

# Hospital Quarterly

## Activity and performance in NSW public hospitals

October to December 2016



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Please note there is the potential for minor revisions of data in this report.  
Please check the online version at **bhi.nsw.gov.au** for any amendments.

Published March 2017

*Hospital Quarterly* reports present data at the point in time when data become available to BHI. Changes in data coverage and analytic methods from quarter to quarter mean that figures published in this document are superseded by subsequent reports. At any time, the most up-to-date data are available on BHI's online data portal, Healthcare Observer, at **bhi.nsw.gov.au/healthcare\_observer**

The conclusions in this report are those of BHI and no official endorsement by the NSW Minister for Health, the NSW Ministry of Health or any other NSW public health organisation is intended or should be inferred.

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# Introduction

Every day around 25,000 people receive care in the NSW public hospital system. *Hospital Quarterly* is a series of regular reports that tracks services provided to the people of NSW and the timeliness with which they are provided.

The *Hospital Quarterly* report is structured into two main sections. The first section describes measures of hospital activity and the second describes measures of hospital performance. Activity measures are used to describe the volume and type of services provided, while performance measures are used to describe the timeliness of service provision.

Within the section on activity, data are provided for emergency department (ED) presentations; hospital admissions; and elective surgical procedures (Figure i). Within the section on performance, data are provided for ED presentations and elective surgical procedures (Figure ii).

*Hospital Quarterly* appendix tables provide information about activity and performance in NSW public hospitals at a state, local health district (LHD), peer group and individual hospital level. Additional and comparative information about activity and performance in NSW public hospitals is available on the BHI interactive data portal, Healthcare Observer, at [bhi.nsw.gov.au/healthcare\\_observer](http://bhi.nsw.gov.au/healthcare_observer)

## About the data

The data used in *Hospital Quarterly* are transmitted by the state's hospitals to centralised data warehouses administered by the NSW Ministry of Health. Hospital admission and ED data in this report were extracted from the NSW Health Information Exchange (HIE) on 24 and 27 January 2017 respectively. Elective surgery data were extracted from the Waiting List Collection On-line System (WLCOS) on 20 January 2017.

The number of hospitals included in this report has changed over time and this has had effects on activity and performance results. For information

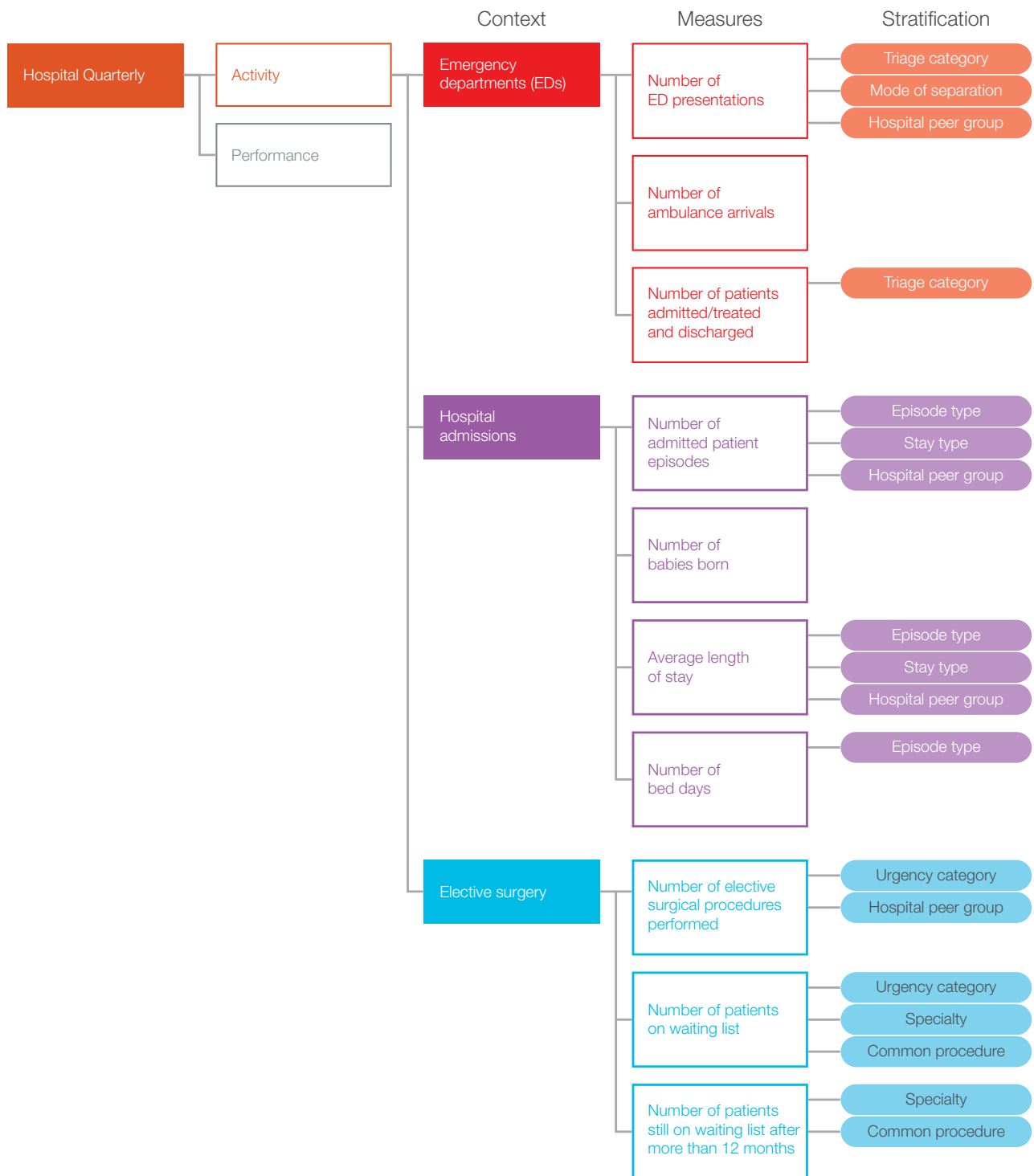
refer to the technical supplements section of the BHI website at [bhi.nsw.gov.au](http://bhi.nsw.gov.au)

ED data are drawn from the Emergency Department Data Collection (EDDC). While not all EDs have systems in place to supply records to the EDDC, data coverage has increased over time. The ED data in this report cover 132 facilities for which consistent data have been reported to the EDDC for at least five quarters. These account for approximately 98% of all records in the EDDC and approximately 95% of ED presentations in NSW. ED data are reported individually for hospitals in principal referral, major or district peer groups (A1, A2, A3, B, C1 and C2) (Table 1). A total of 75 EDs met the reporting criteria in the October to December 2016 quarter. However, the NSW and LHD results in this report include data from all 132 facilities.

*Hospital Quarterly* reports on the percentage of patients who spent four hours or less in the ED. Due to differences in data definitions, period of reporting and the number of hospitals included, results are not directly comparable to figures reported by the NSW Ministry of Health or the Commonwealth, in relation to time spent in the ED. For more information refer to the technical supplements section of the BHI website at [bhi.nsw.gov.au](http://bhi.nsw.gov.au)

Hospital admission data include hospitalisations in public hospitals, privately managed hospitals contracted to supply services to public patients, public multi-purpose services, and public psychiatric hospitals. Non-admitted patients (including community residential care), organ donors (posthumously admitted), and hospital boarders are not included in these data. Newborn babies who are aged nine days or less at the time of admission and who do not require treatment for health problems (unqualified neonates) are also not included in these data. Elective surgery data describe the procedures performed during the quarter; the number of patients who were on the waiting list to receive surgery on the last day of the quarter; and the length of time those patients had been on the waiting list.

Figure i Hospital activity measures included in this report



## About the measures

*Hospital Quarterly* uses a number of measures to report activity and performance in NSW public hospitals (Figures i and ii). Where the focus is on measuring activity, numbers and percentages are commonly used. Where the focus is on measuring performance in terms of timeliness of care (for example, waiting times for treatment in the ED or for elective surgery), the median and 90th percentile times are used:

- Median times are the times by which half of patients had their treatment start – the remaining half took equal to or longer than this time
- 90th percentile times are the times by which 90% of patients received elective surgery – one in 10 patients waited longer than this time.

From March 2017, *Hospital Quarterly* reports the 90th percentile time, rather than the 95th percentile time, for related ED measures. This brings the reporting in line with Commonwealth ED and elective surgery waiting times and elective surgery waiting times in this report.

Timeliness is also reported using the percentage of patients who received care within a defined time period, for example, the percentage of patients who arrived by ambulance that had their care transferred within 30 minutes.

## About the analyses

The data specifications and analytic methods used for *Hospital Quarterly* are described in the technical supplements section of the BHI website at [bhi.nsw.gov.au](http://bhi.nsw.gov.au)

*Hospital Quarterly* includes a number of commonly used terms and classifications to describe activity and performance across EDs, hospital admissions and elective surgery. These are described in Table 4 (page 55).

Making direct comparisons of activity and performance between hospitals is not straightforward. For valid comparisons to be made it is important to consider similar hospitals together. To do this, *Hospital Quarterly* uses a NSW Health classification system called ‘hospital peer groups’ as the basis for comparison (Table 1). An index of NSW public hospitals by LHD and hospital peer group can be found on page 59 of this report.

Urgency categories should also be considered in making fair comparisons in activity and performance across EDs and for elective surgery. Table 4 (page 55) describes ED triage categories and elective surgery urgency categories.

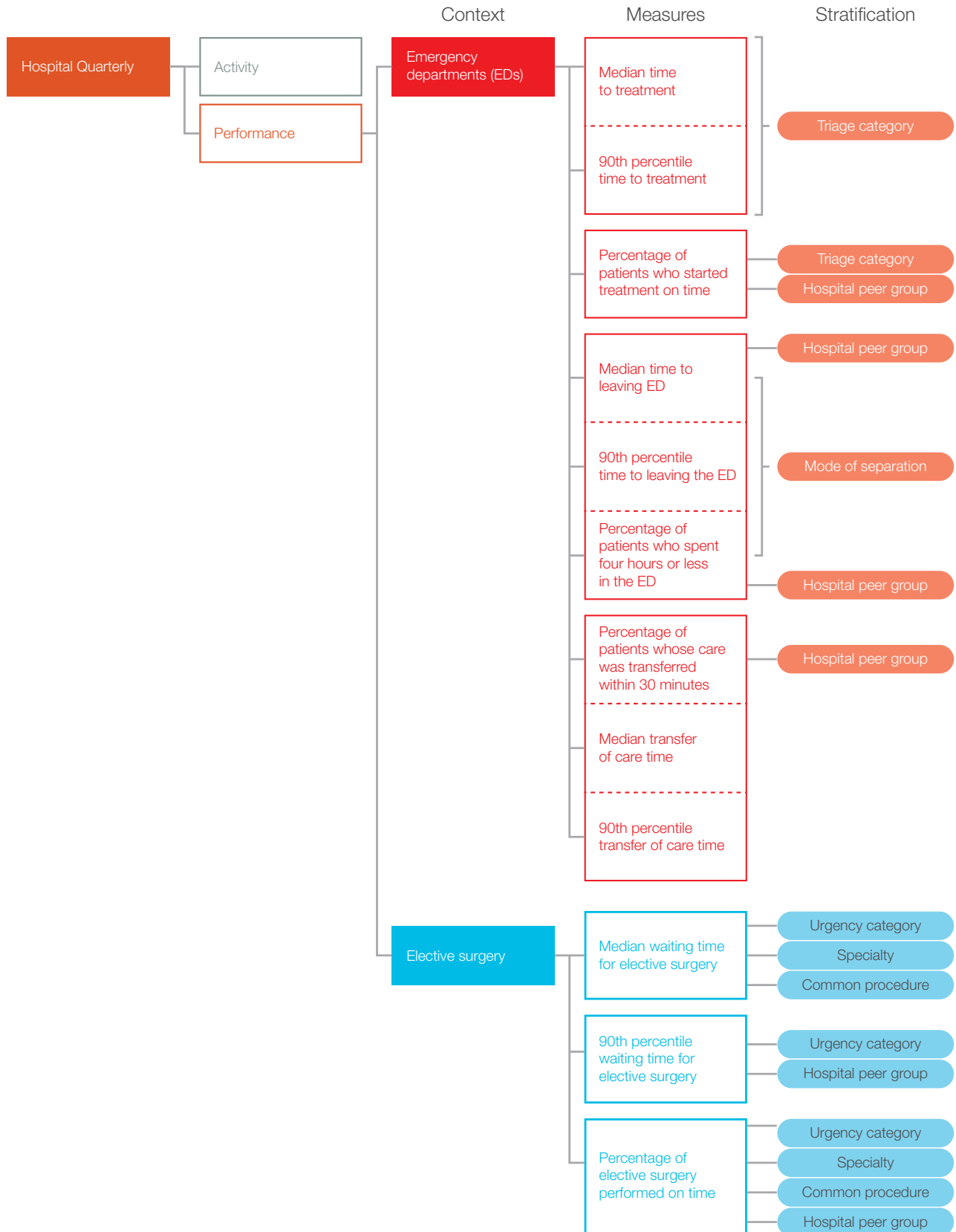
*Hospital Quarterly* compares this quarter’s results with the same quarter in previous years, to take into account seasonal effects on hospital activity and performance.

Table 1 **NSW public hospital peer groups**

| Peer group | Name                                | Description   |
|------------|-------------------------------------|---|
| A1         | Principal referral                  | Very large hospitals providing a broad range of services, including specialised units at a state or national level. |
| A2         | Paediatric specialist               | Specialist hospitals for children and young people.   |
| A3         | Ungrouped acute – tertiary referral | Major specialist hospitals that are not similar enough to any other peer group to be classified with them.          |
| B          | Major                               | Large metropolitan and non-metropolitan hospitals.  |
| C1         | District group 1                    | Medium sized hospitals treating between 5,000–10,000 patients each year.  |
| C2         | District group 2                    | Smaller hospitals typically in rural locations.   |

Figure ii

Hospital performance measures included in this report



Note: From March 2017, *Hospital Quarterly* reports the 90th percentile time, rather than the 95th percentile time, for related ED measures.

# Key findings

## Hospital activity measures – October to December 2016

### How many people presented to NSW emergency departments?

Compared with the same quarter last year:

- 19,817 more patients presented to NSW emergency departments (EDs) (684,740 presentations in total; up 3.0%). Most (96.5%) were unplanned (emergency presentations).
- There was an increase in the number of emergency presentations across all triage categories this quarter, except triage category 5 (901 fewer; down 1.3%). There were 278 more presentations in triage category 1 (up 6.5%), 3,311 more in triage category 2 (up 4.4%), 13,807 more in triage category 3 (up 6.5%) and 5,588 more in triage category 4 (up 2.0%).
- There was an increase of 3,656 in the number of patients who arrived by ambulance (146,797 in total; up 2.6%).

### Where did patients go after the emergency department?

Compared with the same quarter last year:

- 2,964 more patients were treated and discharged (427,299 in total; up 0.7%)
- 13,093 more patients were treated and admitted to hospital (193,343 in total; up 7.3%)
- 697 more patients left without, or before completing, treatment (36,514 in total; up 1.9%)
- 382 more patients were transferred to another hospital (13,989 in total; up 2.8%).

### How many patients were admitted to public hospitals?

Compared with the same quarter last year:

- 17,974 more admitted patient episodes were recorded (484,874 in total; up 3.8%). Most (96.1%) were acute care episodes.
- 37,003 more bed days were recorded (1,684,980 in total; up 2.2%), and 14,820 more acute bed days (1,391,010 in total; up 1.1%)

- The average length of stay for an acute overnight admitted patient episode was 0.1 days shorter (4.7 days)
- There were 107 more babies born in NSW public hospitals (17,791 babies in total; up 0.6%).

### How many elective surgical procedures were performed?

Compared with the same quarter last year:

- 1,457 more elective surgical procedures were performed (54,812 procedures in total; up 2.7%). This total included:
  - 139 more procedures categorised as urgent (12,332 in total; up 1.1%)
  - 275 more procedures categorised as semi-urgent (18,056 in total; up 1.5%)
  - 806 more procedures categorised as non-urgent (21,694 in total; up 3.9%)
  - 237 more procedures categorised as staged (2,730 in total; up 9.5%).

### How many patients were on the waiting list for elective surgery?

Compared with the same quarter last year:

- 481 more people were ready for surgery and on the elective surgery waiting list on the last day of the quarter (73,617 in total; up 0.7%). Of these:
  - 842 people (1.1%) were waiting for urgent surgery
  - 10,501 (14.3%) were waiting for semi-urgent surgery
  - 62,274 (84.6%) were waiting for non-urgent surgery.

Of the 73,617 people ready for surgery and on the elective surgery waiting list on the last day of the quarter, 12,948 (17.6%) had been on the list for 30 days or less.

Table 2 provides a summary of NSW public hospital activity measures for October to December 2016.



Table 2

## Summary of NSW public hospital activity measures, October to December 2016

| Emergency department activity   |                          | October to<br>December 2016 | October to<br>December 2015 | Difference | % change |
|---|--------------------------|-----------------------------|-----------------------------|------------|----------|
| All arrivals at NSW EDs by ambulance                                  |                          | 146,797                     | 143,141                     | 3,656      | 2.6%     |
| All ED presentations  |                          | 684,740                     | 664,923                     | 19,817     | 3.0%     |
| Emergency presentations   |                          | 661,013                     | 638,930                     | 22,083     | 3.5%     |
| Emergency presentations by triage category                            |                          |                             |                             |            |          |
| Triage category   | T1: Resuscitation        | 4,526                       | 4,248                       | 278        | 6.5%     |
|   | T2: Emergency            | 79,091                      | 75,780                      | 3,311      | 4.4%     |
|   | T3: Urgent               | 225,304                     | 211,497                     | 13,807     | 6.5%     |
|   | T4: Semi-urgent          | 282,449                     | 276,861                     | 5,588      | 2.0%     |
|   | T5: Non-urgent           | 69,643                      | 70,544                      | -901       | -1.3%    |
| Admissions to hospital from NSW EDs                                   |                          | 193,343                     | 180,250                     | 13,093     | 7.3%     |
| Admitted patient activity   |                          | October to<br>December 2016 | October to<br>December 2015 | Difference | % change |
| All admitted patient episodes   |                          | 484,874                     | 466,900                     | 17,974     | 3.8%     |
| All acute episodes  |                          | 466,126                     | 449,065                     | 17,061     | 3.8%     |
| Overnight episodes  |                          | 249,874                     | 242,705                     | 7,169      | 3.0%     |
| Same-day episodes   |                          | 216,252                     | 206,360                     | 9,892      | 4.8%     |
| Non-acute episodes  |                          | 18,748                      | 17,835                      | 913        | 5.1%     |
| Average length<br>of stay (days)                                      | All acute episodes       | 3.0                         | 3.1                         | -0.1       |          |
|   | Acute overnight episodes | 4.7                         | 4.8                         | -0.1       |          |
|   | Non-acute episodes       | 15.7                        | 15.2                        | 0.5        |          |
| Hospital<br>bed days  | All bed days             | 1,684,980                   | 1,647,977                   | 37,003     | 2.2%     |
|   | Acute bed days           | 1,391,010                   | 1,376,190                   | 14,820     | 1.1%     |
|   | Non-acute bed days       | 293,970                     | 271,787                     | 22,183     | 8.2%     |
| Babies born in NSW public hospitals                                   |                          | 17,791                      | 17,684                      | 107        | 0.6%     |
| Elective surgery activity   |                          | October to<br>December 2016 | October to<br>December 2015 | Difference | % change |
| Elective surgical procedures performed                                |                          | 54,812                      | 53,355                      | 1,457      | 2.7%     |
| Urgency category  | Urgent surgery           | 12,332                      | 12,193                      | 139        | 1.1%     |
|   | Semi-urgent surgery      | 18,056                      | 17,781                      | 275        | 1.5%     |
|   | Non-urgent surgery       | 21,694                      | 20,888                      | 806        | 3.9%     |
| Patients on waiting list ready for elective surgery at end of quarter |                          | 73,617                      | 73,136                      | 481        | 0.7%     |
| Urgency category  | Urgent surgery           | 842                         | 832                         | 10         | 1.2%     |
|   | Semi-urgent surgery      | 10,501                      | 10,445                      | 56         | 0.5%     |
|   | Non-urgent surgery       | 62,274                      | 61,859                      | 415        | 0.7%     |

# Key findings

## Hospital performance measures – October to December 2016

### How long did patients wait for ED treatment?

Compared with the same quarter last year:

- The percentage of patients whose care was transferred from ambulance to ED staff within 30 minutes was 92.0% (up 1.5 percentage points)
- The median time from ED presentation to starting treatment either decreased or was unchanged across all triage categories
- The percentage of patients whose treatment started on time was 75.6% (up 0.7 percentage points). This included: 66.4% of patients in triage category 2 (down 0.5 percentage points), 70.3% in triage 3 (up 0.9 percentage points), 78.8% in triage 4 (up 1.4 percentage points), and 93.1% in triage 5 (up 0.2 percentage points).
- In 44 out of 75 hospitals, there was an increase in the percentage of patients whose treatment started on time. For 11 hospitals, the increase was more than five percentage points. Of these, for three hospitals the increase was more than 10 percentage points.
- In 29 hospitals, the percentage of patients whose treatment started on time decreased. For nine hospitals, the decrease was more than five percentage points. Of these, for two hospitals the decrease was more than 10 percentage points.

### How long were patients in the ED?

Compared with the same quarter last year:

- The median time patients spent in the ED increased by one minute (to two hours and 41 minutes) and the 90th percentile time decreased by one minute (to six hours and 54 minutes)
- There was an increase in the percentage of patients who spent four hours or less in the ED (74.3%; up 0.2 percentage points)

- The percentage of patients who spent four hours or less in the ED increased in 35 out of 75 hospitals. For seven hospitals, the increase was more than five percentage points.
- The percentage who spent four hours or less in the ED decreased in 39 hospitals. For five hospitals, the decrease was more than five percentage points.

### How long did patients wait for elective surgery?

Compared with the same quarter last year:

- Median and 90th percentile waiting times for elective surgery decreased or remained unchanged across all urgency categories
- For non-urgent surgery, the median and 90th percentile waiting times decreased by 11 and three days (to 212 and 355 days respectively).

### Was elective surgery performed on time?

Compared with the same quarter last year:

- The percentage of elective surgical procedures performed within recommended timeframes was 97.6% (up 1.0 percentage point). This included:
  - 99.8% of urgent surgery (unchanged)
  - 97.6% of semi-urgent surgery (up 0.9 percentage points)
  - 96.3% of non-urgent surgery (up 1.5 percentage points).
- In 31 out of 79 hospitals, the percentage of elective surgical procedures performed on time increased. For eight hospitals, the increase was more than five percentage points. Of these, for one hospital, the increase was more than 10 percentage points.
- In 17 hospitals, the percentage of elective surgical procedures performed on time decreased. For three hospitals, the decrease was more than five percentage points.

- Among specialties, ophthalmological surgery and vascular surgery had the highest percentage of procedures performed on time (both 99.1%). Ear, nose and throat surgery and neurosurgery had the lowest (94.8% and 94.9% respectively).
- Among common procedures, cataract extraction and cholecystectomy had the highest percentage of procedures performed on time (99.1% and 98.7%). Septoplasty (91.9%) and myringoplasty/ tympanoplasty (92.9%) had the lowest.

Table 3 provides a summary of NSW public hospital performance measures for October to December 2016.

**Table 3 Summary of NSW public hospital performance measures, October to December 2016**

| Emergency department performance                                    |  |                 | October to December 2016 | October to December 2015 | Difference             |                        |
|---|--|-----------------|--------------------------|--------------------------|------------------------|------------------------|
| Percentage of patients whose care was transferred within 30 minutes |  |                 | 92.0%                    | 90.5%                    | +1.5 percentage points |                        |
| Time to treatment by triage category                                | T2: Emergency  | Median          | 8 mins                   | 8 mins                   | 0 mins                 |                        |
|   |  | 90th percentile | 26 mins                  | 24 mins                  | 2 mins                 |                        |
|   | T3: Urgent   | Median          | 20 mins                  | 20 mins                  | 0 mins                 |                        |
|   |  | 90th percentile | 67 mins                  | 69 mins                  | -2 mins                |                        |
|   | T4: Semi-urgent  | Median          | 25 mins                  | 27 mins                  | -2 mins                |                        |
|   |  | 90th percentile | 97 mins                  | 103 mins                 | -6 mins                |                        |
|   | T5: Non-urgent   | Median          | 24 mins                  | 24 mins                  | 0 mins                 |                        |
|   |  | 90th percentile | 103 mins                 | 104 mins                 | -1 min                 |                        |
|   | All patients   |                 |                          | 75.6%                    | 74.9%                  | +0.7 percentage points |
|   | Percentage of patients whose treatment started on time | T2: Emergency   |                          | 66.4%                    | 66.9%                  | -0.5 percentage points |
| T3: Urgent  |  |                 | 70.3%                    | 69.4%                    | +0.9 percentage points |                        |
| T4: Semi-urgent   |  |                 | 78.8%                    | 77.4%                    | +1.4 percentage points |                        |
| T5: Non-urgent  |  |                 | 93.1%                    | 92.9%                    | +0.2 percentage points |                        |
| Median time spent in the ED   |  |                 | 2h 41m                   | 2h 40m                   | 1 min                  |                        |
| 90th percentile time spent in the ED                                |  |                 | 6h 54m                   | 6h 55m                   | -1 min                 |                        |
| Percentage of patients who spent four hours or less in the ED       |  |                 | 74.3%                    | 74.1%                    | +0.2 percentage points |                        |
| Elective surgery performance  |  |                 | October to December 2016 | October to December 2015 | Difference             |                        |
| Waiting time (days)   | Urgent   | Median          | 10 days                  | 10 days                  | 0 days                 |                        |
|   |  | 90th percentile | 26 days                  | 26 days                  | 0 days                 |                        |
|   | Semi-urgent  | Median          | 43 days                  | 44 days                  | -1 day                 |                        |
|   |  | 90th percentile | 83 days                  | 83 days                  | 0 days                 |                        |
|   | Non-urgent   | Median          | 212 days                 | 223 days                 | -11 days               |                        |
|   |  | 90th percentile | 355 days                 | 358 days                 | -3 days                |                        |
| Percentage of elective surgical procedures performed on time        | All procedures   |                 | 97.6%                    | 96.6%                    | +1.0 percentage points |                        |
|   | Urgent surgery   |                 | 99.8%                    | 99.8%                    | unchanged              |                        |
|   | Semi-urgent surgery                                    |                 | 97.6%                    | 96.7%                    | +0.9 percentage points |                        |
|   | Non-urgent surgery                                     |                 | 96.3%                    | 94.8%                    | +1.5 percentage points |                        |

Note: From March 2017, *Hospital Quarterly* reports the 90th percentile time, rather than the 95th percentile time, for related ED measures.

# Hospital activity measures

Key findings – October to December 2016

Compared with the same quarter last year...

19,817

more emergency department presentations  
684,740 presentations in total



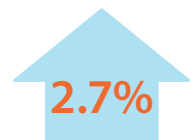
17,974

more people admitted to hospital  
484,874 admissions in total



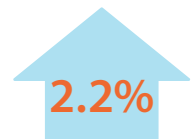
1,457

more elective surgical procedures performed  
54,812 elective surgical procedures in total

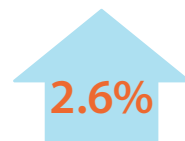


37,003

more bed days of care provided  
1,684,980 bed days in total

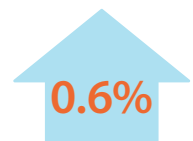


3,656



more patients arrived at the ED by ambulance  
146,797 arrivals in total

107



more babies born  
17,791 babies born in total

The average length of stay for all acute overnight admissions was

4.7 days

down 0.1 days compared with the same quarter last year



## NSW emergency departments

This section provides information about patients who presented to emergency departments, ambulance arrivals, how urgently patients required care (triage category) and where they went after leaving the emergency department (mode of separation).

|  |    |
|--|----|
| NSW emergency department patients and ambulance arrivals         | 11 |
| Patients who left the emergency department by mode of separation | 13 |

## NSW hospital admissions

This section provides information about the number and type of hospital admissions (admitted patient episodes), number of babies born, average length of stay and number of bed days provided.

|                                     |    |
|-------------------------------------|----|
| Hospital admissions and babies born | 15 |
| Hospital bed days                   | 17 |
| Average length of stay              | 17 |

## NSW elective surgery

This section provides information about the number of elective surgical procedures performed, how urgently patients required surgery and the number of patients on the elective surgery waiting list.

|  |    |
|--|----|
| Elective surgery performed by urgency category | 19 |
| Elective surgery waiting list                  | 21 |

# How many people presented to NSW emergency departments?

During the October to December 2016 quarter, a total of 684,740 people presented to NSW public hospital emergency departments (EDs), an increase of 3.0% compared with the same quarter last year. Almost all were emergency presentations (661,013 patients or 96.5%) (Figure 1). The remaining 23,727 patients presented to ED for non-emergency reasons such as a planned return visit, or a planned hospital admission.

There was an increase in the number of emergency presentations across all triage categories, except triage category 5 (901 fewer patients; down 1.3%). The largest increase in numbers was in triage category 3 (13,807 more patients; up 6.5%) and triage category 4 (5,588 more patients; up 2.0%). There was a 6.5% increase in triage category 1 (278 more patients), and a 4.4% increase in triage category 2 (3,311 more patients) (Figure 1).






There has been a 22.8% increase in the number of emergency presentations over the past five years, from 538,154 in the October to December 2011 quarter to 661,013 this quarter (Figure 2).

The number of ED presentations increased this quarter in 61 out of 75 NSW hospital EDs. Of these, 26 had an increase of more than 5%, including 10 that had an increase of more than 10%. Conversely, 13 hospitals had a decrease in the number of ED presentations this quarter, including four that had a decrease of more than 5%. Of these, three hospitals had a decrease of more than 10%. Hospitals identified in Figure 3 had more than 5,000 ED presentations this quarter and more than a 5% change in the number of presentations compared with the same quarter last year.

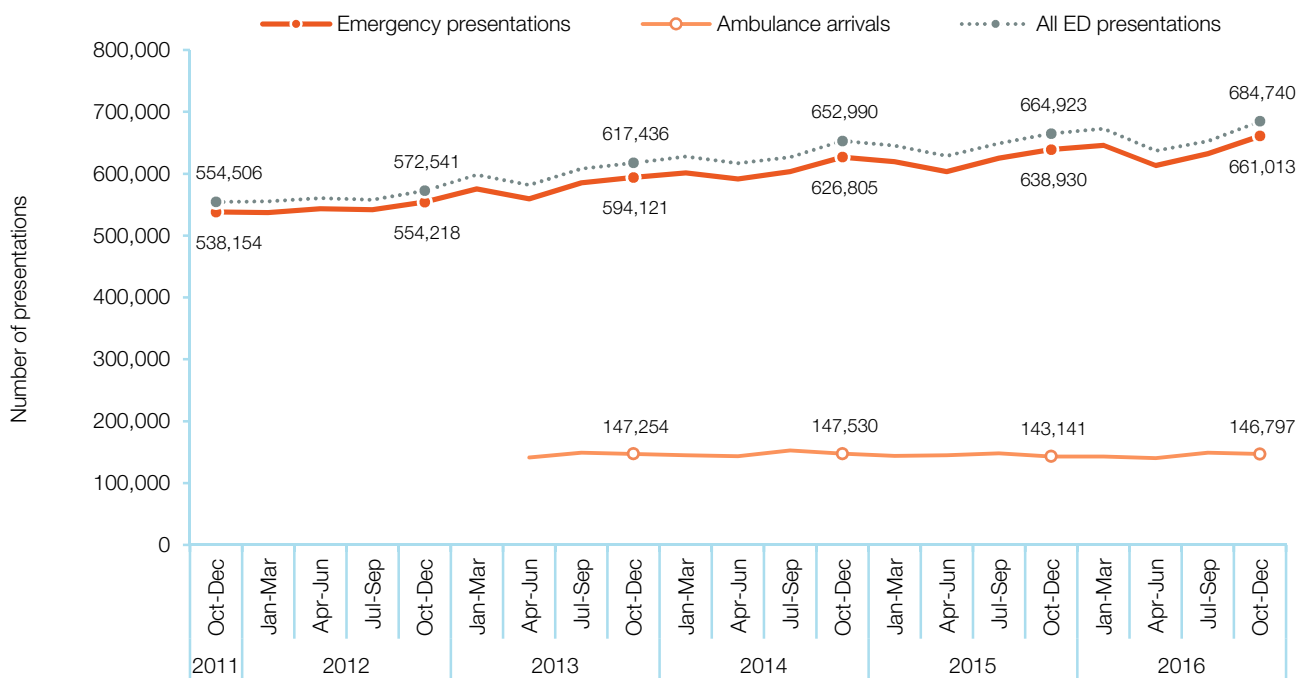
This quarter, there were 146,797 ED patients who arrived by ambulance, an increase of 2.6% compared with the same quarter last year (Figure 1).

A small number of patients visit the ED for routine care, or as an entry point for planned admission to the hospital. The majority of ED visits however, are unplanned 'emergency' presentations.

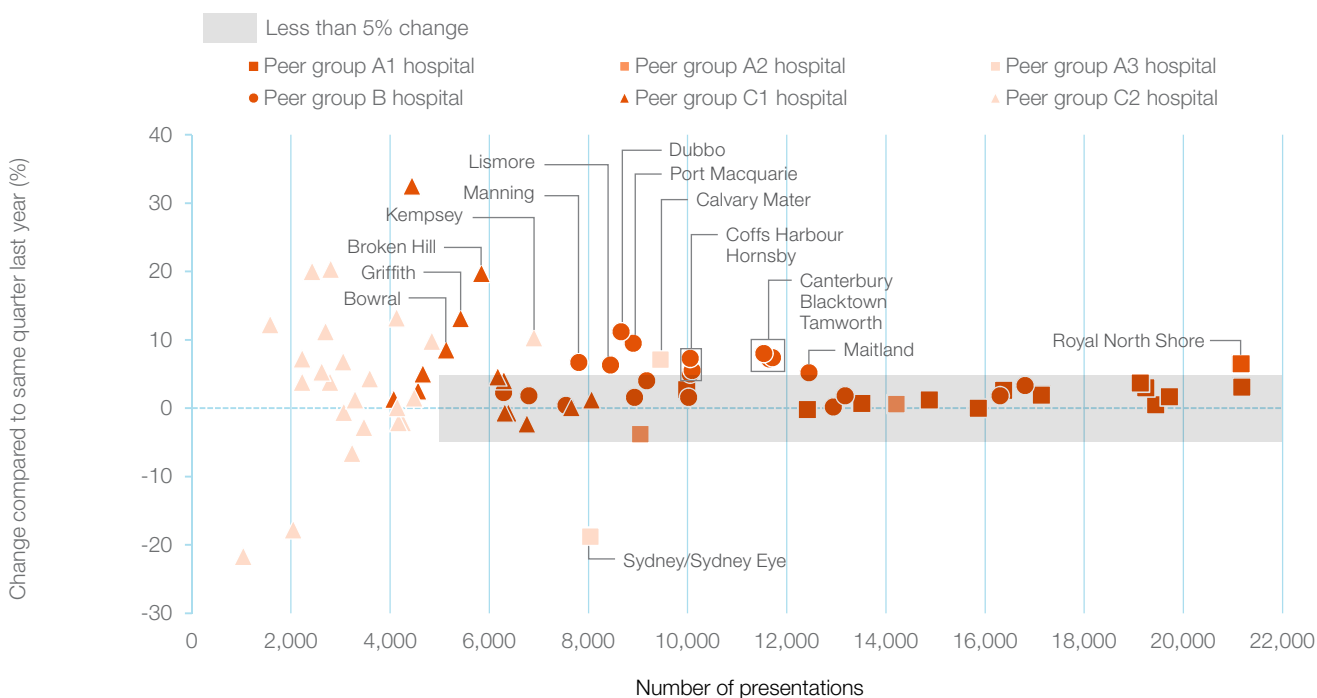
Figure 1 Emergency department presentations and ambulance arrivals at NSW emergency departments, October to December 2016

|  | This quarter | Same quarter last year | Change since one year ago |
|--|--------------|------------------------|---------------------------|
| All ED presentations   | 684,740      | 664,923                | 3.0%                      |
| Emergency presentations by triage category   | 661,013      | 638,930                | 3.5%                      |
| Triage 1: Resuscitation  0.7% | 4,526        | 4,248                  | 6.5%                      |
| Triage 2: Emergency  12.0%    | 79,091       | 75,780                 | 4.4%                      |
| Triage 3: Urgent  34.1%       | 225,304      | 211,497                | 6.5%                      |
| Triage 4: Semi-urgent  42.7%  | 282,449      | 276,861                | 2.0%                      |
| Triage 5: Non-urgent  10.5%   | 69,643       | 70,544                 | -1.3%                     |
| Ambulance arrivals   | 146,797      | 143,141                | 2.6%                      |

**Figure 2** Emergency department presentations and ambulance arrivals at NSW emergency departments, October 2011 to December 2016



**Figure 3** Change in number of emergency department presentations compared with the same quarter last year, hospitals by peer group, October to December 2016



# Where did patients go after leaving the emergency department?

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

During the October to December 2016 quarter, 62.4% of patients were treated and discharged from the ED (427,299 in total; up 0.7% compared with the same quarter last year), and 28.2% of patients were treated and admitted to hospital (193,343 in total; up 7.3%).

The number of patients transferred to another hospital increased by 2.8% this quarter (13,989 in total) and the number who left without, or before

completing, treatment (36,514 in total) increased by 1.9%, compared with the same quarter last year (Figure 4).

The majority of patients in triage category 1, and triage category 2 were treated and admitted to hospital (Figure 5). The majority in triage categories 3, 4 and 5 were treated and discharged (Figure 6).

The number of patients who were treated and discharged, treated and admitted to hospital, and transferred to another hospital has increased over the past five years. The number of patients who left without, or before completing, treatment has decreased (Figure 7).

Figure 4 Patients who presented to the emergency department, by mode of separation, October to December 2016

|   |       | This quarter | Same quarter last year | Change since one year ago |
|---|-------|--------------|------------------------|---------------------------|
| Treated and discharged                        | 62.4% | 427,299      | 424,335                | 0.7%                      |
| Treated and admitted to hospital              | 28.2% | 193,343      | 180,250                | 7.3%                      |
| Left without, or before completing, treatment | 5.3%  | 36,514       | 35,817                 | 1.9%                      |
| Transferred to another hospital               | 2.0%  | 13,989       | 13,607                 | 2.8%                      |
| Other   | 2.0%  | 13,595       | 10,914                 | 24.6%                     |

Figure 5 Percentage of patients who were treated and admitted, by triage category, October to December 2016

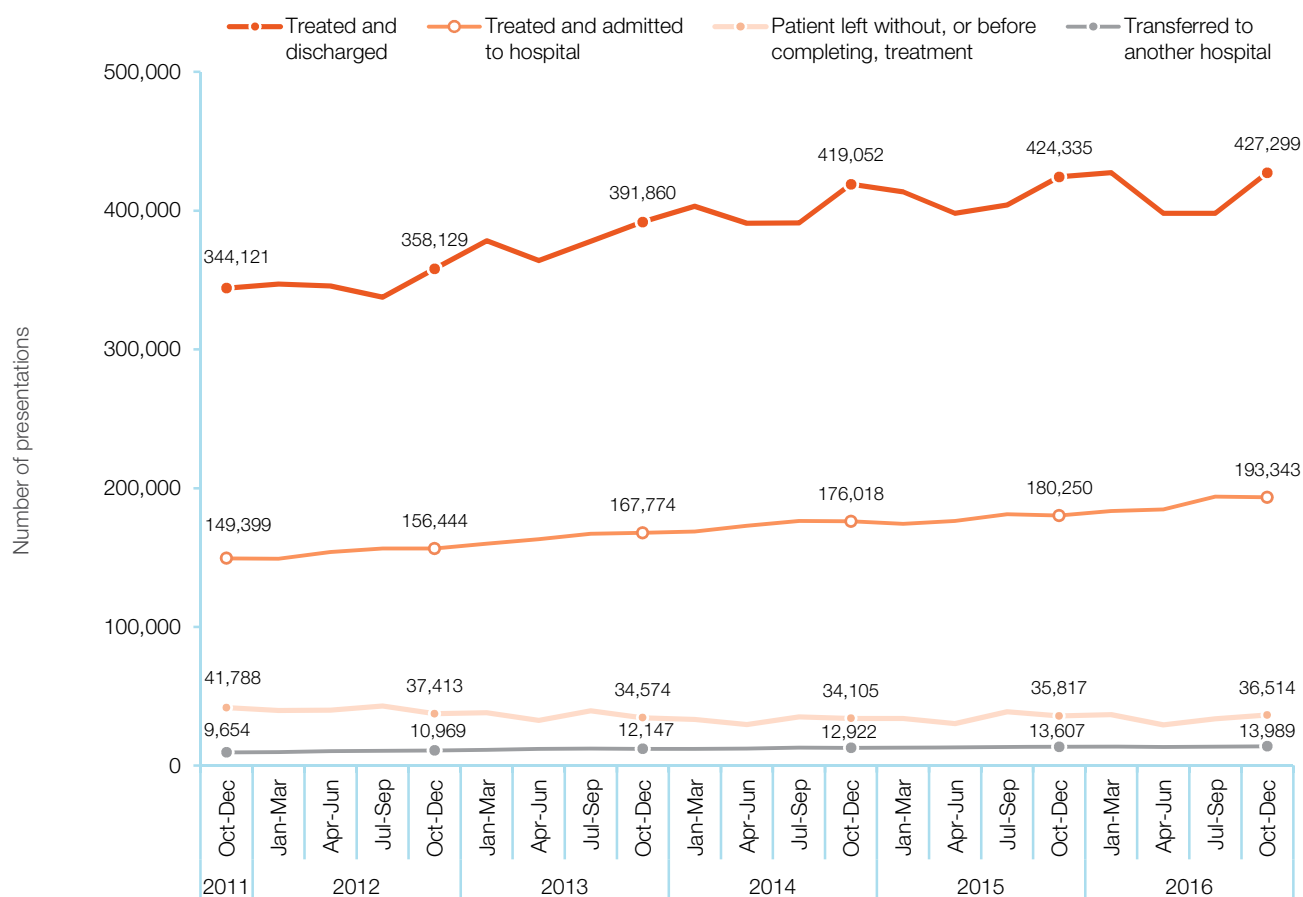
|                      |       | This quarter | Same quarter last year | Percentage point change since one year ago |
|----------------------|-------|--------------|------------------------|--|
| All ED presentations | 28.3% |              | 27.1%                  | 1.2  |
| Triage 1             | 81.0% |              | 80.9%                  | 0.1  |
| Triage 2             | 59.3% |              | 58.8%                  | 0.5  |
| Triage 3             | 40.6% |              | 39.3%                  | 1.3  |
| Triage 4             | 15.8% |              | 15.5%                  | 0.3  |
| Triage 5             | 5.3%  |              | 5.0%                   | 0.3  |



Figure 6 Percentage of patients who were treated and discharged, by triage category, October to December 2016

|                      | This quarter | Same quarter last year | Percentage point change since one year ago |
|----------------------|--------------|------------------------|--|
| All ED presentations | 62.5%        | 63.9%                  | -1.4                                       |
| Triage 1             | 8.4%         | 8.2%                   | 0.2  |
| Triage 2             | 33.3%        | 34.1%                  | -0.8                                       |
| Triage 3             | 52.2%        | 53.6%                  | -1.4                                       |
| Triage 4             | 74.2%        | 74.9%                  | -0.7                                       |
| Triage 5             | 80.3%        | 81.9%                  | -1.6                                       |

Figure 7 Patients who presented to the emergency department, by mode of separation, October 2011 to December 2016



# How many patients were admitted to a public hospital?

During the October to December 2016 quarter, there were 484,874 admitted patient episodes; up 3.8% compared with the same quarter last year (Figure 8). The majority were acute admitted patient episodes (96.1%) and of these, 53.6% were for overnight care and 46.4% were for same-day care (Figure 9).

Hospital admissions can be planned (arranged in advance) or unplanned (emergency hospital admissions or unplanned surgical procedures). This quarter, the majority of acute same-day admitted patient episodes (72.2%) were planned. Conversely, the majority of acute overnight episodes (84.5%) were unplanned.

There has been a gradual increase over the past five years in all admitted patient episodes and all acute admitted patient episodes (Figure 8). During this time, the number of acute overnight admitted patient episodes has increased by 11.6% and the number of same-day episodes increased by 18.7% (Figure 9).

Figure 10 shows differences in the proportion of acute admissions that were same-day episodes this quarter across hospital peer groups. Peer group C2 hospitals had a higher percentage of same-day admissions than other peer groups and also had the widest range – with 23.4% to 86.5% of all acute admissions for same-day care.

The number of babies born in NSW public hospitals (17,791) increased by 0.6% this quarter compared with the same quarter last year (Figure 8).

Patients can have more than one admitted episode during the same hospitalisation. For example, a person may be admitted for acute care and then require an episode of rehabilitation or palliative care prior to being discharged.

**Figure 8** All admitted patient episodes, acute admitted patient episodes and babies born, October 2011 to December 2016

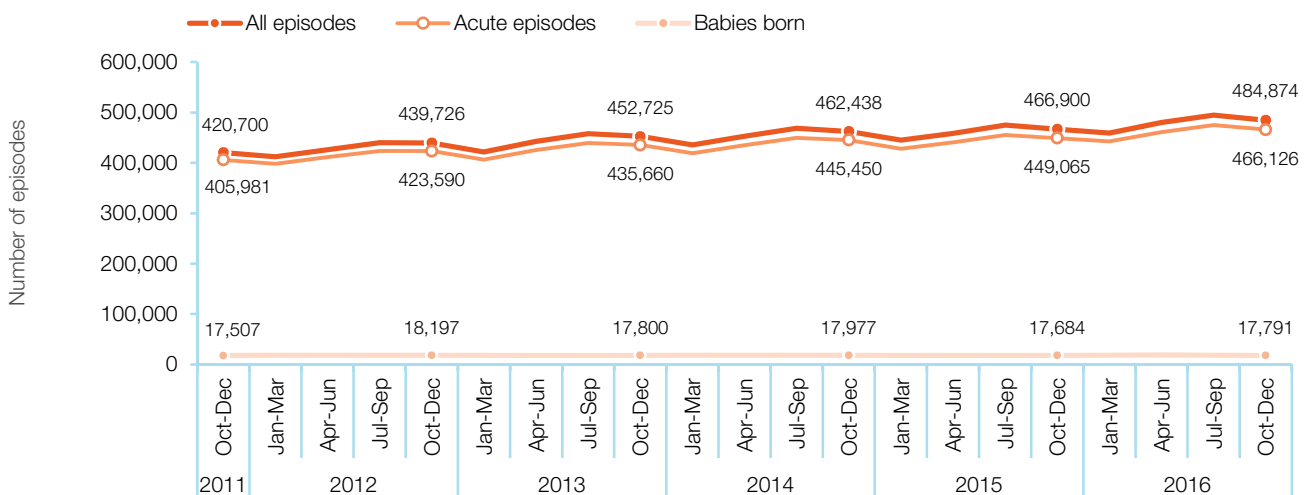


Figure 9 All acute admitted patient episodes, October 2011 to December 2016

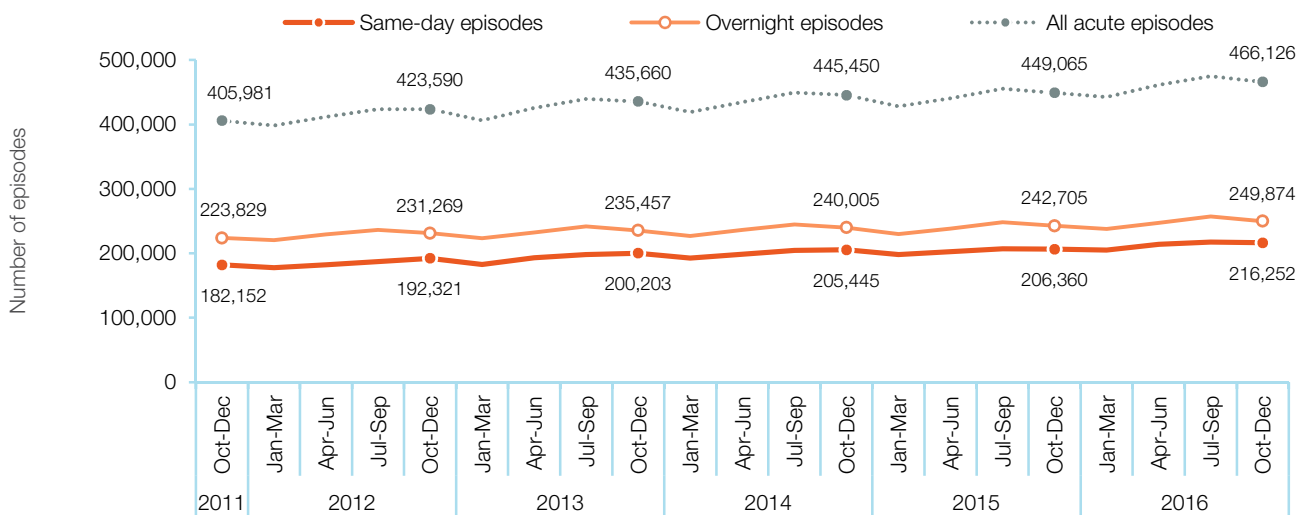
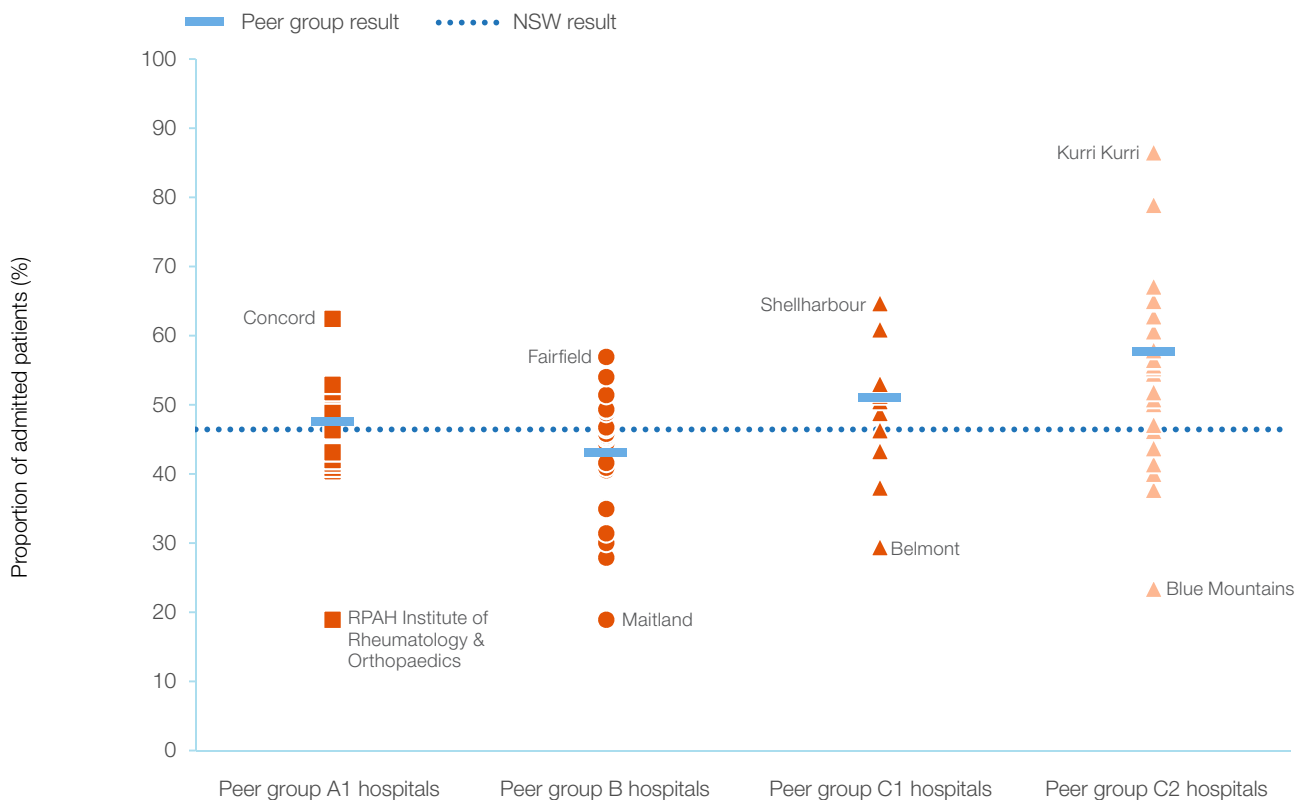


Figure 10 Same-day admitted patient episodes as percentage of all acute admitted patient episodes, by peer group, October to December 2016



Note: Same-day refers to patients who are admitted and discharged on the same day. Same-day episodes count as one bed day.

# How long did patients stay in hospital?

Bed days are a measure of hospital utilisation and service provision. During the October to December 2016 quarter, there were 1,684,980 hospital bed days across all admitted patient episodes; up 2.2% compared with the same quarter last year. The majority of bed days were for acute care, which increased 1.1% this quarter. The number of non-acute bed days increased by 8.2% compared with the same quarter last year (Figure 11).

Between October 2011 and December 2016 there was a 4.4% increase in the number of bed days for acute care. During this time, there was a 26.6% increase in the number of bed days for non-acute care (Figure 12).

The average length of stay for all acute episodes was 3.0 days and for all acute overnight episodes was 4.7 days (both down 0.1 days compared with the same quarter last year). The average length of stay for all acute episodes has remained relatively stable in the same quarter over the past three years (Figure 13).

There were hospital-level differences in the average length of stay for acute overnight episodes this quarter, even within peer groups. The greatest variation was in the C2 peer group, where there was a 6.1 days difference between the highest and lowest average length of stay for individual hospitals, compared with a 2.3 day difference in the B peer group (Figure 14). Differences in case-mix of patients both between and within hospital peer groups may affect length of stay measures.

Figure 11 Total number of hospital bed days, by episode type, October to December 2016

|                | This quarter | Same quarter last year | Change since one year ago |
|----------------|--------------|------------------------|---------------------------|
| Total bed days | 1,684,980    | 1,647,977              | 2.2%                      |
| Acute          | 1,391,010    | 1,376,190              | 1.1%                      |
| Non-acute      | 293,970      | 271,787                | 8.2%                      |

Figure 12 Total number of hospital bed days by episode type, October 2011 to December 2016

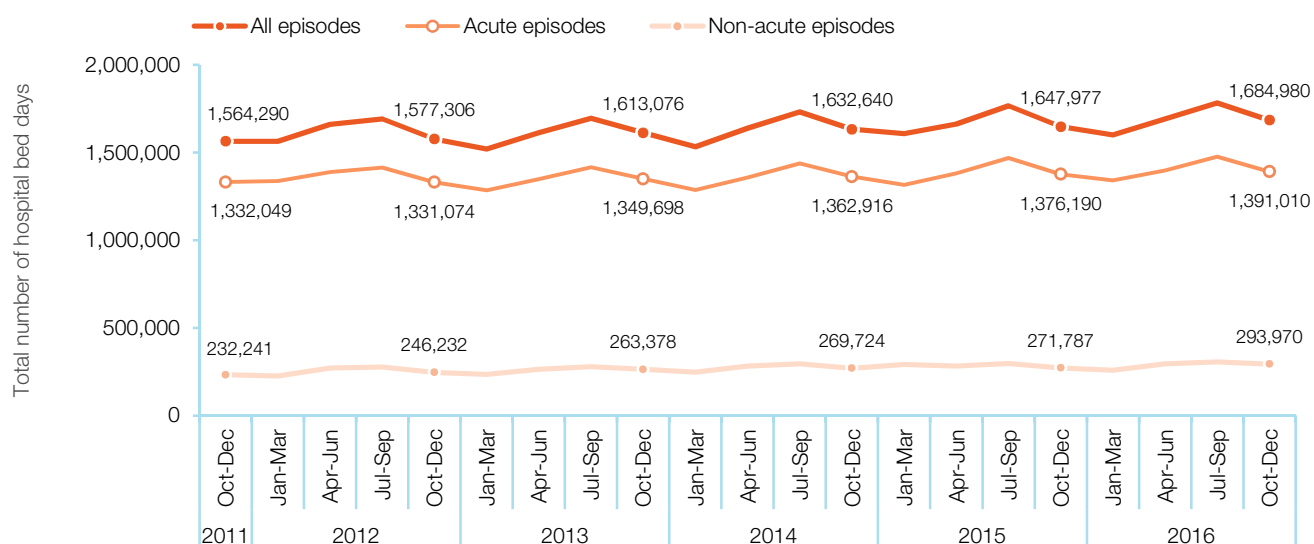


Figure 13 Average length of stay, by type of admitted patient episode, October 2011 to December 2016

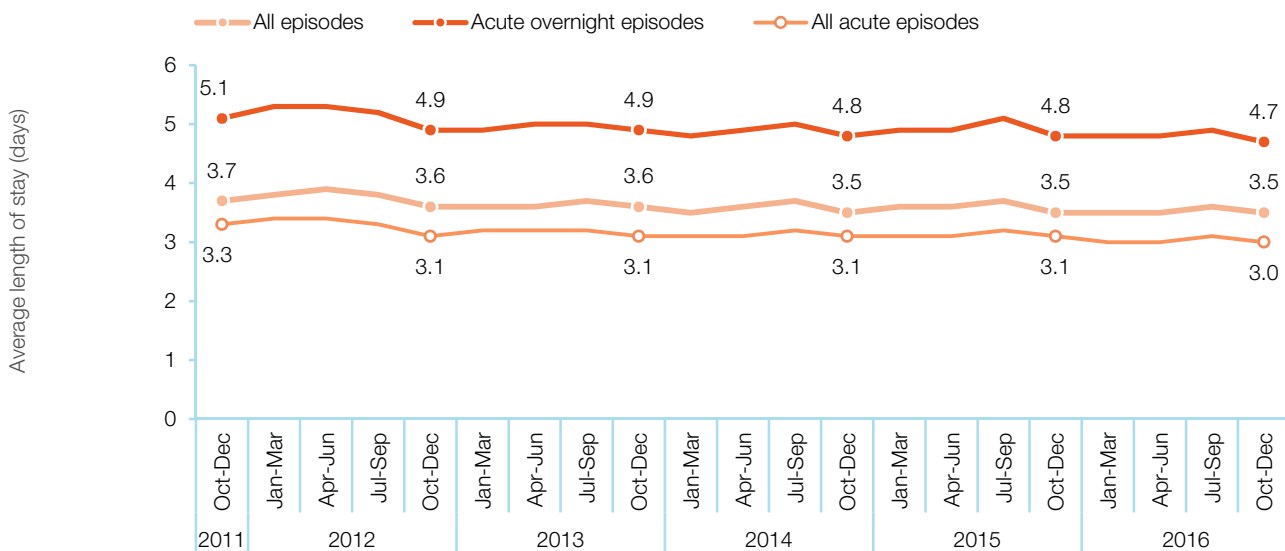
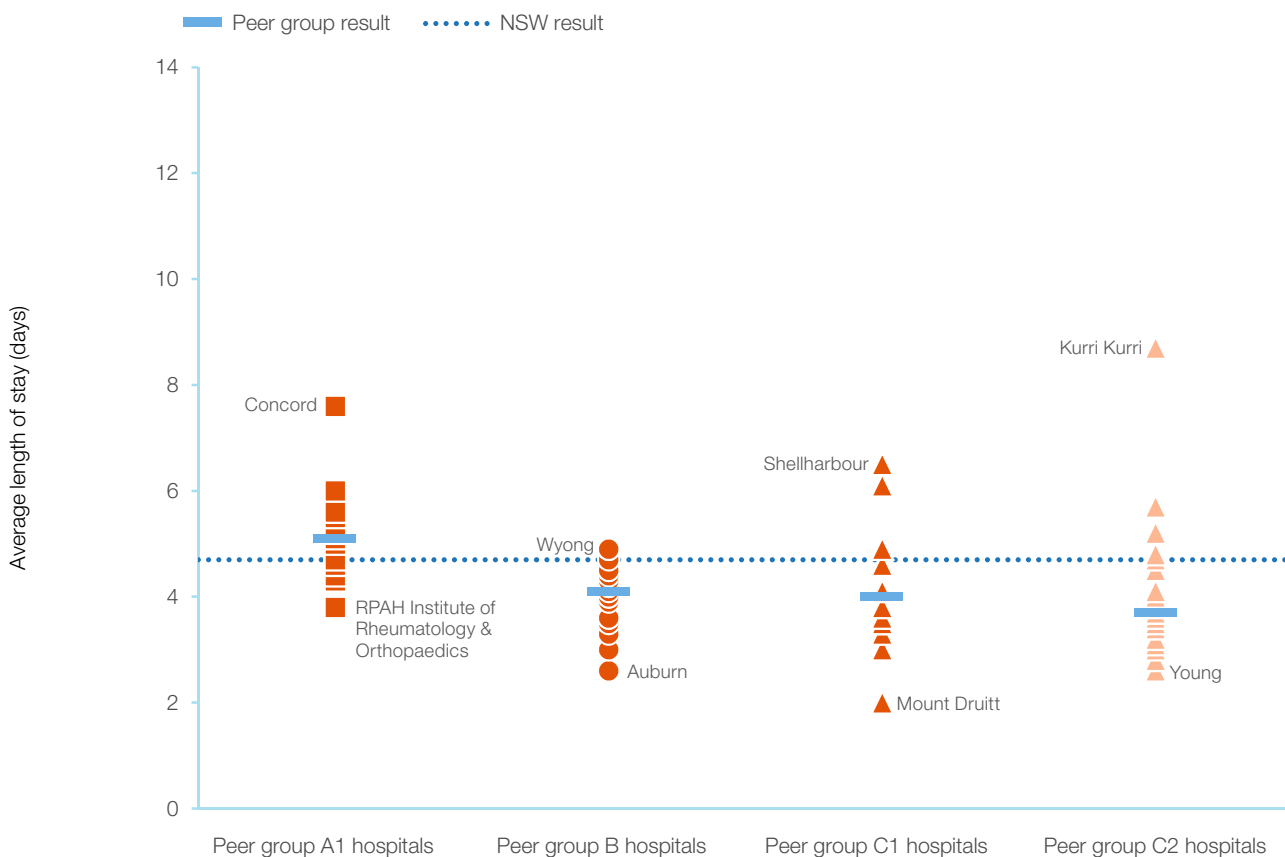


Figure 14 Average length of stay for acute overnight admitted patient episodes, by peer group, October to December 2016



# How many elective surgical procedures were performed?

During the October to December 2016 quarter, a total of 54,812 elective surgical procedures were performed. This was 1,457 (2.7%) more than in the same quarter last year. Of all the elective surgical procedures performed this quarter, 22.5% were categorised as urgent, 32.9% as semi-urgent, and 39.6% as non-urgent. A further 5.0% were categorised as staged (Figure 15).

Compared with the same quarter last year, there was an increase in the number of urgent (up 1.1%), semi-urgent (up 1.5%) and non-urgent procedures performed (up 3.9%). The number of staged procedures performed increased by 9.5% (Figure 15).

There are three elective surgery urgency categories, each with a clinically recommended maximum time by which the procedure should be performed: urgent (within 30 days), semi-urgent (within 90 days) and non-urgent surgery (within 365 days).

Figure 15 Elective surgical procedures performed, by urgency category, October to December 2016

|  | This quarter | Same quarter last year | Change since one year ago |
|--|--------------|------------------------|---------------------------|
| Total number of elective surgical procedures | 54,812       | 53,355                 | 2.7%                      |
| Urgent                                       | 12,332       | 12,193                 | 1.1%                      |
| Semi-urgent                                  | 18,056       | 17,781                 | 1.5%                      |
| Non-urgent                                   | 21,694       | 20,888                 | 3.9%                      |
| Staged                                       | 2,730        | 2,493                  | 9.5%                      |

Figure 16 Distribution of elective surgery by urgency category and peer group, October to December 2016

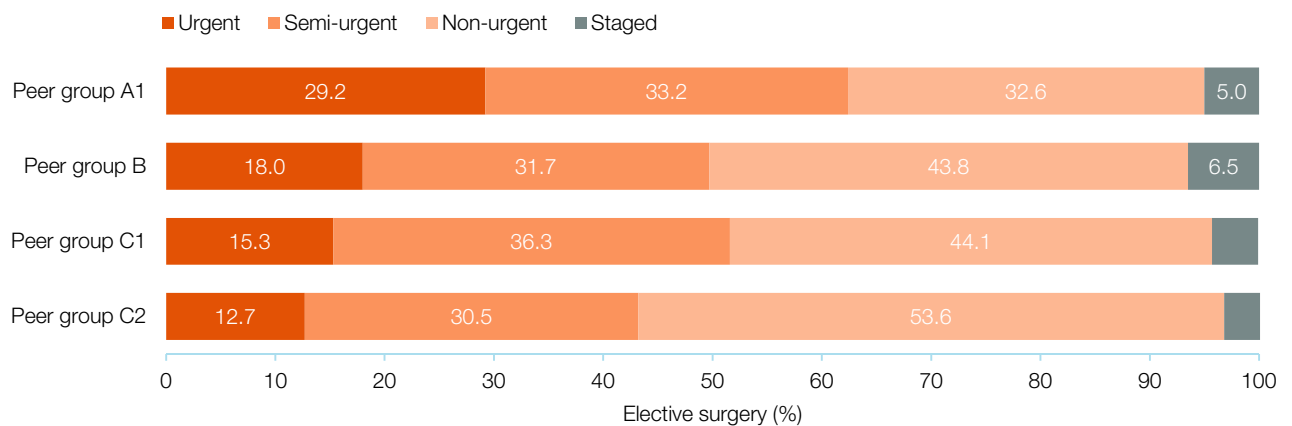
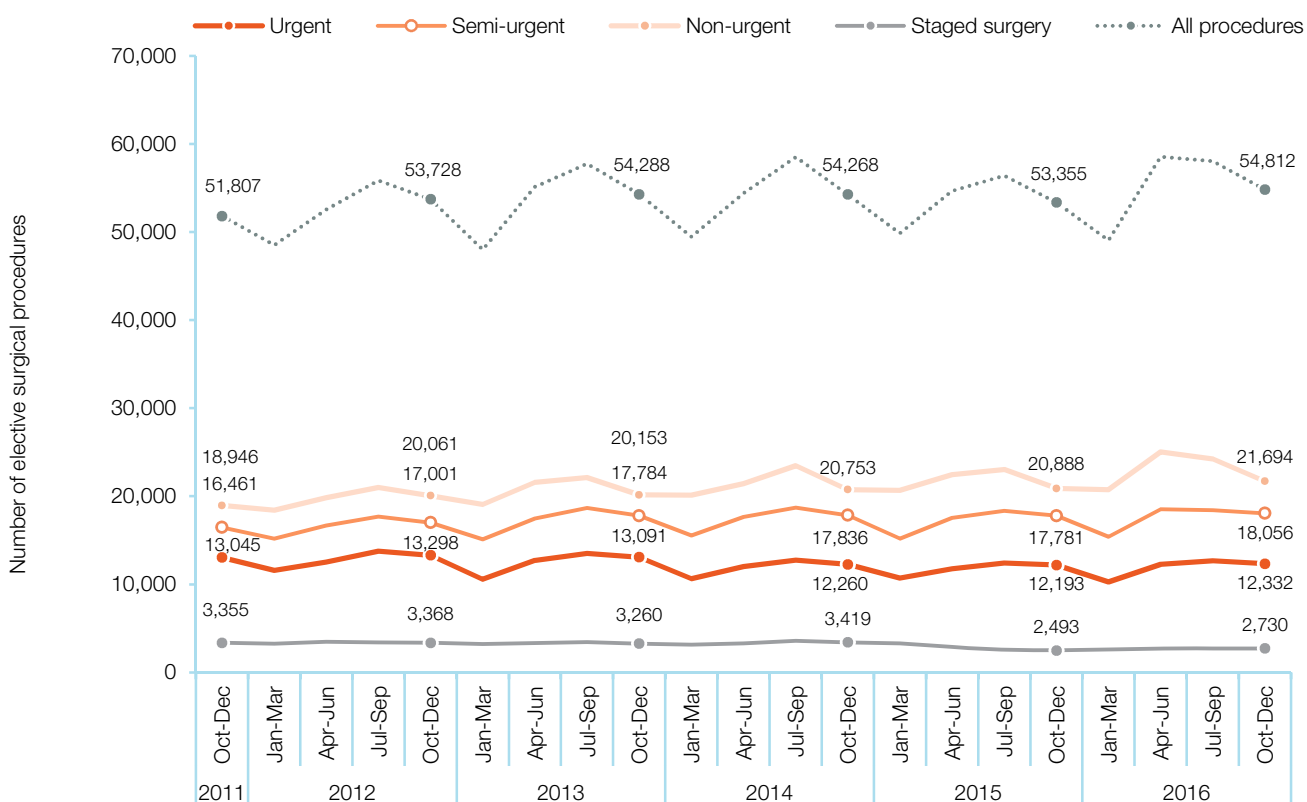


Figure 16 shows variation in the distribution of elective surgery, by urgency categories across different hospital peer groups. Peer group A1 had the highest percentage of elective surgical procedures that were urgent and the lowest percentage that were non-urgent.

The volume of elective surgical procedures performed has increased over the past five years. Compared with the same quarter in 2011, the number categorised as semi-urgent and non-urgent increased by 9.7% and 14.5% respectively. The number categorised as urgent decreased by 5.5% and the number categorised as staged decreased by 18.6% during this time (Figure 17).

Figure 17 Elective surgical procedures performed, by urgency category, October 2011 to December 2016



# How many patients were on the elective surgery waiting list at the end of the quarter?

At the end of December 2016, there were 73,617 patients who were ready for surgery and on the elective surgery waiting list. Of these, 1.1% were waiting for urgent surgery, 14.3% were waiting for semi-urgent surgery and 84.6% were waiting for non-urgent surgery.

The waiting list is dynamic and this number provides a snapshot of the list on a single day. Among the patients on the list on 31 December 2016, there were 12,948 (17.6%) who had been waiting for 30 days or less.

Compared with the same quarter last year, there was an increase in the number of patients on the waiting list on the last day of the quarter across all urgency categories. The largest increase was in the number of patients waiting for non-urgent surgery (62,274 in total; up 0.7%) (Figure 18).

At the end of the quarter, there were 14,120 patients 'not ready for surgery' and on the elective surgery waiting list, up 1.5% compared with the same quarter last year (Figure 18).

## Comparing across surgical specialties

Orthopaedic surgery and ophthalmological surgery were the specialties with the most patients waiting at the end of the quarter. Together, these specialties made up 49.6% of all patients waiting for elective

surgery in NSW public hospitals. Medical (non-specialist) surgery and cardiothoracic surgery had the smallest number of patients waiting (Figure 19).

At the end of the quarter, there were 194 patients who were still waiting for surgery after more than 12 months on the waiting list; a decrease of 45.2% compared with the same quarter last year. Almost half (94 patients) were still waiting for orthopaedic surgery after more than 12 months on the waiting list. Compared with the same quarter last year, the largest decrease in absolute numbers was for ear, nose and throat surgery (from 89 to 30 patients this quarter) (Figure 19).

## Comparing across common procedures

Cataract extraction, the highest volume procedure, had the most patients waiting for surgery at the end of the quarter (15,179 patients; up 0.7% compared with the same quarter last year). Procedures with the smallest number of patients waiting were coronary artery bypass graft (107 patients; up 23.0%) and myringotomy (108 patients; down 11.5%) (Figure 20).

Figure 18 Elective surgery waiting list, by urgency category, as at 31 December 2016

|  | This quarter | Same quarter last year | Change since one year ago |
|--|--------------|------------------------|---------------------------|
| Patients ready for surgery on waiting list as at 31 December 2016    | 73,617       | 73,136                 | 0.7%                      |
| Urgent   | 842          | 832                    | 1.2%                      |
| Semi-urgent  | 10,501       | 10,445                 | 0.5%                      |
| Non-urgent   | 62,274       | 61,859                 | 0.7%                      |
| Patients not ready for surgery on waiting list at the end of quarter | 14,120       | 13,917                 | 1.5%                      |



Figure 19 Patients waiting for elective surgery and patients still waiting after more than 12 months on the waiting list at the end of the quarter, by specialty, as at 31 December 2016

|                              | Patients on waiting list at end of quarter |                        |                           | Patients still waiting after more than 12 months |                        |
|------------------------------|--|------------------------|---------------------------|--|------------------------|
|                              | This quarter                               | Same quarter last year | Change since one year ago | This quarter                                     | Same quarter last year |
| All specialties              | 73,617                                     | 73,136                 | 0.7%                      | 194  | 354                    |
| Orthopaedic surgery          | 18,999                                     | 18,818                 | 1.0%                      | 94   | 129                    |
| Ophthalmology                | 17,498                                     | 17,216                 | 1.6%                      | <5   | 22                     |
| General surgery              | 12,069                                     | 12,253                 | -1.5%                     | 27   | 45                     |
| Ear, nose and throat surgery | 10,347                                     | 10,212                 | 1.3%                      | 30   | 89                     |
| Gynaecology                  | 5,714                                      | 5,783                  | -1.2%                     | 10   | 16                     |
| Urology                      | 3,684                                      | 3,604                  | 2.2%                      | 0  | 17                     |
| Plastic surgery              | 2,320                                      | 2,364                  | -1.9%                     | 9  | 23                     |
| Neurosurgery                 | 1,285                                      | 1,299                  | -1.1%                     | 6  | 9                      |
| Vascular surgery             | 1,038                                      | 972                    | 6.8%                      | 14   | <5                     |
| Cardiothoracic surgery       | 375  | 405                    | -7.4%                     | 0  | 0                      |
| Medical                      | 288  | 210                    | 37.1%                     | 0  | 0                      |

Figure 20 Patients waiting for elective surgery and patients still waiting after more than 12 months on the waiting list at the end of the quarter, by common procedure, as at 31 December 2016

|                                       | Patients on waiting list at end of quarter |                        |                           | Patients still waiting after more than 12 months |                        |
|---------------------------------------|--|------------------------|---------------------------|--|------------------------|
|                                       | This quarter                               | Same quarter last year | Change since one year ago | This quarter                                     | Same quarter last year |
| Cataract extraction                   | 15,179                                     | 15,080                 | 0.7%                      | <5   | 14                     |
| Total knee replacement                | 5,737                                      | 5,502                  | 4.3%                      | 25   | 28                     |
| Tonsillectomy                         | 4,184                                      | 3,964                  | 5.5%                      | <5   | 7                      |
| Total hip replacement                 | 2,497                                      | 2,451                  | 1.9%                      | 10   | 9                      |
| Inguinal herniorrhaphy                | 2,129                                      | 2,170                  | -1.9%                     | 7  | <5                     |
| Cholecystectomy                       | 1,524                                      | 1,628                  | -6.4%                     | 0  | <5                     |
| Septoplasty                           | 1,439                                      | 1,349                  | 6.7%                      | 13   | 19                     |
| Hysteroscopy                          | 1,347                                      | 1,411                  | -4.5%                     | <5   | <5                     |
| Other - General                       | 1,184                                      | 1,219                  | -2.9%                     | 0  | 6                      |
| Cystoscopy                            | 951  | 941                    | 1.1%                      | 0  | 0                      |
| Abdominal hysterectomy                | 729  | 776                    | -6.1%                     | <5   | <5                     |
| Prostatectomy                         | 699  | 659                    | 6.1%                      | 0  | <5                     |
| Varicose veins stripping and ligation | 640  | 696                    | -8.0%                     | 13   | 5                      |
| Haemorrhoidectomy                     | 399  | 399                    | 0.0%                      | <5   | <5                     |
| Myringoplasty / Tympanoplasty         | 330  | 337                    | -2.1%                     | <5   | 10                     |
| Myringotomy                           | 108  | 122                    | -11.5%                    | 0  | 0                      |
| Coronary artery bypass graft          | 107  | 87                     | 23.0%                     | 0  | 0                      |

# Hospital performance measures

## Key findings – October to December 2016

Responsibility for the care of patients was transferred to ED staff within 30 minutes for

**92.0%** of patients who arrived by ambulance

up 1.5 percentage points compared with the same quarter last year



ED treatment started within recommended timeframes for

**75.6%** of all ED patients



of triage category 2 patients



of triage category 3 patients



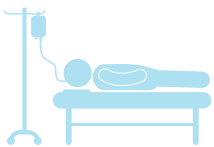
of triage category 4 patients



of triage category 5 patients

**74.3%** of patients spent four hours or less in the emergency department

up 0.2 percentage points compared with the same quarter last year



**97.6%** of patients received their surgery within recommended timeframes



urgent surgical procedures performed on time



semi-urgent surgical procedures performed on time



non-urgent surgical procedures performed on time



31 out of 79 hospitals performed a higher percentage of elective surgical procedures on time – 17 performed less, compared with the same quarter last year

## NSW emergency departments

This section provides information about timeliness measures for NSW emergency departments.

|   |    |
|---|----|
| Time to treatment   | 25 |
| Percentage of patients whose treatment started on time                          | 27 |
| Time spent in the emergency department  | 33 |
| Percentage of patients who spent four hours or less in the emergency department | 37 |
| Transfer of care  | 43 |

## NSW elective surgery

This section provides information about timeliness measures for elective surgery in NSW public hospitals.

|  |    |
|--|----|
| Waiting times for elective surgery                           | 45 |
| Percentage of elective surgical procedures performed on time | 49 |

# How long did patients wait for treatment in the emergency department?

## Time patients waited to start treatment in the ED

On arrival at the emergency department (ED), patients are allocated to one of five triage categories, based on urgency. Each category has a maximum waiting time within which treatment should start:

- Triage 1: Resuscitation (within two minutes)
- Triage 2: Emergency (within 10 minutes)
- Triage 3: Urgent (within 30 minutes)
- Triage 4: Semi-urgent (within 60 minutes)
- Triage 5: Non-urgent (within 120 minutes).

During the October to December 2016 quarter, the median time from presenting to the ED to starting treatment decreased or remained unchanged across all triage categories compared with the same quarter last year. The 90th percentile time increased by two minutes for triage category 2 and decreased across all other triage categories (Figure 21).

## How have ED treatment times changed over time?

For triage category 2, the median time patients waited to start treatment has remained almost unchanged in the October to December quarter over the past five years. The median times have decreased for triage categories 3, 4 and 5 during this time (Figure 22).

Over the past five years, in triage categories 3, 4 and 5, the 90th percentile time that patients waited to start treatment decreased while there has been little change for triage category 2 patients (Figure 23).

Figure 21 Time from presentation to starting treatment, by triage category, October to December 2016

|  | This quarter | Same quarter last year | Change since one year ago |
|--|--------------|------------------------|---------------------------|
| <b>Triage 2 Emergency (e.g. chest pain, severe burns): 78,153 patients</b>       |              |                        |                           |
| Median time to start treatment   | 8m           | 8m                     | 0m                        |
| 90th percentile time to start treatment  | 26m          | 24m                    | 2m                        |
| <b>Triage 3 Urgent (e.g. moderate blood loss, dehydration): 219,515 patients</b> |              |                        |                           |
| Median time to start treatment   | 20m          | 20m                    | 0m                        |
| 90th percentile time to start treatment  | 1h 7m        | 1h 9m                  | -2m                       |
| <b>Triage 4 Semi-urgent (e.g. sprained ankle, earache): 262,395 patients</b>     |              |                        |                           |
| Median time to start treatment   | 25m          | 27m                    | -2m                       |
| 90th percentile time to start treatment  | 1h 37m       | 1h 43m                 | -6m                       |
| <b>Triage 5 Non-urgent (e.g. small cuts or abrasions): 59,340 patients</b>       |              |                        |                           |
| Median time to start treatment   | 24m          | 24m                    | 0m                        |
| 90th percentile time to start treatment  | 1h 43m       | 1h 44m                 | -1m                       |

Note: From March 2017, *Hospital Quarterly* reports the 90th percentile time, rather than the 95th percentile time, for related ED measures.

Figure 22 Median time from presentation to starting treatment, by triage category, October 2011 to December 2016

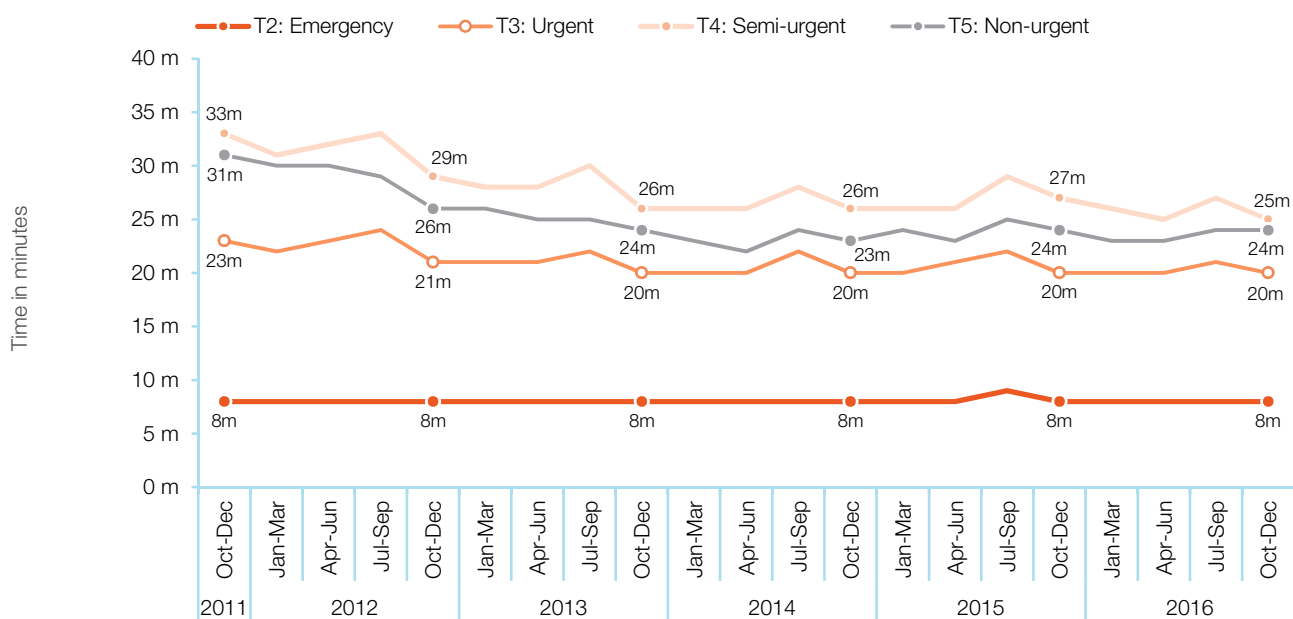
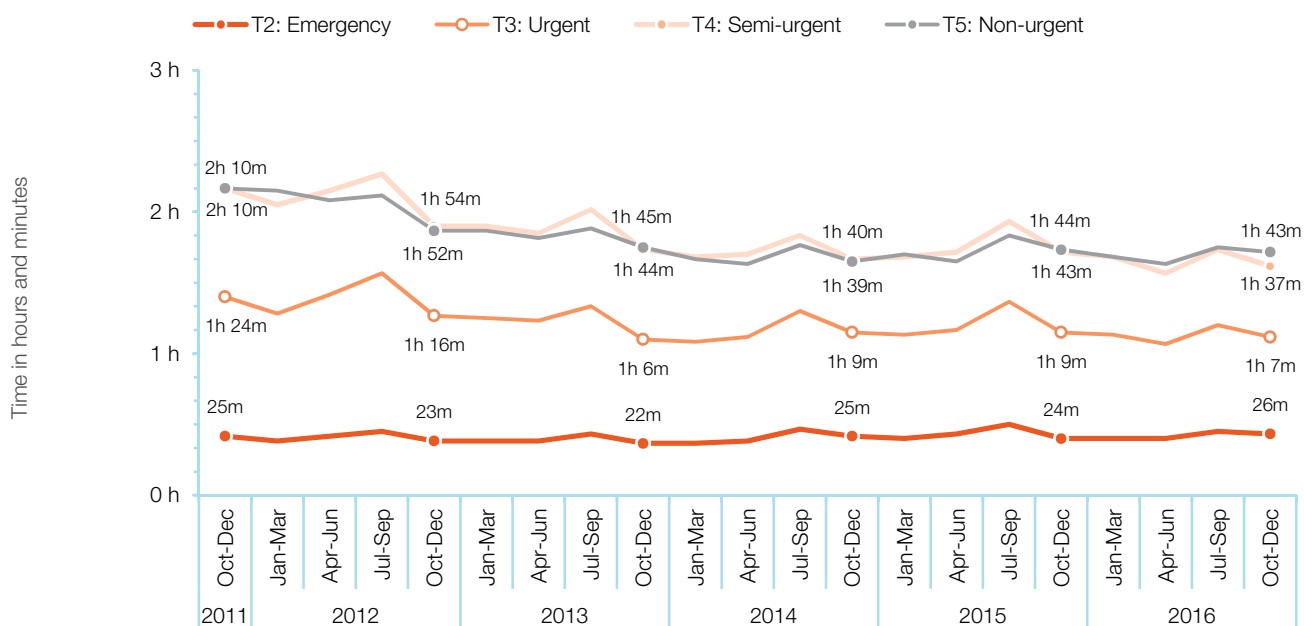


Figure 23 90th percentile time from presentation to starting treatment, by triage category, October 2011 to December 2016



Note: From March 2017, Hospital Quarterly reports the 90th percentile time, rather than the 95th percentile time, for related ED measures.

# How long did patients wait for treatment in the emergency department?

## Percentage of patients whose treatment started on time

During the October to December 2016 quarter, 75.6% of ED patients' treatment started within clinically recommended timeframes; an increase of 0.7 percentage points compared with the same quarter last year.

With the exception of triage category 2, the percentage of patients whose treatment started on time increased this quarter across all triage categories; 70.3% of patients assigned to triage category 3 (up 0.9 percentage points), 78.8% assigned to triage category 4 (up 1.4 percentage points), and 93.1% assigned to triage category 5 (up 0.2 percentage points). For this quarter, 66.4% of patients assigned to triage category 2 had their treatment start on time (down 0.5 percentage points) (Figure 24).

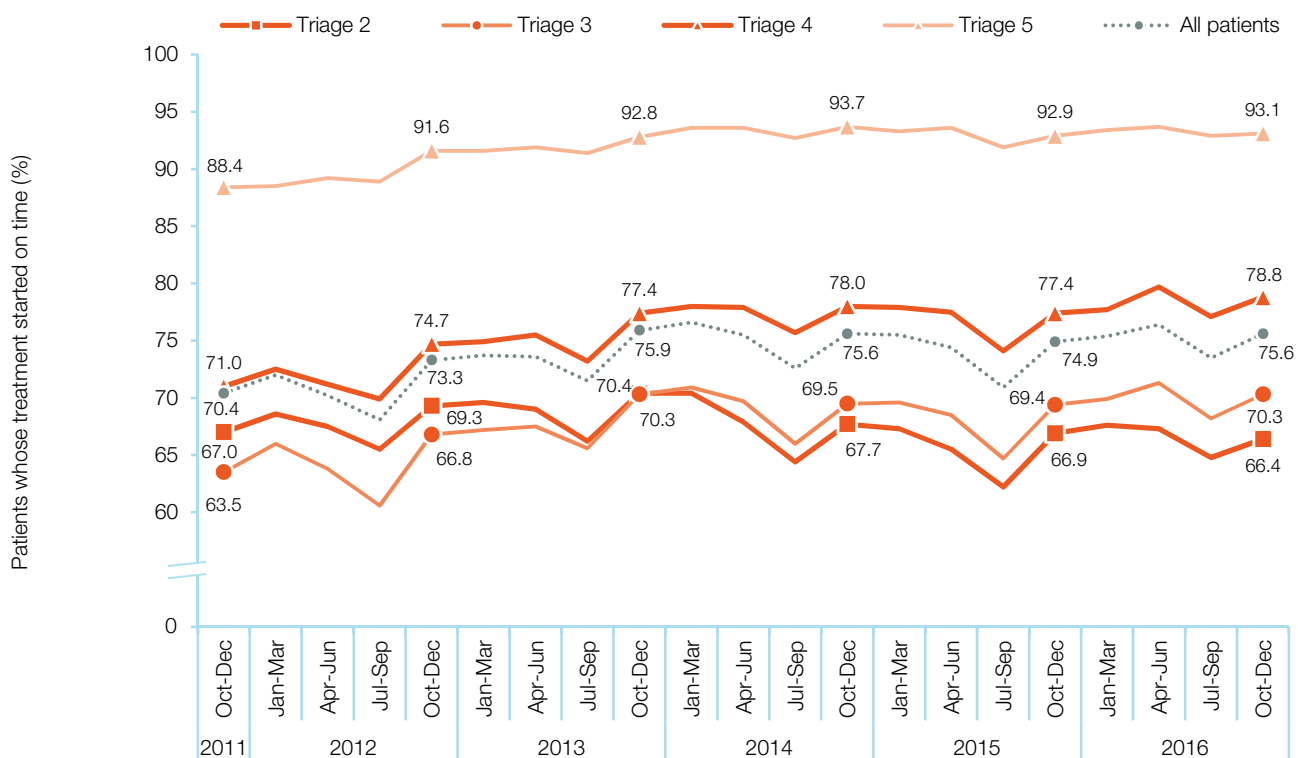
In October to December 2011, 70.4% of patients had their treatment start on time, compared with 75.6% this quarter (up 5.2 percentage points).

Over the past five years, the percentage of patients whose treatment started on time has increased across all triage categories, except triage category 2. Compared with the same quarter in 2011, the largest increase was seen for triage categories 3 and 4 (up 6.8 and 7.8 percentage points respectively). For triage category 2, the percentage whose treatment started on time decreased by 0.6 percentage points (Figure 25).

Figure 24 Percentage of patients whose treatment started on time, by triage category, October to December 2016

|                             | This quarter                      | Same quarter last year | Percentage point change since one year ago |
|-----------------------------|-----------------------------------|------------------------|--|
| All emergency presentations | 75.6%                             | 74.9%                  | 0.7  |
| Triage category 2           | 66.4%<br>Recommended: 10 minutes  | 66.9%                  | -0.5                                       |
| Triage category 3           | 70.3%<br>Recommended: 30 minutes  | 69.4%                  | 0.9  |
| Triage category 4           | 78.8%<br>Recommended: 60 minutes  | 77.4%                  | 1.4  |
| Triage category 5           | 93.1%<br>Recommended: 120 minutes | 92.9%                  | 0.2  |

Figure 25 Percentage of patients whose treatment started on time, by triage category, October 2011 to December 2016



# How long did patients wait for treatment in the emergency department?

## Variation in the percentage of patients whose treatment started on time

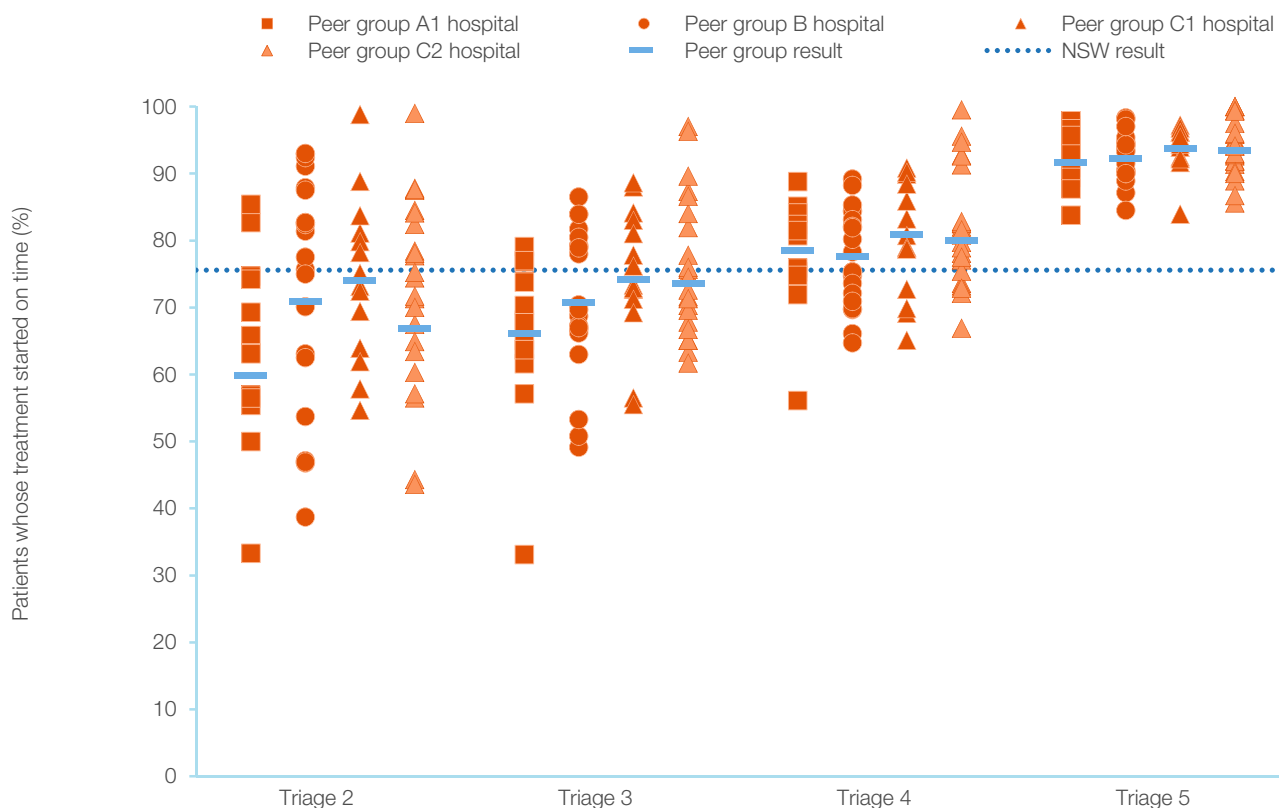
During the October to December 2016 quarter, there was considerable variation between and within hospital peer groups in the percentage of patients whose treatment started within clinically recommended timeframes. This variation was most marked for patients in triage category 2 (Figure 26).

Figure 27 maps hospital results for this quarter on two axes: the percentage of patients whose treatment started on time (Y-axis), and the percentage point change since the same quarter last year (X-axis). For hospitals shown above the blue NSW line, a higher percentage of patients started treatment on time compared with the overall NSW result. For hospitals below this line, a lower

percentage of patients started treatment on time compared with the overall NSW result. Hospitals shown to the left of the vertical '0' line had lower results, compared with the same quarter last year, while those shown to the right of the vertical line had higher results.

Hospitals in the upper right quadrant achieved higher results than NSW overall, and an increase in the percentage of patients whose treatment started on time, compared with the same quarter last year. Hospitals in the upper left quadrant had results that were higher than the overall NSW result and a decrease in the percentage of patients whose treatment started on time.

Figure 26 Percentage of patients whose treatment started on time, by peer group, October to December 2016





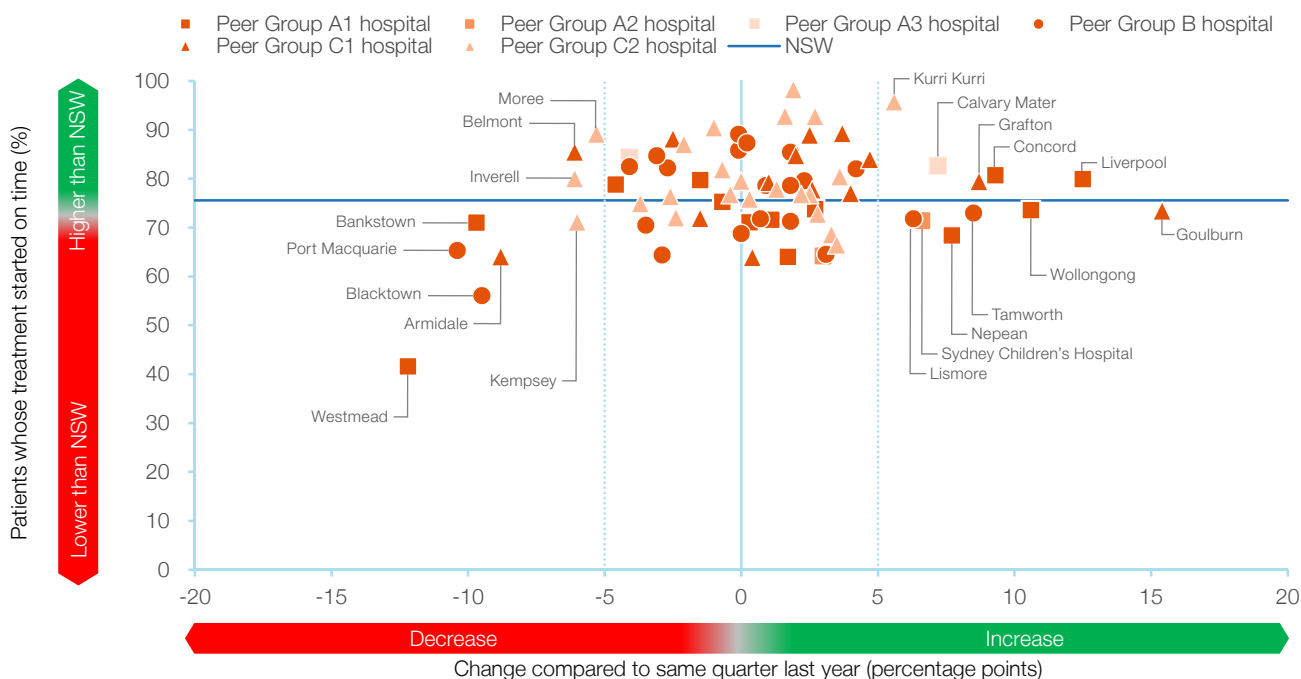
Hospitals in the lower right quadrant had results that were lower than NSW overall and an increase in the percentage of patients whose treatment started on time. Hospitals in the lower left quadrant had results that were lower than NSW and a decrease in the percentage of patients whose treatment started on time, compared with the same quarter last year.

Hospitals labelled in Figure 27 are those that had an increase or a decrease of more than five percentage points in the percentage of patients whose treatment started on time, compared with the same quarter last year.

Across hospitals, the percentage of patients whose treatment started on time increased this quarter in 44 out of 75 hospitals. For 11 hospitals, the increase was more than five percentage points. Of these, for three hospitals, the increase was more than 10 percentage points.

The percentage of patients whose treatment started on time decreased this quarter in 29 hospitals. For nine hospitals, the decrease was more than five percentage points. Of these, for two hospitals, the decrease was more than 10 percentage points (Figure 27).

Figure 27 Percentage of patients whose treatment started on time, and percentage point change since same quarter last year, hospitals by peer group, October to December 2016



# How long did patients wait for treatment to start in the emergency department?

## Change over time in the percentage of patients whose treatment started on time

Compared with the same quarter last year, the percentage of patients whose treatment started on time increased in peer groups A1 and C1 (up 1.4 and 2.0 percentage points respectively) and decreased in peer groups B and C2 (down 0.4 and 0.2 percentage points respectively) (Figure 28).

Compared to the same quarter in 2011, the percentage of patients whose treatment started on time increased in peer group B and C1 hospitals, across all triage categories. For peer groups A1 and C2, the percentage of patients in triage category 2 whose treatment started on time decreased during this time (down 7.5 and 4.7 percentage points respectively) (Figure 29).

Figure 28 Percentage of patients whose treatment started on time, by peer group, October 2011 to December 2016

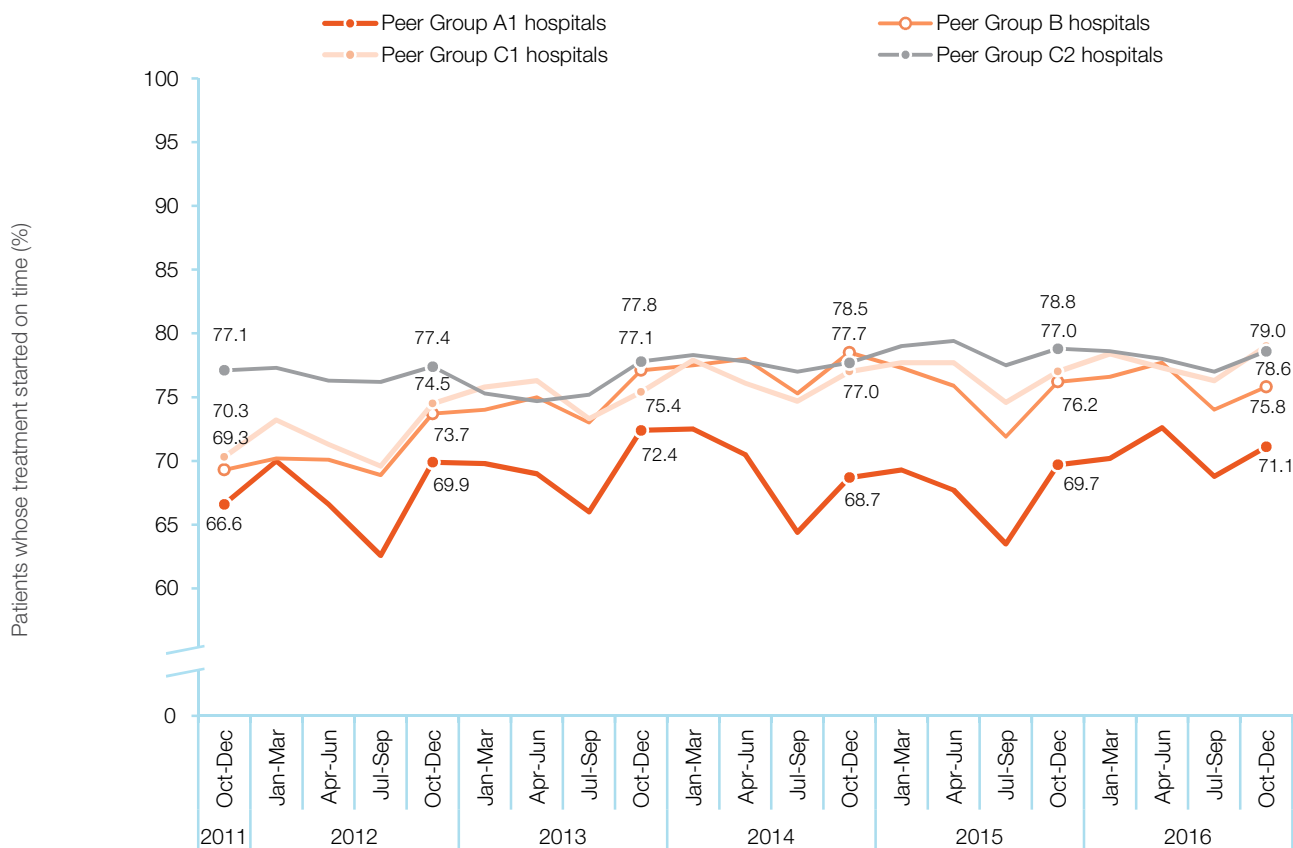
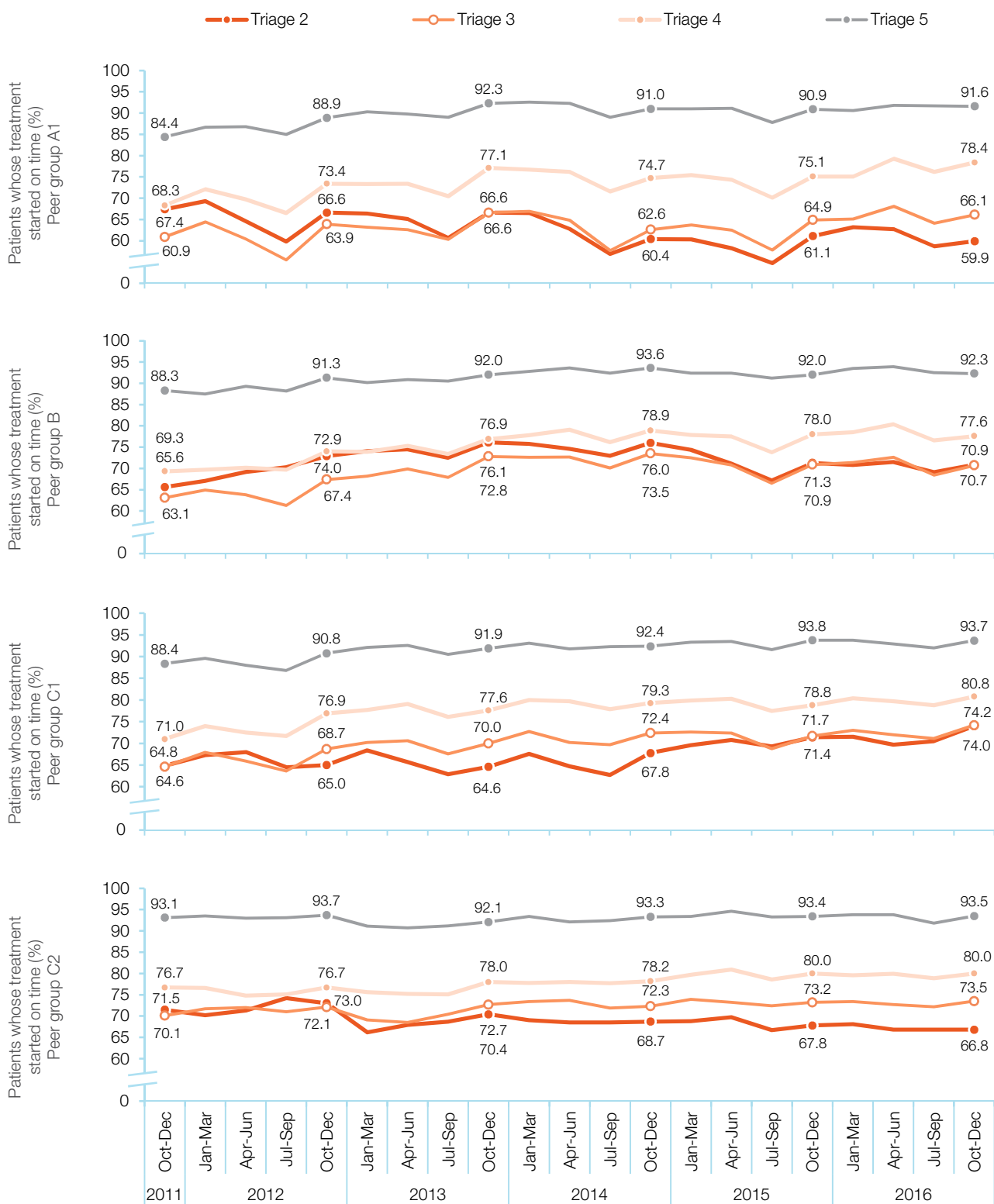


Figure 29 Percentage of patients whose treatment started on time, by triage and peer group, October 2011 to December 2016



# How long did patients spend in the emergency department?

During the October to December 2016 quarter, the median time patients spent in the ED was two hours and 41 minutes, up one minute compared with the same quarter last year. The 90th percentile time patients spent in the ED was six hours and 54 minutes, one minute shorter than the same quarter last year (Figure 30).

## Does the time patients spend in the ED differ across hospital peer groups?

Figure 31 shows the median time patients spent in the ED over the past five years for peer groups A1, B, C1 and C2. The shaded areas illustrate the range of values between the highest and lowest median times for hospitals in each peer group.

Overall, in peer groups A1, B and C1 there has been a decrease in the median time patients spent in the ED compared with the same quarter in 2011. For peer group C2 hospitals, however, the median time has increased, and was 13 minutes longer this quarter than in October to December 2011 (Figure 31).

There is little variation in the median time spent in the ED between hospitals in peer group A1, as evidenced by the narrow band between the highest and lowest median times for individual hospitals. More variation is seen in the median time patients spent in the ED for peer group B, C1 and C2 hospitals (Figure 31).

In peer groups C1 and C2, patients spent less time in the ED compared to peer groups A1 and B (Figure 31). These hospitals also have a higher percentage of patients who spent four hours or less in the ED, compared with other peer groups (see page 39, Figure 37).

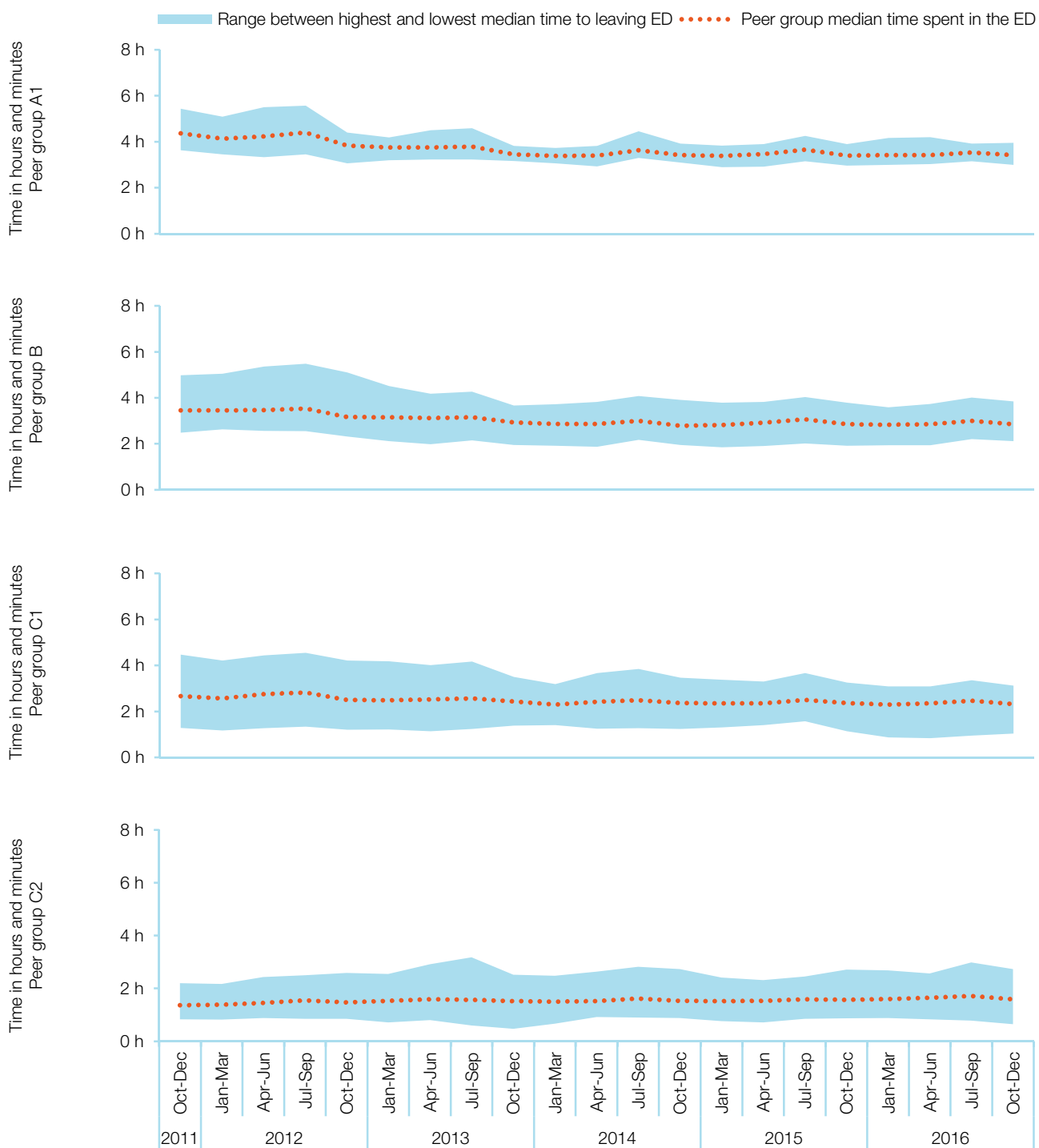
The cohort of EDs included in this report has changed over the past five years, and this has affected overall volumes and performance measures. Results for peer group C2 hospitals are most affected by these changes. For more information refer to the technical supplements section of the BHI website at [bhi.nsw.gov.au](http://bhi.nsw.gov.au)

Figure 30 Time patients spent in the emergency department, October to December 2016

|                                      | This quarter | Same quarter last year | Change since one year ago |
|--------------------------------------|--------------|------------------------|---------------------------|
| Median time spent in the ED          | 2h 41m       | 2h 40m                 | 1m                        |
| 90th percentile time spent in the ED | 6h 54m       | 6h 55m                 | -1m                       |

Note: From March 2017, *Hospital Quarterly* reports the 90th percentile time, rather than the 95th percentile time, for related ED measures.

Figure 31 Median time patients spent in the emergency department, and range, peer group hospitals, October 2011 to December 2016



# How long did patients spend in the emergency department?

During the October to December 2016 quarter, the median time patients spent in the ED increased or remained unchanged across most modes of separation, compared with the same quarter last year. The exception was patients who were treated and admitted to hospital where the median time spent in the ED decreased by four minutes (Figure 32).

Compared to the same quarter last year, the 90th percentile time patients spent in the ED decreased or remained unchanged across all modes of separation (Figure 33).

## Has time spent in the ED changed by mode of separation?

Despite a 19% increase in the overall number of ED presentations since 2011, the median time patients spent in the ED decreased from three hours and 11 minutes in October to December 2011 to two hours and 41 minutes this quarter.

Figure 32 shows a downward trend over the past five years in the median time patients spent in the ED across all modes of separation. For patients who were treated and admitted to hospital, the median time spent in the ED was four hours and 38 minutes this quarter, compared with six hours and 30 minutes in October to December 2011.

Compared with the same quarter in 2011, the 90th percentile time patients spent in the ED has decreased across all modes of separation. For patients who were treated and admitted to hospital, the 90th percentile time spent in the ED was 11 hours and 37 minutes this quarter, compared with 15 hours and three minutes in October to December 2011 (Figure 33).

Figure 32 Median time patients spent in the emergency department, October 2011 to December 2016

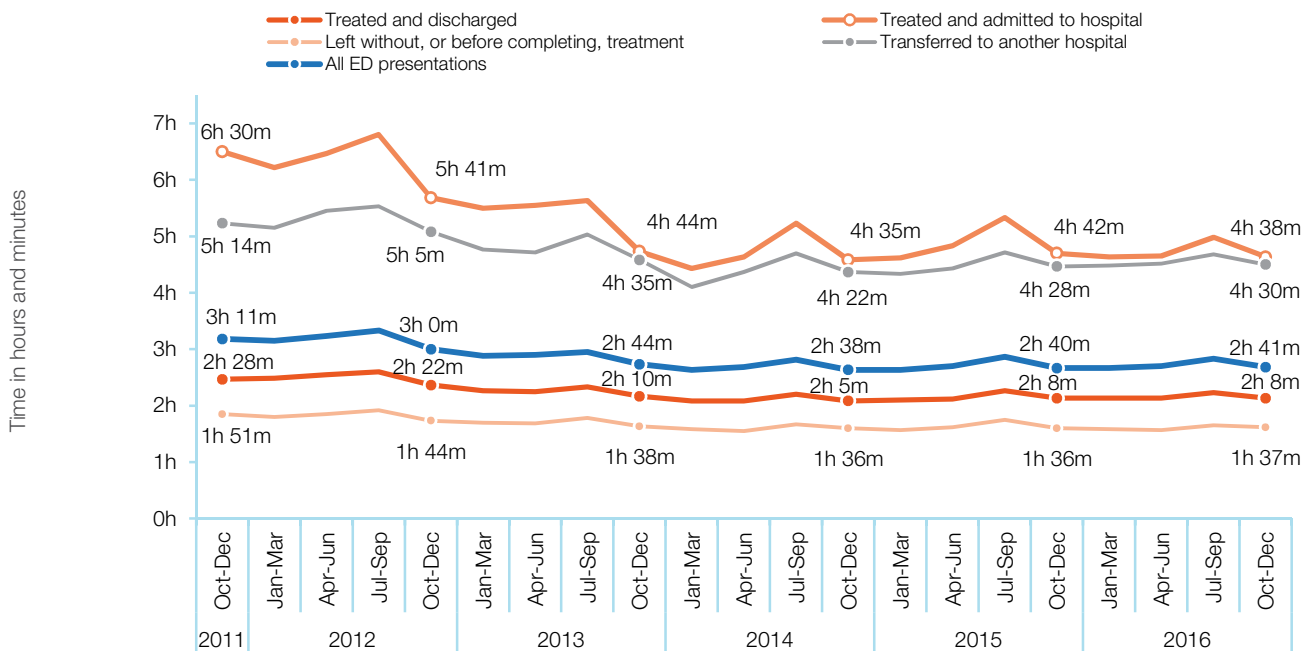
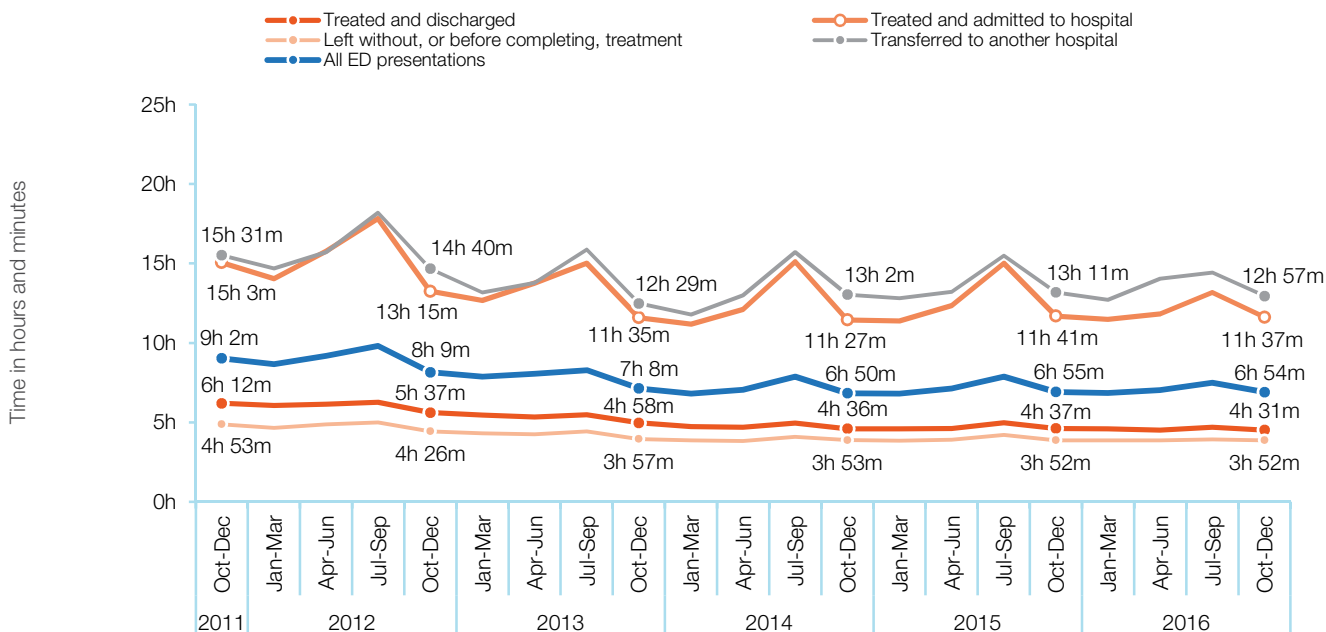


Figure 33 90th percentile time patients spent in the emergency department, October 2011 to December 2016



Note: From March 2017, Hospital Quarterly reports the 90th percentile time, rather than the 95th percentile time, for related ED measures.

# How long did patients spend in the emergency department?

## Percentage of patients who spent four hours or less in the ED

During the October to December 2016 quarter, 74.3% of patients spent four hours or less in the ED, an increase of 0.2 percentage points compared with the same quarter last year (Figures 34 and 35).

Patients who require admission to hospital from the ED usually have more complex health needs than those who are treated in the ED and discharged, and therefore often spend longer periods in the ED.

Among patients who were treated and discharged this quarter, 87.0% spent four hours or less in the ED. Among patients who were treated and subsequently admitted to hospital, and those who were transferred to another hospital, less than half (43.5% and 45.6% respectively) spent four hours or less in the ED. Of those who left without, or before,

completing treatment, 91.4% spent four hours or less in the ED (Figure 34).

While 74.3% of patients spent four hours or less in the ED this quarter, 18.4% spent between four and eight hours, and a further 4.2% spent between eight to 12 hours in the ED (Figure 36).

Due to differences in data definitions and the number of hospitals included, *Hospital Quarterly* results for the percentage of patients who spent four hours or less in the ED are not directly comparable to figures reported by the NSW Ministry of Health or by the Commonwealth. For more information refer to the technical supplements section of the BHI website at [bhi.nsw.gov.au](http://bhi.nsw.gov.au)

Figure 34 Percentage of patients who spent four hours or less in the emergency department, by mode of separation, October to December 2016

|   | This quarter | Same quarter last year | Percentage point change since one year ago |
|---|--------------|------------------------|--|
| All ED presentations                          | 74.3%        | 74.1%                  | 0.2  |
| Treated and discharged                        | 87.0%        | 86.3%                  | 0.7  |
| Treated and admitted                          | 43.5%        | 42.6%                  | 0.9  |
| Left without, or before completing, treatment | 91.4%        | 91.5%                  | -0.1                                       |
| Transferred to another hospital               | 45.6%        | 45.8%                  | -0.2                                       |



Figure 35 Percentage of patients who spent four hours or less in the emergency department, by mode of separation, October 2011 to December 2016

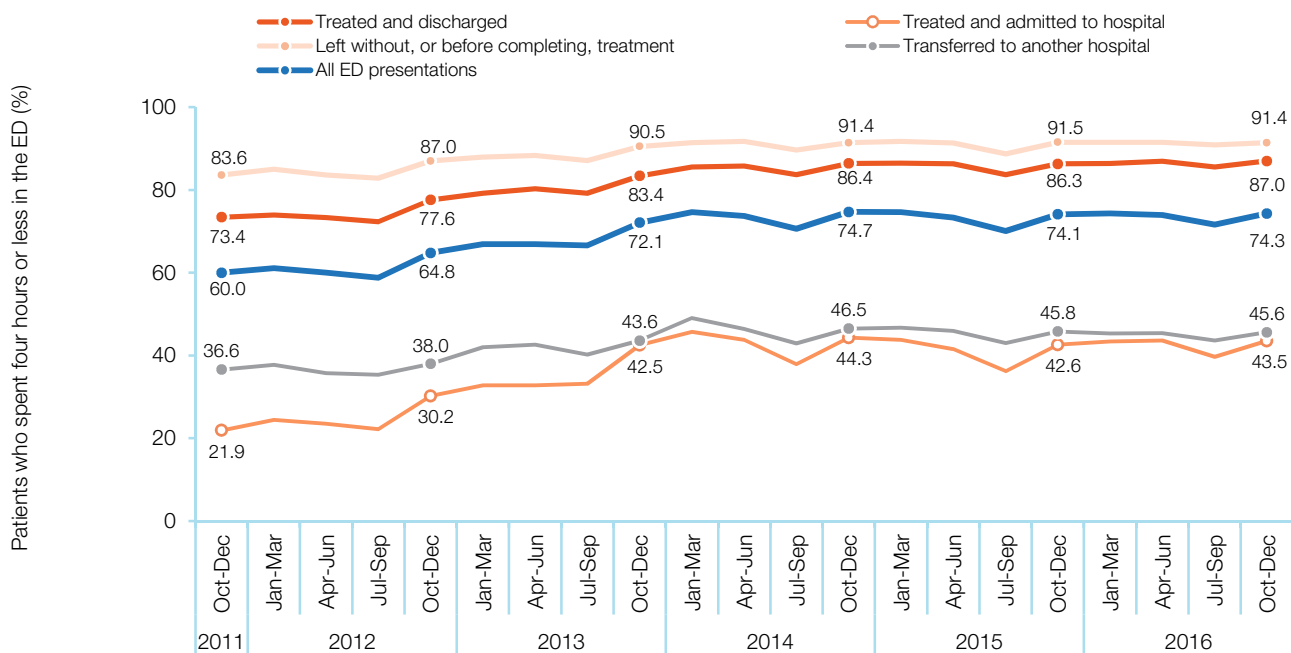
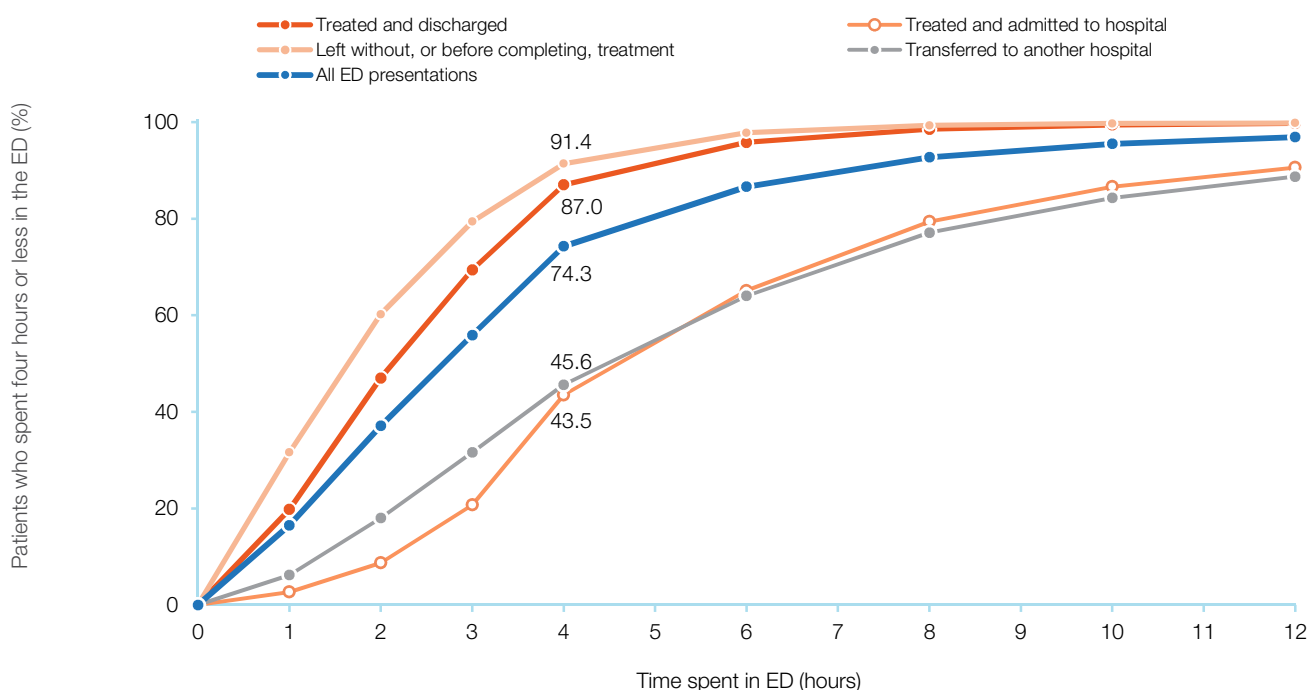


Figure 36 Percentage of patients and time spent in the emergency department, by mode of separation, October to December 2016



# How long were patients in the emergency department?

## Variation in the percentage of patients who spent four hours or less in the ED

There is considerable variation between and within hospital peer groups in the percentage of patients who spent four hours or less in the ED. Peer group C2 hospitals have a higher percentage of patients who spent four hours or less in the ED compared with other peer group hospitals. Peer group A1 hospitals have a smaller percentage of patients who spent four hours or less in the ED (Figure 37).

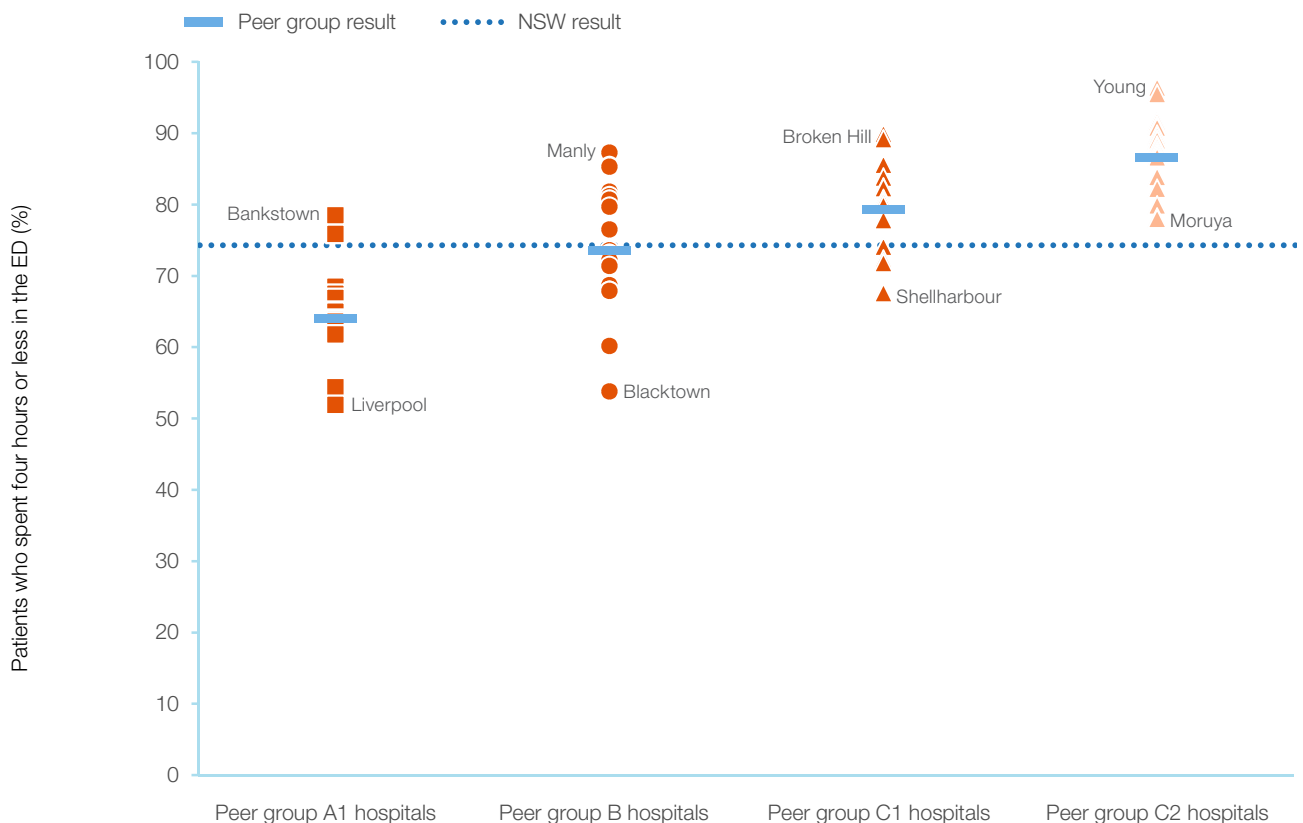
Figure 38 maps hospital results for this quarter on two axes: the percentage of patients who spent four hours or less in the ED (Y-axis), and the percentage point change since the same quarter last year (X-axis).

For hospitals shown above the blue NSW line, a higher percentage of patients spent four hours or

less in the ED, compared with the overall NSW result. For hospitals below this line, a lower percentage of patients spent four hours or less in the ED, compared with the overall NSW result. Hospitals shown to the left of the vertical '0' line had lower results, compared with the same quarter last year, while those shown to the right of the vertical line had higher results.

Hospitals in the upper right quadrant achieved higher results than NSW overall, and an increase in percentage of patients who spent four hours or less in the ED, compared with the same quarter last year. Hospitals in the upper left quadrant had results that were higher than NSW and a decrease in the percentage of their patients who spent four hours or less in the ED.

Figure 37 Percentage of patients who spent four hours or less in the emergency department, by peer group, October to December 2016



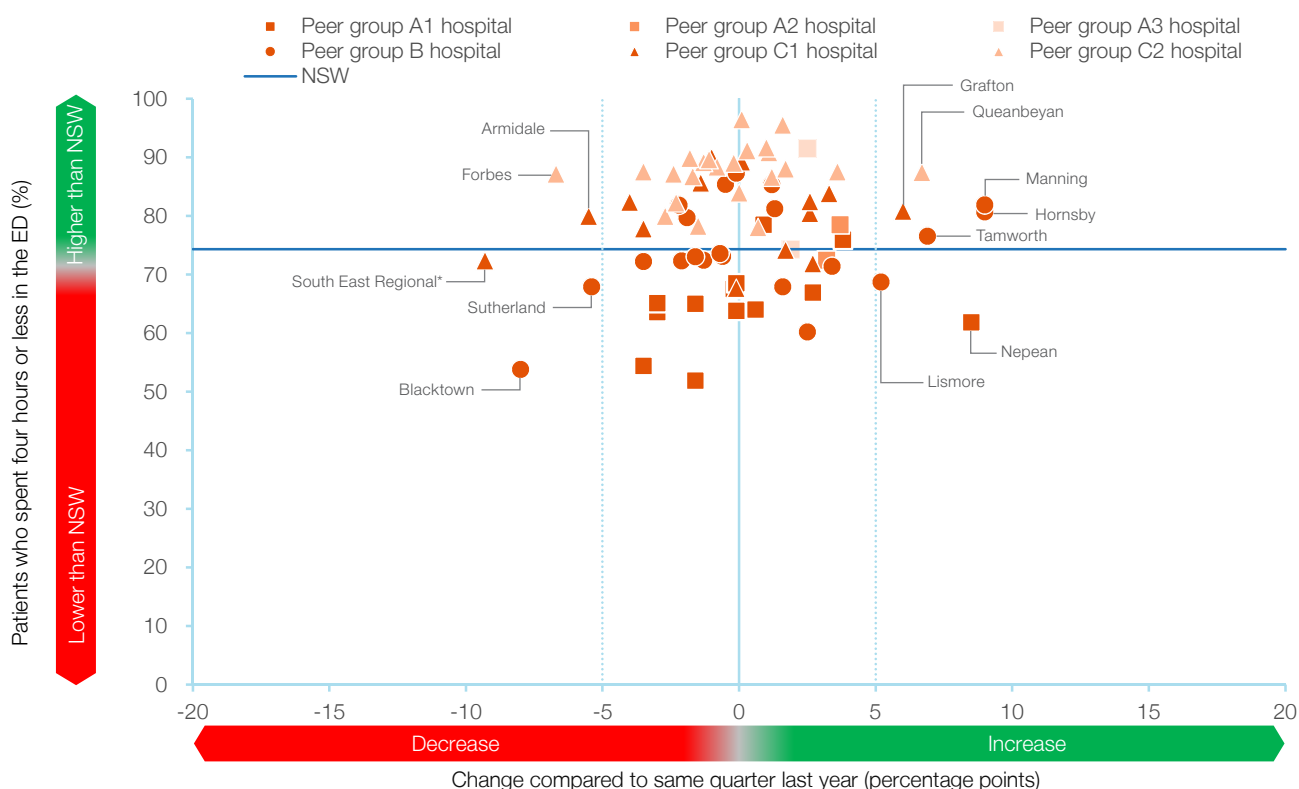
Hospitals in the lower right quadrant had results that were lower than NSW, and an increase in the percentage of their patients who spent four hours or less in the ED. Hospitals in the lower left quadrant had results that were lower than NSW and a decrease the percentage who spent four hours or less in the ED.

Hospitals identified in Figure 38 are those that had an increase or a decrease in the percentage of their patients who spent four hours or less in the ED of more than five percentage points compared with the same quarter last year.

Across hospitals, the percentage of patients who spent four hours or less in the ED increased in 35 out of 75 hospitals this quarter. For seven hospitals, the increase was more than five percentage points (Figure 38).

The percentage of patients who spent four hours or less in the ED decreased in 39 hospitals. For five hospitals, the decrease was more than five percentage points (Figure 38).

Figure 38 Percentage of patients who spent four hours or less in the emergency department, and percentage point change since same quarter last year, hospitals by peer group, October to December 2016



\* South East Regional Hospital (formerly called Bega District Hospital)

# How long did patients spend in the emergency department?

## Change over time in percentage of patients who spent four hours or less in the ED

Compared with the same quarter last year, the proportion of patients who spent four hours or less in the ED increased by 0.3 percentage points in peer groups B and C1. For peer group C2, there was a decrease of 0.3 percentage points compared to the same quarter last year and no change for peer group A1 (Figure 39).

Over the past five years, there has been an increase in the percentage of patients who spent four hours or less in the ED across hospital peer groups and modes of separation, with the exception of peer group C2. During this time, there has been a decrease for peer group C2 across all modes of separation with the exception of patients who left without, or before completing, treatment (Figure 40).

Hospitals in peer groups C1 and C2 consistently have a higher percentage of patients spending four hours or less in the ED compared with hospitals in peer groups A1 and B (Figure 39).

Figure 39 Percentage of patients who spent four hours or less in the emergency department, by peer group, October 2011 to December 2016

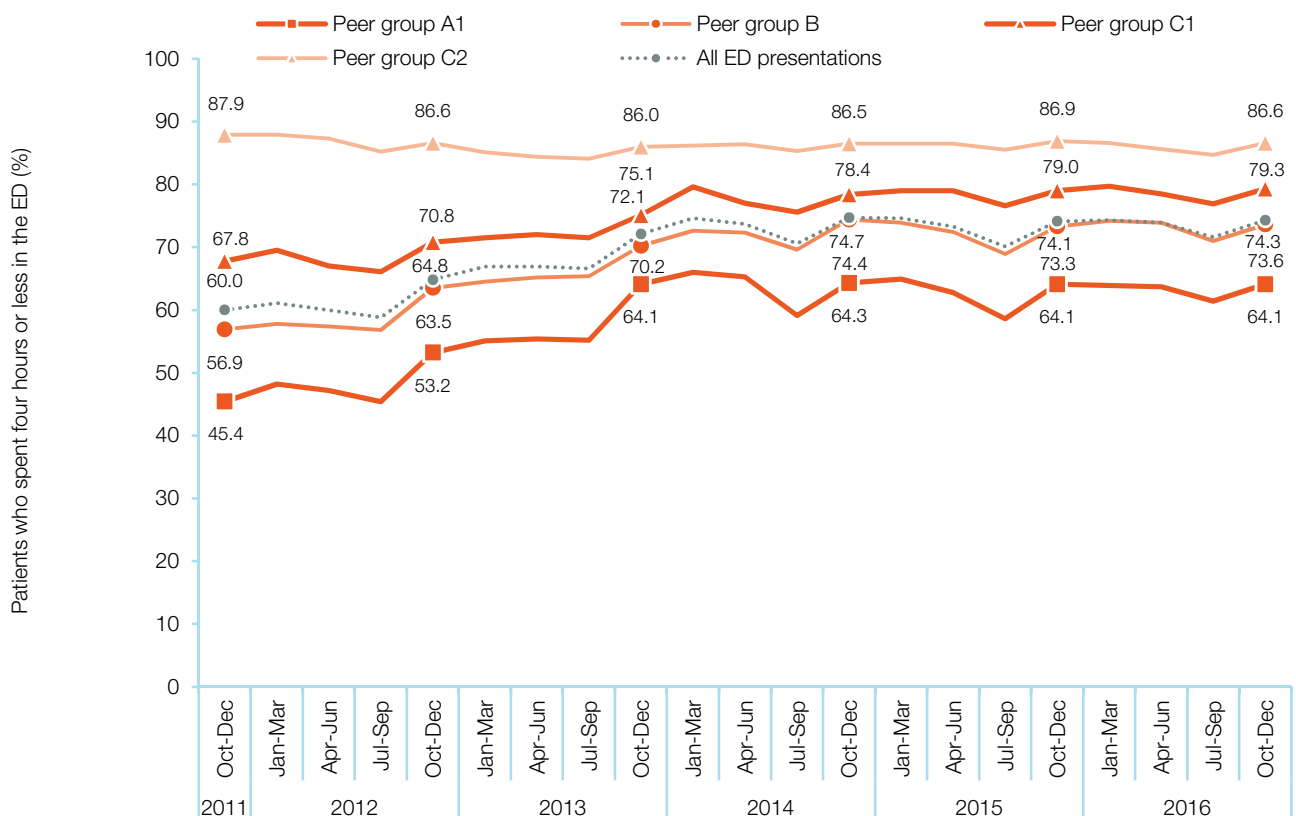
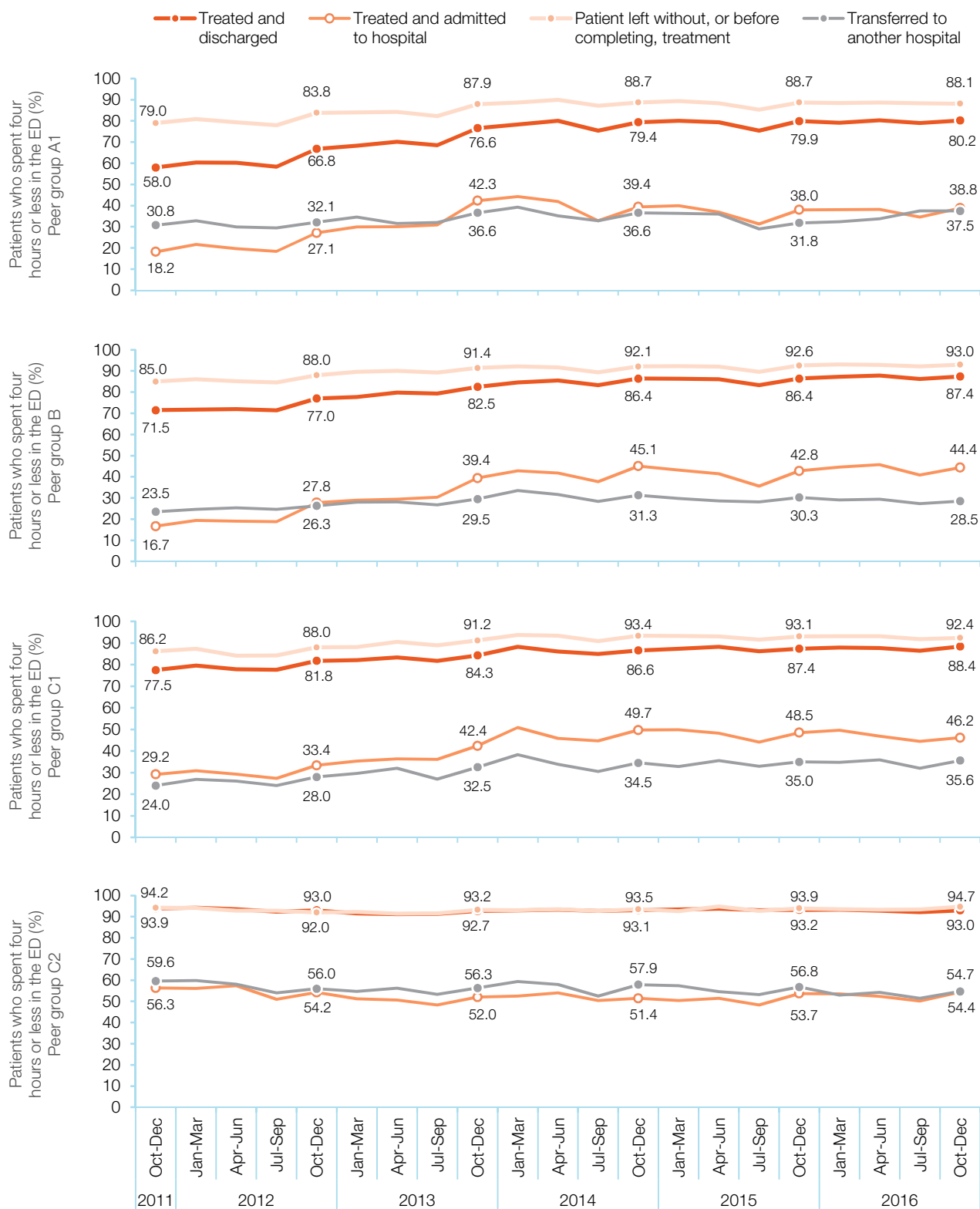


Figure 40 Percentage of patients who spent four hours or less in the emergency department, by mode of separation and peer group, October 2011 to December 2016



# How many patients who arrived by ambulance had their care transferred within 30 minutes?

During the October to December 2016 quarter, 146,797 patients arrived at hospital by ambulance (up 2.6% compared with the same quarter last year). This quarter, 132,800 patient records (matched between ambulance service and ED records) were used to calculate transfer of care time (Figure 41).

The median transfer of care time from ambulance to ED staff was 11 minutes this quarter (one minute shorter compared with the same quarter last year) and the 90th percentile transfer of care time was 26 minutes (3 minutes shorter) (Figure 41).

In NSW, transfer of care from ambulance to ED staff, should have occurred within 30 minutes for 90% of patients. This quarter, 92.0% of patients arriving by ambulance had their care transferred within 30 minutes; 1.5 percentage points higher than in the same quarter last year (Figure 42).

Figure 43 shows variation between and within hospital peer groups in the percentage of patients who had their care transferred within 30 minutes this quarter.

Figure 41 Emergency department transfer of care time, October to December 2016

|  | This quarter | Same quarter last year | Change since one year ago |
|--|--------------|------------------------|---------------------------|
| Arrivals used to calculate transfer of care time: 132,800 patients |              | 126,096 patients       | 5.3%                      |
| ED transfer of care time   |              |                        |                           |
| Median time  | 11m          | 12m                    | -1m                       |
| 90th percentile time   | 26m          | 29m                    | -3m                       |

Note: From March 2017, *Hospital Quarterly* reports the 90th percentile time, rather than the 95th percentile time, for related ED measures.

Figure 42 Percentage of ambulance arrivals with transfer of care time within 30 minutes, April 2013 to December 2016

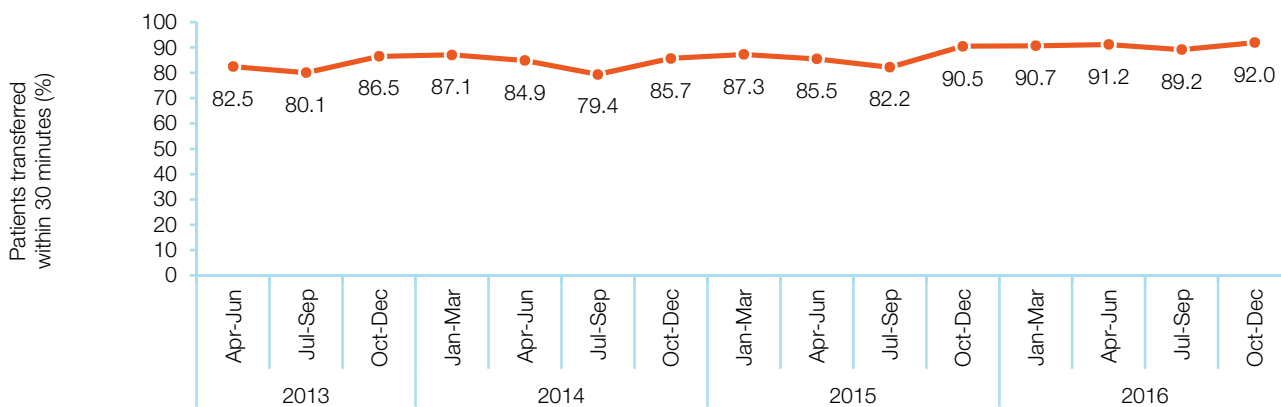
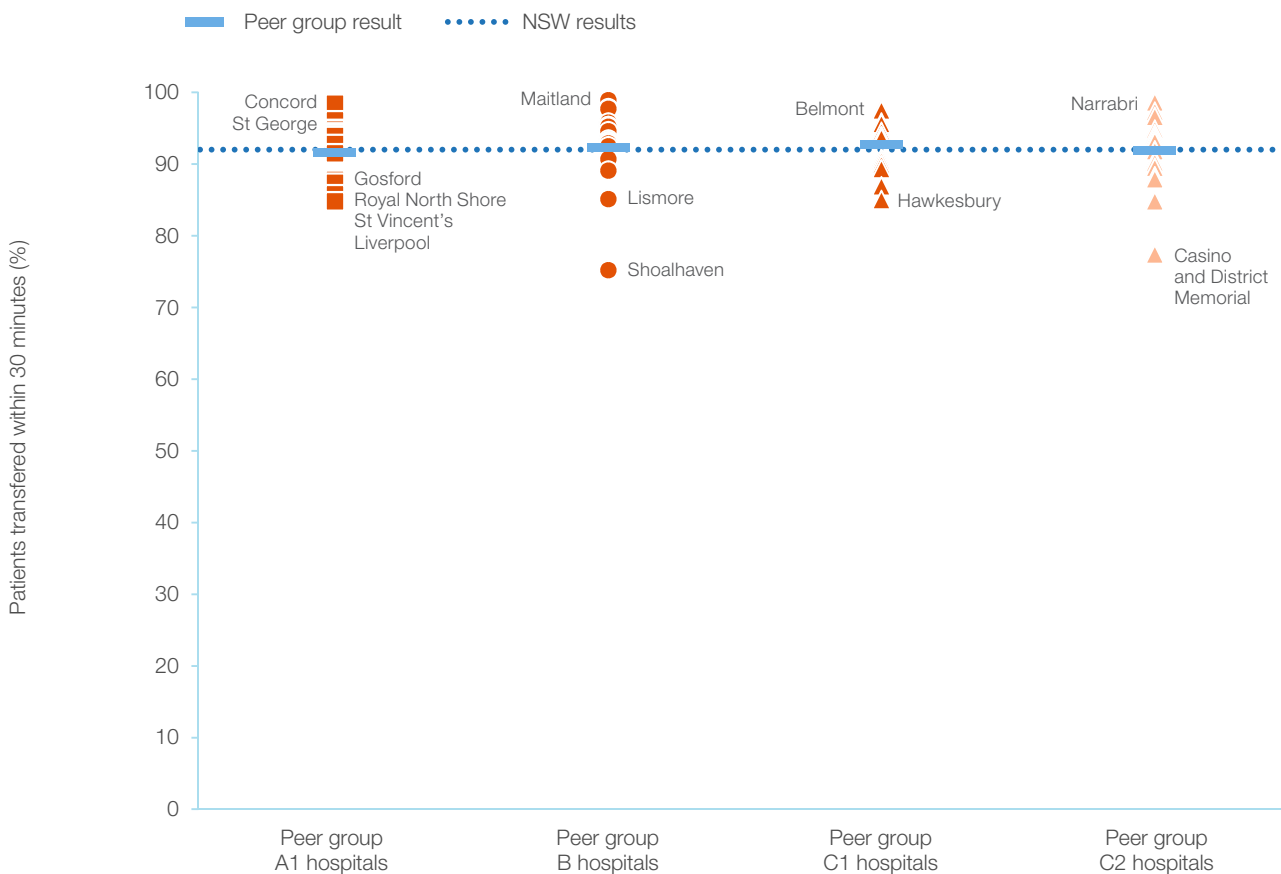


Figure 43 Percentage of ambulance arrivals whose care was transferred within 30 minutes, by peer group, October to December 2016



# How long did patients wait for elective surgery?

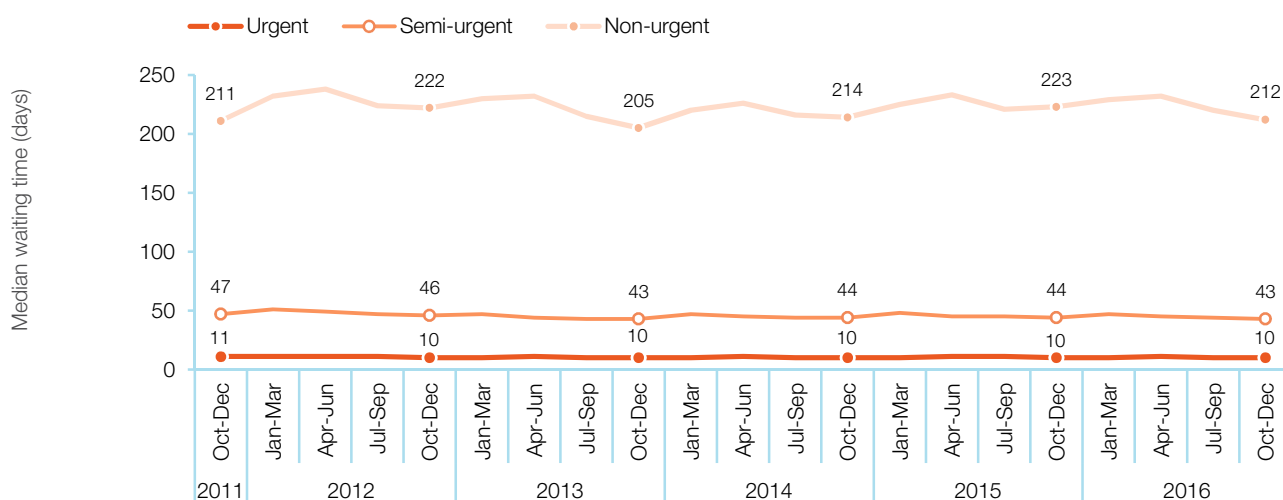
During the October to December 2016 quarter, the median waiting time elective surgery decreased or remained unchanged across all urgency categories compared with the same quarter last year. The largest decrease was for the non-urgent category (down 11 days) (Figure 44). Over the past five years, the median waiting time for elective surgery have been relatively stable across urgency categories (Figure 45).

Compared with the same quarter in 2011, the median waiting time for semi-urgent surgery has decreased by four days and the median waiting time for non-urgent surgery has increased by one day (Figure 45).

Figure 44 Waiting times for elective surgery, by urgency category, October to December 2016

|   | This quarter | Same quarter last year | Change since one year ago |
|---|--------------|------------------------|---------------------------|
| <b>Urgent: 12,332 patients</b>          |              |                        |                           |
| Median time to receive surgery          | 10 days      | 10 days                | 0 days                    |
| 90th percentile time to receive surgery | 26 days      | 26 days                | 0 days                    |
| <b>Semi-urgent: 18,056 patients</b>     |              |                        |                           |
| Median time to receive surgery          | 43 days      | 44 days                | -1 day                    |
| 90th percentile time to receive surgery | 83 days      | 83 days                | 0 days                    |
| <b>Non-urgent: 21,694 patients</b>      |              |                        |                           |
| Median time to receive surgery          | 212 days     | 223 days               | -11 days                  |
| 90th percentile time to receive surgery | 355 days     | 358 days               | -3 days                   |

Figure 45 Median waiting time for elective surgery, by urgency category, October 2011 to December 2016





There has been a slight downward trend in the 90th percentile waiting times for elective surgery across all urgency categories since the October to December 2011 quarter (Figure 46). The largest decrease was for procedures categorised as non-urgent (down 9 days) since October to December 2011 (Figure 46).

Figure 47 shows the percentage of elective surgical procedures completed, by number of days waiting and urgency category. The lines drawn at 30 days, 90 days and 365 days represent the recommended times for patients to receive surgery in each urgency category.

Figure 46 90th percentile waiting time for elective surgery, by urgency category, October 2011 to December 2016

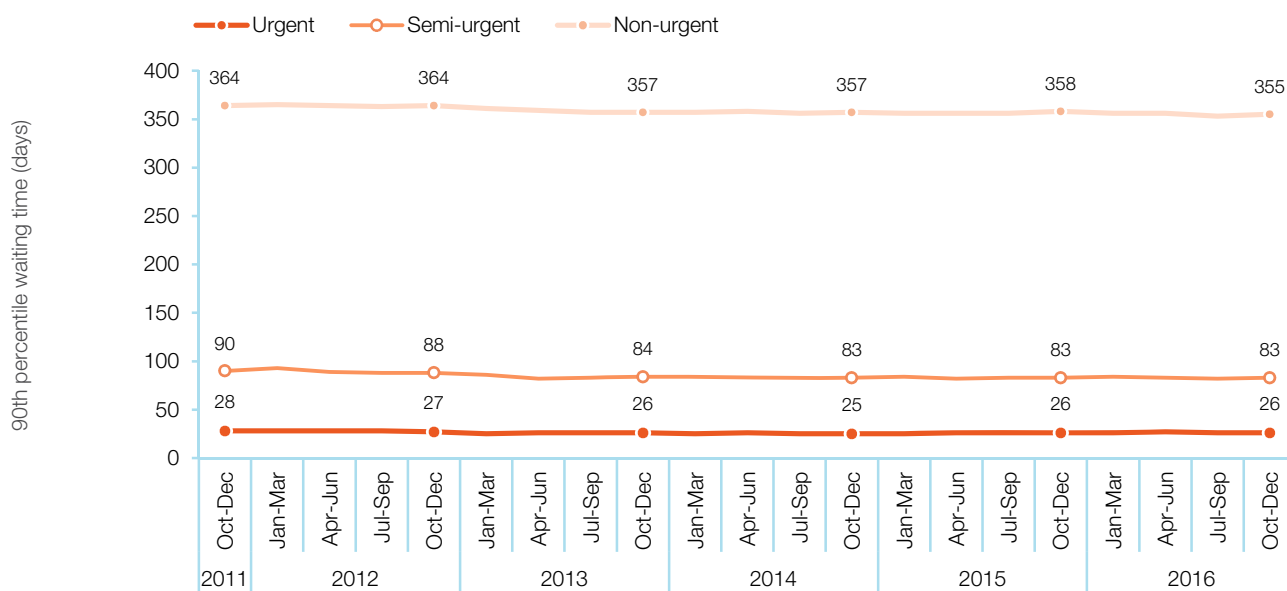
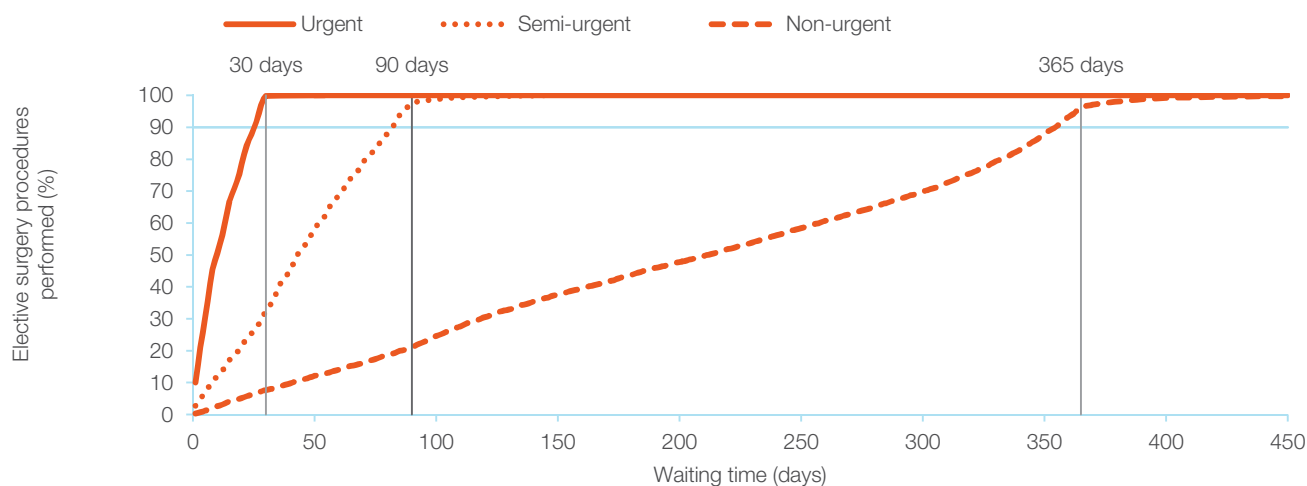


Figure 47 Cumulative percentage of elective surgery completed, by day and urgency category, October to December 2016



# How long did patients wait for elective surgery?

## Variation in waiting times for elective surgery

During the October to December 2016 quarter, there was variation between and within hospital peer groups in 90th percentile waiting times for elective surgery. This variation was most marked for patients who received non-urgent surgery (Figure 48).

Across specialty groups, ophthalmological surgery (182 days), ear, nose and throat surgery (127 days), and orthopaedic surgery (115 days) had the longest median waiting times this quarter. Medical (non-specialist) surgery had the shortest median waiting time (15 days) (Figure 49).

Across common surgical procedures, septoplasty (316 days), and total knee replacement (288 days) had the longest median waiting times this quarter. Other-general (22 days) and coronary artery bypass graft (26 days) had the shortest median waiting times (Figure 50).

Due to the large amount of information presented, individual facilities are not identified in Figure 48. This information is available in Healthcare Observer.

Figure 48 90th percentile waiting time for elective surgery, by urgency category and peer group, October to December 2016

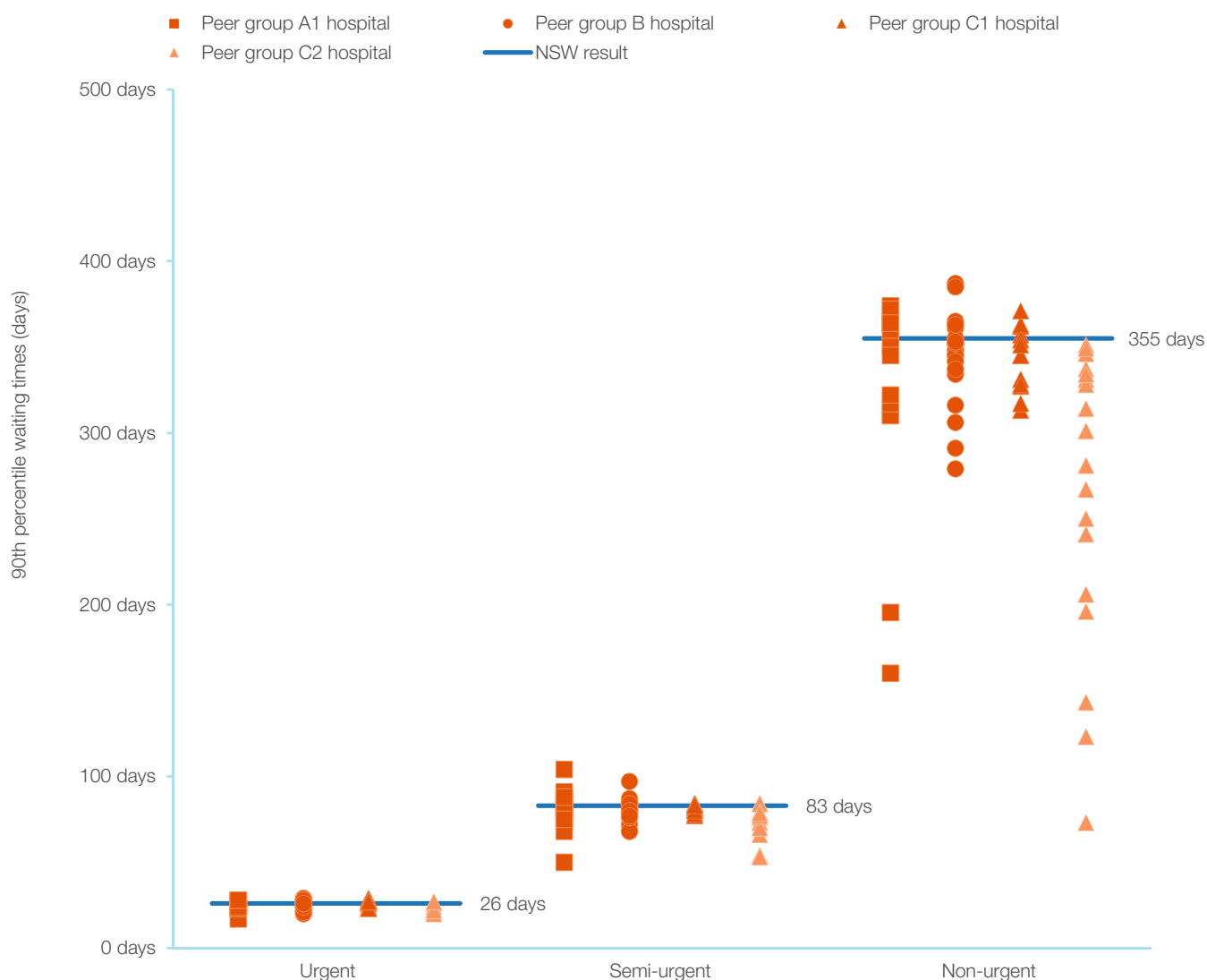


Figure 49 Median waiting time for patients who received elective surgery, by specialty, October to December 2016

|                              | Number of procedures | This quarter | Same quarter last year | Change since one year ago |
|------------------------------|----------------------|--------------|------------------------|---------------------------|
| General surgery              | 13,216               | 33 days      | 34 days                | -1 day                    |
| Orthopaedic surgery          | 8,661                | 115 days     | 111 days               | 4 days                    |
| Ophthalmology                | 7,701                | 182 days     | 204 days               | -22 days                  |
| Urology                      | 7,521                | 34 days      | 31 days                | 3 days                    |
| Gynaecology                  | 6,909                | 34 days      | 34 days                | 0 days                    |
| Ear, nose and throat surgery | 4,183                | 127 days     | 147 days               | -20 days                  |
| Plastic surgery              | 2,427                | 34 days      | 39 days                | -5 days                   |
| Vascular surgery             | 1,616                | 19 days      | 20 days                | -1 day                    |
| Neurosurgery                 | 1,115                | 39 days      | 37 days                | 2 days                    |
| Cardiothoracic surgery       | 912                  | 22 days      | 26 days                | -4 days                   |
| Medical                      | 551                  | 15 days      | 16 days                | -1 day                    |

Figure 50 Median waiting time for patients who received elective surgery, by common procedure, October to December 2016

|                                       | Number of procedures | This quarter | Same quarter last year | Change since one year ago |
|---------------------------------------|----------------------|--------------|------------------------|---------------------------|
| Cataract extraction                   | 6,063                | 216 days     | 228 days               | -12 days                  |
| Cystoscopy                            | 3,175                | 30 days      | 29 days                | 1 day                     |
| Hysteroscopy                          | 2,410                | 29 days      | 34 days                | -5 days                   |
| Total knee replacement                | 1,658                | 288 days     | 288 days               | 0 days                    |
| Other - General                       | 1,609                | 22 days      | 22 days                | 0 days                    |
| Cholecystectomy                       | 1,574                | 49 days      | 55 days                | -6 days                   |
| Inguinal herniorrhaphy                | 1,450                | 64 days      | 67 days                | -3 days                   |
| Tonsillectomy                         | 1,379                | 236 days     | 252 days               | -16 days                  |
| Total hip replacement                 | 943                  | 203 days     | 199 days               | 4 days                    |
| Prostatectomy                         | 709                  | 59 days      | 56 days                | 3 days                    |
| Abdominal hysterectomy                | 630                  | 51 days      | 54 days                | -3 days                   |
| Septoplasty                           | 385                  | 316 days     | 311 days               | 5 days                    |
| Varicose veins stripping and ligation | 322                  | 121 days     | 130 days               | -9 days                   |
| Haemorrhoidectomy                     | 299                  | 57 days      | 58 days                | -1 day                    |
| Coronary artery bypass graft          | 174                  | 26 days      | 28 days                | -2 days                   |
| Myringoplasty/Tympanoplasty           | 113                  | 174 days     | 321 days               | -147 days                 |
| Myringotomy                           | 61                   | 77 days      | 78 days                | -1 day                    |

# How long did patients wait for elective surgery?

## Percentage of elective surgical procedures performed on time

Most elective surgical procedures (97.6%) were performed on time this quarter – 99.8% of urgent surgery, 97.6% of semi-urgent surgery and 96.3% of non-urgent surgery (Figure 51). These results have been largely stable for all urgency categories in the same quarter over the past three years (Figure 52).

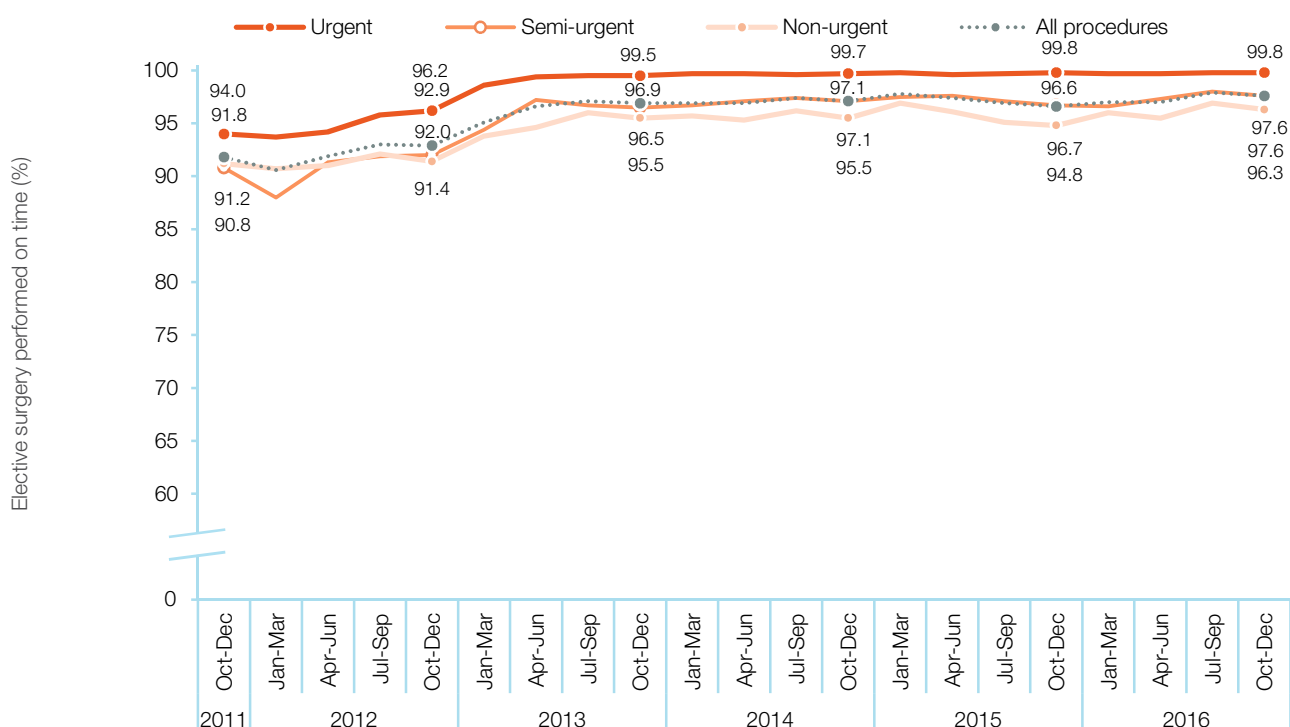
For hospitals shown above the blue NSW line, a higher percentage of procedures were performed on time this quarter compared with the overall NSW result. For hospitals below this line, a lower percentage of procedures were performed on time this quarter compared with the overall NSW result. Hospitals shown to the left of the vertical '0' line had lower results, compared with the same quarter last year, while those shown to the right of the vertical line had higher results.

Figure 53 maps hospital results for this quarter on two axes: the percentage of elective surgery performed on time (Y-axis), and the percentage point change since the same quarter last year (X-axis).

Figure 51 Percentage of elective surgical procedures performed on time, by urgency, October to December 2016

|                | This quarter | Same quarter last year | Percentage point change since one year ago |
|----------------|--------------|------------------------|--|
| All procedures | 97.6%        | 96.6%                  | 1.0  |
| Urgent         | 99.8%        | 99.8%                  | unchanged                                  |
| Semi-urgent    | 97.6%        | 96.7%                  | 0.9  |
| Non-urgent     | 96.3%        | 94.8%                  | 1.5  |

Figure 52 Percentage of elective surgical procedures performed on time, by urgency, October 2011 to December 2016



Hospitals in the upper right quadrant have achieved higher results than NSW overall, and an increase in the percentage of elective surgical procedures performed on time this quarter, compared with the same quarter last year. Hospitals in the upper left quadrant achieved results higher than NSW this quarter and a decrease in the percentage of procedures performed on time, compared with the same quarter last year.

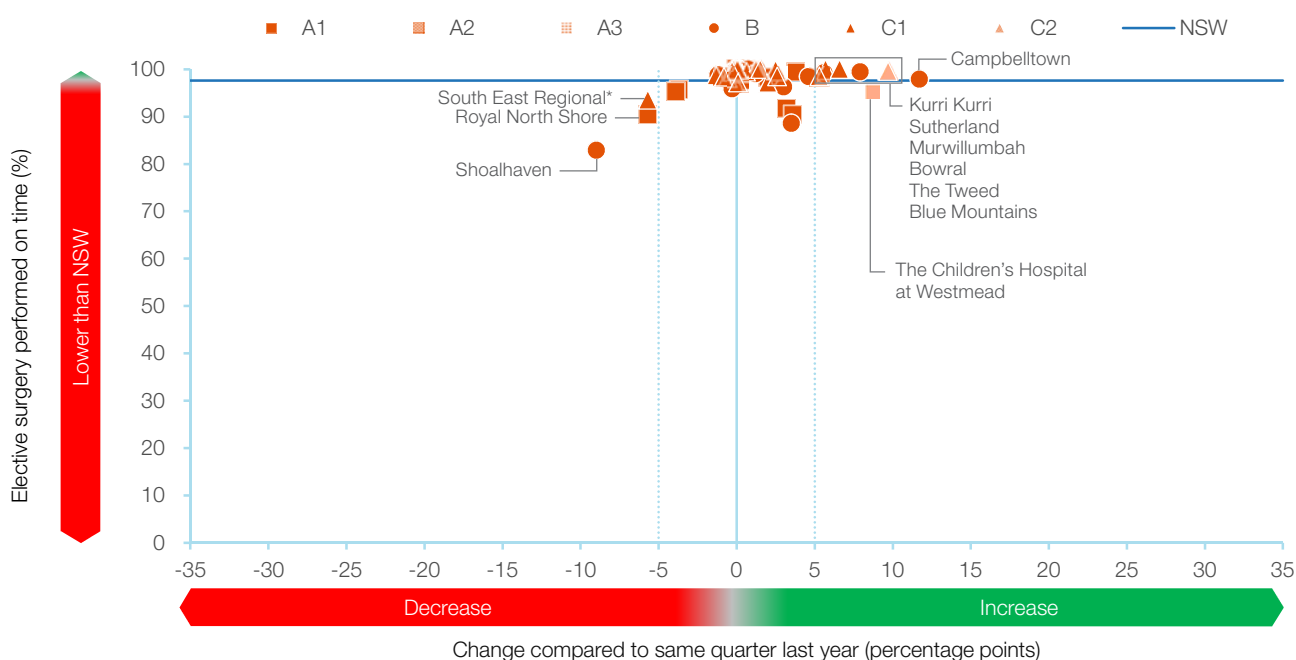
Hospitals in the lower right quadrant had results that were lower than NSW overall, and an increase in the percentage of procedures performed on time this quarter, compared with the same quarter last year. Hospitals in the lower left quadrant had results that were lower than NSW and a decrease in the percentage of procedures performed on time, compared with the same quarter last year.

Hospitals identified in Figure 53 are those that had an increase or a decrease in the percentage of procedures performed on time this quarter of more than five percentage points, compared with the same quarter last year.

Across hospitals, the percentage of elective surgical procedures performed on time increased in 31 out of 79 hospitals. For eight hospitals, the increase was more than five percentage points. Of these, for one hospital, the increase was more than 10 percentage points (Figure 53).

The percentage of procedures performed on time decreased in 17 hospitals. For three hospital, the decrease was more than five percentage points (Figure 53).

Figure 53 Percentage of elective surgical procedures performed on time and percentage point change since same quarter last year, hospitals by peer group, October to December 2016



\* South East Regional Hospital formerly called Bega District Hospital

# How long did patients wait for elective surgery?

## Percentage of elective surgical procedures performed on time by specialty

The percentage of elective surgical procedures performed on time reached almost 100% this quarter across several specialty groups.

Vascular surgery and ophthalmology surgery had the highest percentage of patients who received surgery on time this quarter (both 99.1%). Ear, nose and throat surgery (94.8%) and neurosurgery (94.9%) had the lowest (Figure 54). Ear, nose and throat surgery had the largest percentage point increase this quarter (up 3.4 percentage points),

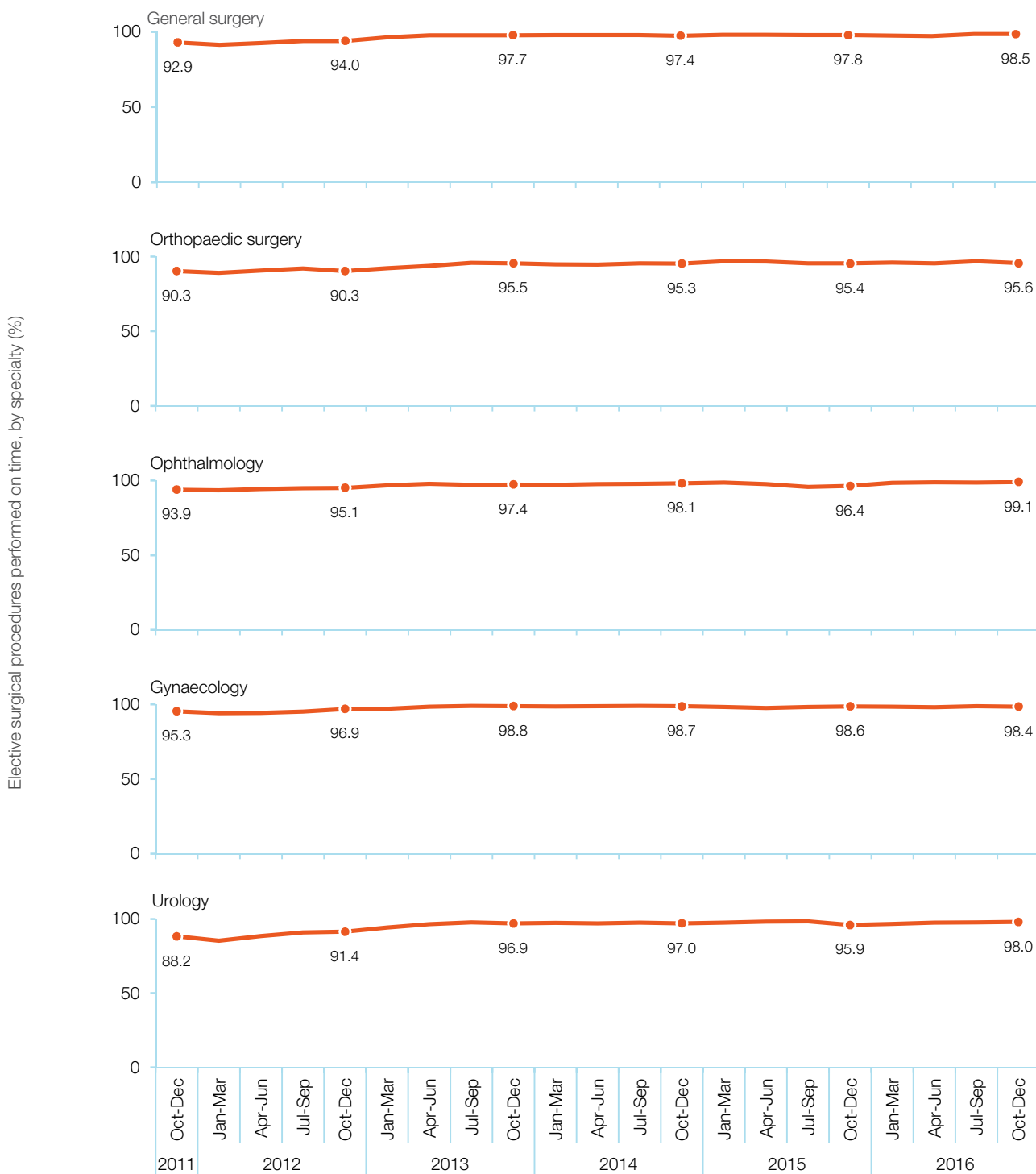
while neurosurgery had the largest percentage point decrease (down 3.1 percentage points), compared with the same quarter last year.

Figure 55 shows change over the past five years in the percentage of elective surgery performed on time for the five highest volume surgical specialty groups. Urology had the largest increase (9.8 percentage points) in the percentage of elective surgery completed within recommended timeframes since October to December 2011.

Figure 54 Percentage of elective surgical procedures performed on time, by specialty, October to December 2016

|                              | Number of procedures | Percentage on time | Same quarter last year | Percentage point change since one year ago |
|------------------------------|----------------------|--------------------|------------------------|--|
| General surgery              | 13,216               | 98.5%              | 97.8%                  | 0.7  |
| Orthopaedic surgery          | 8,661                | 95.6%              | 95.4%                  | 0.2  |
| Ophthalmology                | 7,701                | 99.1%              | 96.4%                  | 2.7  |
| Urology                      | 7,521                | 98.0%              | 95.9%                  | 2.1  |
| Gynaecology                  | 6,909                | 98.4%              | 98.6%                  | -0.2                                       |
| Ear, nose and throat surgery | 4,183                | 94.8%              | 91.4%                  | 3.4  |
| Plastic surgery              | 2,427                | 96.6%              | 97.3%                  | -0.7                                       |
| Vascular surgery             | 1,616                | 99.1%              | 99.3%                  | -0.2                                       |
| Neurosurgery                 | 1,115                | 94.9%              | 98.0%                  | -3.1                                       |
| Cardiothoracic surgery       | 912                  | 97.6%              | 98.0%                  | -0.4                                       |
| Medical                      | 551                  | 98.5%              | 97.9%                  | 0.6  |

Figure 55 Percentage of elective surgical procedures performed on time, by specialty, October 2011 to December 2016



# How long did patients wait for elective surgery?

## Percentage of elective surgery performed on time by common procedure

The percentage of elective surgical procedures performed on time reached almost 100% this quarter across several common procedures.

Cataract extraction and cholecystectomy had the highest percentage of procedures performed on time this quarter (99.1% and 98.7% respectively), while septoplasty (91.9%) and myringoplasty/tympanoplasty (92.9%) had the lowest. Myringoplasty/tympanoplasty had the largest increase in the percentage of procedures performed on time this quarter (up 12.7 percentage points), while hysteroscopy

had the largest decrease (down 0.8 percentage points) compared with the same quarter last year (Figure 56).

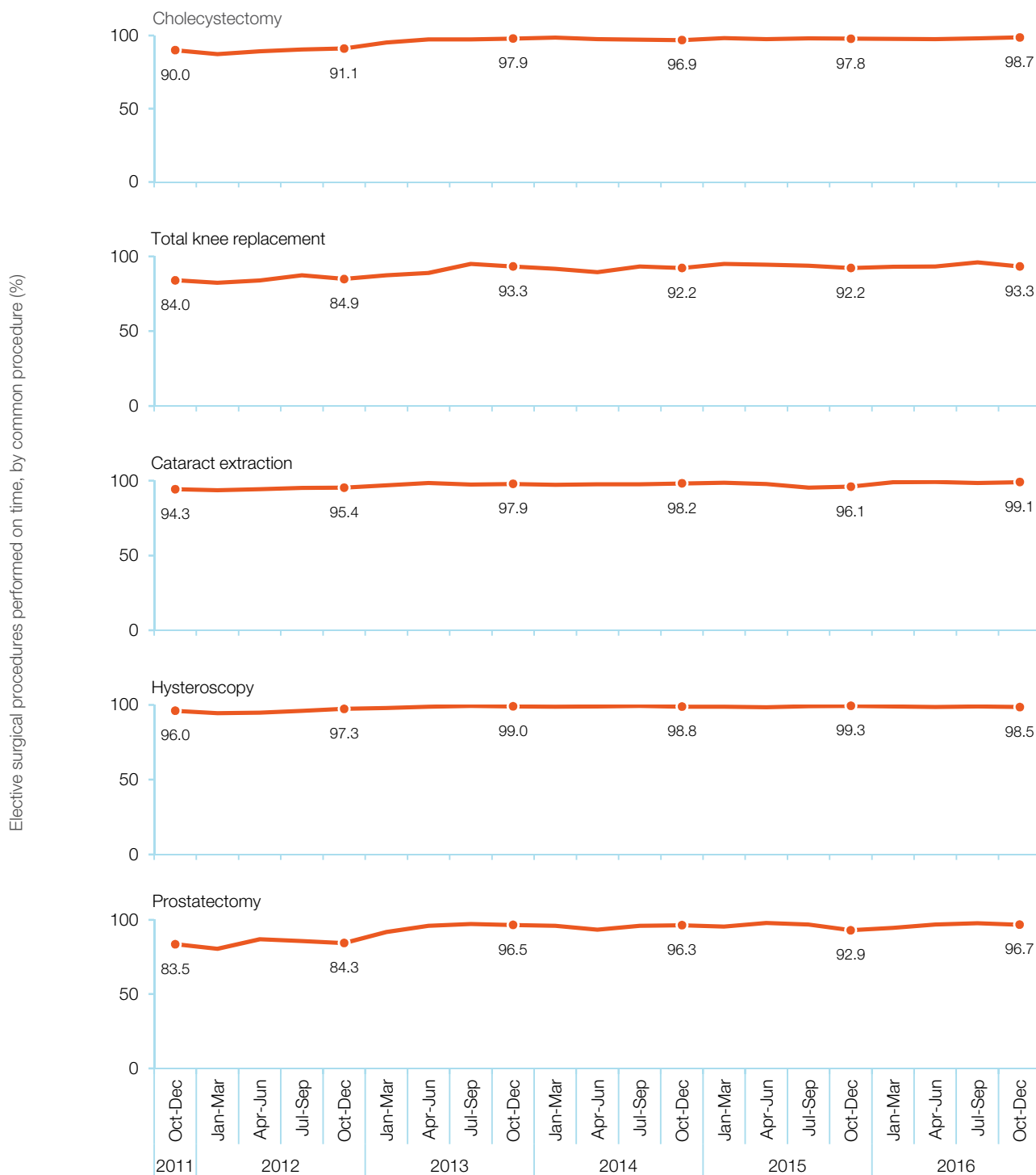
Figure 57 shows change over the past five years in the percentage of surgery performed on time across key common procedures in five high volume specialties. Since the same quarter in 2011, prostatectomy and total knee replacement have seen the largest increase in the percentage of on-time surgery (13.2 and 9.3 percentage points respectively).

Figure 56 Percentage of elective surgical procedures performed on time, by common procedure, October to December 2016

|                                       | Number of procedures | Percentage on time | Same quarter last year | Percentage point change since one year ago |
|---------------------------------------|----------------------|--------------------|------------------------|--|
| Cataract extraction                   | 6,063                | 99.1%              | 96.1%                  | 3.0  |
| Cystoscopy                            | 3,175                | 98.2%              | 96.8%                  | 1.4  |
| Hysteroscopy                          | 2,410                | 98.5%              | 99.3%                  | -0.8                                       |
| Total knee replacement                | 1,658                | 93.3%              | 92.2%                  | 1.1  |
| Other - General                       | 1,609                | 97.6%              | 97.3%                  | 0.3  |
| Cholecystectomy                       | 1,574                | 98.7%              | 97.8%                  | 0.9  |
| Inguinal herniorrhaphy                | 1,450                | 97.4%              | 97.0%                  | 0.4  |
| Tonsillectomy                         | 1,379                | 93.0%              | 91.5%                  | 1.5  |
| Total hip replacement                 | 943                  | 95.7%              | 95.2%                  | 0.5  |
| Prostatectomy                         | 709                  | 96.7%              | 92.9%                  | 3.8  |
| Abdominal hysterectomy                | 630                  | 97.7%              | 97.2%                  | 0.5  |
| Septoplasty                           | 385                  | 91.9%              | 89.5%                  | 2.4  |
| Varicose veins stripping and ligation | 322                  | 97.8%              | 97.7%                  | 0.1  |
| Haemorrhoidectomy                     | 299                  | 98.0%              | 96.1%                  | 1.9  |
| Coronary artery bypass graft          | 174                  | 97.7%              | 98.0%                  | -0.3                                       |
| Myringoplasty / Tympanoplasty         | 113                  | 92.9%              | 80.2%                  | 12.7                                       |
| Myringotomy                           | 61                   | 98.4%              | 93.0%                  | 5.4  |



Figure 57 Percentage of elective surgical procedures performed on time, by common procedure, October 2011 to December 2016



# Terms and classifications

Table 4 Terms and classifications used in the report

| Emergency departments                                   |   |
|---|---|
| All ED presentations                                    | All emergency and non-emergency attendances at the emergency department (ED).   |
| Emergency presentations                                 | All presentations that have a triage category and are coded as emergency presentations or unplanned return visits or disaster.  |
| Presentation time                                       | <p>Presentation time is the earliest time recorded of the patient being in the ED and the earlier of the following fields in the emergency visit database of the Health Information Exchange (HIE):</p> <p><b>Arrival time:</b> the date and time the patient presented at the ED</p> <p><b>Triage time:</b> the date and time when the patient was assessed by a triage nurse. Times to starting treatment and times to leaving the ED are both measured starting from presentation time.</p>  |
| Treatment time  | <p>Treatment time is the earlier of the following fields in the ED visit database of the HIE:</p> <p><b>First seen by clinician time:</b> the date and time when the patient is first seen by a medical officer and has a physical examination/treatment performed that is relevant to their presenting problem(s)</p> <p><b>First seen by nurse time:</b> the date and time when the patient is first seen by a nurse and has an assessment/treatment performed that is relevant to their presenting problem(s).</p> <p>Some patients are excluded from ED treatment time measures due to calculation requirements.</p>  |
| Percentage of patients whose treatment started on time  | <p>The percentage of patients whose treatment started on time is calculated as the percentage of patients with waiting times, from presentation, less than or equal to the clinically recommended maximum waiting time in as per the Australasian Triage Scale:</p> <p><b>Triage category 2:</b> Emergency 10 minutes</p> <p><b>Triage category 3:</b> Urgent 30 minutes</p> <p><b>Triage category 4:</b> Semi-urgent 60 minutes</p> <p><b>Triage category 5:</b> Non-urgent 120 minutes</p> <p>Note: Triage 1 patients are the most urgent and are almost all treated within two minutes. Clinicians treating them are focused on providing immediate and essential care, rather than recording times, therefore times to start treatment are generally not reported</p> |
| Median time patients waited to start treatment          | The time from presentation by which half of patients had their treatment started. The other half of patients took equal to or longer than this time.  |
| 90th percentile time patients waited to start treatment | The time from presentation by which 90% of patients had treatment start. The final 10% of patients took equal to or longer than this time.  |
| Departure time  | <p>BHI has revised the definition used for calculating the time spent in the ED in line with the definition of the Commonwealth National Emergency Access Target (NEAT).</p> <p>Departure time is defined as follows:</p> <p>For patients who were treated and discharged, departure time is the time when treatment was completed. For all other patients, departure time is the time when the patient actually left the ED.</p>   |
| Median time spent in the ED                             | The time half the patients spent in the ED. The other half of patients spent equal to or longer than this time. The median time patients spent in the ED is calculated from all ED presentations with a valid departure time.   |
| 90th percentile time spent in the ED                    | The time by which 90% of patients had left the ED. The remaining 10% spent equal to or longer than this time. The 90th percentile time patients spent in the ED is calculated from all ED presentations with a valid departure time.  |

Table 4 Terms and classifications used in the report (cont)

| Emergency departments   |  |
|---|--|
| Mode of separation  | ED presentations by mode of separation includes all presentations at the ED that have a departure time recorded.   |
| Percentage of patients who spent four hours or less in the ED | <p>The percentage of patients who spent four hours or less in the ED is calculated from all ED presentations with a valid time to departing the ED.</p> <p>The percentage of patients who spent four hours or less in the ED reported in <i>Hospital Quarterly</i> is not directly comparable to figures reported by the NSW Ministry of Health or the Commonwealth due to slight differences in definitions, period of reporting and the number of hospitals included.</p> <p>Revision of departure time definition, together with the inclusion of 14 additional EDs in this issue of <i>Hospital Quarterly</i> has resulted in a two percentage point increase in the percentage of patients who spent four hours or less in the ED than would have otherwise been reported this quarter. For more information visit <a href="http://bhi.nsw.gov.au">bhi.nsw.gov.au</a></p> |
| Transfer of care time   | The period between arrival of patients at the ED by ambulance and transfer of responsibility for their care from paramedics to ED staff in an ED treatment zone. Transfer of care time is calculated for records that can be matched between the ED and ambulance information systems. This report includes transfer of care times for matched records only.   |
| Triage category   | <p>A classification system based on how urgent the patient's need is for treatment:</p> <p><b>Triage category 1:</b> Resuscitation (for example, cardiac arrest)</p> <p><b>Triage category 2:</b> Emergency (for example, chest pain, severe burns)</p> <p><b>Triage category 3:</b> Urgent (for example, moderate blood loss, dehydration)</p> <p><b>Triage category 4:</b> Semi-urgent (for example, sprained ankle, earache)</p> <p><b>Triage category 5:</b> Non-urgent (for example, small cuts, abrasions).</p>  |
| Hospital admissions   |  |
| Episode of care   | <p>A period of care in a hospital or other healthcare facility with a defined start and end.</p> <p>When a person is admitted to hospital they begin what is termed an admitted patient episode or 'episode of care'. Acute episodes are typically short-term admissions for immediate care or treatment. Non-acute episodes include admissions for rehabilitation, palliative care and other non-acute reasons.</p> <p>Patients can have more than one episode of care during the same hospital admission. For example, a patient may begin with acute care and then change to rehabilitation or palliative care.</p>   |
| Stay type   | <p>Admitted patient episodes can be for 'same-day' or 'overnight' care. Same-day refers to patients who are admitted and discharged on the same day. Overnight refers to patients who spend at least one night in hospital.</p> <p>Admitted patient episodes can be either 'planned' or 'unplanned'. Planned refers to admissions that are arranged in advance (for example, patients who are admitted for planned elective surgery). Unplanned refers to emergency admissions (for example, for unplanned surgical patients).</p>   |
| Average length of stay  | <p>The total number of days in hospital for all admitted patient episodes (including same-day and overnight patients) divided by the total number of admitted patient episodes.</p> <p>The average length of stay is usually measured from midnight.</p>   |
| Bed days  | <p>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. Total acute bed days for an overnight episode is the difference, in days, between the episode start date and the episode end date, minus the number of episode leave days recorded. Same-day episodes count as one bed day.</p>   |

# Terms and classifications

Table 4 Terms and classifications used in the report (cont)

| Elective surgery              |  |
|-------------------------------|--|
| Common procedure              | Commonly performed elective surgery procedures.  |
| Specialty                     | The area of clinical expertise held by the doctor who performed the surgery. Medical (specialty) refers to any surgery performed by a non-specialist medical practitioner.   |
| Median waiting time           | The number of days by which half of patients received surgery. The other half took equal to or longer than this time.  |
| 90th percentile waiting time  | The number of days by which 90% of patients had received surgery. The remaining 10% took equal to or longer than this time.  |
| Urgency category              | <p>A classification system based on how urgent the patient's need for surgery is:</p> <p><b>Urgent surgery:</b> Admission within 30 days is desirable for a condition that has potential to deteriorate quickly and become an emergency</p> <p><b>Semi-urgent surgery:</b> Admission within 90 days is desirable for a condition unlikely to deteriorate quickly</p> <p><b>Non-urgent surgery:</b> Admission within 365 days acceptable for a condition unlikely to deteriorate quickly.</p>   |
| Staged surgery                | <p>Surgery that, for medical reasons, cannot take place before a certain amount of time has elapsed. BHI uses this term to define all patients that could be identified as being a staged patient for most of their time on the waiting list and all non-urgent cystoscopy patients.</p> <p>Because of differences in how hospitals have historically coded cystoscopy, BHI includes all non-urgent cystoscopy in the staged surgery category for measures of surgical activity.</p>   |
| Elective surgery waiting list | <p>Patients ready for elective surgery and on the waiting list excludes those waiting for staged procedures. Patients ready for non-urgent surgery on the waiting list also excludes those waiting for non-urgent cystoscopy.</p> <p>Patients not ready for surgery on the waiting list includes those waiting for staged procedures, non-urgent cystoscopy, and patients currently not available for personal reasons.</p> <p>The time a patient waited for the initial appointment with a specialist is not included in the time a patient spent on the waiting list for elective surgery.</p> |

# Appendix tables

These tables present activity and performance measures for individual hospitals from principal referral (peer group A1), paediatric specialist hospitals (peer group A2), ungrouped acute – tertiary referral hospitals (peer group A3), major hospitals (peer group B), district group 1 (peer group C1) and district group 2 hospitals (peer group C2). Information for smaller hospitals is presented under the category 'Other'.

## Hospital admissions

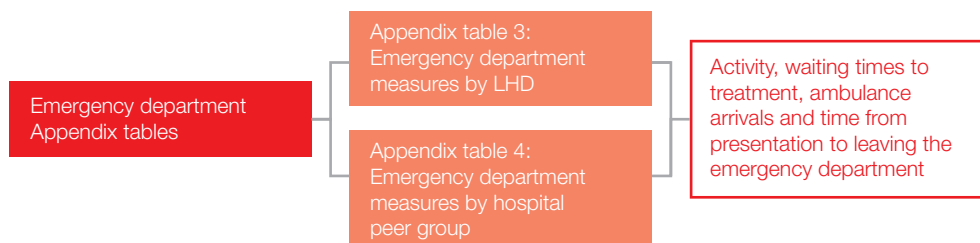
Appendix tables 1 and 2 present hospital admission activity measures for public hospitals in NSW for this quarter, by local health district (LHD) and hospital peer group.

- Download appendix tables by LHD
- Download appendix tables by hospital peer group

## Emergency departments

Appendix tables 3 and 4 present emergency department activity and performance measures for public hospitals in NSW for this quarter, by LHD and hospital peer group.

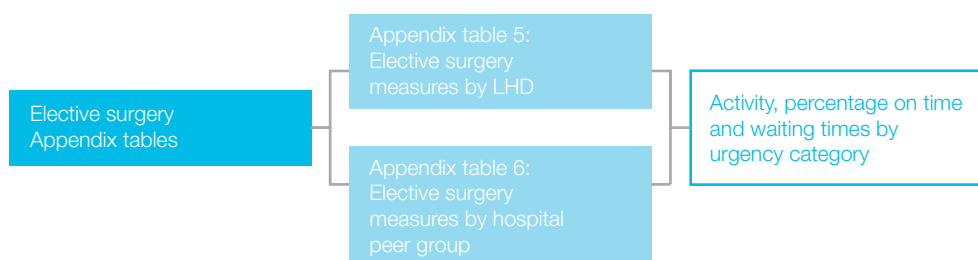
- Download appendix tables by LHD
- Download appendix tables by hospital peer group



## Elective surgery

Appendix tables 5 and 6 present elective surgery activity and performance measures for public hospitals in NSW for this quarter, by LHD and hospital peer group.

- Download appendix tables by LHD
- Download appendix tables by hospital peer group



# Index of hospitals by local health district and hospital peer group

| Hospital name   | Local health district | Hospital peer group |
|---|-----------------------|---------------------|
| Armidale and New England Hospital                                   | Hunter New England    | C1                  |
| Auburn Hospital   | Western Sydney        | B                   |
| Ballina District Hospital   | Northern NSW          | C2                  |
| Bankstown/Lidcombe Hospital   | South Western Sydney  | A1                  |
| Bateman's Bay District Hospital                                     | Southern NSW          | C2                  |
| Bathurst Base Hospital  | Western NSW           | C1                  |
| Belmont Hospital  | Hunter New England    | C1                  |
| Blacktown Hospital  | Western Sydney        | B                   |
| Blue Mountains District Anzac Memorial Hospital                     | Nepean Blue Mountains | C2                  |
| Bowral and District Hospital  | South Western Sydney  | C1                  |
| Broken Hill Base Hospital   | Far West              | C1                  |
| Calvary Mater Newcastle   | Hunter New England    | A3                  |
| Campbelltown Hospital   | South Western Sydney  | B                   |
| Canterbury Hospital   | Sydney                | B                   |
| Casino and District Memorial Hospital                               | Northern NSW          | C2                  |
| Cessnock District Hospital  | Hunter New England    | C2                  |
| Coffs Harbour Base Hospital   | Mid North Coast       | B                   |
| Concord Hospital  | Sydney                | A1                  |
| Cooma Health Service  | Southern NSW          | C2                  |
| Cowra District Hospital   | Western NSW           | C2                  |
| Deniliquin Health Service   | Murrumbidgee          | C2                  |
| Dubbo Base Hospital   | Western NSW           | B                   |
| Fairfield Hospital  | South Western Sydney  | B                   |
| Forbes District Hospital  | Western NSW           | C2                  |
| Gosford Hospital  | Central Coast         | A1                  |
| Goulburn Base Hospital  | Southern NSW          | C1                  |
| Grafton Base Hospital   | Northern NSW          | C1                  |
| Griffith Base Hospital  | Murrumbidgee          | C1                  |
| Gunnedah District Hospital  | Hunter New England    | C2                  |
| Hawkesbury District Health Services (public hospital services only) | Nepean Blue Mountains | C1                  |
| Hornsby and Ku-Ring-Gai Hospital                                    | Northern Sydney       | B                   |
| Inverell District Hospital  | Hunter New England    | C2                  |
| John Hunter Hospital  | Hunter New England    | A1                  |
| Kempsey Hospital  | Mid North Coast       | C2                  |
| Kurri Kurri District Hospital                                       | Hunter New England    | C2                  |
| Lismore Base Hospital   | Northern NSW          | B                   |
| Lithgow Health Service  | Nepean Blue Mountains | C2                  |
| Liverpool Hospital  | South Western Sydney  | A1                  |
| Macksville District Hospital  | Mid North Coast       | C2                  |
| Maclean District Hospital   | Northern NSW          | C2                  |
| Maitland Hospital   | Hunter New England    | B                   |
| Manly District Hospital   | Northern Sydney       | B                   |
| Manning Base Hospital   | Hunter New England    | B                   |
| Milton and Ulladulla Hospital                                       | Illawarra Shoalhaven  | C2                  |

| Hospital name   | Local health district       | Hospital peer group |
|---|-----------------------------|---------------------|
| Mona Vale and District Hospital                       | Northern Sydney             | B                   |
| Moree District Hospital                               | Hunter New England          | C2                  |
| Moruya District Hospital                              | Southern NSW                | C2                  |
| Mount Druitt Hospital                                 | Western Sydney              | C1                  |
| Mudgee District Hospital                              | Western NSW                 | C2                  |
| Murwillumbah District Hospital                        | Northern NSW                | C1                  |
| Muswellbrook District Hospital                        | Hunter New England          | C2                  |
| Narrabri District Hospital                            | Hunter New England          | C2                  |
| Nepean Hospital                                       | Nepean Blue Mountains       | A1                  |
| Orange Health Service                                 | Western NSW                 | B                   |
| Port Macquarie Base Hospital                          | Mid North Coast             | B                   |
| Prince of Wales Hospital                              | South Eastern Sydney        | A1                  |
| Queanbeyan Health Service                             | Southern NSW                | C2                  |
| Royal Hospital for Women                              | South Eastern Sydney        | A3                  |
| Royal North Shore Hospital                            | Northern Sydney             | A1                  |
| Royal Prince Alfred Hospital                          | Sydney                      | A1                  |
| RPAH Institute of Rheumatology & Orthopaedics         | Sydney                      | A1                  |
| Ryde Hospital   | Northern Sydney             | C1                  |
| Shellharbour Hospital                                 | Illawarra Shoalhaven        | C1                  |
| Shoalhaven District Memorial Hospital                 | Illawarra Shoalhaven        | B                   |
| Singleton District Hospital                           | Hunter New England          | C2                  |
| St George Hospital                                    | South Eastern Sydney        | A1                  |
| St Vincent's Hospital, Darlinghurst                   | St Vincent's Health Network | A1                  |
| South East Regional Hospital (Bega District Hospital) | Southern NSW                | C1                  |
| Sutherland Hospital                                   | South Eastern Sydney        | B                   |
| Sydney Children's Hospital                            | Sydney Children's Network   | A2                  |
| Sydney/Sydney Eye Hospital                            | South Eastern Sydney        | A3                  |
| Tamworth Base Hospital                                | Hunter New England          | B                   |
| The Children's Hospital at Westmead                   | Sydney Children's Network   | A2                  |
| The Tweed Hospital                                    | Northern NSW                | B                   |
| Wagga Wagga Rural Referral Hospital                   | Murrumbidgee                | B                   |
| Westmead Hospital                                     | Western Sydney              | A1                  |
| Wollongong Hospital                                   | Illawarra Shoalhaven        | A1                  |
| Wyong Hospital  | Central Coast               | B                   |
| Young Health Service                                  | Murrumbidgee                | C2                  |

# Acknowledgements

The Bureau of Health Information (BHI) is the main source of information for the people of NSW about the performance of their public healthcare system. A NSW board-governed organisation, BHI, is led by Chairperson Professor Carol Pollock and Chief Executive Jean-Frédéric Lévesque MD, PhD.

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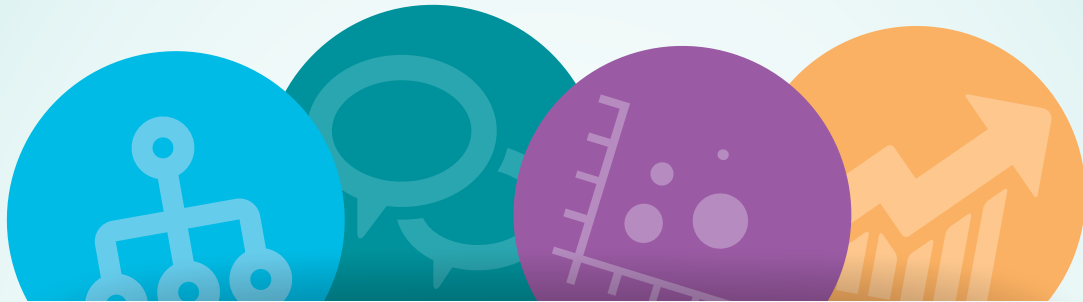
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## About the Bureau of Health Information

The Bureau of Health Information (BHI) is a board-governed organisation that provides independent information about the performance of the NSW public healthcare system.

BHI was established in 2009 to provide system-wide support through transparent reporting.

BHI 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 in public hospitals and other healthcare facilities.

BHI publishes a range of reports and tools that provide relevant, accurate and impartial information about how the health system is measuring up in terms of:

- Accessibility – healthcare when and where needed
- Appropriateness – the right healthcare, the right way
- Effectiveness – making a difference for patients
- Efficiency – value for money
- Equity – health for all, healthcare that's fair
- Sustainability – caring for the future

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 report 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)