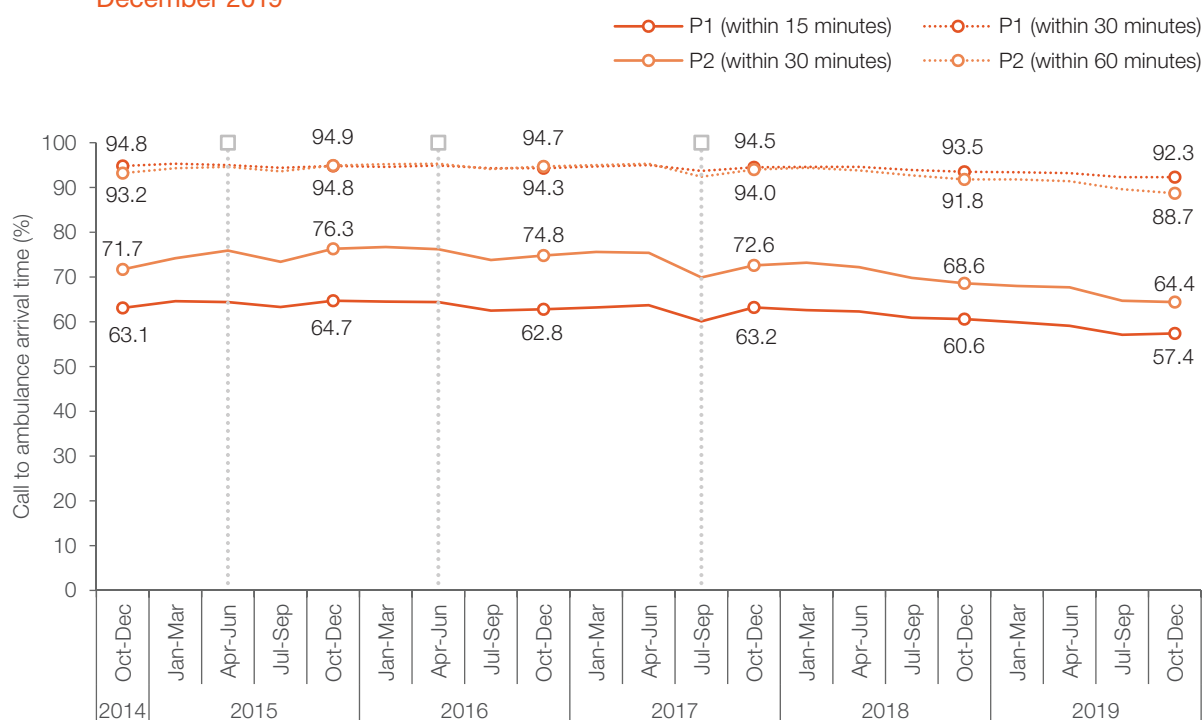
The median ambulance response time for P1 and P1A cases remained relatively stable over the past five years. The median ambulance response time for P2 cases increased from 18.3 minutes in the October to December 2017 quarter to 21.1 minutes in the October to December 2019 quarter, the longest P2 median response time of any quarter over five years (Figure 19).

In NSW, the benchmark for the median P1A response time is 10 minutes. The percentage of P1A response time within 10 minutes remained relatively stable over the five-year period (Figure 20).

Figure 17   Call to ambulance arrival time intervals, NSW

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

Figure 18   Percentage of call to ambulance arrival time by priority category, October 2014 to December 2019
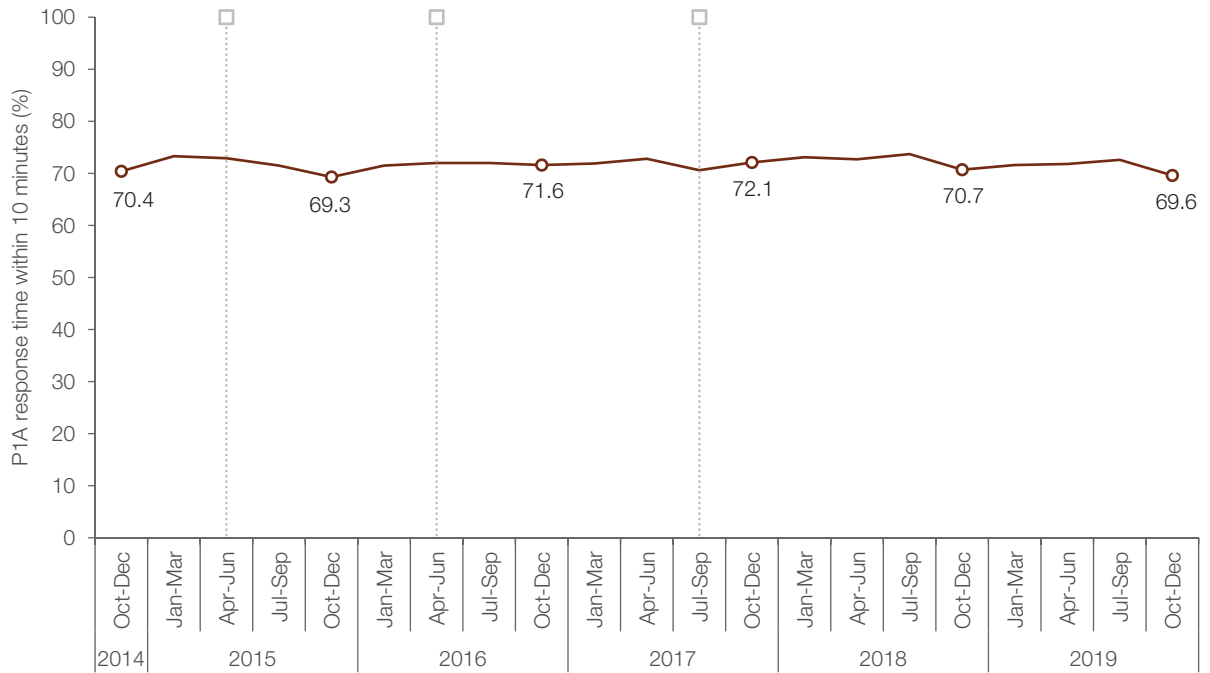

⚑: Changes to ambulance protocols resulting in the re-allocation of responses among priority categories

Figure 19   Median ambulance response time by priority, October 2014 to December 2019
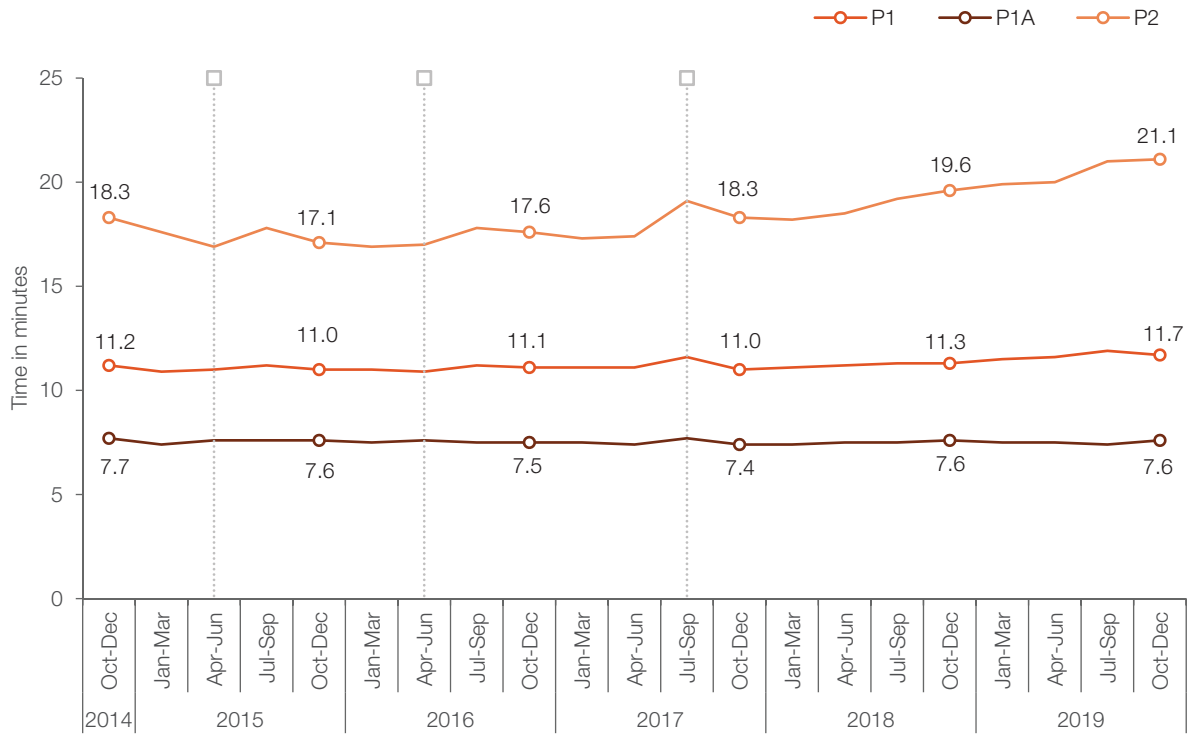
●—P1   ●—P1A   ●—P2

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

Figure 20   Percentage of Priority 1A (P1A) response time within 10 minutes, October 2014 to December 2019

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

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.

Admitted patient episodes have increased from 462,702 in the October to December 2014 quarter to 491,025 in October to December 2019, up 6.1% (28,323 more episodes) (Fiigure 21).

The five-year trend showed seasonal variation in hospital admissions, with both acute and non-acute episodes following a similar pattern (Figure 21).

The majority of admitted patient episodes were acute admissions, representing more than 90% of the total admitted patient episodes over five years.

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

Phase-in of new 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. The new mental health stay type comprises patients who were previously included in the acute and non-acute stay types that are routinely reported by BHI.

Fair comparisons cannot be made with results from the policy phase-in period due to staggered implementation across LHDs that affected activity counts in the acute, non-acute and mental health categories. Mental health activity counts presented before the introduction of the classification change are estimates that were calculated using a flag for days in a psychiatric unit. Accordingly, comparisons between the pre- and post-policy period should be made with caution.
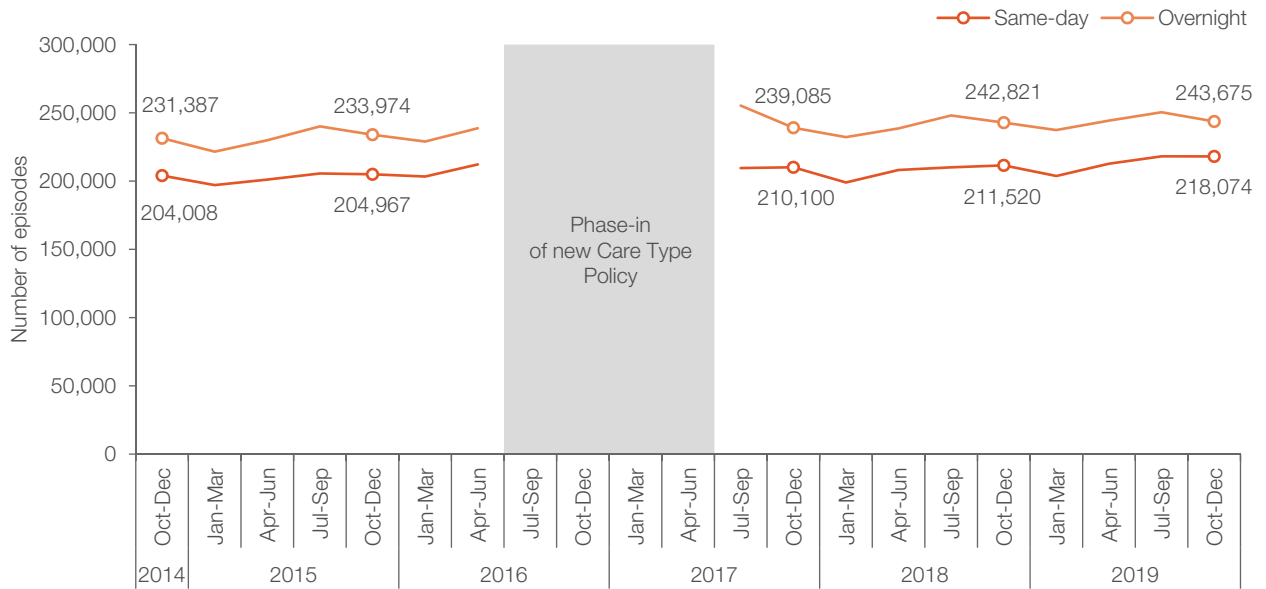
Figure 21   Total, acute, non-acute and mental health episodes, October 2014 to December 2019
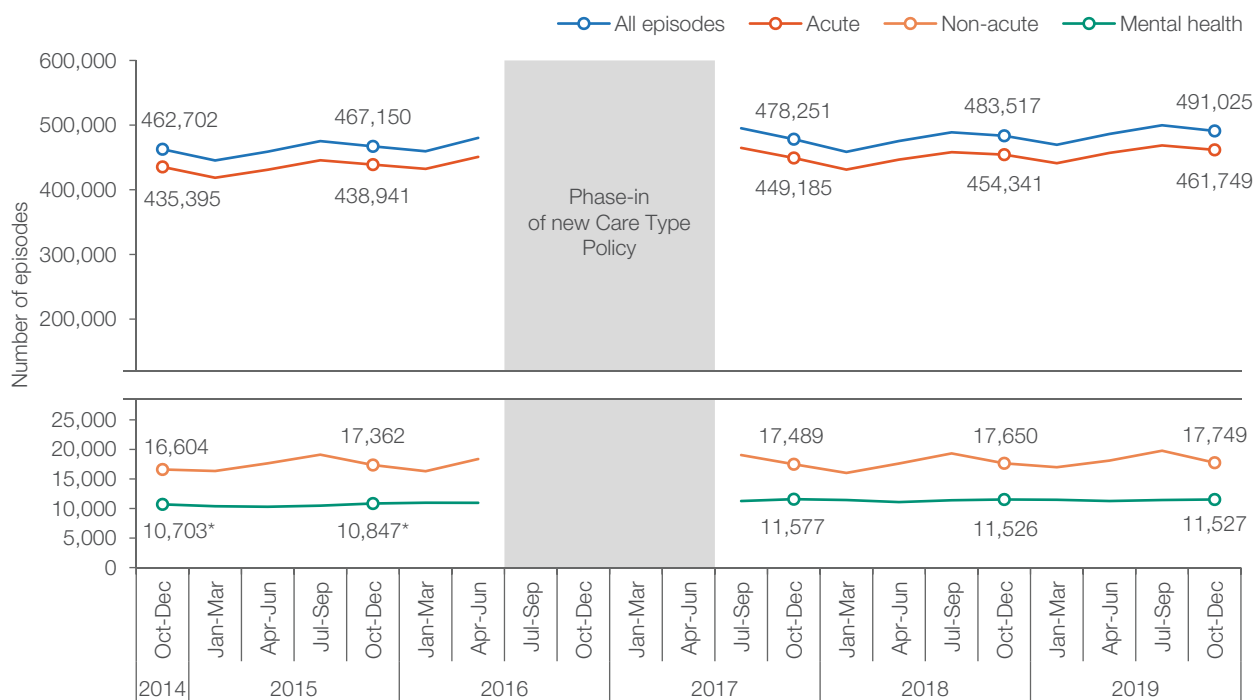
Note: Results are calculated from more than 200 hospitals in each quarter reported in *Healthcare Quarterly*.
* Estimates of mental health episodes calculated using a flag for days in a psychiatric unit.

Figure 22

Overnight and same-day acute admitted patient episodes, October 2014 to December 2019

Note: Results are calculated from more than 200 hospitals in each quarter reported in *Healthcare Quarterly*. Same-day refers to patients who are admitted and discharged on the same day. Same-day episodes count as one bed day.
* Estimates of mental health episodes calculated using a flag for days in a psychiatric unit.

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 showed a similar pattern to that for hospital admissions (Figures 21, 23).

Phase-in of new 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. The new mental health stay type comprises patients who were previously included in the acute and non-acute stay types that are routinely reported by BHI.

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

Figure 23   Number of hospital bed days by type of admitted patient episode, October 2014 to December 2019
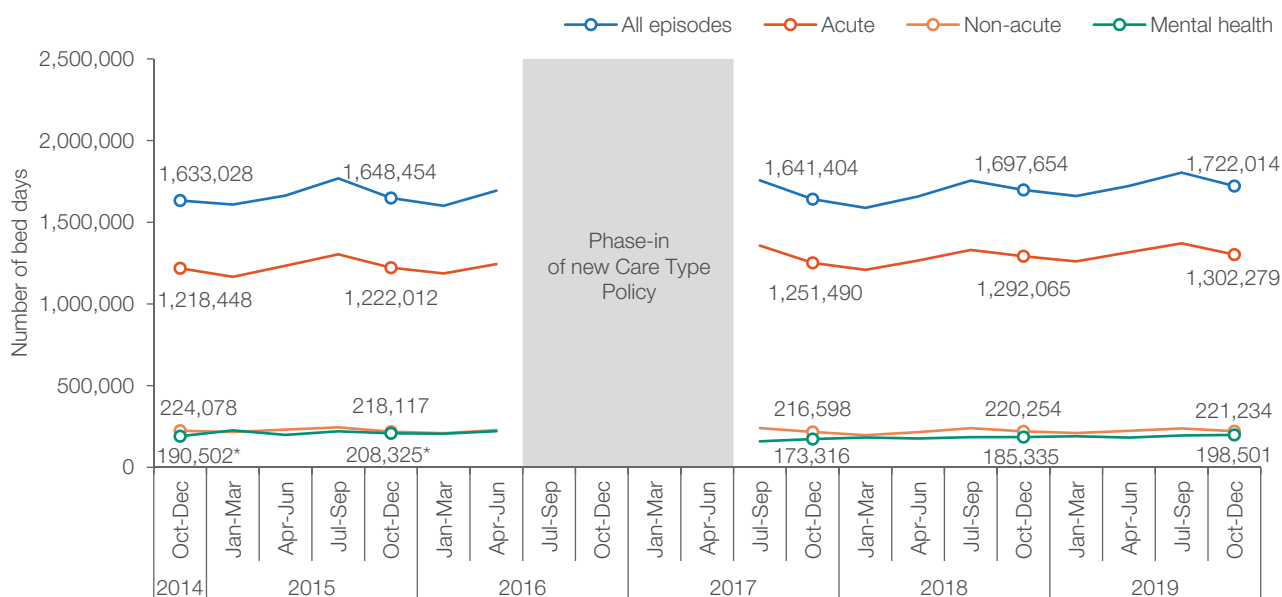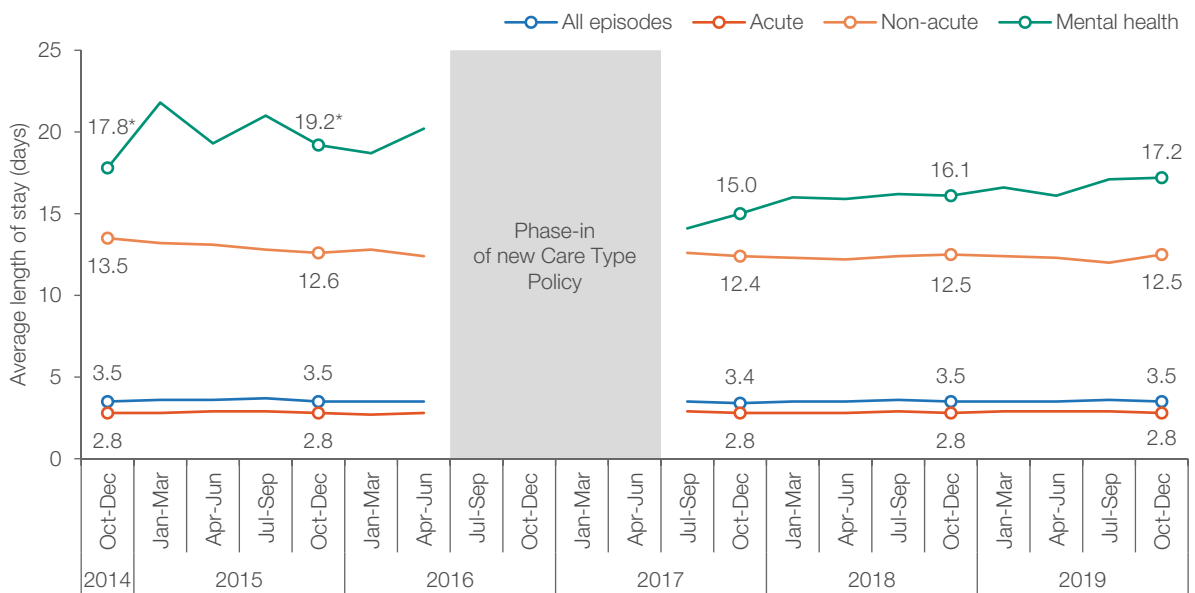

Note: Results are calculated from more than 200 hospitals in each quarter reported in *Healthcare Quarterly*.
* Estimates of mental health episodes calculated using a flag for days in a psychiatric unit.

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 and acute episodes over five years. The average length of stay decreased for non-acute admitted patient episodes from 13.5 days in the October to December 2014 quarter to 12.5 days in the October to December 2019 quarter (Figure 24).

Figure 24   Average length of stay, by type of admitted patient episode, October 2014 to December 2019

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.

# Elective surgery activity and performance

Elective surgical procedures

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.

The number of elective surgical procedures increased from 54,268 in the October to December 2014 quarter to 57,614 in October to Decembe 2019, up 6.2%

(3,346) over five years. The October to December 2019 quarter had the highest number of elective surgical procedures in October to December quarters over five years (Figure 25).

The five-year trends showed seasonal variation in the number of elective surgical procedures. There was a similar pattern for each of urgent, semi-urgent and non-urgent procedures. (Figure 25).

Figure 25   Elective surgical procedures performed, by urgency category, October 2014 to December 2019
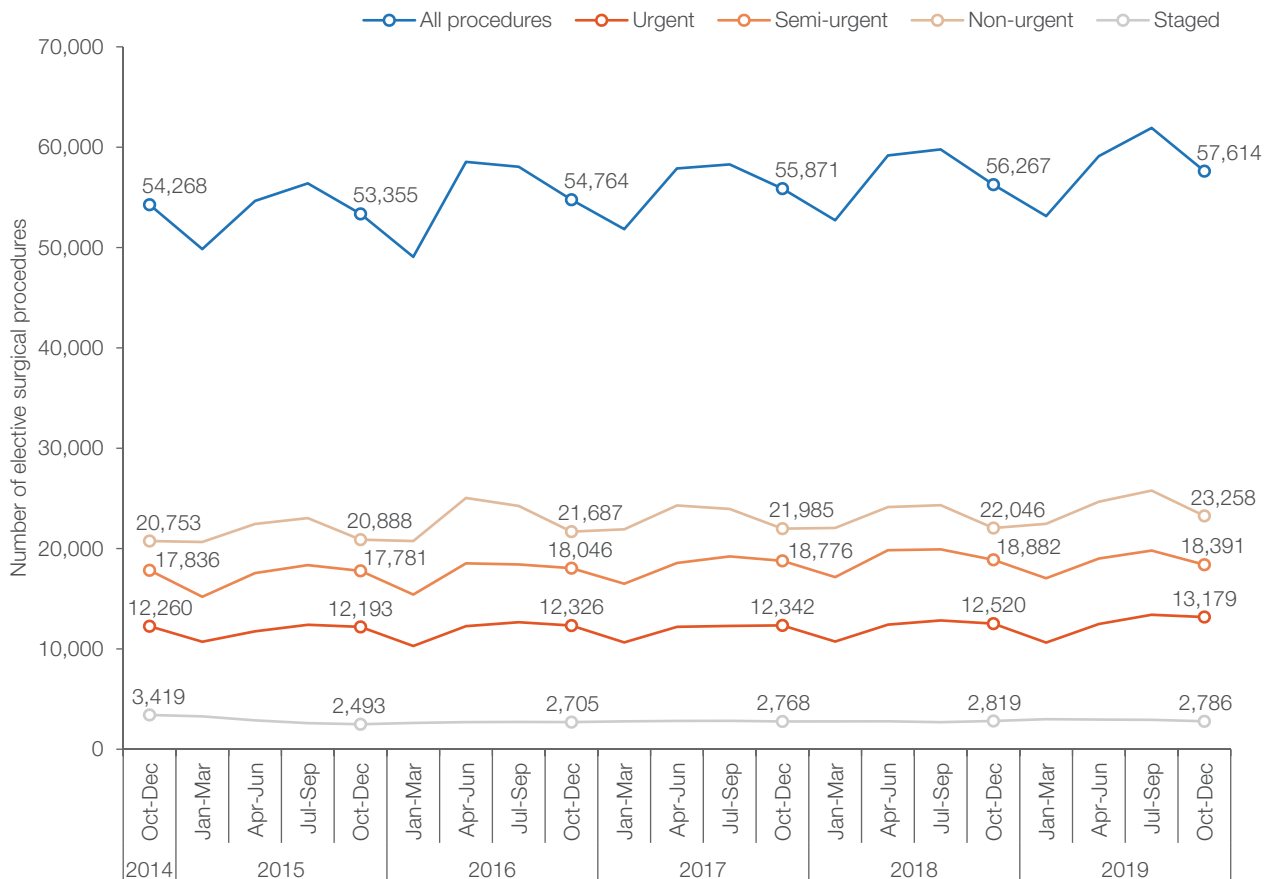
Percentage of elective surgery on time

For each urgency category there are clinically recommended timeframes 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 timeframes over five years. The percentage of elective surgical procedures performed on time for other urgency categories was lower (Figure 26).

For non-urgent surgery, the October to December 2019 quarter had the lowest percentage of procedures performed on time of any quarter in the five-year period (Figure 26).

Figure 26   Percentage of elective surgical procedures performed on time, by urgency, October 2014 to December 2019

Elective surgery activity and performance
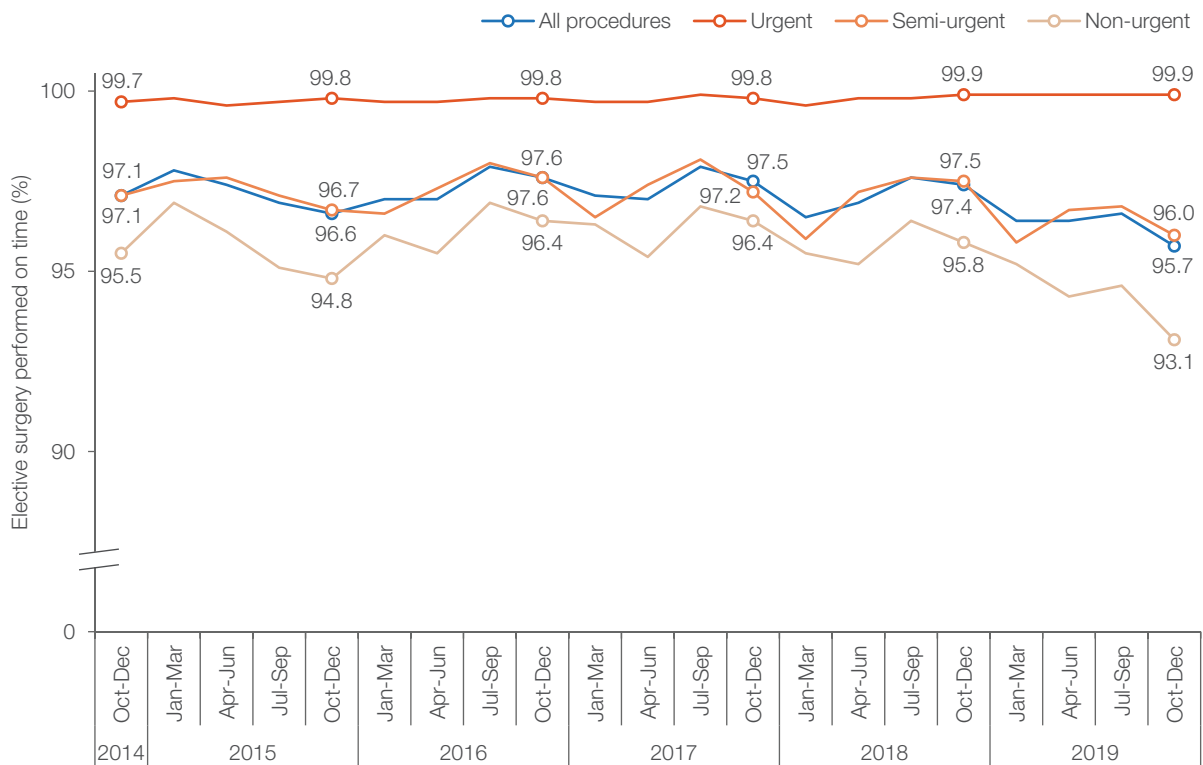
Waiting time for elective surgery

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

Among the patients who received surgery during the quarter, 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 over five years for urgent and semi-urgent elective surgical procedures, and increased for non-urgent elective surgical procedures (Figure 27).

Figure 27   Median waiting time for elective surgery, by urgency category, October 2014 to December 2019
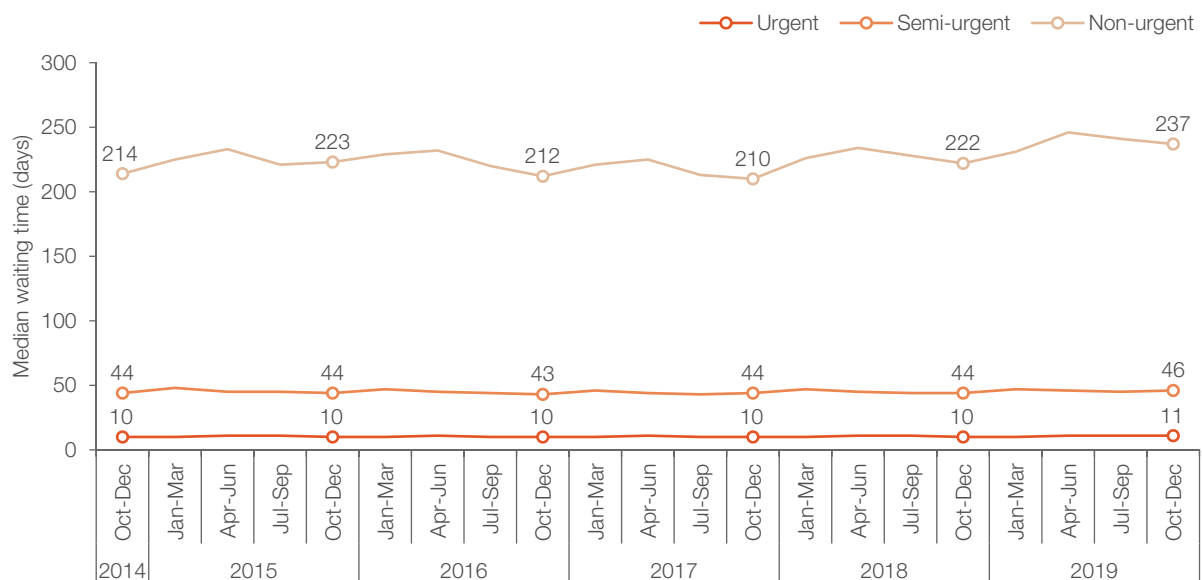
90th percentile waiting time

The 90th percentile gives a sense of the longest waiting times to receive surgery. Among patients who received surgery in the quarter, 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.

The 90th percentile waiting times remained relatively stable for all urgency categories over five years (Figure 28).

Figure 28   90th percentile waiting time for elective surgery, by urgency category, October 2014 to December 2019
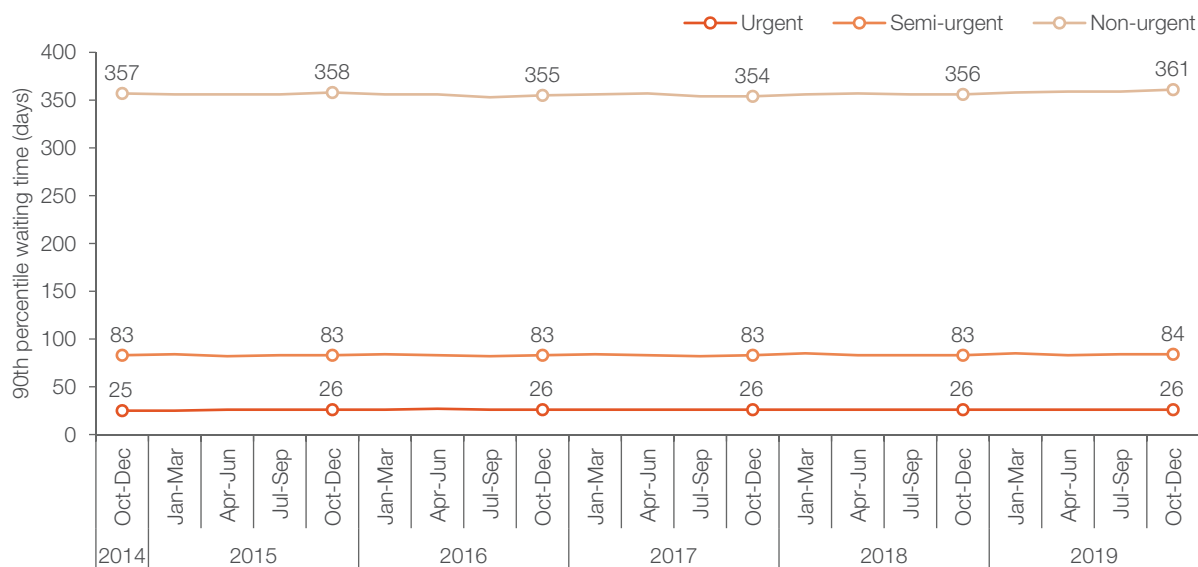
About the Bureau of Health Information

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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