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# Emergency department care

2017–18

Australian  
hospital statistics







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# **Emergency department care 2017–18**

## **Australian hospital statistics**

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# Contents

<b>Summary</b> .....	<b>v</b>
<b>1 Introduction</b> .....	<b>1</b>
1.1 What's in this report? .....	2
<b>2 How much emergency department activity was there?</b> .....	<b>4</b>
2.1 How many emergency department presentations were there?.....	4
<b>3 Who used emergency department services?</b> .....	<b>7</b>
3.1 How did emergency department use vary by age group and sex? .....	7
3.2 How did emergency department use vary by Indigenous status?.....	7
3.3 How did emergency department use vary by remoteness area?.....	11
3.4 How did emergency department use vary by socioeconomic status? .....	11
<b>4 How and why were services accessed?</b> .....	<b>14</b>
4.1 What types of visit occur in emergency departments? .....	14
4.2 How urgently was care required?.....	16
4.3 When did people present to the emergency department? .....	22
4.4 Why did people receive care?.....	24
4.5 How was care completed?.....	36
<b>5 How long did people wait for emergency department care?</b> .....	<b>40</b>
5.1 Measurement of time in the emergency department .....	40
5.2 How have waiting times changed over time? .....	42
5.3 How long did people wait for care in 2017–18?.....	44
<b>6 How long did people stay in the emergency department?</b> .....	<b>49</b>
6.1 How long did patients stay? .....	50
6.2 How many visits were completed within 4 hours? .....	53
6.3 How long did clinical care take?.....	59
<b>Appendix A: What data are reported?</b> .....	<b>61</b>
<b>Appendix B: Technical notes</b> .....	<b>70</b>
<b>Appendix C: Public hospital peer groups</b> .....	<b>76</b>
<b>Appendix D: National hospital statistics-related committees</b> .....	<b>78</b>
Acknowledgements .....	78
<b>Abbreviations</b> .....	<b>79</b>
<b>Symbols</b> .....	<b>79</b>
<b>Glossary</b> .....	<b>80</b>
<b>References</b> .....	<b>82</b>

**List of tables .....84**  
**List of figures .....86**  
**Related publications .....87**

# Summary

This report provides an overview of care provided in public hospital emergency departments in Australia.

## Emergency department activity increasing

In 2017–18, more than 8 million patients presented to Australian public hospital emergency departments—an average of about 22,000 patients per day. This was 3.4% higher than the previous year (compared with 2.7% growth per year between 2013–14 and 2017–18).

Principal diagnoses in the ICD-10-AM chapter *Injury, poisoning and certain other consequences of external causes* accounted for about one in four presentations (almost 2 million). These include fractures, burns, toxic effects of medicinal and non-medicinal substances, and other complications.

Patients aged 4 and under (who make up less than 7% of the population—ABS 2018) accounted for 11% of presentations, and patients aged 65 and over (who make up about 15% of the population) accounted for 22% of presentations.

Older patients were more likely to be assigned a triage category of *Resuscitation*, *Emergency* or *Urgent* than younger patients. Older patients were also more likely to be subsequently admitted to the hospital.

## Around three-quarters of patients received care on time

In 2017–18, 72% of patients were ‘seen on time’, including almost all of those requiring immediate care and 76% of those requiring care within 10 minutes. The overall proportion seen on time has declined since 2013–14 (75%).

Of all emergency department presentations:

- 90% of patients were seen within 1 hour and 39 minutes. This measure was fairly consistent over the previous four years, varying from 1 hour and 33 minutes to 1 hour and 35 minutes
- 50% of patients were seen within 19 minutes, consistent with waiting times for the previous year, and similar to waiting times in 2013–14 (18 minutes).

## Fewer ED visits were completed within 4 hours

In 2017–18:

- overall, 71% of ED visits were completed within 4 hours—ranging from 61% in South Australia to 76% in Western Australia
- 90% of ED visits were completed within 7 hours and 14 minutes.



# 1 Introduction

Emergency departments are a critical component of Australia's health care system. Many of Australia's public hospitals have purpose-built emergency departments, staffed 24 hours a day, providing care for patients who require urgent medical attention.

This report presents information on care provided in public hospital emergency departments (EDs) between 1 July 2017 and 30 June 2018. It includes information on overall activity, nationally agreed performance indicators on waiting times for care, time spent in the ED, and other waiting times statistics. Comparative information for the previous 4 reporting periods is also included.

This report is accompanied by online content available on the AIHW website, including downloadable tables. Complementary hospital-level data is released on the *MyHospitals* website. See Box 1 for further information.

The data presented are sourced from the AIHW's National Non-admitted Patient Emergency Department Care Database (NNAPEDCD), which is based on the Non-admitted Patient Emergency Department Care (NAPEDC) National Minimum Data Set/National Best Endeavours Data Set (NMDS/NBEDS).

The NNAPEDCD provides information on the care provided (including waiting times for care) for non-admitted patients registered for care in EDs in public hospitals where the ED meets the following criteria:

- a purposely designed and equipped area with designated assessment, treatment, and resuscitation areas
- the ability to provide resuscitation, stabilisation, and initial management of all emergencies
- availability of medical staff in the hospital 24 hours a day
- designated emergency department nursing staff 24 hours per day 7 days per week, and a designated emergency department nursing unit manager.

For 2017–18, the coverage of the NNAPEDCD was considered complete for public hospitals which meet the above criteria. The collection does not include all emergency services provided in Australia; for example, emergency service activity provided by private hospitals, or by public hospitals which do not have an emergency department that meets the above criteria are excluded. This should be taken into account, particularly when comparing data by remoteness area and Indigenous status as a greater proportion of Indigenous Australians live in more remote areas.

For more information on the NNAPEDCD, see Appendix A.

# 1.1 What's in this report?

## Structure of the report

This introduction provides contextual information on the data presented in this report and their limitations, along with a description of the key terms used. Other chapters provide information on the following subjects:

- 'Chapter 2 How much emergency department activity was there?'—presents information on the number of emergency departments reporting, and the numbers of presentations to public hospital emergency departments.
- 'Chapter 3 Who used emergency departments?'—presents information about the patients who presented to emergency departments, including their age, sex, and Indigenous status, and the remoteness of their area of usual residence.
- 'Chapter 4 How and why were services accessed?'—presents information on arrival mode, triage category, time of presentation, type of visit, reason for the patient's visit, and how the episode ended.
- 'Chapter 5 How long did people wait for emergency department care?'—presents waiting times information, including the proportion of patients seen on time, and the median and 90th percentile waiting times.
- 'Chapter 6 How long did people stay in the emergency department?'—presents information on how long patients stayed in the emergency department, including the proportion of emergency department stays that were completed within 4 hours, and the 90th percentile length of emergency department stay for patients who were subsequently admitted to hospital.

The chapters present information on activity in 2017–18 and, where possible, changes over time.

Appendix A presents data quality information, including information on apparent variations in the reporting of the data in this report, and on the quality of Indigenous identification.

Appendix B presents technical notes on the methods used in this report.

Appendix C includes information on the public hospital peer groups used in this report.

The Glossary provides definitions for many of the common terms used in this report.

## Common terms

An emergency department **presentation** occurs following the arrival of the patient at the ED, and is the earliest occasion of being registered clinically or triaged. The **presentation** is also used as a counting unit.

The **type of visit** to the ED indicates the reason the patient presented. It includes: *Emergency presentation*; *Return visit, planned*; *Pre-arranged admission*; *Patient in transit* (NAPEDC NMDS only); and *Dead on arrival*.

A record with a type of visit of **Emergency presentation** refers to attendance for an actual or suspected condition that is sufficiently serious to require acute unscheduled care.

For more common terms and definitions, see the Glossary.

### **Box 1.1. Where to go for more information**

More information on emergency department care in 2017–18 is available online including the data tables for this report.

#### **MyHospitals website**

Information about emergency department care for individual public hospitals is available on the AIHW's *MyHospitals* website: <<http://www.myhospitals.gov.au/>>. Reported measures include:

- numbers of presentations to EDs
- percentage of patients seen on time
- percentage of patients who departed the ED within 4 hours
- median time patients spent in the ED
- time until most patients (90%) had departed the emergency department.

The website includes changes in these performance measures over the past 6 years and comparisons with the performance of the hospital peer group.

Although the peer groupings used in this report and on the *MyHospitals* website are based on the same peer grouping classification (AIHW 2015a), there are some differences in the names and the groupings. For example, *Principal referral* hospitals are described as *Major* hospitals on the *MyHospitals* web site. For an explanation of these differences see <<http://www.myhospitals.gov.au/about-the-data>>.

More information on Australia's public hospitals is available in:

- *Elective surgery waiting times 2017–18: Australian hospital statistics* (AIHW 2018c)
- *Staphylococcus aureus bacteraemia in Australia's hospitals 2016–17: Australian hospital statistics* (AIHW 2017)
- *Admitted patient care 2016–17: Australian hospital statistics* (AIHW 2018a)
- *Australia's hospitals 2016–17: at a glance* (AIHW 2018b)
- *Hospital resources 2016–17: Australian hospital statistics* (AIHW 2018d)
- *Non-admitted patient care 2016–17: Australian hospital statistics* (AIHW 2018e).

## 2 How much emergency department activity was there?

This chapter presents information on the number of presentations to public hospital emergency departments reported to the NNAPEDCD over the period 2013–14 to 2017–18.

Between 2013–14 and 2017–18, the number of hospitals that reported ED presentations to the NNAPEDCD was relatively stable for most states and territories, and included the major public hospitals in all states and territories (see Appendix A). Changes in coverage due to the opening or closing of hospitals should be taken into account when interpreting changes over time.

### 2.1 How many emergency department presentations were there?

In 2017–18, there were over 8 million presentations to public hospital emergency departments—or an average of 22,000 presentations each day. Between 2016–17 and 2017–18, presentations increased by 3.4%.

Between 2013–14 and 2017–18, the number of presentations to public hospital emergency departments increased by 11% overall—or by 2.7% on average each year (Table 2.1). This was greater than the average growth in population over the same period, with an increase of 1.1% in the number of presentations per 1,000 people (ABS 2018).

About 35% (2.8 million) of presentations to public hospital emergency departments occurred in *Principal referral and Women's and children's hospitals*, 37% (3.0 million) in *Public acute group A hospitals*, and 18% (1.4 million) in *Public acute group B hospitals*.

**Table 2.1: Emergency department presentations, by public hospital peer group, 2013–14 to 2017–18**

Public hospital peer group	2013–14	2014–15	2015–16 <sup>(b)</sup>	2016–17	2017–18	Change (%) <sup>(a)</sup>	
						Average since 2013–14	Since 2016–17
Principal referral and Women's and children's hospitals	2,323,147	2,426,058	2,486,675	2,628,218	2,769,927	4.5	5.4
Public acute group A hospitals	2,626,188	2,680,370	2,723,863	2,872,668	2,965,198	3.1	3.2
Public acute group B hospitals	1,382,088	1,399,080	1,406,639	1,394,563	1,404,238	0.4	0.7
Public acute group C hospitals	594,398	604,331	625,810	635,816	651,224	2.3	2.4
Other hospitals <sup>(c)</sup>	270,082	256,603	222,882	224,341	226,905	–4.3	1.1
<b>All hospitals</b>	<b>7,195,903</b>	<b>7,366,442</b>	<b>7,465,869</b>	<b>7,755,606</b>	<b>8,017,492</b>	<b>2.7</b>	<b>3.4</b>

(a) Interpretation of all changes over time presented in this report should take into account changes in coverage. Changes have not been adjusted for the increase in coverage of hospitals in Western Australia between 2013–14 and 2014–15.

(b) Excludes data for the Australian Capital Territory, which were not available at the time of publication.

(c) Includes hospitals not included in the specified hospital peer groups (see appendix C for more information about peer groups).

Note: See appendixes A and B for more information on terminology, data limitations, and methods.

Between 2013–14 and 2017–18, the Australian Capital Territory experienced the highest growth in ED presentations (4.1%) (Table 2.2).

Between 2016–17 and 2017–18, Tasmania experienced the most growth (3.9%), followed by Queensland (3.8%).

**Table 2.2: Emergency department presentations, by state and territory, 2013–14 to 2017–18**

	2013–14	2014–15	2015–16 <sup>(b)</sup>	2016–17	2017–18	Change (%) <sup>(a)</sup>	
						Average since 2013–14	Since 2016–17
<b>Presentations</b>							
New South Wales	2,646,415	2,681,466	2,733,520	2,784,545	2,880,287	2.1	3.4
Victoria	1,572,787	1,610,623	1,679,886	1,731,040	1,792,906	3.3	3.6
Queensland	1,351,573	1,378,883	1,439,143	1,457,083	1,512,118	2.8	3.8
Western Australia	742,615	803,821	829,431	835,551	856,707	3.6	2.5
South Australia	463,171	469,368	481,889	493,268	506,494	2.3	2.7
Tasmania	148,278	150,076	153,541	156,323	162,441	2.3	3.9
Australian Capital Territory	125,888	129,961	n.a.	143,860	147,778	4.1	2.7
Northern Territory	145,176	142,244	148,459	153,936	158,761	2.3	3.1
<b>Total</b>	<b>7,195,903</b>	<b>7,366,442</b>	<b>7,465,869</b>	<b>7,755,606</b>	<b>8,017,492</b>	<b>2.7</b>	<b>3.4</b>
<b>Presentations per 1,000 population<sup>(c)</sup></b>							
New South Wales	350.9	350.1	352.2	352.8	358.8	0.6	1.7
Victoria	268.7	268.9	274.3	275.4	278.5	0.9	1.1
Queensland	289.8	291.1	300.0	299.3	305.1	1.3	1.9
Western Australia	297.9	318.4	325.6	325.8	330.4	2.6	1.4
South Australia	273.7	273.7	278.5	282.4	287.9	1.3	1.9
Tasmania	291.8	294.5	300.4	303.4	312.9	1.8	3.1
Australian Capital Territory	329.4	334.8	n.a.	357.6	360.4	2.3	0.8
Northern Territory	621.2	606.9	628.2	649.7	667.4	1.8	2.7
<b>Total</b>	<b>307.9</b>	<b>310.0</b>	<b>309.6</b>	<b>316.3</b>	<b>321.3</b>	<b>1.1</b>	<b>1.6</b>

(a) Interpretation of all changes over time presented in this report should take into account changes in coverage, as noted in the data quality summary. Changes have not been adjusted for the increase in coverage of hospitals in Western Australia between 2013–14 and 2014–15.

(b) Excludes data for the Australian Capital Territory, which were not available at the time of publication.

(c) Presentation rates are directly age-standardised. See Appendix B.

Note: See appendixes A and B for more information on terminology, data limitations, and methods.

### Where to go for more information

More information on ED presentations by peer group is available in 'Table S5.1: Emergency department presentation statistics, by triage category and public hospital peer group, 2017–18' (which accompanies this report online).

**Table 2.3: Emergency department presentations, by public hospital peer group, states and territories, 2017–18**

Public hospital peer group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total	Total (%)
Principal referral and Women's and children's hospitals	880,907	562,325	569,131	321,805	212,526	63,163	88,661	71,409	2,769,927	34.5
Public acute group A hospitals	943,048	733,141	665,537	283,885	159,521	70,937	59,117	50,012	2,965,198	37.0
Public acute group B hospitals	486,454	360,318	277,450	162,486	89,189	28,341	..	..	1,404,238	17.5
Public acute group C hospitals	385,500	94,595	0	88,531	45,258	0	..	37,340	651,224	8.1
Other hospitals <sup>(a)</sup>	184,378	42,527	0	0	0	0	0	..	226,905	2.8
<b>All hospitals</b>	<b>2,880,287</b>	<b>1,792,906</b>	<b>1,512,118</b>	<b>856,707</b>	<b>506,494</b>	<b>162,441</b>	<b>147,778</b>	<b>158,761</b>	<b>8,017,492</b>	<b>100.0</b>

(a) Includes hospitals not included in the specified hospital peer groups (see appendix C for more information about peer groups).

Note: See appendixes A, B, and C for more information on terminology, data limitations, and methods.

## **3 Who used emergency department services?**

This chapter presents information on the patients who received care in Australia's public hospital emergency departments. It includes information on the patient's age, sex, Indigenous status, remoteness of area of usual residence and socioeconomic group.

Comparisons of emergency department presentations, particularly by Indigenous status, remoteness of area and socioeconomic status should take into account that the NNAPEDCD, by definition, does not include all hospital emergency services provided in Australia. In particular, coverage varied by remoteness of the hospital (see Appendix A for more information).

### **3.1 How did emergency department use vary by age group and sex?**

In 2017–18, ED presentations were evenly split between males and females (Table 3.1).

For those aged 0–14, substantially more boys (56%) than girls (44%) presented to emergency departments.

In 2017–18, patients aged 4 and under (who make up less than 7% of the population), accounted for 11% of all ED presentations. Males accounted for 56% of presentations for patients aged 4 and under.

Patients aged 65 and over (who make up about 15% of the population) accounted for 22% of all ED presentations in 2017–18.

### **3.2 How did emergency department use vary by Indigenous status?**

In 2017–18, about 6.7% of ED presentations (535,000) were for Aboriginal and Torres Strait Islander people (Indigenous Australians), who represent about 3.5% of the Australian population (Table 3.2).

The quality of the data reported for Indigenous status in emergency departments has not been formally assessed—therefore, caution should be exercised when interpreting these data. In addition, the NNAPEDCD does not include all emergency department activity in remote areas and this is likely to affect reporting of data for Indigenous Australians who account for a higher proportion of the population in these areas.

See the data quality summary in Appendix A for information on the quality of Indigenous status data.

**Table 3.1: Emergency department presentations by age group and sex, states and territories, 2017–18**

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
<b>Males</b>									
0–4	177,086	112,993	93,913	59,122	31,534	7,894	9,771	9,272	501,585
5–14	162,564	93,464	87,631	52,221	27,282	8,100	8,381	7,252	446,895
15–24	176,456	103,066	97,337	51,055	29,275	10,907	9,395	9,106	486,597
25–34	172,808	108,352	92,127	53,871	28,065	9,730	9,002	12,311	486,266
35–44	152,530	95,923	83,344	46,786	25,756	8,505	8,235	11,273	432,352
45–54	150,841	93,456	80,166	45,310	27,006	8,911	6,849	11,977	424,516
55–64	146,045	87,050	71,876	39,245	24,950	9,068	6,101	8,678	393,013
65–74	147,190	82,277	68,885	35,866	23,749	8,830	5,979	5,530	378,306
75–84	118,995	70,301	53,227	28,427	21,185	6,706	4,703	2,402	305,946
85–89	41,722	24,876	17,374	9,820	8,354	1,989	1,691	459	106,285
90–94	19,407	10,594	7,820	4,708	4,320	719	702	169	48,439
95+	4,396	2,224	1,694	1,010	917	179	207	33	10,660
<i>Total males<sup>(a)</sup></i>	<i>1,470,104</i>	<i>884,592</i>	<i>755,522</i>	<i>427,441</i>	<i>252,394</i>	<i>81,542</i>	<i>71,016</i>	<i>78,466</i>	<i>4,021,077</i>

*(continued)*

**Table 3.1 (continued): Emergency department presentations by age group and sex, states and territories, 2017–18**

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
<b>Females</b>									
0–4	138,556	86,066	73,485	46,424	24,473	6,326	7,620	7,755	390,705
5–14	126,055	74,530	71,324	42,730	22,004	7,039	6,575	6,369	356,626
15–24	190,455	121,745	119,409	58,759	35,355	12,712	11,868	10,693	560,996
25–34	192,628	150,782	110,114	68,028	33,969	10,748	12,628	14,924	593,821
35–44	147,918	105,104	84,858	49,157	25,038	8,701	9,406	13,468	443,650
45–54	138,628	90,340	79,396	42,933	25,280	8,788	7,375	12,362	405,102
55–64	134,569	79,716	66,730	36,733	23,012	8,428	6,498	7,677	363,363
65–74	129,914	76,533	61,582	32,829	22,795	7,809	5,907	4,190	341,559
75–84	120,999	71,961	52,898	29,413	23,204	6,419	5,206	2,105	312,205
85–89	51,435	30,042	21,204	12,251	10,660	2,316	1,908	486	130,302
90–94	29,646	16,379	11,537	7,408	6,351	1,283	1,324	203	74,131
95+	9,215	4,933	3,866	2,535	1,942	316	431	50	23,288
<i>Total females<sup>(a)</sup></i>	<i>1,410,039</i>	<i>908,153</i>	<i>756,457</i>	<i>429,200</i>	<i>254,083</i>	<i>80,886</i>	<i>76,746</i>	<i>80,284</i>	<i>3,995,848</i>
<b>All persons<sup>(b)</sup></b>	<b>2,880,287</b>	<b>1,792,906</b>	<b>1,512,118</b>	<b>856,707</b>	<b>506,494</b>	<b>162,441</b>	<b>147,778</b>	<b>158,761</b>	<b>8,017,492</b>

(a) Includes 317 presentations for which the age group of the patient was not reported.

(b) Includes 567 presentations for which the sex of the patient was not reported, and 317 presentations for which the age group of the patient was not reported.

Note: See appendixes A and B for more information on terminology, data limitations, and methods.

**Table 3.2: Emergency department presentations by Indigenous status<sup>(a)</sup>, states and territories, 2017–18**

Indigenous status	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Aboriginal but not Torres Strait Islander origin	187,403	32,946	94,539	74,218	24,011	8,341	4,974	73,253	499,685
Torres Strait Islander but not Aboriginal origin	2,776	964	8,152	559	241	305	94	402	13,493
Aboriginal and Torres Strait Islander origin	5,440	2,802	9,423	1,513	719	536	160	1,348	21,941
<i>Indigenous Australians</i>	<i>195,619</i>	<i>36,712</i>	<i>112,114</i>	<i>76,290</i>	<i>24,971</i>	<i>9,182</i>	<i>5,228</i>	<i>75,003</i>	<i>535,119</i>
Neither Aboriginal nor Torres Strait Islander origin	2,662,743	1,744,524	1,394,470	777,090	463,075	151,760	141,767	83,332	7,418,761
Not reported	21,925	11,670	5,534	3,327	18,448	1,499	783	426	63,612
<i>Other Australians<sup>(b)</sup></i>	<i>2,684,668</i>	<i>1,756,194</i>	<i>1,400,004</i>	<i>780,417</i>	<i>481,523</i>	<i>153,259</i>	<i>142,550</i>	<i>83,758</i>	<i>7,482,373</i>
<b>Total</b>	<b>2,880,287</b>	<b>1,792,906</b>	<b>1,512,118</b>	<b>856,707</b>	<b>506,494</b>	<b>162,441</b>	<b>147,778</b>	<b>158,761</b>	<b>8,017,492</b>
Presentation rate for Indigenous Australians per 1,000	787.9	635.6	494.9	744.9	562.7	310.4	683.6	988.1	672.2
Presentation rate for other Australians per 1,000	298.6	235.1	252.7	262.7	236.6	271.1	295.7	413.1	261.5
<b>Presentation rate for all persons per 1,000<sup>(c)</sup></b>	<b>310.2</b>	<b>238.6</b>	<b>262.2</b>	<b>280.1</b>	<b>244.7</b>	<b>271.8</b>	<b>302.2</b>	<b>559.1</b>	<b>273.8</b>
<b>Presentation rate ratio<sup>(d)</sup></b>	<b>2.6</b>	<b>2.7</b>	<b>2.0</b>	<b>2.8</b>	<b>2.4</b>	<b>1.1</b>	<b>2.3</b>	<b>2.4</b>	<b>2.6</b>

(a) The quality of the data reported for Indigenous status in emergency departments has not been formally assessed—therefore, caution should be exercised when interpreting these data. See the data quality summary for more information

(b) Includes records for which the Indigenous status was not reported.

(c) Presentation rates were directly age-standardised using 5-year age groups, up to 65 and over. Therefore, standardised rates in this table are not directly comparable with standardised rates that use 5 year age groups up to 85 and over, presented elsewhere in this report.

(d) The presentation rate ratio is equal to the presentation rate for Indigenous Australians divided by the presentation rate for other Australians.

Note: See appendixes A and B for more information on terminology, data limitations, and methods.

### Where to go for more information

Information on waiting times for ED presentations by Indigenous status is available in Chapter 4.

### 3.3 How did emergency department use vary by remoteness area?

In 2017–18, 63% of ED presentations were reported for people living in *Major cities*—who make up about 71% of the Australian population, with about 289 presentations per 1,000 people (Table 3.3).

People living in *Remote* and *Very remote* areas (who make up about 2% of the population) accounted for more than 3% of presentations, with about 554 and 435 presentations per 1,000 people, respectively.

For people living in *Major cities*, 54% of presentations were assigned to the 3 most urgent triage categories (*Resuscitation*, *Emergency*, and *Urgent*), compared with 37% of presentations for people living in *Remote* areas.

The information presented in Table 3.3 is based on the remoteness area of the patient's usual residence, and this may differ from the remoteness area of the hospital.

The presentations rates presented in Table 3.3 should be interpreted with caution as the scope of the NAPEDC NMDS is restricted to formal emergency departments, and therefore does not include all emergency department activity. Coverage of the NNAPEDCD is likely to be lowest in *Remote* and *Very remote* areas. For 2014–15, an approximate estimate of coverage by remoteness area of the hospital ranged from 100% in *Major Cities* to 18% in *Very remote* areas (AIHW 2015b).

In addition, caution should be used when comparing the data presented here with previous reports. The remoteness area information for 2017–18 are based on the ABS's ASGS 2016 classification (ABS 2016), whereas the remoteness area information reported for 2013–14 to 2016–17 were based on the ABS's ASGS 2011 classification (ABS 2011).

### 3.4 How did emergency department use vary by socioeconomic status?

This section presents information on the number of ED presentations by socioeconomic status (SES) of area of usual residence. The information is presented by SES quintiles (fifths). The lowest SES group represents the areas containing the 20% of the population with the most disadvantage and the highest SES group represents the areas containing the 20% of the population with the least disadvantage.

In 2017–18, almost 24% of ED presentations were reported for patients living in areas classified as being the lowest (most disadvantaged) SES group (Table 3.4), with about 382 presentations per 1,000 people.

The smallest number of presentations was reported for patients living in areas classified as being the highest (least disadvantaged) SES group (14% of the total), with about 234 presentations per 1,000 people.

Patients living in areas classified as being in the lowest two SES groups made up more than half of all non-urgent triage category presentations in emergency departments.

The presentations rates presented in Table 3.4 should be interpreted with caution as the scope of the NAPEDC NMDS is restricted to formal emergency departments, and therefore does not include all emergency department activity.

**Table 3.3: Emergency department presentations by triage category and remoteness of patient's area of usual residence, 2017–18**

Triage category	Remoteness of area of usual residence					Total <sup>(a)</sup>
	Major cities	Inner regional	Outer regional	Remote	Very remote	
<b>Presentations</b>						
Resuscitation	39,852	10,320	6,318	927	671	60,642
Emergency	709,802	199,328	89,965	15,342	8,990	1,043,705
Urgent	1,991,173	613,957	269,007	46,370	25,155	3,002,488
Semi-urgent	1,964,451	723,371	336,584	76,956	36,176	3,201,449
Non-urgent	346,508	189,197	112,557	28,303	11,580	705,993
<b>Total<sup>(b)</sup></b>	<b>5,053,101</b>	<b>1,737,264</b>	<b>814,991</b>	<b>167,991</b>	<b>82,593</b>	<b>8,017,492</b>
<b>Presentations per 1,000 population<sup>(c)</sup></b>						
Resuscitation	2.2	2.2	2.9	3.0	3.6	2.4
Emergency	40.0	42.0	40.6	49.8	48.9	41.3
Urgent	113.1	137.0	127.3	152.1	133.9	121.1
Semi-urgent	113.8	169.3	164.8	254.7	187.6	132.4
Non-urgent	20.2	44.3	53.9	94.4	61.1	29.3
<b>Total<sup>(b)</sup></b>	<b>289.4</b>	<b>395.1</b>	<b>389.9</b>	<b>554.4</b>	<b>435.2</b>	<b>326.5</b>
<b>Presentation rate ratio<sup>(d)</sup></b>	<b>0.9</b>	<b>1.2</b>	<b>1.2</b>	<b>1.7</b>	<b>1.4</b>	<b>..</b>

(a) Includes about 161,000 presentations for which the remoteness area was unknown.

(b) Includes about 3,200 presentations for which the triage category was not reported.

(c) Presentation rates are directly age-standardised using populations by remoteness areas, which do not include persons with unknown or migratory area of usual residence. Therefore, the total standardised rates in this table differ from national rates presented elsewhere in this report.

(d) The presentation rate ratio is equal to the presentation rate for the remoteness area divided by the presentation rate for Australia.

Note: See appendixes A and B for more information on terminology, data limitations, and methods.

**Table 3.4: Emergency department presentations by triage category and socioeconomic status of patient's area of usual residence, 2017–18**

Triage category	Socioeconomic status of area of usual residence					Total <sup>(a)</sup>
	1—lowest	2	3	4	5—highest	
<b>Presentations</b>						
Resuscitation	14,662	12,780	12,327	9,839	8,470	60,642
Emergency	245,473	221,042	221,005	183,492	152,236	1,043,705
Urgent	702,522	644,877	637,919	535,503	424,284	3,002,488
Semi-urgent	741,550	728,096	675,115	533,833	458,243	3,201,449
Non-urgent	185,103	180,344	135,429	98,828	88,247	705,993
<b>Total<sup>(b)</sup></b>	<b>1,890,326</b>	<b>1,787,953</b>	<b>1,682,474</b>	<b>1,361,809</b>	<b>1,131,737</b>	<b>8,017,492</b>
<b>Presentations per 1,000 population<sup>(c)</sup></b>						
Resuscitation	2.8	2.4	2.4	2.0	1.7	2.4
Emergency	47.9	42.9	43.8	37.2	30.8	41.3
Urgent	140.2	128.8	129.1	109.5	87.0	121.1
Semi-urgent	153.0	150.7	140.2	110.8	95.5	132.5
Non-urgent	38.3	37.4	28.2	20.5	18.4	29.3
<b>Total<sup>(b)</sup></b>	<b>382.4</b>	<b>362.5</b>	<b>343.9</b>	<b>280.1</b>	<b>233.5</b>	<b>326.7</b>
<b>Presentation rate ratio<sup>(d)</sup></b>	<b>1.2</b>	<b>1.1</b>	<b>1.1</b>	<b>0.9</b>	<b>0.7</b>	<b>..</b>

(a) Includes about 163,000 presentations for which the SEIFA category was not reported.

(b) Includes about 3,200 presentations for which the triage category was not reported.

(c) Presentation rates are directly age-standardised using populations by socioeconomic status groups, which do not include persons in areas for which the socioeconomic status could not be determined. Therefore, the total standardised rates in this table differ from national rates presented elsewhere in this report.

(d) The presentation rate ratio is equal to the presentation rate for the socioeconomic quintile divided by the presentation rate for Australia.

Note: See appendixes A and B for more information on terminology, data limitations, and methods.

### Where to go for more information

Information on waiting times for ED presentations by remoteness of area of usual residence is available in Chapter 5.

## 4 How and why were services accessed?

This chapter presents information on how and why patients presented to emergency departments. This section includes:

- the type of visit—whether for emergency treatment or another reason
- the urgency of care—the triage category indicates the urgency of the patient's need for medical and nursing care
- the mode of arrival—whether by ambulance, or another form of transport
- the principal diagnosis—the diagnosis chiefly responsible for occasioning the presentation to the emergency department
- the episode end status—including whether the patient was subsequently admitted.

### 4.1 What types of visit occur in emergency departments?

The reason that a patient presents to the ED is described by the **type of visit** (Table 4.1), which can be reported as:

- *Emergency presentation*—attendance for an actual or suspected condition that is sufficiently serious to require acute unscheduled care
- *Return visit, planned*—presentation is planned, and is a result of a previous ED presentation or return visit
- *Pre-arranged admission*—a patient who presents at the ED for either clerical, nursing, or medical processes to be undertaken, and admission has been pre-arranged by the referring medical officer and a bed allocated
- *Patient in transit*—the ED is responsible for care and treatment of a patient awaiting transport to another facility
- *Dead on arrival*—a patient who is dead on arrival and an emergency department clinician certifies the death of the patient.

**Table 4.1: Emergency department presentations by type of visit, states and territories, 2017–18**

Type of visit	NSW	Vic <sup>(a)</sup>	Qld <sup>(a)</sup>	WA <sup>(a)(b)</sup>	SA <sup>(c)</sup>	Tas	ACT	NT	Total
Emergency presentation	2,782,669	1,780,224	1,497,574	849,135	501,751	159,010	146,358	156,176	7,872,897
Return visit, planned	82,131	12,141	10,093	7,136	4,525	2,949	1,383	2,096	122,454
Pre-arranged admission	12,254	451	4,422	397	112	0	29	0	17,665
Patient in transit	331	1	..	..	0	0	0	26	358
Dead on arrival	2,846	89	29	..	..	427	8	3	3,402
Not reported	56	0	0	39	106	55	0	460	716
<b>Total</b>	<b>2,880,287</b>	<b>1,792,906</b>	<b>1,512,118</b>	<b>856,707</b>	<b>506,494</b>	<b>162,441</b>	<b>147,778</b>	<b>158,761</b>	<b>8,017,492</b>

(a) Victoria, Queensland and Western Australia provided 2017–18 data for the NNAPEDCD using the NAPEDC NBEDS, for which *Patient in transit* is not a valid category. Patients previously assigned to this category are included in the category *Emergency presentation*. In addition, for the NAPEDC NBEDS, patients who were *Dead on arrival*, but for which resuscitation or other clinical care is attempted are included in the category *Emergency presentation*.

(b) Western Australian emergency departments only occasionally manage and report patients who are *Dead on arrival*, because the majority of these patients are taken directly to the state morgue. In Western Australia, some hospitals reported all presentations as *Emergency presentation*.

(c) For South Australia, patients who are *Dead on arrival* are not managed or reported by emergency departments.

Note: See appendixes A and B for more information on terminology, data limitations, and methods.

## 4.2 How urgently was care required?

The **triage category** indicates the urgency of the patient's need for medical and nursing care. It is usually assigned by a member of the clinical assessment team at, or shortly after, the time of presentation to the emergency department. The triage category assigned is in response to the question: 'This patient should wait for medical assessment and treatment no longer than ...?'

The Australasian Triage Scale (ATS) was developed to:

'... ensure that patients presenting to emergency departments (EDs) are treated in the order of their clinical urgency and allocated to the most appropriate assessment and treatment area'. (ACEM 2016)

The ATS has 5 categories that incorporate the time by which the patient should receive care. The categories are:

- *Resuscitation* (ATS 1): immediate (within seconds)
- *Emergency* (ATS 2): within 10 minutes
- *Urgent* (ATS 3): within 30 minutes
- *Semi-urgent* (ATS 4): within 60 minutes
- *Non-urgent* (ATS 5): within 120 minutes. (METeOR ID 646659).

Of the 8.0 million ED presentations in 2017–18:

- 0.8% were assigned a triage category of *Resuscitation*
- 13.0% were assigned to *Emergency*
- 37.4% were assigned to *Urgent*
- 39.9% were assigned to *Semi-urgent*
- 8.8% were assigned to *Non-urgent* (Table 4.2).

Since 2013–14, the proportion of presentations assigned a triage category of *Urgent* has increased, and the proportions assigned the triage categories of *Semi-urgent* or *Non-urgent* have decreased.

The proportion of patients who were subsequently admitted varied by triage category between states and territories, indicating that the assignment of triage categories may not be comparable (see Appendix A for more information).

### How did people arrive?

The **arrival mode—transport** indicates the mode of transport by which the patient arrived at the emergency department.

In 2017–18, the majority of presentations to emergency departments (74%) had an arrival mode of *Other*—indicating that the patient either walked into the ED, or came by private transport, public transport, community transport, or taxi. About 25% arrived by *Ambulance, air ambulance or helicopter rescue service* (Table 4.2).

About 83% of *Resuscitation* patients (who need to receive care immediately) arrived by *Ambulance, air ambulance or helicopter rescue service*, compared with fewer than 4% of *Non-urgent* patients (who need to receive care within 2 hours).

## Age group of patient

The proportion of patients assigned to each triage category varied markedly by age group. For example, the proportion of patients assigned to the 3 most urgent triage categories was:

- about half (51%) for all patients (Table 4.3)
- fewer than 40% for patients aged 5–14 (37% for males and 36% for females)
- more than 67% for patients aged 95 and over (67% for males and 68% for females).

### Where to go for more information

Information on waiting times for ED presentations by triage category is available in:

- Chapter 5
- Tables S5.1 and S5.2: 'Emergency presentation statistics, by public hospital peer group and triage category, 2017–18' (which accompany this report online).

**Table 4.2: Emergency department presentations, by triage category and arrival mode, states and territories, 2017–18**

<b>Triage category and arrival mode</b>	<b>NSW</b>	<b>Vic</b>	<b>Qld</b>	<b>WA</b>	<b>SA</b>	<b>Tas</b>	<b>ACT</b>	<b>NT</b>	<b>Total</b>
<b>Resuscitation</b>									
Ambulance, air ambulance or helicopter rescue service	16,148	8,156	11,724	5,942	5,861	1,008	665	845	50,349
Police/correctional services vehicle	104	40	177	55	30	5	2	24	437
Other <sup>(a)</sup>	3,158	1,500	2,249	1,013	1,111	76	85	553	9,745
Not reported	64	0	0	5	42	0	0	0	111
<i>Total</i>	<i>19,474</i>	<i>9,696</i>	<i>14,150</i>	<i>7,015</i>	<i>7,044</i>	<i>1,089</i>	<i>752</i>	<i>1,422</i>	<i>60,642</i>
<b>Emergency</b>									
Ambulance, air ambulance or helicopter rescue service	148,405	96,255	122,022	39,599	36,246	9,402	5,518	7,385	464,832
Police/correctional services vehicle	2,019	1,931	3,340	1,767	570	189	383	512	10,711
Other <sup>(a)</sup>	204,424	112,548	111,773	74,243	34,934	6,463	8,836	13,798	567,019
Not reported	572	0	0	86	474	11	0	0	1,143
<i>Total</i>	<i>355,420</i>	<i>210,734</i>	<i>237,135</i>	<i>115,695</i>	<i>72,224</i>	<i>16,065</i>	<i>14,737</i>	<i>21,695</i>	<i>1,043,705</i>
<b>Urgent</b>									
Ambulance, air ambulance or helicopter rescue service	298,197	226,445	278,235	74,115	78,558	22,646	16,824	12,500	1,007,520
Police/correctional services vehicle	4,606	3,322	6,889	4,586	2,079	913	640	1,323	24,358
Other <sup>(a)</sup>	662,509	446,534	407,314	216,900	121,047	34,244	44,642	35,156	1,968,346
Not reported	732	0	0	121	1,366	45	0	0	2,264
<i>Total</i>	<i>966,044</i>	<i>676,301</i>	<i>692,438</i>	<i>295,722</i>	<i>203,050</i>	<i>57,848</i>	<i>62,106</i>	<i>48,979</i>	<i>3,002,488</i>
<b>Semi-urgent</b>									
Ambulance, air ambulance or helicopter rescue service	158,174	109,381	97,125	42,652	34,143	11,822	6,394	8,618	468,309
Police/correctional services vehicle	3,252	998	2,588	3,095	1,580	486	145	1,952	14,096
Other <sup>(a)</sup>	1,020,422	638,266	400,250	333,712	153,077	58,331	51,460	61,548	2,717,066
Not reported	395	0	0	105	1,392	86	0	0	1,978
<i>Total</i>	<i>1,182,243</i>	<i>748,645</i>	<i>499,963</i>	<i>379,564</i>	<i>190,192</i>	<i>70,725</i>	<i>57,999</i>	<i>72,118</i>	<i>3,201,449</i>

(continued)

**Table 4.2 (continued): Emergency department presentations, by triage category and arrival mode, states and territories, 2017–18**

<b>Triage category and arrival mode</b>	<b>NSW</b>	<b>Vic</b>	<b>Qld</b>	<b>WA</b>	<b>SA</b>	<b>Tas</b>	<b>ACT</b>	<b>NT</b>	<b>Total</b>
<b>Non-urgent</b>									
Ambulance, air ambulance or helicopter rescue service	11,767	3,710	4,639	1,778	1,998	616	328	693	25,529
Police/correctional services vehicle	1,960	284	777	571	543	2,050	31	318	6,534
Other <sup>(a)</sup>	340,625	143,448	63,016	56,346	31,014	13,596	11,825	13,536	673,406
Not reported	63	0	0	7	429	25	0	0	524
<i>Total</i>	<i>354,415</i>	<i>147,442</i>	<i>68,432</i>	<i>58,702</i>	<i>33,984</i>	<i>16,287</i>	<i>12,184</i>	<i>14,547</i>	<i>705,993</i>
<b>All triage categories<sup>(b)</sup></b>									
<b>Ambulance, air ambulance or helicopter rescue service</b>	<b>632,854</b>	<b>444,008</b>	<b>513,745</b>	<b>164,086</b>	<b>156,806</b>	<b>45,502</b>	<b>29,729</b>	<b>30,041</b>	<b>2,016,771</b>
<b>Police/correctional services vehicle</b>	<b>11,951</b>	<b>6,576</b>	<b>13,771</b>	<b>10,074</b>	<b>4,802</b>	<b>3,645</b>	<b>1,201</b>	<b>4,129</b>	<b>56,149</b>
<b>Other<sup>(a)</sup></b>	<b>2,233,632</b>	<b>1,342,322</b>	<b>984,602</b>	<b>682,222</b>	<b>341,183</b>	<b>113,127</b>	<b>116,848</b>	<b>124,591</b>	<b>5,938,527</b>
<b>Not reported</b>	<b>1,850</b>	<b>0</b>	<b>0</b>	<b>325</b>	<b>3,703</b>	<b>167</b>	<b>0</b>	<b>0</b>	<b>6,045</b>
<b>Total</b>	<b>2,880,287</b>	<b>1,792,906</b>	<b>1,512,118</b>	<b>856,707</b>	<b>506,494</b>	<b>162,441</b>	<b>147,778</b>	<b>158,761</b>	<b>8,017,492</b>

(a) Includes presentations where patients either walked into the emergency department, or came by private transport, public transport, community transport, or taxi.

(b) Includes about 3,200 presentations for which the triage category was not reported.

Note: See appendixes A and B for more information on terminology, data limitations, and methods.

**Table 4.3: Emergency department presentations by age group, sex and triage category, public hospital emergency departments, 2017–18**

Age group	Resuscitation		Emergency		Urgent		Semi-urgent		Non-urgent		Total
	Presentations	Proportion (%)	Presentations	Proportion (%)	Presentations	Proportion (%)	Presentations	Proportion (%)	Presentations	Proportion (%)	
<b>Males</b>											
0–4	2,171	0.4	58,301	11.6	197,407	39.4	220,135	43.9	23,413	4.7	501,585
5–14	1,383	0.3	30,158	6.7	135,746	30.4	233,347	52.2	46,139	10.3	446,895
15–24	3,653	0.8	49,367	10.1	149,971	30.8	222,261	45.7	61,145	12.6	486,597
25–34	3,752	0.8	54,400	11.2	157,661	32.4	211,313	43.5	58,897	12.1	486,266
35–44	3,678	0.9	59,285	13.7	145,884	33.7	173,277	40.1	49,979	11.6	432,352
45–54	4,328	1.0	70,747	16.7	147,314	34.7	156,128	36.8	45,762	10.8	424,516
55–64	4,830	1.2	74,637	19.0	143,898	36.6	131,271	33.4	38,177	9.7	393,013
65–74	5,032	1.3	75,342	19.9	150,559	39.8	115,091	30.4	32,118	8.5	378,306
75–84	4,295	1.4	59,075	19.3	134,220	43.9	88,475	28.9	19,755	6.5	305,946
85–89	1,658	1.6	19,343	18.2	49,090	46.2	31,155	29.3	5,000	4.7	106,285
90–94	777	1.6	8,424	17.4	23,198	47.9	14,162	29.2	1,868	3.9	48,439
95+	214	2.0	1,812	17.0	5,139	48.2	3,150	29.5	337	3.2	10,660
<i>Total<sup>(a)</sup></i>	<i>35,830</i>	<i>0.9</i>	<i>560,944</i>	<i>14.0</i>	<i>1,440,138</i>	<i>35.8</i>	<i>1,599,791</i>	<i>39.8</i>	<i>382,613</i>	<i>9.5</i>	<i>4,021,077</i>

*(continued)*

**Table 4.3 (continued): Emergency department presentations by age group, sex and triage category, public hospital emergency departments, 2017–18**

Age group	Resuscitation		Emergency		Urgent		Semi-urgent		Non-urgent		Total
	Presentations	Proportion (%)	Presentations	Proportion (%)	Presentations	Proportion (%)	Presentations	Proportion (%)	Presentations	Proportion (%)	
<b>Females</b>											
0–4	1,558	0.4	38,516	9.9	151,942	38.9	178,853	45.8	19,708	5.0	390,705
5–14	983	0.3	18,892	5.3	106,563	29.9	192,494	54.0	37,598	10.5	356,626
15–24	2,289	0.4	47,846	8.5	215,569	38.4	244,531	43.6	50,523	9.0	560,996
25–34	2,540	0.4	52,228	8.8	234,274	39.5	249,390	42.0	55,123	9.3	593,821
35–44	2,213	0.5	50,963	11.5	173,226	39.0	176,138	39.7	40,944	9.2	443,650
45–54	2,549	0.6	61,196	15.1	153,102	37.8	151,252	37.3	36,827	9.1	405,102
55–64	2,709	0.7	60,106	16.5	137,367	37.8	130,117	35.8	32,938	9.1	363,363
65–74	3,058	0.9	60,241	17.6	139,695	40.9	113,235	33.2	25,224	7.4	341,559
75–84	3,574	1.1	54,483	17.5	140,374	45.0	96,853	31.0	16,835	5.4	312,205
85–89	1,759	1.3	21,931	16.8	61,947	47.5	39,663	30.4	4,968	3.8	130,302
90–94	1,116	1.5	12,495	16.9	36,315	49.0	22,086	29.8	2,096	2.8	74,131
95+	426	1.8	3,775	16.2	11,734	50.4	6,815	29.3	532	2.3	23,288
<i>Total<sup>(a)</sup></i>	<i>24,796</i>	<i>0.6</i>	<i>482,697</i>	<i>12.1</i>	<i>1,562,133</i>	<i>39.1</i>	<i>1,601,442</i>	<i>40.1</i>	<i>323,328</i>	<i>8.1</i>	<i>3,995,848</i>
<b>All persons</b>											
<b>Total<sup>(a)(b)</sup></b>	<b>60,642</b>	<b>0.8</b>	<b>1,043,705</b>	<b>13.0</b>	<b>3,002,488</b>	<b>37.4</b>	<b>3,201,449</b>	<b>39.9</b>	<b>705,993</b>	<b>8.8</b>	<b>8,017,492</b>

(a) Includes records for which the age of the patient could not be calculated.

(b) Includes records for which the sex of the patient was Indeterminate/not stated or Not reported.

### 4.3 When did people present to the emergency department?

The time of presentation at the ED is defined as the earliest occasion of being registered clerically or triaged.

In 2017–18, there were more presentations on Mondays than on other days (Table 4.4).

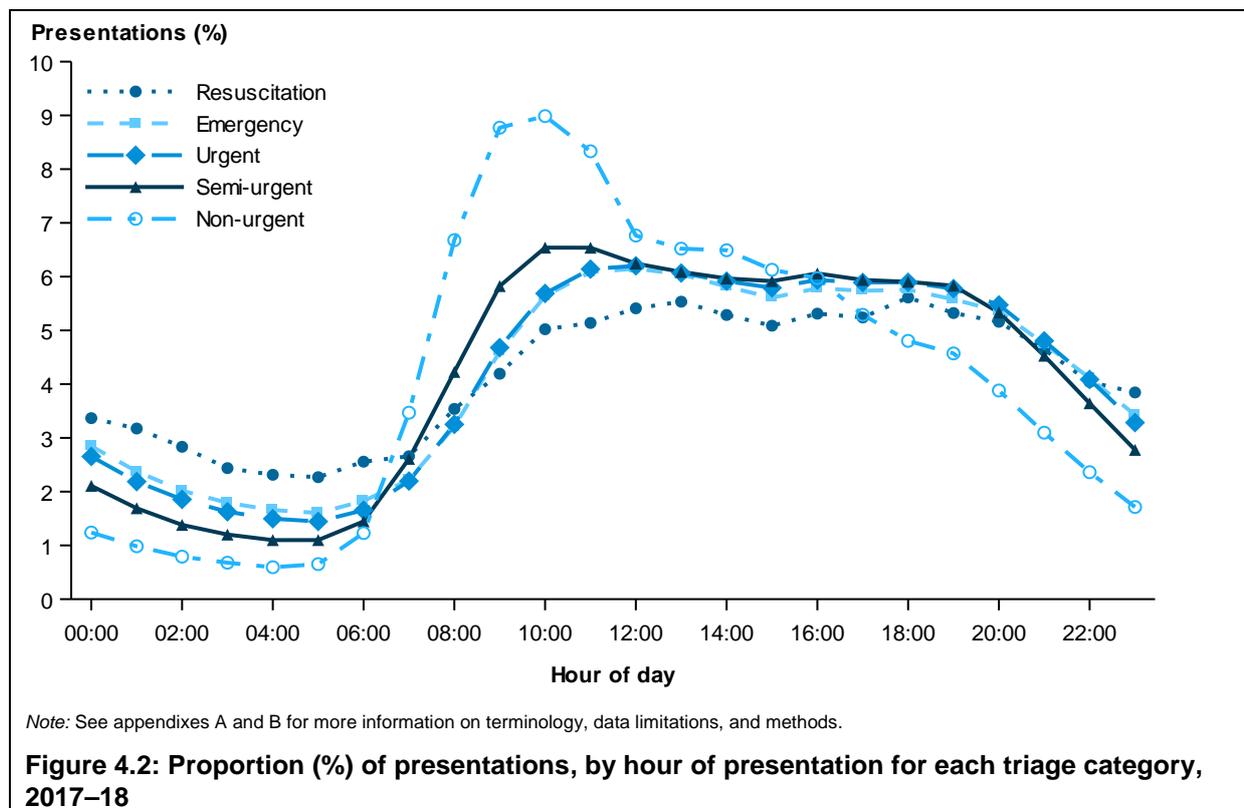
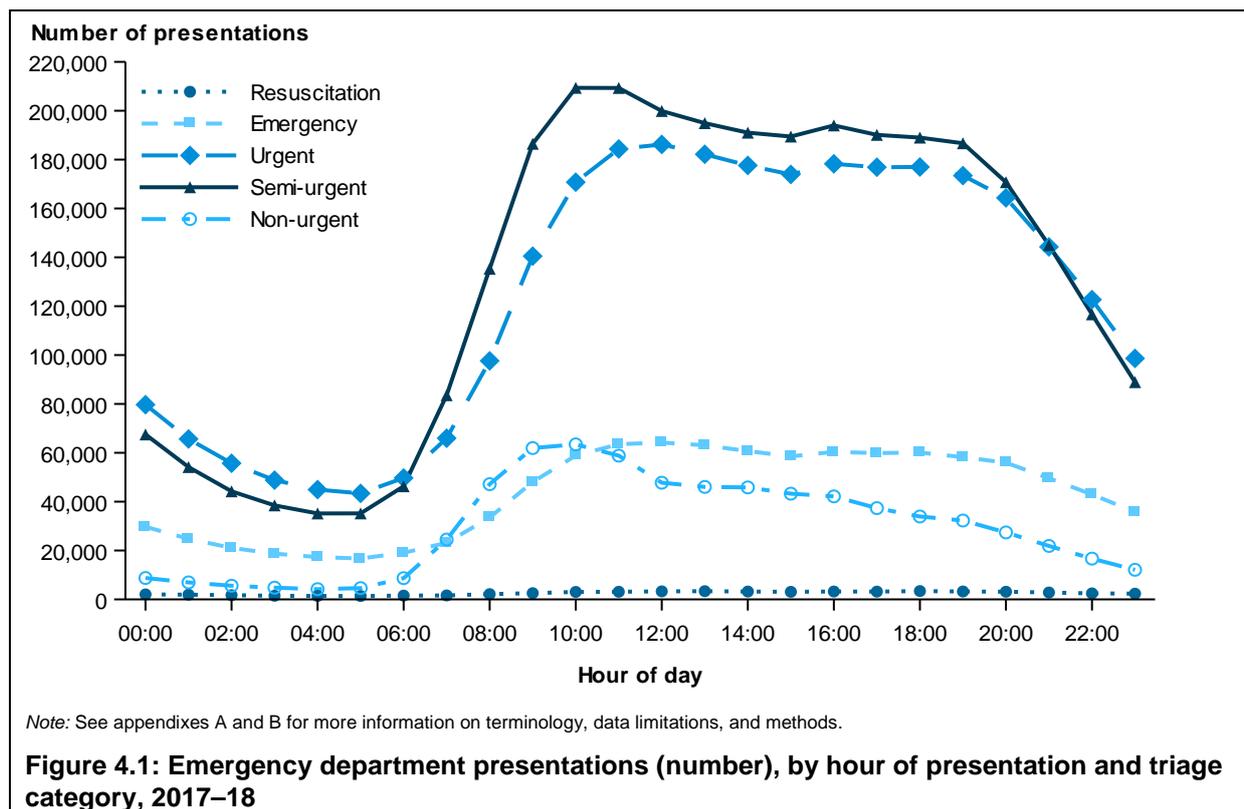
Emergency department resources are used unevenly throughout the average day, with more than two-thirds (70%) of ED presentations occurring between 8 am and 8 pm (Figure 4.1).

*Resuscitation* presentations are more evenly distributed throughout the day than other triage categories (Figure 4.2). The highest proportions of *Non-urgent* presentations occurred between 8 am and 11 am.

**Table 4.4: Proportion (%) of presentations by day of week and time of presentation, 2017–18**

Time of presentation	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Total
Midnight to 1:59 am	4.9	4.0	4.0	4.0	4.1	4.1	4.7	4.3
2 am to 3:59 am	3.5	2.8	2.8	2.8	2.8	2.9	3.3	3.0
4 am to 5:59 am	2.8	2.5	2.4	2.5	2.4	2.5	2.7	2.5
6 am to 7:59 am	4.1	4.1	4.1	4.0	4.0	4.0	4.0	4.0
8 am to 9:59 am	9.4	10.1	9.6	9.4	9.3	9.3	8.9	9.4
10 am to 11:59 am	12.9	13.3	12.8	12.6	12.6	12.7	12.5	12.8
Midday to 1:59 pm	12.3	12.4	12.2	12.2	12.3	12.4	12.6	12.4
2 pm to 3:59 pm	11.9	11.7	11.6	11.6	11.7	11.8	12.4	11.8
4 pm to 5:59 pm	11.3	11.8	12.0	12.0	11.9	12.0	11.7	11.8
6 pm to 7:59 pm	10.9	11.5	12.0	11.9	11.8	11.3	10.8	11.4
8 pm to 9:59 pm	9.4	9.6	10.1	10.2	10.1	9.8	9.5	9.8
10 pm to 11:59 pm	6.5	6.2	6.6	6.8	6.8	7.2	7.1	6.7
<b>Total</b>	<b>14.9</b>	<b>15.1</b>	<b>14.1</b>	<b>13.9</b>	<b>13.8</b>	<b>13.9</b>	<b>14.4</b>	<b>100.0</b>
<b>Presentations</b>	<b>1,193,628</b>	<b>1,213,911</b>	<b>1,131,724</b>	<b>1,111,295</b>	<b>1,102,505</b>	<b>1,110,632</b>	<b>1,153,797</b>	<b>8,017,492</b>

Note: See appendixes A and B for more information on terminology, data limitations, and methods.



## 4.4 Why did people receive care?

This section presents information on the reason for the ED presentation, described by the diagnoses reported for presentations.

ICD-10-AM diagnoses are presented using:

- principal diagnosis chapters, by state and territory, triage category, admission status and age group
- the 20 most common ICD-10-AM principal diagnoses at the 3-character level, by state and territory, and for patients who were subsequently admitted, by triage category
- the 5 most common ICD-10-AM principal diagnoses at the 3-character level, by age group.

For 2017–18, states and territories provided ED diagnosis information in several classifications, including SNOMED CT-AU, International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM), and various editions of ICD-10-AM (for more information, see appendixes A and B). For the purpose of reporting principal diagnoses, the AIHW mapped the provided information to ICD-10-AM 10th edition codes, where necessary (see Appendix B for more information).

The quality of the information provided for ED principal diagnosis has not been fully assessed. As a result, these data should be interpreted with caution (see Appendix A for more information on data quality).

### Principal diagnosis

The principal diagnosis is the diagnosis established at the conclusion of the patient's attendance in an emergency department to be mainly responsible for occasioning the attendance.

### ICD-10-AM chapters

The *International Statistical Classification of Diseases and Related Health Problems, 10th Revision, Australian Modification* (ICD-10-AM) provides a systematic coding scheme to describe diseases and causes of injury (ACCD 2018).

In 2017–18, *Injury, poisoning and certain other consequences of external causes* was the most common ICD-10-AM principal diagnosis chapter reported (accounting for 25% of presentations, followed by *Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified* (21%) (Table 4.5).

### Triage category

In 2017–18, *Injury, poisoning and certain other consequences of external causes* was the most common ICD-10-AM principal diagnosis chapter reported for presentations with a triage category of *Resuscitation* (26.4%), *Semi-urgent* (32.1%), or *Non-urgent* (35.7%) (Table 4.6).

*Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified* was the most common ICD-10-AM principal diagnosis chapter reported for patients with triage categories of *Emergency* (32.8%) or *Urgent* (26.0%).

The proportion of presentations that were reported for *Diseases of the circulatory system* varied by triage category, ranging from 24% for *Resuscitation* presentations to less than 1% for *Non-urgent* presentations.

## Admission status

Emergency department principal diagnoses also varied depending on whether the patient was subsequently admitted to the same hospital or not.

In 2017–18, 31% of ED presentations were subsequently admitted to the hospital (see Section 4.5).

For patients who were subsequently admitted to hospital, the most common ICD-10-AM principal diagnosis chapters were *Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified* (27.5%), *Injury, poisoning and certain other consequences of external causes* (14.1%), and *Diseases of the respiratory system* (10.4%) (Table 4.7).

About 70% of patients who presented with a principal diagnosis in the chapter *Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism* were subsequently admitted, as were 65% of those with a principal diagnosis in the chapters *Diseases of the circulatory system* or *Endocrine, nutritional and metabolic diseases*.

## Age group

Emergency department principal diagnoses also varied depending on the patient's age. For example:

- 43.2% of patients aged 5–14 had a principal diagnosis of *Injury, poisoning and certain other consequences of external causes* (Table 4.8)
- the proportion of patients with a principal diagnosis in the chapter *Diseases of the circulatory system* increased with age, ranging from 0.3% for patients aged 0–4 to 11.5% for those aged between 75 and 94.

## Most common principal diagnoses

In 2017–18, the 20 most common 3-character ICD-10-AM principal diagnoses accounted for about 31% of principal diagnoses reported. The most common 3-character ICD-10-AM principal diagnoses were *Abdominal and pelvic pain* (R10, 4.4%), followed by *Pain in throat and chest* (R07, 3.8%) (Table 4.9). This is consistent with principal diagnoses reported in previous years (where data were available).

## Admission status

The 20 most common principal diagnoses varied depending on whether the patient was subsequently admitted to the same hospital or not. For example, *Angina pectoris* (I20), *Heart failure* (I50), and *Acute myocardial infarction* (I21) were in the top 20 principal diagnoses for patients who were subsequently admitted (Table 4.10), but did not appear in the top 20 principal diagnoses overall (Table 4.9).

## Age group

For patients aged 0–9, 3 of the 5 most common principal diagnoses related to respiratory conditions (Table 4.11).

*Pain in throat and chest* (R07) was one of the 5 most common principal diagnoses for all age groups from 20 to 29 and over. *Dorsalgia* (M54, back pain) was one of the 5 most common principal diagnoses for all age groups between 30 and 79.

### **Where to go for more information**

Information on the principal diagnoses provided for ED presentations, is available in appendixes A and B. Information on principal diagnosis by major diagnostic block is available in tables S4.1–S4.3 which accompany this report online for:

- major diagnostic block and states and territories
- major diagnostic block and triage category
- major diagnostic block and admission status.

**Table 4.5: Emergency department presentations<sup>(a)</sup> by principal diagnosis in ICD-10-AM<sup>(b)</sup> chapters, states and territories, 2017–18**

Principal diagnosis	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
A00–B99 Certain infectious and parasitic diseases	143,311	86,432	81,560	48,393	23,130	7,137	9,163	8,204	407,330
C00–D48 Neoplasms	11,202	5,510	6,308	2,565	1,542	744	385	287	28,543
D50–D89 Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism	13,536	11,945	6,939	3,917	2,768	759	605	362	40,831
E00–E90 Endocrine, nutritional and metabolic diseases	25,488	15,341	13,667	6,836	5,192	1,653	1,349	3,288	72,814
F00–F99 Mental and behavioural disorders	95,090	57,527	57,022	35,634	24,350	5,817	4,626	6,919	286,985
G00–G99 Diseases of the nervous system	29,749	32,133	23,943	12,783	8,545	3,635	2,494	2,064	115,346
H00–H59 Diseases of the eye and adnexa	48,882	32,820	14,790	9,943	4,922	1,384	1,905	2,270	116,916
H60–H95 Diseases of the ear and mastoid process	34,710	24,189	18,329	10,184	4,899	1,565	1,773	2,596	98,245
I00–I99 Diseases of the circulatory system	103,134	79,989	91,247	33,046	18,836	7,620	5,038	4,380	343,290
J00–J99 Diseases of the respiratory system	235,020	131,827	119,194	65,410	39,574	13,004	11,317	14,101	629,447
K00–K93 Diseases of the digestive system	146,704	95,366	81,994	51,168	27,450	9,737	8,136	7,586	428,141
L00–L99 Diseases of the skin and subcutaneous tissue	97,612	53,912	51,694	31,946	14,550	5,064	4,214	9,371	268,363
M00–M99 Diseases of the musculoskeletal system and connective tissue	165,201	80,747	47,465	32,652	22,292	8,164	6,195	10,334	373,050
N00–N99 Diseases of the genitourinary system	108,522	73,860	65,917	35,083	17,288	6,419	6,130	6,550	319,769
O00–O99 Pregnancy, childbirth and the puerperium	29,575	38,540	14,776	10,957	5,730	1,347	1,808	999	103,732
P00–P96 Certain conditions originating in the perinatal period	1,556	4,492	3,222	1,281	625	146	131	117	11,570
Q00–Q99 Congenital malformations, deformations and chromosomal abnormalities	661	335	593	202	298	10	29	22	2,150
R00–R99 Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	668,690	381,764	260,290	144,376	117,437	30,440	30,776	25,218	1,658,991
S00–T98 Injury, poisoning and certain other consequences of external causes	679,280	423,427	414,583	233,975	111,991	44,022	39,981	31,112	1,978,371
U50–Y98 External causes of morbidity and mortality	16,239	187	15,069	1,707	3,611	42	465	1,129	38,449
Z00–Z99 Factors influencing health status and contact with health services	158,699	69,502	44,036	59,028	37,323	13,717	11,258	9,683	403,246
Not reported <sup>(c)</sup>	67,426	93,061	79,480	25,621	14,141	15	0	12,169	291,913
<b>Total</b>	<b>2,880,287</b>	<b>1,792,906</b>	<b>1,512,118</b>	<b>856,707</b>	<b>506,494</b>	<b>162,441</b>	<b>147,778</b>	<b>158,761</b>	<b>8,017,492</b>

(a) Presentations include all types of visit.

(b) Principal diagnoses were reported using various ICD-10-AM editions, ICD-9-CM, and SNOMED CT-AU, and were mapped to ICD-10-AM 3-character diagnosis codes.

(c) Includes about 8,000 records for which the provided ICD-9-CM or SNOMED CT-AU code could not be mapped to an ICD-10-AM diagnosis code.

Note: See appendixes A and B for more information on terminology, data limitations, and methods.

**Table 4.6: Emergency department presentations<sup>(a)</sup> by principal diagnosis in ICD-10-AM<sup>(b)</sup> chapters and triage category, 2017–18**

Principal diagnosis	Triage category					Total
	Resuscitation	Emergency	Urgent	Semi-urgent	Non-urgent	
A00–B99 Certain infectious and parasitic diseases	1,496	34,305	172,125	182,108	17,271	407,330
C00–D48 Neoplasms	263	3,718	14,779	7,747	2,034	28,543
D50–D89 Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism	82	8,304	20,510	9,729	2,202	40,831
E00–E90 Endocrine, nutritional and metabolic diseases	912	15,684	37,714	16,151	2,346	72,814
F00–F99 Mental and behavioural disorders	2,887	41,390	141,662	83,990	17,030	286,985
G00–G99 Diseases of the nervous system	2,483	17,536	63,510	29,148	2,664	115,346
H00–H59 Diseases of the eye and adnexa	56	5,313	33,374	60,016	18,150	116,916
H60–H95 Diseases of the ear and mastoid process	21	1,659	21,447	58,225	16,880	98,245
I00–I99 Diseases of the circulatory system	14,263	146,904	128,947	47,031	6,132	343,290
J00–J99 Diseases of the respiratory system	7,899	126,349	294,486	183,346	17,328	629,447
K00–K93 Diseases of the digestive system	1,012	36,348	212,570	161,540	16,651	428,141
L00–L99 Diseases of the skin and subcutaneous tissue	103	8,120	60,782	160,631	38,705	268,363
M00–M99 Diseases of the musculoskeletal system and connective tissue	280	17,347	105,290	209,641	40,466	373,050
N00–N99 Diseases of the genitourinary system	524	35,259	155,712	116,993	11,268	319,769
O00–O99 Pregnancy, childbirth and the puerperium	341	5,697	44,978	43,750	8,943	103,732
P00–P96 Certain conditions originating in the perinatal period	71	3,886	5,299	2,119	195	11,570
Q00–Q99 Congenital malformations, deformations and chromosomal abnormalities	18	503	951	540	137	2,150
R00–R99 Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	9,418	341,837	782,021	473,850	51,188	1,658,991
S00–T98 Injury, poisoning and certain other consequences of external causes	16,006	157,098	526,605	1,026,775	251,744	1,978,371
U50–Y98 External causes of morbidity and mortality	420	4,442	13,334	15,808	4,444	38,449
Z00–Z99 Factors influencing health status and contact with health services	1,642	22,863	88,749	154,822	134,583	403,246
Not reported <sup>(c)</sup>	445	9,143	77,643	157,489	45,632	291,913
<b>Total</b>	<b>60,642</b>	<b>1,043,705</b>	<b>3,002,488</b>	<b>3,201,449</b>	<b>705,993</b>	<b>8,017,492</b>

(a) Presentations include all types of visit.

(b) Principal diagnoses were reported using various ICD-10-AM editions, ICD-9-CM, and SNOMED-CT-AU and were mapped to ICD-10-AM 3-character diagnosis codes.

(c) Includes about 8,000 records for which the provided ICD-9-CM or SNOMED-CT-AU code could not be mapped to an ICD-10-AM diagnosis code.

Note: See appendixes A and B for more information on terminology, data limitations, and methods.

**Table 4.7: Emergency department presentations<sup>(a)</sup> by principal diagnosis in ICD-10-AM<sup>(b)</sup> chapters, and admission status, 2017–18**

Principal diagnosis		Patient subsequently admitted	Patient not admitted	Total	Proportion admitted (%)
A00–B99	Certain infectious and parasitic diseases	98,947	308,383	407,330	24.3
C00–D48	Neoplasms	18,062	10,481	28,543	63.3
D50–D89	Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism	28,651	12,180	40,831	70.2
E00–E90	Endocrine, nutritional and metabolic diseases	47,551	25,263	72,814	65.3
F00–F99	Mental and behavioural disorders	99,089	187,896	286,985	34.5
G00–G99	Diseases of the nervous system	53,964	61,382	115,346	46.8
H00–H59	Diseases of the eye and adnexa	9,467	107,449	116,916	8.1
H60–H95	Diseases of the ear and mastoid process	10,207	88,038	98,245	10.4
I00–I99	Diseases of the circulatory system	223,218	120,072	343,290	65.0
J00–J99	Diseases of the respiratory system	258,067	371,380	629,447	41.0
K00–K93	Diseases of the digestive system	199,134	229,007	428,141	46.5
L00–L99	Diseases of the skin and subcutaneous tissue	89,478	178,885	268,363	33.3
M00–M99	Diseases of the musculoskeletal system and connective tissue	88,773	284,277	373,050	23.8
N00–N99	Diseases of the genitourinary system	137,004	182,765	319,769	42.8
O00–O99	Pregnancy, childbirth and the puerperium	29,768	73,964	103,732	28.7
P00–P96	Certain conditions originating in the perinatal period	4,356	7,214	11,570	37.6
Q00–Q99	Congenital malformations, deformations and chromosomal abnormalities	854	1,296	2,150	39.7
R00–R99	Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	684,662	974,329	1,658,991	41.3
S00–T98	Injury, poisoning and certain other consequences of external causes	351,915	1,626,456	1,978,371	17.8
U50–Y98	External causes of morbidity and mortality	9,469	28,980	38,449	24.6
Z00–Z99	Factors influencing health status and contact with health services	42,140	361,106	403,246	10.5
	Not reported <sup>(c)</sup>	7,980	283,933	291,913	2.7
<b>Total</b>		<b>2,492,756</b>	<b>5,524,736</b>	<b>8,017,492</b>	<b>31.1</b>

(a) Presentations include all types of visit.

(b) Principal diagnoses were reported using various ICD-10-AM editions, ICD-9-CM, and SNOMED-CT-AU, and were mapped to ICD-10-AM 3-character diagnosis codes.

(c) Includes about 8,000 records for which the provided ICD-9-CM or SNOMED-CT-AU code could not be mapped to an ICD-10-AM diagnosis code.

Note: See appendixes A and B for more information on terminology, data limitations, and methods.

**Table 4.8: Emergency department presentations(a) by age group and principal diagnosis in ICD-10-AM(b) chapters, public hospitals, 2017–18**

Principal diagnosis		0–4	5–14	15–24	25–34	35–44	45–54
A00–B99	Certain infectious and parasitic diseases	142,316	52,837	42,206	42,738	27,507	23,008
C00–D48	Neoplasms	486	387	531	1,109	1,901	3,603
D50–D89	Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism	2,066	2,115	2,022	2,510	3,160	3,926
E00–E90	Endocrine, nutritional and metabolic diseases	4,867	3,993	6,633	6,362	6,783	7,955
F00–F99	Mental and behavioural disorders	805	11,609	63,201	59,037	54,546	42,447
G00–G99	Diseases of the nervous system	3,023	6,392	14,437	18,490	16,625	16,389
H00–H59	Diseases of the eye and adnexa	8,063	7,754	11,236	16,325	15,021	15,715
H60–H95	Diseases of the ear and mastoid process	18,051	17,695	10,176	11,274	10,068	9,787
I00–I99	Diseases of the circulatory system	2,468	6,005	8,127	14,861	23,240	41,089
J00–J99	Diseases of the respiratory system	195,566	66,828	49,195	42,339	36,801	38,424
K00–K93	Diseases of the digestive system	23,474	25,423	47,854	64,392	54,677	54,834
L00–L99	Diseases of the skin and subcutaneous tissue	29,223	25,146	33,326	35,629	32,826	31,877
M00–M99	Diseases of the musculoskeletal system and connective tissue	9,048	28,785	40,115	49,725	50,340	54,763
N00–N99	Diseases of the genitourinary system	15,152	15,962	46,996	58,198	41,414	35,079
O00–O99	Pregnancy, childbirth and the puerperium	163	79	21,796	58,503	22,447	626
P00–P96	Certain conditions originating in the perinatal period	11,171	32	50	55	61	41
Q00–Q99	Congenital malformations, deformations and chromosomal abnormalities	1,013	315	134	129	123	124
R00–R99	Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	152,344	120,214	190,867	200,302	174,371	182,010
S00–T98	Injury, poisoning and certain other consequences of external causes	190,097	346,870	337,410	270,447	208,334	188,870
U50–Y98	External causes of morbidity and mortality	2,119	3,533	7,643	6,015	4,315	3,974
Z00–Z99	Factors influencing health status and contact with health services	40,338	33,750	63,085	69,947	51,378	43,538
	Not reported	40,454	27,823	50,728	51,828	40,112	31,587
<b>Total<sup>(d)</sup></b>		<b>892,307</b>	<b>803,547</b>	<b>1,047,768</b>	<b>1,080,215</b>	<b>876,050</b>	<b>829,666</b>

*(continued)*

**Table 4.8 (continued): Emergency department presentations<sup>(a)</sup> by age group and principal diagnosis in ICD-10-AM<sup>(b)</sup> chapters, public hospitals, 2017–18**

Principal diagnosis		55–64	65–74	75–84	85–94	95+	Total <sup>(c)</sup>
A00–B99	Certain infectious and parasitic diseases	22,894	23,115	19,167	10,611	930	407,330
C00–D48	Neoplasms	5,778	7,271	5,259	2,110	107	28,543
D50–D89	Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism	4,792	7,406	7,663	4,736	434	40,831
E00–E90	Endocrine, nutritional and metabolic diseases	9,128	10,249	10,212	6,120	511	72,814
F00–F99	Mental and behavioural disorders	22,586	13,052	10,933	7,825	850	286,985
G00–G99	Diseases of the nervous system	13,355	11,844	9,756	4,693	339	115,346
H00–H59	Diseases of the eye and adnexa	18,314	13,962	7,681	2,682	163	116,916
H60–H95	Diseases of the ear and mastoid process	8,363	6,999	4,282	1,484	65	98,245
I00–I99	Diseases of the circulatory system	57,718	73,574	71,288	41,432	3,473	343,290
J00–J99	Diseases of the respiratory system	47,032	58,119	57,118	34,499	3,524	629,447
K00–K93	Diseases of the digestive system	49,016	46,731	39,288	20,760	1,688	428,141
L00–L99	Diseases of the skin and subcutaneous tissue	27,947	24,136	17,693	9,705	855	268,363
M00–M99	Diseases of the musculoskeletal system and connective tissue	47,818	42,355	32,683	16,138	1,276	373,050
N00–N99	Diseases of the genitourinary system	30,511	30,852	27,552	16,496	1,557	319,769
O00–O99	Pregnancy, childbirth and the puerperium	49	32	22	14	1	103,732
P00–P96	Certain conditions originating in the perinatal period	52	42	42	21	3	11,570
Q00–Q99	Congenital malformations, deformations and chromosomal abnormalities	87	89	90	40	6	2,150
R00–R99	Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	175,790	180,585	169,520	103,148	9,780	1,658,991
S00–T98	Injury, poisoning and certain other consequences of external causes	155,085	122,599	93,354	58,507	6,689	1,978,371
U50–Y98	External causes of morbidity and mortality	3,102	2,573	2,640	2,275	260	38,449
Z00–Z99	Factors influencing health status and contact with health services	35,504	29,657	22,746	12,070	1,220	403,246
	Not reported	21,510	14,659	9,169	3,795	218	291,913
<b>Total<sup>(d)</sup></b>		<b>756,431</b>	<b>719,901</b>	<b>618,158</b>	<b>359,161</b>	<b>33,949</b>	<b>8,017,492</b>

(a) Presentations include all types of visit.

(b) Principal diagnoses were reported using various ICD-10-AM editions, ICD-9-CM, and SNOMED-CT-AU, and were mapped to ICD-10-AM 3-character diagnosis codes.

(c) Includes 317 presentations for which the age group of the patient was not reported.

(d) Includes about 8,000 records for which the provided ICD-9-CM or SNOMED-CT-AU code could not be mapped to an ICD-10-AM diagnosis code.

Note: See appendixes A and B for more information on terminology, data limitations, and methods.

**Table 4.9: The 20 most common principal diagnoses<sup>(a)</sup> (3-character level) for emergency department presentations<sup>(b)</sup>, states and territories, 2017–18**

Principal diagnosis	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
R10 Abdominal and pelvic pain	130,911	85,365	66,230	33,097	21,319	6,450	7,593	4,892	355,857
R07 Pain in throat and chest	118,691	80,136	36,441	30,673	22,542	6,569	6,671	5,567	307,290
B34 Viral infection of unspecified site	42,553	38,983	36,157	22,716	6,498	2,707	4,348	2,722	156,684
L03 Cellulitis	48,776	23,204	24,349	15,761	6,124	2,445	2,189	5,281	128,129
M54 Dorsalgia	52,975	31,261	10,503	10,325	7,191	3,407	2,072	2,485	120,219
T14 Injury of unspecified body region	83,812	8,510	11,042	4,484	6,175	34	263	594	114,914
A09 Other gastroenteritis and colitis of infectious and unspecified origin	49,918	26,939	17,721	6,041	6,041	1,914	2,673	1,531	112,778
S01 Open wound of head	34,365	24,576	21,087	15,160	7,036	2,205	2,344	2,459	109,232
J06 Acute upper respiratory infections of multiple and unspecified sites	47,573	15,413	19,654	11,059	6,175	2,217	1,452	3,111	106,654
Z53 Persons encountering health services for specific procedures, not carried out	62,712	1,587	1,594	10,849	11,909	5,514	6,555	0	100,720
S61 Open wound of wrist and hand	35,123	23,827	17,467	11,268	6,277	2,960	1,945	1,551	100,418
N39 Other disorders of urinary system	36,087	19,727	20,099	10,463	5,541	2,170	1,932	1,688	97,707
S93 Dislocation, sprain and strain of joints and ligaments at ankle and foot level	26,775	21,153	24,722	11,535	4,667	2,958	2,410	1,321	95,541
S62 Fracture at wrist and hand level	27,834	25,929	17,996	12,919	4,330	1,844	1,784	1,431	94,067
R55 Syncope and collapse	28,150	20,695	19,615	8,396	7,990	2,089	1,417	862	89,214
M79 Other soft tissue disorders, not elsewhere classified	41,661	27,937	5,758	4,371	4,652	1,415	940	545	87,279
R11 Nausea and vomiting	38,173	16,642	14,723	6,983	5,238	1,664	1,844	1,173	86,440
S52 Fracture of forearm	31,138	12,094	19,200	8,880	5,759	1,830	1,752	1,411	82,064
S09 Other and unspecified injuries of head	44,610	11,290	5,693	6,314	5,373	681	1,034	1,654	76,649
R06 Abnormalities of breathing	35,373	18,168	7,747	7,362	4,633	867	703	1,056	75,909
Other diagnoses	1,863,077	1,259,470	1,114,320	608,051	351,024	110,501	95,857	117,427	5,519,727
<b>Total</b>	<b>2,880,287</b>	<b>1,792,906</b>	<b>1,512,118</b>	<b>856,707</b>	<b>506,494</b>	<b>162,441</b>	<b>147,778</b>	<b>158,761</b>	<b>8,017,492</b>

(a) Presentations include all types of visit.

(b) Principal diagnoses were reported using various ICD-10-AM editions, ICD-9-CM, and SNOMED-CT-AU, and were mapped to ICD-10-AM 3-character codes.

Note: See appendixes A and B for more information on terminology, data limitations, and methods.

**Table 4.10: The 20 most common principal diagnoses<sup>(a)</sup> (3-character level) for patients who were subsequently admitted to the hospital<sup>(b)</sup>, by triage category, 2017–18**

Principal diagnosis		Resuscitation	Emergency	Urgent	Semi-urgent	Non-urgent	Total
R10	Abdominal and pelvic pain	159	13,600	90,037	38,042	824	142,666
R07	Pain in throat and chest	501	92,535	37,043	5,934	221	136,238
L03	Cellulitis	51	3,486	20,717	29,522	2,266	56,046
J18	Pneumonia, organism unspecified	1,096	19,441	28,066	6,244	160	55,009
R55	Syncope and collapse	700	9,597	28,829	5,252	94	44,472
I20	Angina pectoris	97	31,258	9,612	870	46	41,883
R06	Abnormalities of breathing	717	13,958	22,158	4,873	121	41,828
R50	Fever of other and unknown origin	168	12,818	19,229	5,448	153	37,817
M54	Dorsalgia	99	2,627	17,378	16,769	530	37,403
N39	Other disorders of urinary system	219	6,019	20,020	9,131	287	35,677
A09	Other gastroenteritis and colitis of infectious and unspecified origin	65	3,307	20,251	11,404	202	35,229
J44	Other chronic obstructive pulmonary disease	1,428	13,416	17,229	2,419	75	34,569
R29	Other symptoms and signs involving the nervous and musculoskeletal systems	213	5,070	18,638	8,649	262	32,834
J45	Asthma	685	12,030	15,465	2,309	39	30,528
I50	Heart failure	769	8,190	15,457	3,568	115	28,099
I48	Atrial fibrillation and flutter	336	15,695	10,483	1,195	63	27,772
R11	Nausea and vomiting	33	2,479	15,500	8,878	246	27,137
N23	Unspecified renal colic	8	4,571	16,901	4,644	91	26,215
I21	Acute myocardial infarction	2,386	16,417	6,145	985	101	26,034
K35	Acute appendicitis	7	1,021	16,785	7,926	141	25,880
	Other diagnoses	35,811	326,086	797,525	379,732	30,213	1,569,420
<b>Total</b>		<b>45,548</b>	<b>613,621</b>	<b>1,243,468</b>	<b>553,794</b>	<b>36,250</b>	<b>2,492,756</b>

(a) Principal diagnoses were reported using various ICD-10-AM editions, ICD-9-CM, and SNOMED-CT-AU, and were mapped to ICD-10-AM 3-character codes.

(b) Presentations include all type of visits, for which the episode end status was *Admitted to this hospital*.

Note: See appendixes A and B for more information on terminology, data limitations, and methods.

**Table 4.11: The 5 most common principal diagnoses<sup>(a)</sup> in 3-character ICD-10-AM<sup>(b)</sup> groupings by age group<sup>(c)</sup>, public hospital emergency departments, 2017–18**

Age group and principal diagnosis		Presentations
<b>0–9</b>		
B34	Viral infection of unspecified site	76,948
J06	Acute upper respiratory infections of multiple and unspecified sites	57,253
J05	Acute obstructive laryngitis [croup] and epiglottitis	39,283
J21	Acute bronchiolitis	36,382
S01	Open wound of head	32,943
	Other diagnoses	649,498
	<i>Total</i>	<i>892,307</i>
<b>10–19</b>		
R10	Abdominal and pelvic pain	45,938
S52	Fracture of forearm	37,060
S62	Fracture at wrist and hand level	26,455
B34	Viral infection of unspecified site	25,187
S01	Open wound of head	22,327
	Other diagnoses	646,580
	<i>Total</i>	<i>803,547</i>
<b>20–29</b>		
R10	Abdominal and pelvic pain	64,928
S93	Dislocation, sprain and strain of joints and ligaments at ankle and foot level	26,805
R07	Pain in throat and chest	26,002
S62	Fracture at wrist and hand level	21,505
S61	Open wound of wrist and hand	20,875
	Other diagnoses	887,653
	<i>Total</i>	<i>1,047,768</i>
<b>30–39</b>		
R10	Abdominal and pelvic pain	66,626
R07	Pain in throat and chest	36,734
S61	Open wound of wrist and hand	21,121
Z53	Persons encountering health services for specific procedures, not carried out	17,956
M54	Dorsalgia	17,824
	Other diagnoses	919,954
	<i>Total</i>	<i>1,080,215</i>
<b>40–49</b>		
R10	Abdominal and pelvic pain	47,160
R07	Pain in throat and chest	44,181
M54	Dorsalgia	18,992
L03	Cellulitis	16,487
S61	Open wound of wrist and hand	15,167
	Other diagnoses	734,063
	<i>Total</i>	<i>876,050</i>

(continued)

**Table 4.11 (continued): The 5 most common principal diagnoses in 3-character ICD-10-AM groupings by age group, public hospital emergency departments, 2017–18**

Age group and principal diagnosis		Presentations
<b>50–59</b>		
R07	Pain in throat and chest	55,232
R10	Abdominal and pelvic pain	37,874
M54	Dorsalgia	20,165
L03	Cellulitis	17,683
S61	Open wound of wrist and hand	12,847
	Other diagnoses	685,865
	<i>Total</i>	<i>829,666</i>
<b>60–69</b>		
R07	Pain in throat and chest	51,339
R10	Abdominal and pelvic pain	29,899
L03	Cellulitis	16,933
M54	Dorsalgia	16,591
I20	Angina pectoris	11,798
	Other diagnoses	629,871
	<i>Total</i>	<i>756,431</i>
<b>70–79</b>		
R07	Pain in throat and chest	42,922
R10	Abdominal and pelvic pain	25,231
L03	Cellulitis	15,499
J44	Other chronic obstructive pulmonary disease	14,494
M54	Dorsalgia	14,039
	Other diagnoses	607,716
	<i>Total</i>	<i>719,901</i>
<b>80–89</b>		
R07	Pain in throat and chest	30,199
R10	Abdominal and pelvic pain	18,374
R55	Syncope and collapse	16,425
R29	Other symptoms and signs involving the nervous and musculoskeletal systems	16,406
J18	Pneumonia, organism unspecified	14,906
	Other diagnoses	521,848
	<i>Total</i>	<i>618,158</i>
<b>90+</b>		
R29	Other symptoms and signs involving the nervous and musculoskeletal systems	22,307
R07	Pain in throat and chest	13,427
J18	Pneumonia, organism unspecified	12,889
R55	Syncope and collapse	12,088
N39	Other disorders of urinary system	11,633
	Other diagnoses	320,732
	<i>Total</i>	<i>393,076</i>

(a) Principal diagnoses were reported using various ICD-10-AM editions, ICD-9-CM, and SNOMED-CT-AU, and were mapped to ICD-10-AM 3-character codes.

(b) Presentations include all type of visits, for which the episode end status was Admitted to this hospital.

(c) Excludes presentations for which the age group of the patient was not reported.

*Note:* See appendixes A and B for more information on terminology, data limitations, and methods.

## 4.5 How was care completed?

Tables 4.12 to 4.15 provide information on how emergency department care was completed.

The **episode end status** describes the status of the patient at the conclusion of the non-admitted patient episode in the emergency department. For the NMDS, the episode end status (METeOR identifier: 616654) can be reported as:

- *Admitted to this hospital (either short stay unit, hospital-in-the-home, or non-emergency department hospital ward)*. The NAPEDC NBEDS category *Transferred for admitted patient care in this hospital* (METeOR identifier: 551305) is considered equivalent to this category.
- *Departed without being admitted or referred to another hospital*
- *Referred to another hospital for admission: emergency department stay completed*
- *Did not wait to be attended by a health care professional*
- *Left at own risk*—the patient left after being attended by a health care professional but before the non-admitted patient emergency department service episode was completed
- *Died in emergency department*
- *Dead on arrival*—a patient who was dead on arrival, and an ED clinician certified the death of the patient
- *Registered, advised of another health care service, and left the emergency department without being attended by a health care professional.*

The **proportion ending in admission** is the proportion of presentations for which the episode end status was reported as *Admitted to this hospital (either short stay unit, hospital-in-the-home or non-emergency department hospital ward)* (NAPEDC NMDS) or *Transferred for admitted patient care in this hospital (either short stay unit, hospital-in-the-home or non-emergency department hospital ward)* (NAPEDC NBEDS).

For 2017–18:

- 61% of all presentations reported an episode end status of *Departed without being admitted or referred*, and this proportion was higher for less urgent triage categories (Table 4.12). For example, 11% of *Resuscitation* patients *Departed without being admitted or referred*, compared with 82% of *Non-urgent* patients
- 31% of all presentations were *Admitted to this hospital* at the conclusion of treatment in the emergency department and this proportion varied slightly across states and territories (26–36%)
- the proportion of presentations *Admitted to this hospital* was lower for less urgent triage categories—ranging from 75% for *Resuscitation* patients to 5% for *Non-urgent* patients (Table 4.13)
- 4% of presentations had an episode end status of *Did not wait to be attended by a health care professional* (Table 4.14)
- more than 65% of patients aged 85 and over were *Admitted to this hospital* compared with fewer than 18% of patients aged 0–24 (Table 4.15)
- fewer than 1% of patients aged 85 and over had an end status of *Did not wait to be attended by a health care professional*, compared with about 5% of patients aged 15–34.

**Table 4.12: Emergency department presentations, by episode end status and triage category, 2017–18**

<b>Episode end status</b>	<b>Resuscitation</b>	<b>Emergency</b>	<b>Urgent</b>	<b>Semi-urgent</b>	<b>Non-urgent</b>	<b>Total<sup>(a)</sup></b>
Admitted to this hospital <sup>(b)</sup>	45,548	613,621	1,243,468	553,794	36,250	2,492,756
Departed without being admitted or referred	6,684	362,993	1,555,768	2,353,763	581,330	4,861,007
Referred to another hospital for admission	4,522	45,515	69,783	28,375	2,431	150,649
Did not wait	11	2,570	68,498	172,929	54,015	299,825
Left at own risk	555	14,505	56,044	65,196	13,884	150,237
Died in emergency department	3,120	1,258	437	80	15	4,911
Dead on arrival	67	5	22	13	2,900	3,510
Registered, advised of another health care service and left without being attended to	100	3,068	7,984	26,950	15,069	53,409
Not reported	35	170	484	349	99	1,188
<b>Total</b>	<b>60,642</b>	<b>1,043,705</b>	<b>3,002,488</b>	<b>3,201,449</b>	<b>705,993</b>	<b>8,017,492</b>

(a) Includes presentations for which the triage category was *Not reported*.

(b) Includes presentations for which the NAPERDC NBEDS *Episode end status* was *Transferred for admitted patient care in this hospital (either short stay unit, hospital-in-the-home, or non-emergency department hospital ward)*.

Note: See appendixes A and B for more information on terminology, data limitations, and methods.

### **Where to go for more information**

More information on ED presentations that end in admission to the same hospital is available in Chapter 6.

**Table 4.13: Emergency department presentations by episode end status, states and territories, 2017–18**

Episode end status	NSW	Vic	Qld	WA <sup>(a)</sup>	SA <sup>(b)</sup>	Tas	ACT	NT	Total
Admitted to this hospital <sup>(c)</sup>	737,930	651,191	549,075	237,266	165,329	49,479	46,003	56,483	2,492,756
Departed without being admitted or referred	1,862,189	987,831	854,905	568,956	302,908	104,003	91,940	88,275	4,861,007
Referred to another hospital for admission	63,191	28,626	26,198	17,653	12,187	897	1,766	131	150,649
Did not wait	87,996	92,526	49,136	23,607	21,279	6,659	6,257	12,365	299,825
Left at own risk	70,261	31,532	31,852	8,083	4,434	865	1,735	1,475	150,237
Died in emergency department	2,081	1,074	744	627	212	73	74	26	4,911
Dead on arrival	2,938	89	29	30	..	417	2	5	3,510
Registered, advised of another health care service and left without being attended to	52,804	36	179	272	118	0	0	0	53,409
Not reported	897	1	0	213	27	48	1	1	1,188
<b>Total</b>	<b>2,880,287</b>	<b>1,792,906</b>	<b>1,512,118</b>	<b>856,707</b>	<b>506,494</b>	<b>162,441</b>	<b>147,778</b>	<b>158,761</b>	<b>8,017,492</b>

(a) Western Australian emergency departments only occasionally manage and report patients who are *Dead on arrival*, because the majority of these patients are taken directly to the state morgue.

(b) For South Australia, patients who are *Dead on arrival* are not managed or reported by emergency departments.

(c) Includes presentations from Victoria, Queensland and Western Australia for which the NAPERDC NBEDS Episode end status category was *Transferred for admitted patient care in this hospital (either short stay unit, hospital-in-the-home, or non-emergency department hospital ward)*. This category does not include patients who died or otherwise left the emergency department.

Note: See appendixes A and B for more information on terminology, data limitations, and methods.

**Table 4.14: Proportion (%) of Emergency presentations with an episode end status of Admitted to this hospital, by triage category, states and territories, 2017–18**

Triage category	NSW	Vic <sup>(a)</sup>	Qld <sup>(a)</sup>	WA <sup>(a)</sup>	SA	Tas	ACT	NT	Total
Resuscitation	69	74	80	73	80	85	81	87	75
Emergency	52	66	64	53	59	67	63	67	59
Urgent	36	48	43	37	40	43	40	51	41
Semi-urgent	14	23	16	16	18	17	18	21	17
Non-urgent	5	6	5	4	7	5	5	9	5
<b>Total<sup>(b)</sup></b>	<b>26</b>	<b>36</b>	<b>36</b>	<b>28</b>	<b>33</b>	<b>31</b>	<b>31</b>	<b>36</b>	<b>31</b>

(a) Includes presentations for which the NAPERDC NBEDS Episode end status category was *Transferred for admitted patient care in this hospital (either short stay unit, hospital-in-the-home, or non-emergency department hospital ward)*.

(b) Includes presentations for which the Triage category was not reported

Note: See appendixes A and B for more information on terminology, data limitations, and methods.

**Table 4.15: Emergency department presentations by age group and episode end status, public hospital emergency departments, 2017–18**

Age group	Admitted to this hospital		Departed without being admitted or referred		Referred to another hospital for admission		Did not wait		Other <sup>(a)</sup>		Total
	Presentations	Proportion (%)	Presentations	Proportion (%)	Presentations	Proportion (%)	Presentations	Proportion (%)	Presentations	Proportion (%)	
0–4	169,060	18.9	646,561	72.5	11,703	1.3	46,080	5.2	18,886	2.1	892,290
5–14	106,672	13.3	639,238	79.6	11,001	1.4	30,089	3.7	16,521	2.1	803,521
15–24	208,112	19.9	735,211	70.2	14,047	1.3	52,358	5.0	37,865	3.6	1,047,593
25–34	255,229	23.6	716,044	66.3	13,991	1.3	54,299	5.0	40,524	3.8	1,080,087
35–44	241,620	27.6	548,476	62.6	13,765	1.6	40,806	4.7	31,335	3.6	876,002
45–54	271,629	32.7	485,474	58.5	15,329	1.8	31,739	3.8	25,447	3.1	829,618
55–64	291,569	38.5	408,657	54.0	17,382	2.3	20,945	2.8	17,823	2.4	756,376
65–74	338,300	47.0	334,618	46.5	21,172	2.9	13,182	1.8	12,593	1.7	719,865
75–84	351,849	56.9	231,226	37.4	19,541	3.2	7,552	1.2	7,983	1.3	618,151
85–89	152,148	64.3	72,228	30.5	7,644	3.2	1,954	0.8	2,613	1.1	236,587
90–94	82,903	67.6	33,809	27.6	3,995	3.3	650	0.5	1,213	1.0	122,570
95+	23,434	69.0	8,986	26.5	1,059	3.1	120	0.4	349	1.0	33,948
<b>Total<sup>(b)</sup></b>	<b>2,492,756</b>	<b>31.1</b>	<b>4,861,007</b>	<b>60.6</b>	<b>150,649</b>	<b>1.9</b>	<b>299,825</b>	<b>3.7</b>	<b>213,255</b>	<b>2.7</b>	<b>8,017,492</b>

(a) Includes records for which the episode end status was reported as *Left at own risk*, *Died in emergency department*, *Dead on arrival*, *Registered*, *advised of another health care service and left without being attended to* or *Not reported*.

(b) Includes records for which the age of the patient could not be calculated.

Note: See appendixes A and B for more information on terminology, data limitations, and methods.

## 5 How long did people wait for emergency department care?

This chapter presents information on how long people who presented to the emergency department with a type of visit of *Emergency presentation* waited for care. It also includes the National Healthcare Agreement (NHA) performance indicator: *Waiting times for emergency department care—proportion seen on time* (Box 5.1).

### Box 5.1 Performance indicator: Waiting times for emergency department care—proportion seen on time

The NHA performance indicator *Waiting time for emergency hospital care—proportion seen on time* can be related to the Australian Health Performance Framework dimension 'Accessibility' within the domain 'Health system performance'. Under the NHA, it relates to the outcome area of *Australians receive appropriate high-quality and affordable hospital and hospital-related care*. Information on individual hospital performance for this indicator is also available on the *MyHospitals* website.

In 2017–18, 72% of *Emergency presentations* were seen on time (Table 5.1). *Principal referral and women's and children's hospitals* had the lowest overall proportion of presentations seen on time (67%), and *Other hospitals* had the highest proportion (89%) (Table 5.3).

From 2014–15 onwards, there were some changes to the way data were reported for this indicator. Therefore information presented from 2014–15 onwards are not comparable to previous years. See Appendix A for information on the quality of NHA data.

See the following sections for detailed information on waiting times for this indicator:

- Section 5.2: Proportion of presentations seen on time by year, states and territories
- Section 5.3: Proportion of presentations seen on time by public hospital peer group and triage category, states and territories
- Section 5.3: Proportion of presentations seen on time by Indigenous status and triage category, states and territories
- Complementary hospital-level data for this indicator are released on the *MyHospitals* website.

### 5.1 Measurement of time in the emergency department

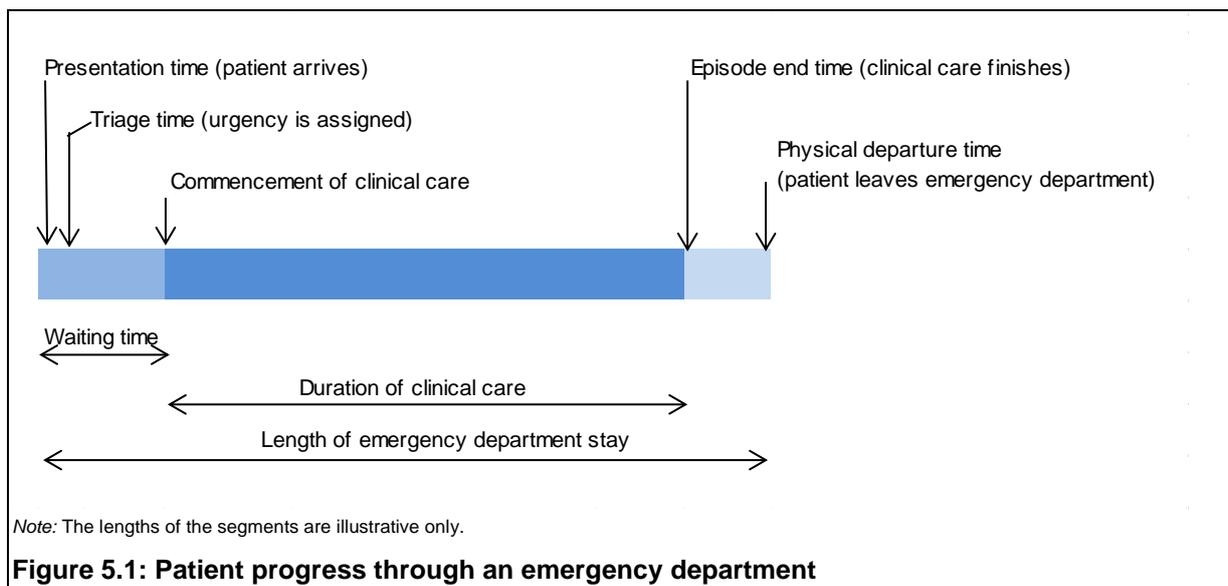
The progress of the patient through the ED is recorded in the NNAPEDCD using 5 different time points:

- presentation time—the time of first recorded contact with an ED staff member, which may be at the start of clerical registration or of the triage process
- triage time—the time at which the patient was assigned a triage category, which can coincide with presentation time

- clinical care commencement—the time at which care commenced by a doctor, nurse, mental health practitioner or other health professional, which can also coincide with presentation time
- episode end time—the time at which the non-admitted patient emergency department service episode ended
- physical departure time—the time at which the patient departed the ED, which can coincide with episode end time.

These time points are used to derive the patient’s waiting time to commencement of clinical care, the duration of clinical care, and the length of the emergency department stay.

Figure 5.1 shows the patient’s progress through an ED. For more information on methods, see Appendix B.



**Emergency department waiting time to commencement of clinical care** is the time elapsed in minutes for each patient from presentation in the ED until the commencement of the emergency department non-admitted clinical care (see Figure 5.1). Presentations were excluded from the calculation of waiting time statistics if:

- the type of visit was not *Emergency presentation* (because patients who present to the ED for other types of visit do not necessarily undergo the same processes as *Emergency presentations*)
- the triage category was not reported
- the patient *Did not wait to be attended to by a health care professional, was Dead on arrival or was Registered, advised of another health care service, and left the emergency department without being attended by a health care professional*—about 357,000 presentations were excluded in 2017–18
- the waiting time could not be calculated—about 12,000 presentations were excluded in 2017–18.

## 5.2 How have waiting times changed over time?

### Proportion seen on time

The **proportion of presentations seen on time** is the proportion of presentations for which the waiting time to commencement of clinical care was within the time specified in the definition of the triage category. For the purpose of this report, a patient with a triage category of *Resuscitation* was considered to be seen on time if the waiting time to commencement of clinical care was less than or equal to 2 minutes.

Between 2013–14 and 2017–18, the proportion of *Emergency presentations* that were seen on time decreased from 75% to 72% (Table 5.1).

### Median waiting time

The **median waiting time** is the time within which 50% of all patients commenced clinical care. Half of the patients waited a shorter time, and half waited longer.

Between 2013–14 and 2014–15, the median waiting time for *Emergency presentations* remained stable at 18 minutes (Table 5.1). Between 2014–15 and 2015–16, the median waiting time increased from 18 minutes to 19 minutes, and it remained stable at 19 minutes for 2016–17 and 2017–18.

### 90th percentile waiting time

The **90th percentile waiting time** is the time within which 90% of all patients commenced clinical care—the remaining 10% of patients waited longer.

Overall, the time within which 90% of presentations were seen increased from 93 minutes in 2013–14 to 99 minutes in 2017–18 (Table 5.1).

**Table 5.1: Emergency presentation waiting time statistics, states and territories, 2013–14 to 2017–18**

	2013–14	2014–15	2015–16 <sup>(a)</sup>	2016–17	2017–18
<b>New South Wales</b>					
Median waiting time (minutes)	15	15	15	14	15
90th percentile waiting time (minutes)	80	78	78	76	78
Proportion seen on time (%)	81	81	81	81	80
<b>Victoria</b>					
Median waiting time (minutes)	19	19	19	20	20
90th percentile waiting time (minutes)	100	97	96	97	100
Proportion seen on time (%)	75	75	74	73	72
<b>Queensland</b>					
Median waiting time (minutes)	19	20	20	20	21
90th percentile waiting time (minutes)	91	93	95	96	96
Proportion seen on time (%)	73	71	70	69	68
<b>Western Australia<sup>(b)</sup></b>					
Median waiting time (minutes)	24	25	27	28	28
90th percentile waiting time (minutes)	95	99	106	115	115
Proportion seen on time (%)	70	68	65	64	64
<b>South Australia</b>					
Median waiting time (minutes)	16	20	20	22	25
90th percentile waiting time (minutes)	93	113	109	117	132
Proportion seen on time (%)	73	66	66	64	60
<b>Tasmania</b>					
Median waiting time (minutes)	23	25	27	28	27
90th percentile waiting time (minutes)	98	107	120	111	111
Proportion seen on time (%)	72	70	66	65	66
<b>Australian Capital Territory</b>					
Median waiting time (minutes)	33	37	n.a.	30	46
90th percentile waiting time (minutes)	152	147	n.a.	116	159
Proportion seen on time (%)	61	59	n.a.	62	49
<b>Northern Territory</b>					
Median waiting time (minutes)	34	31	30	30	32
90th percentile waiting time (minutes)	151	130	123	125	133
Proportion seen on time (%)	57	60	61	61	57
<b>Total</b>					
<b>Median waiting time (minutes)</b>	<b>18</b>	<b>18</b>	<b>19</b>	<b>19</b>	<b>19</b>
<b>90th percentile waiting time (minutes)</b>	<b>93</b>	<b>93</b>	<b>93</b>	<b>95</b>	<b>99</b>
<b>Proportion seen on time (%)</b>	<b>75</b>	<b>74</b>	<b>74</b>	<b>73</b>	<b>72</b>

(a) Excludes data for the Australian Capital Territory, which were not available at the time of publication.

(b) Waiting times information could not be calculated for emergency department presentations for a *Public acute group B hospital* in Western Australia for about 43,000 presentations in 2015–16 and 23,000 presentations in 2016–17.

Note: See appendixes A and B for more information on terminology, data limitations, and methods.

## 5.3 How long did people wait for care in 2017–18?

### Proportion seen on time

In 2017–18:

- almost 100% of *Resuscitation* patients were seen on time (clinically recommended time of ‘immediate—within seconds’)
- 76% of *Emergency* patients were seen within 10 minutes
- 64% of *Urgent* patients were seen within 30 minutes
- 73% of *Semi-urgent* patients were seen within 1 hour
- 92% of *Non-urgent* patients were seen within 2 hours (Table 5.2).

Overall, the proportion of presentations seen on time for Indigenous Australians (73%) was similar to that for other Australians (72%) (Table 5.5).

### Median waiting time

The time within which 50% of patients commenced clinical care (the median waiting time) ranged from 15 minutes in New South Wales to 46 minutes in the Australian Capital Territory.

### 90th percentile waiting time

The 90th percentile waiting time to commencement of clinical care also varied, from 78 minutes in New South Wales to 159 minutes in the Australian Capital Territory.

**Table 5.2: Emergency presentation waiting time statistics<sup>(a)</sup>, states and territories, 2017–18**

Triage category	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Emergency presentations	2,782,669	1,780,224	1,497,574	849,135	501,751	159,010	146,358	156,176	7,872,897
<b>Proportion (%) seen on time</b>									
Resuscitation	100	100	100	100	100	100	100	100	100
Emergency	81	76	72	81	63	71	77	63	76
Urgent	76	68	59	50	48	56	37	49	64
Semi-urgent	80	72	73	65	66	66	48	56	73
Non-urgent	94	89	93	92	89	89	81	87	92
<b>Total</b>	<b>80</b>	<b>72</b>	<b>68</b>	<b>64</b>	<b>60</b>	<b>66</b>	<b>49</b>	<b>57</b>	<b>72</b>
<b>Waiting time (minutes)</b>									
Median waiting time (minutes)	15	20	21	28	25	27	46	32	19
90th percentile waiting time (minutes)	78	100	96	115	132	111	159	133	99

(a) Records were excluded from the calculation of waiting time if the patient *Did not wait to be attended to by a health care professional*, was *Dead on arrival*, was *Registered, advised of another health care service, and left the emergency department without being attended by a health care professional*, or if the waiting time could not be calculated, or the triage category was missing.

Note: See appendixes A and B for more information on terminology, data limitations, and methods.

**Table 5.3: Proportion<sup>(a)</sup> (%) of *Emergency presentations* seen on time, by public hospital peer group and triage category, states and territories, 2017–18**

Peer group and triage category	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
<b>Principal referral and Women's and children's hospitals</b>									
Resuscitation	100	100	100	100	100	100	100	100	100
Emergency	77	71	70	78	56	67	73	57	72
Urgent	72	64	61	46	44	39	28	30	60
Semi-urgent	76	70	76	62	57	53	39	47	69
Non-urgent	92	89	95	89	87	85	77	82	90
<i>Total</i>	76	69	69	61	53	53	42	46	67
<b>Public acute group A hospitals</b>									
Resuscitation	100	100	100	100	100	100	100	100	100
Emergency	84	78	71	83	67	72	85	74	78
Urgent	75	70	59	41	40	65	48	61	63
Semi-urgent	79	75	72	60	52	72	64	52	72
Non-urgent	93	90	91	92	82	93	90	86	91
<i>Total</i>	80	75	67	57	52	71	60	60	71
<b>Public acute group B hospitals</b>									
Resuscitation	100	100	99	100	100	100	..	..	100
Emergency	83	79	75	81	73	83	..	..	79
Urgent	77	66	57	62	63	73	..	..	67
Semi-urgent	79	70	73	69	79	77	..	..	74
Non-urgent	93	88	94	92	96	93	..	..	92
<i>Total</i>	80	71	67	70	75	77	..	..	73
<b>Public acute group C hospitals</b>									
Resuscitation	100	100	..	100	100	..	..	100	100
Emergency	86	80	..	88	97	..	..	70	85
Urgent	83	79	..	85	96	..	..	74	83
Semi-urgent	86	77	..	82	94	..	..	75	84
Non-urgent	96	92	..	94	98	..	..	89	95
<i>Total</i>	86	80	..	85	95	..	..	77	85
<b>Other hospitals</b>									
Resuscitation	100	100	..	..	..	..	..	..	100
Emergency	84	92	..	..	..	..	..	..	85
Urgent	90	78	..	..	..	..	..	..	88
Semi-urgent	93	69	..	..	..	..	..	..	87
Non-urgent	99	84	..	..	..	..	..	..	95
<b>Total</b>	<b>93</b>	<b>75</b>	..	..	..	..	..	..	<b>89</b>
<b>All hospitals</b>									
Resuscitation	100	100	100	100	100	100	100	100	100
Emergency	81	76	72	81	63	71	77	63	76
Urgent	76	68	59	50	48	56	37	49	64
Semi-urgent	80	72	73	65	66	66	48	56	73
Non-urgent	94	89	93	92	89	89	81	87	92
<b>Total</b>	<b>80</b>	<b>72</b>	<b>68</b>	<b>64</b>	<b>60</b>	<b>66</b>	<b>49</b>	<b>57</b>	<b>72</b>

(a) Records were excluded from the calculation of waiting time if the patient *Did not wait to be attended to by a health care professional, was Dead on arrival, was Registered, advised of another health care service, and left the emergency department without being attended by a health care professional*, or if the waiting time could not be calculated, or the triage category was unknown.

Note: See appendixes A, B, and C for more information on terminology, data limitations, and methods.

## How did waiting times vary by remoteness of area of usual residence?

In 2017–18, median waiting times varied by remoteness of patients' area of usual residence (Table 5.4). Overall, median waiting times were highest for people living in *Major cities* (21 minutes), and lowest for those living in *Outer regional* areas (15 minutes).

Patients living in *Remote* areas had the shortest median waiting times for *Emergency* and *Urgent* triage categories, while those living in *Major cities* had the longest median waiting times for *Urgent* and *Non-urgent* categories (Table 5.4).

The information presented in Table 5.4 is based on the remoteness of the patient's area of usual residence, and this may differ from the remoteness of the hospital location. Therefore, the information presented should be interpreted with caution.

**Table 5.4: Median waiting time<sup>(a)</sup> (minutes) for *Emergency presentations*, by triage category and remoteness of area of usual residence , 2017–18**

Triage category	Major cities	Inner regional	Outer regional	Remote	Very remote	Total <sup>(b)</sup>
Resuscitation	0	0	0	0	0	0
Emergency	6	6	6	5	6	6
Urgent	23	19	16	15	18	21
Semi-urgent	31	26	22	24	31	29
Non-urgent	28	21	15	17	23	23
<b>Total</b>	<b>21</b>	<b>18</b>	<b>15</b>	<b>16</b>	<b>20</b>	<b>19</b>

(a) Records were excluded from the calculation of waiting time if the patient *Did not wait to be attended to by a health care professional*, was *Dead on arrival*, was *Registered, advised of another health care service*, and *left the emergency department without being attended by a health care professional*, or if the waiting time could not be calculated, or the triage category was unknown.

(b) Includes presentations for which the remoteness of the area of residence was unknown.

Note: See appendixes A and B for more information on terminology, data limitations, and methods.

## How did waiting times vary by Indigenous status?

Over 522,000 *Emergency presentations* (6.6%) were reported for patients who identified as being of Aboriginal and/or Torres Strait Islander origin. Nationally, the proportion of presentations seen on time for Indigenous Australians was 73% (Table 5.5).

The median waiting time for Indigenous Australians (19 minutes) was similar to that for other Australians (19 minutes) (Table 5.6).

For *Urgent*, *Semi-urgent*, and *Non-urgent* patients, the national median waiting times for Indigenous Australians were shorter than those for other Australians.

It should be noted that differences in waiting times may have been influenced by differences in the mix of triage categories for Indigenous Australians compared with other Australians. For example, nationally, a higher proportion of Indigenous Australians were assigned to the *Semi-urgent* and *Non-urgent* triage categories compared with other Australians.

As the quality of the Indigenous status data in the NNAPEDCD has not been formally assessed, these data should be interpreted with caution. See Appendix A for information on the quality of Indigenous status data.

**Table 5.5: Proportion<sup>(a)</sup> (%) of *Emergency presentations* seen on time, by Indigenous status and triage category, states and territories, 2017–18**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
<b>Indigenous Australians</b>									
Resuscitation	100	100	100	100	100	100	100	100	100
Emergency	82	77	74	82	70	72	70	65	76
Urgent	76	66	65	64	56	55	34	55	66
Semi-urgent	81	71	75	71	72	65	45	57	73
Non-urgent	94	89	93	93	92	88	82	86	92
<b>Total<sup>(b)</sup></b>	<b>81</b>	<b>72</b>	<b>71</b>	<b>73</b>	<b>68</b>	<b>65</b>	<b>46</b>	<b>60</b>	<b>73</b>
<b>Other Australians<sup>(c)</sup></b>									
Resuscitation	100	100	100	100	100	100	100	100	100
Emergency	81	76	72	81	62	71	77	62	76
Urgent	76	68	59	49	48	56	37	43	64
Semi-urgent	80	72	73	64	66	67	49	55	73
Non-urgent	94	89	93	92	89	89	81	87	92
<b>Total<sup>(b)</sup></b>	<b>80</b>	<b>72</b>	<b>67</b>	<b>63</b>	<b>60</b>	<b>66</b>	<b>49</b>	<b>55</b>	<b>72</b>

(a) Records were excluded from the calculation of waiting time if the patient *Did not wait to be attended to by a health care professional, was Dead on arrival, was Registered, advised of another health care service, and left the emergency department without being attended by a health care professional*, or if the waiting time could not be calculated, or the triage category was unknown.

(b) Does not include records for which the triage category was unknown.

(c) *Other Australians* includes records for which Indigenous status was not reported.

Note: See appendixes A and B for more information on terminology, data limitations, and methods.

**Table 5.6: Median waiting time<sup>(a)</sup> (minutes) for *Emergency presentations*, by Indigenous status and triage category, states and territories, 2017–18**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total	Emergency presentations <sup>(b)</sup>
<b>Indigenous Australians</b>										
Resuscitation	0	0	0	0	0	0	0	0	0	4,032
Emergency	5	7	7	5	6	7	6	8	6	61,608
Urgent	15	21	21	21	24	27	52	27	20	181,221
Semi-urgent	19	32	28	32	25	39	70	50	28	223,171
Non-urgent	14	28	24	29	21	32	53	33	21	51,731
<b>Total<sup>(c)</sup></b>	<b>14</b>	<b>21</b>	<b>19</b>	<b>22</b>	<b>19</b>	<b>28</b>	<b>51</b>	<b>28</b>	<b>19</b>	<b>522,072</b>
<b>Other Australians<sup>(d)</sup></b>										
Resuscitation	0	0	0	0	0	0	0	0	0	56,384
Emergency	6	7	7	5	8	7	6	8	6	979,006
Urgent	16	20	24	31	33	26	47	38	21	2,806,147
Semi-urgent	21	30	30	42	34	38	63	54	29	2,939,075
Non-urgent	17	29	25	33	26	32	55	38	24	567,891
<b>Total<sup>(c)</sup></b>	<b>15</b>	<b>20</b>	<b>21</b>	<b>28</b>	<b>25</b>	<b>27</b>	<b>46</b>	<b>36</b>	<b>19</b>	<b>7,350,825</b>

(a) Records were excluded from the calculation of waiting time if the patient *Did not wait to be attended to by a health care professional, was Dead on arrival, was Registered, advised of another health care service, and left the emergency department without being attended by a health care professional*, or if the waiting time could not be calculated, or the triage category was unknown.

(b) The total number of emergency presentations includes records for which waiting times could not be calculated.

(c) The total number of emergency presentations includes records for which the triage category was unknown.

(d) *Other Australians* includes records for which Indigenous status was not reported.

Note: See appendixes A and B for more information on terminology, data limitations and methods.

### Where to go for more information

- More information on ED waiting times is available in tables S5.2–S5.3 which accompany this report online for:
- triage category and remoteness of usual residence
- triage category and socioeconomic status of usual residence.

## 6 How long did people stay in the emergency department?

This chapter presents information on how long patients stayed in the ED before departing.

The length of emergency department stay can be different for patients who were subsequently admitted to the same hospital compared with those who were not subsequently admitted to the same hospital. As a result, summary length of stay statistics are presented separately for patients who were subsequently admitted to the same hospital (with an episode end status of *Admitted to this hospital—either short stay unit, hospital-in-the-home, or non-emergency department hospital ward*), and for patients who were not subsequently admitted to the same hospital (including those who were *Referred to another hospital*).

Included in this section is the NHA indicator *Waiting time for emergency hospital care: proportion of patients whose length of emergency department stay is less than or equal to 4 hours* (proportion completed within 4 hours) (Box 6.1).

This section also includes information on an indicator previously reported for the National Partnership Agreement on Improving Public Hospital Services (NPA-IPHS)—*Admission to hospital from emergency departments*. It includes 2 measures—the proportion of patients who were subsequently admitted, whose length of emergency department stay is less than or equal to 4 hours, and the length of emergency department stay at the 90th percentile.

### **Box 6.1 Performance indicator: Waiting time for emergency hospital care: proportion of patients whose length of emergency department stay is less than or equal to 4 hours (proportion completed within 4 hours)**

The NHA performance indicator: *Waiting time for emergency hospital care: proportion of patients whose length of emergency department stay is less than or equal to 4 hours* (proportion completed within 4 hours) can be related to the Australian Health Performance Framework dimensions 'Accessibility' and 'Effectiveness' within the domain 'Health system performance'. Under the NHA, it relates to the outcome area of *Australians receive appropriate high quality and affordable hospital and hospital related care*.

The scope of this indicator is all public hospitals reporting to the NAPEDC NMDS.

In general, presentations for patients who required more urgent treatment (reflected by the triage category) were not as likely to be completed within 4 hours. For example, 55% of *Resuscitation* and 58% of *Emergency visits* were completed within 4 hours, compared with 79% of *Semi-urgent* visits and 92% of *Non-urgent* visits (Table 6.4).

*Public acute group B hospitals* generally achieved a higher proportion of visits completed within 4 hours (76%) than *Principal referral and women's and children's hospitals* and *Public acute group A hospitals* (67% and 68%, respectively).

See the following sections for detailed information on waiting times for this indicator:

- Section 6.2: 'How many visits were completed within 4 hours?'
- Complementary hospital-level data for this indicator is released on the MyHospitals website.

## 6.1 How long did patients stay?

An **emergency department stay** is the period between when a patient presents at an ED, and when that person is recorded as having physically departed the ED (regardless of whether they were admitted to the hospital, were referred to another hospital, were discharged, or left at their own risk). It includes any time spent as an admitted patient in the ED, but not in 'short-stay units' (see Figure 5.1).

The length of stay measures (tables 6.1–6.6) include all ED *Type of visit* categories (*Emergency presentations; Return visit, planned; Pre-arranged admission; Patient in transit; and Dead on arrival*).

### 90th percentile length of stay

The 90th percentile length of stay represents the amount of time spent in the ED for 90% of patients. For the remaining 10% of patients, the length of stay was longer.

### How has the 90th percentile length of stay changed over time?

Between 2013–14 and 2015–16, the 90th percentile length of stay for ED presentations decreased from 7 hours and 5 minutes to 6 hours and 53 minutes. It increased to 7 hours in 2016–17, and to 7 hours and 14 minutes in 2017–18 (see Table 6.1).

For patients subsequently admitted to the same hospital, the 90th percentile length of stay decreased from 11 hours and 49 minutes to 10 hours and 43 minutes between 2013–14 and 2015–16. It increased to 10 hours and 44 minutes in 2016–17, and to 11 hours and 8 minutes in 2017–18.

#### Where to go for more information

More information on the length of ED stay is available in tables S6.1–S6.2 which present the median length of ED stay and accompany this report online for:

- states and territories by admission status, 2013–14 to 2017–18
- states and territories by admission status and triage category 2017–18.

**Table 6.1: Emergency department presentations<sup>(a)</sup> 90th percentile length of emergency department stay<sup>(b)</sup> by admission status, states and territories, 2013–14 to 2017–18**

	2013–14	2014–15	2015–16 <sup>(c)</sup>	2016–17	2017–18
<b>Presentations ending in admission (hours: minutes)</b>					
New South Wales	12:29	12:34	11:51	11:36	12:05
Victoria <sup>(d)</sup>	11:54	11:58	11:00	10:37	11:12
Queensland <sup>(d)</sup>	9:19	8:47	8:50	9:15	9:19
Western Australia <sup>(d)</sup>	8:55	8:19	8:17	9:07	8:11
South Australia	14:01	14:34	10:53	11:05	12:00
Tasmania	19:33	21:34	19:24	17:59	21:41
Australian Capital Territory	15:12	15:28	n.a.	9:14	12:15
Northern Territory	19:44	19:33	15:56	16:10	17:07
<b>Total</b>	<b>11:49</b>	<b>11:41</b>	<b>10:43</b>	<b>10:44</b>	<b>11:08</b>
<b>Presentations not ending in admission (hours: minutes)</b>					
New South Wales	4:43	4:30	4:53	4:51	5:01
Victoria <sup>(d)</sup>	5:35	5:29	5:22	5:23	5:40
Queensland <sup>(d)</sup>	4:36	4:36	4:45	5:01	5:05
Western Australia <sup>(d)</sup>	4:23	4:29	4:49	5:07	4:58
South Australia	5:52	5:48	5:38	5:59	6:29
Tasmania	5:23	5:30	5:21	5:19	5:11
Australian Capital Territory	6:18	6:01	n.a.	4:52	5:44
Northern Territory	5:51	5:35	5:04	5:10	5:17
<b>Total</b>	<b>5:01</b>	<b>4:54</b>	<b>5:01</b>	<b>5:07</b>	<b>5:18</b>
<b>All presentations (hours: minutes)</b>					
New South Wales	7:03	6:56	6:52	6:51	7:03
Victoria <sup>(d)</sup>	7:34	7:36	7:19	7:16	7:41
Queensland <sup>(d)</sup>	6:16	6:10	6:18	6:40	6:48
Western Australia <sup>(d)</sup>	5:45	5:48	6:03	6:25	6:07
South Australia	8:25	8:38	7:31	7:50	8:24
Tasmania	8:28	8:52	8:41	9:01	9:41
Australian Capital Territory	8:45	8:32	n.a.	6:33	7:51
Northern Territory	10:05	10:26	9:27	9:20	9:55
<b>Total</b>	<b>7:05</b>	<b>7:02</b>	<b>6:53</b>	<b>7:00</b>	<b>7:14</b>

(a) Includes presentations for all types of visit.

(b) Length of stay is calculated as the length of time between presentation to the emergency department and physical departure.

(c) Excludes data for the Australian Capital Territory for 2015–16, which were not available at the time of publication.

(d) Includes presentations for which the NAPEDC NBEDS/DSS *Episode end status* category was *Transferred for admitted patient care in this hospital (either short stay unit, hospital-in-the-home, or non-emergency department hospital ward)*.

Note: See appendixes A and B for more information on terminology, data limitations, and methods.

## What was the 90th percentile length of stay in 2017–18?

Nationally, 90% of ED presentations were completed within 7 hours and 14 minutes (Table 6.2).

For patients subsequently admitted to the same hospital, 90% of presentations were completed within 11 hours and 8 minutes, ranging from 8 hours and 5 minutes for *Non-urgent* patients to 11 hours and 40 minutes for *Emergency* patients.

For patients not subsequently admitted, 90% of presentations were completed within 5 hours and 18 minutes, and 90th percentile lengths of stay were generally longer for patients in the more urgent triage categories.

**Table 6.2: Emergency department presentations<sup>(a)</sup> 90th percentile length of stay<sup>(b)</sup> by admission status and triage category, states and territories, 2017–18**

Triage category	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
<b>Presentations ending in admission<sup>(c)</sup> (hours: minutes)</b>									
Resuscitation	12:07	10:43	9:45	7:02	9:55	16:38	8:50	13:43	10:31
Emergency	13:07	12:22	9:48	7:47	11:20	20:59	10:54	18:16	11:40
Urgent	12:30	11:30	9:20	8:30	12:42	22:51	13:01	17:46	11:25
Semi-urgent	10:41	10:03	8:28	8:03	11:38	20:26	11:29	15:09	10:13
Non-urgent	7:45	7:47	7:36	7:06	9:15	12:33	9:23	12:43	8:05
<b>Total<sup>(d)</sup></b>	<b>12:05</b>	<b>11:12</b>	<b>9:19</b>	<b>8:11</b>	<b>12:00</b>	<b>21:41</b>	<b>12:15</b>	<b>17:07</b>	<b>11:08</b>
<b>Presentations not ending in admission (hours: minutes)</b>									
Resuscitation	9:03	11:07	9:02	9:10	9:39	8:10	9:14	8:16	9:34
Emergency	6:59	8:41	6:47	6:32	7:42	6:50	7:12	6:26	7:11
Urgent	5:58	6:37	5:42	5:53	7:35	5:57	6:29	5:53	6:10
Semi-urgent	4:30	5:10	4:20	4:21	5:38	4:48	5:12	5:03	4:43
Non-urgent	3:13	3:55	3:33	3:20	4:09	3:42	4:07	4:08	3:32
<b>Total<sup>(d)</sup></b>	<b>5:01</b>	<b>5:40</b>	<b>5:06</b>	<b>4:58</b>	<b>6:29</b>	<b>5:11</b>	<b>5:44</b>	<b>5:17</b>	<b>5:18</b>
<b>All presentations (hours: minutes)</b>									
Resuscitation	11:09	10:50	9:39	7:35	9:54	15:26	8:58	13:06	10:16
Emergency	10:09	11:06	8:49	7:16	9:51	16:55	9:28	15:07	9:50
Urgent	8:31	9:00	7:23	7:03	9:42	13:25	9:21	12:26	8:26
Semi-urgent	5:36	6:15	5:06	5:10	6:42	6:50	6:18	7:12	5:46
Non-urgent	3:27	4:06	3:46	3:33	4:27	4:05	4:26	4:53	3:45
<b>Total<sup>(d)</sup></b>	<b>7:03</b>	<b>7:41</b>	<b>6:48</b>	<b>6:07</b>	<b>8:24</b>	<b>9:41</b>	<b>7:51</b>	<b>9:55</b>	<b>7:14</b>

(a) Includes presentations for all types of visit.

(b) Length of stay is calculated as the length of time between presentation to the emergency department and physical departure.

(c) For Victoria, Queensland, and Western Australia, includes presentations for which the NAPEDC NBEDS *Episode end status* category was *Transferred for admitted patient care in this hospital (either short stay unit, hospital-in-the-home or non-emergency department hospital ward)*.

(d) Includes presentations for which the triage category was not reported.

Note: See appendixes A and B for more information on terminology, data limitations and methods.

## 6.2 How many visits were completed within 4 hours?

The calculation of the **proportion of emergency department presentations completed within 4 hours** includes all types of visits, and all episode end types.

The length of emergency department stay and the proportion completed within 4 hours could not be calculated for about 7,000 records due to missing or invalid values (for example, for the time of presentation or physical departure).

### **How has the proportion of presentations completed within 4 hours changed over time?**

Between 2013–14 and 2015–16, the proportion of presentations completed within 4 hours increased from 72.7% to 73.2%. It has since decreased to 71.1% in 2017–18 (Table 6.3) (excludes data for the Australian Capital Territory in 2015–16).

For patients subsequently admitted to the same hospital, the proportion of presentations completed within 4 hours increased from 45.2% in 2013–14 to 49.1% in 2016–17. It decreased to 48.5% in 2017–18.

**Table 6.3: Proportion (%) of presentations<sup>(a)</sup> to emergency departments with a length of stay of 4 hours or less, for all patients and patients subsequently admitted<sup>(b)</sup>, states and territories, 2013–14 to 2017–18**

	2013–14	2014–15	2015–16 <sup>(c)</sup>	2016–17	2017–18
<b>Waiting times for emergency department care—proportion (%) completed within 4 hours<sup>(d)</sup></b>					
New South Wales	73.9	74.9	74.8	74.7	73.5
Victoria <sup>(e)</sup>	69.0	69.9	71.2	71.3	69.2
Queensland <sup>(e)</sup>	76.3	76.7	75.2	72.7	72.1
Western Australia <sup>(e)</sup>	79.5	78.7	76.0	73.8	75.7
South Australia	64.5	63.8	66.0	63.7	60.8
Tasmania	67.7	66.6	66.3	64.7	64.4
Australian Capital Territory	61.8	63.1	n.a.	73.0	64.0
Northern Territory	61.6	62.1	63.6	64.2	62.7
<b>Total</b>	<b>72.7</b>	<b>73.2</b>	<b>73.2</b>	<b>72.3</b>	<b>71.1</b>
<b>Admission to hospital from emergency departments— percentage of presentations where length of stay is less than or equal to 4 hours<sup>(f)</sup></b>					
New South Wales	42.4	42.9	43.7	44.3	43.2
Victoria <sup>(e)</sup>	46.0	49.3	52.7	54.9	52.9
Queensland <sup>(e)</sup>	52.9	56.6	56.2	54.6	54.8
Western Australia <sup>(e)</sup>	53.0	54.6	51.5	48.9	53.8
South Australia	38.2	37.2	43.8	42.6	40.8
Tasmania	28.4	29.0	28.2	26.2	28.2
Australian Capital Territory	34.3	35.7	n.a.	51.2	40.3
Northern Territory	21.9	22.7	26.8	32.3	31.3
<b>Total</b>	<b>45.2</b>	<b>47.2</b>	<b>48.9</b>	<b>49.1</b>	<b>48.5</b>
<b>Admission to hospital from emergency departments— emergency department length of stay at the 90th percentile (hours: minutes)</b>					
New South Wales	12:29	12:34	11:51	11:36	12:05
Victoria <sup>(e)</sup>	11:54	11:58	11:00	10:37	11:12
Queensland <sup>(e)</sup>	09:19	08:47	08:50	09:15	09:19
Western Australia <sup>(e)</sup>	08:55	08:19	08:17	09:07	08:11
South Australia	14:01	14:34	10:53	11:05	12:00
Tasmania	19:33	21:34	19:24	17:59	21:41
Australian Capital Territory	15:12	15:28	n.a.	09:14	12:15
Northern Territory	19:44	19:33	15:56	16:10	17:07
<b>Total</b>	<b>11:49</b>	<b>11:41</b>	<b>10:43</b>	<b>10:44</b>	<b>11:08</b>

(a) Includes presentations for all types of visit.

(b) For patients with an episode end status of *Admitted to this hospital (either short-stay unit, hospital-in-the-home, or non-emergency department hospital ward)*.

(c) Excludes 2015–16 data for the Australian Capital Territory, which were not available at the time of publication.

(d) The measure *Waiting times for emergency department care—proportion (%) completed within 4 hours* is the NHA performance indicator 21b.

(e) Includes presentations for which the NAPEDC NBEDS/DSS Episode end status category was *Transferred for admitted patient care in this hospital (either short stay unit, hospital-in-the-home or non-emergency department hospital ward)*.

(f) The measure *Admission to hospital from emergency departments—percentage of presentations where length of stay is less than or equal to 4 hours* is not part of the NHA performance indicator 21b.

Note: See appendixes A and B for more information on terminology, data limitations and methods.

**Table 6.4: Proportion (%) of presentations<sup>(a)</sup> to emergency departments with a length of stay of 4 hours or less, by public hospital peer group and triage category, states and territories, 2017–18**

Peer group and triage category	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
<b>Principal referral and Women's and children's hospitals</b>									
Resuscitation	51	58	62	68	55	55	57	49	57
Emergency	49	56	59	67	48	41	49	42	54
Urgent	56	64	65	65	47	47	47	46	59
Semi-urgent	74	77	81	81	63	65	66	66	75
Non-urgent	89	90	91	92	81	86	84	81	89
<i>Total<sup>(b)</sup></i>	<i>64</i>	<i>70</i>	<i>71</i>	<i>74</i>	<i>54</i>	<i>59</i>	<i>59</i>	<i>56</i>	<i>67</i>
<b>Public acute group A hospitals</b>									
Resuscitation	50	48	48	64	52	47	63	46	51
Emergency	56	55	61	66	49	41	62	40	57
Urgent	61	57	66	64	42	49	63	52	60
Semi-urgent	79	73	82	80	61	75	82	71	77
Non-urgent	92	89	92	94	80	91	92	77	91
<i>Total<sup>(b)</sup></i>	<i>71</i>	<i>65</i>	<i>71</i>	<i>73</i>	<i>52</i>	<i>64</i>	<i>72</i>	<i>61</i>	<i>68</i>
<b>Public acute group B hospitals</b>									
Resuscitation	55	54	53	59	85	43	..	..	56
Emergency	59	63	67	67	63	54	..	..	63
Urgent	67	65	70	71	66	67	..	..	68
Semi-urgent	83	76	88	84	84	88	..	..	82
Non-urgent	94	90	97	95	95	95	..	..	94
<i>Total<sup>(b)</sup></i>	<i>77</i>	<i>72</i>	<i>77</i>	<i>78</i>	<i>77</i>	<i>78</i>	<i>..</i>	<i>..</i>	<i>76</i>
<b>Public acute group C hospitals</b>									
Resuscitation	67	55	..	48	97	..	..	39	64
Emergency	67	63	..	65	93	..	..	57	66
Urgent	79	69	..	79	88	..	..	68	78
Semi-urgent	92	85	..	93	94	..	..	82	91
Non-urgent	97	94	..	97	98	..	..	90	96
<i>Total<sup>(b)</sup></i>	<i>87</i>	<i>80</i>	<i>..</i>	<i>88</i>	<i>93</i>	<i>..</i>	<i>..</i>	<i>79</i>	<i>86</i>
<b>All hospitals<sup>(c)</sup></b>									
Resuscitation	53	54	55	65	56	50	58	48	55
Emergency	56	57	61	66	51	43	54	44	58
Urgent	63	62	67	67	50	51	54	52	63
Semi-urgent	81	76	83	83	71	74	72	72	79
Non-urgent	94	89	92	94	87	90	87	85	92
<b>Waiting times for emergency department care-proportion (%) completed within four hours</b>									
<b>Total<sup>(b)</sup></b>	<b>73</b>	<b>69</b>	<b>72</b>	<b>76</b>	<b>61</b>	<b>64</b>	<b>64</b>	<b>63</b>	<b>71</b>

(a) Includes presentations for all types of visit.

(b) The total includes presentations for which the triage category was not reported.

(c) Includes *Principal referral and women's and children's hospitals*, *Public acute group A hospitals*, *Public acute group B hospitals*, and hospitals in other peer groups that reported to the NNAPEDCD.

Note: See appendixes A and B for more information on terminology, data limitations, and methods.

## How did the proportion completed within 4 hours vary for patients subsequently admitted?

For patients subsequently admitted to the same hospital, the length of stay indicates the amount of time spent in the ED before being moved to another ward in the hospital. The proportion of presentations for patients subsequently admitted to the same hospital, where the length of the emergency department stay is less than or equal to 4 hours, can be used to assess 'Access block'—or how long patients wait for an admitted patient bed to become available.

For patients subsequently admitted to the same hospital:

- about half (49%) of ED presentations were completed within 4 hours (Table 6.5)
- ED presentations for *Resuscitation* and *Non-urgent* patients were more likely to be completed within 4 hours compared with other triage categories
- *Public acute group C hospitals* generally achieved a higher proportion of ED presentations completed within 4 hours (60%) than *Principal referral and Women's and children's hospitals* (47%), *Public acute group A hospitals* (46%), and *Public acute group B hospitals* (56%).

## How did the proportion completed within 4 hours vary for patients not subsequently admitted?

For patients not subsequently admitted:

- 81% of ED presentations were completed within 4 hours (Table 6.6)
- 94% of ED presentations for *Non-urgent* patients were completed within 4 hours
- *Public acute group C hospitals* generally achieved a higher proportion of ED presentations completed within 4 hours (90%) than *Principal referral and Women's and children's hospitals* (79%), *Public acute group A hospitals* (80%) and *Public acute group B hospitals* (82%).

**Table 6.5: Proportion (%) of presentations<sup>(a)</sup> to emergency departments with a length of stay of 4 hours or less, for patients subsequently admitted to the hospital<sup>(b)</sup>, by public hospital peer group and triage category, states and territories, 2017–18**

Peer group and triage category	NSW	Vic <sup>(c)</sup>	Qld <sup>(c)</sup>	WA <sup>(c)</sup>	SA	Tas	ACT	NT	Total
<b>Principal referral and Women's and children's hospitals</b>									
Resuscitation	50	61	63	71	56	53	60	47	58
Emergency	40	52	52	61	42	32	44	31	47
Urgent	38	55	52	52	32	21	29	28	45
Semi-urgent	43	59	55	55	38	24	36	31	49
Non-urgent	61	69	68	58	62	34	42	42	61
<i>Total<sup>(d)</sup></i>	40	56	53	56	37	25	35	30	47
<b>Public acute group A hospitals</b>									
Resuscitation	46	50	45	65	51	47	62	43	48
Emergency	43	51	56	58	41	31	65	30	49
Urgent	38	45	54	44	26	26	48	28	44
Semi-urgent	43	50	57	49	28	30	55	26	47
Non-urgent	64	61	65	55	29	52	69	39	60
<i>Total<sup>(d)</sup></i>	41	48	55	49	31	29	52	29	46
<b>Public acute group B hospitals</b>									
Resuscitation	49	60	51	58	89	42	..	..	56
Emergency	49	62	61	63	68	44	..	..	58
Urgent	44	59	56	55	58	37	..	..	54
Semi-urgent	48	62	64	54	63	43	..	..	57
Non-urgent	71	68	77	65	79	63	..	..	71
<i>Total<sup>(d)</sup></i>	47	60	59	57	62	40	..	..	56
<b>Public acute group C hospitals</b>									
Resuscitation	57	58	..	46	97	..	..	32	60
Emergency	60	60	..	50	95	..	..	40	59
Urgent	59	50	..	55	89	..	..	42	59
Semi-urgent	62	49	..	58	90	..	..	44	61
Non-urgent	75	77	..	69	93	..	..	56	75
<i>Total<sup>(d)</sup></i>	61	53	..	55	91	..	..	43	60
<b>All hospitals<sup>(e)</sup></b>									
Resuscitation	49	57	55	68	56	50	61	45	55
Emergency	43	53	56	60	45	33	50	32	50
Urgent	41	51	54	50	36	25	36	30	46
Semi-urgent	46	55	57	53	44	28	40	31	50
Non-urgent	66	67	68	60	60	43	46	44	64
<b>Admission to hospital from emergency departments—proportion (%) of presentations where the length of stay is less than or equal to 4 hours</b>									
<b>Total<sup>(d)</sup></b>	<b>43</b>	<b>53</b>	<b>55</b>	<b>54</b>	<b>41</b>	<b>28</b>	<b>40</b>	<b>31</b>	<b>49</b>

(a) Includes presentations for all types of visit.

(b) For patients with an episode end status of *Admitted to this hospital (either short-stay unit, hospital-in-the-home, or non-emergency department hospital ward)*.

(c) Includes presentations for which the NAPEDC NBEDS episode end status category was *Transferred for admitted patient care in this hospital (either short-stay unit, hospital-in-the-home, or non-emergency department hospital ward)*.

(d) The total includes presentations for which the triage category was not reported.

(e) Includes *Principal referral and women's and children's hospitals, Public acute group A hospitals, Public acute group B hospitals, and hospitals in other peer groups that reported to the NNAPEDCD.*

Note: See appendixes A, B, and C for more information on terminology, data limitations, and methods.

**Table 6.6: Proportion (%) of presentations<sup>(a)</sup> to emergency departments with a length of stay of 4 hours or less, for patients not subsequently admitted to the hospital<sup>(b)</sup>, by public hospital peer group and triage category, states and territories, 2017–18**

Peer group and triage category	NSW	Vic <sup>(c)</sup>	Qld <sup>(c)</sup>	WA <sup>(c)</sup>	SA	Tas	ACT	NT	Total
<b>Principal referral and Women's and children's hospitals</b>									
Resuscitation	57	44	57	54	48	78	32	61	53
Emergency	66	65	73	76	61	72	61	62	68
Urgent	71	75	77	75	60	71	62	65	72
Semi-urgent	81	83	87	88	70	78	75	77	83
Non-urgent	91	92	93	94	84	89	87	85	91
<i>Total<sup>(d)</sup></i>	<i>78</i>	<i>81</i>	<i>82</i>	<i>84</i>	<i>66</i>	<i>78</i>	<i>72</i>	<i>73</i>	<i>79</i>
<b>Public acute group A hospitals</b>									
Resuscitation	61	42	57	64	56	48	65	73	56
Emergency	74	64	69	72	59	59	59	76	69
Urgent	78	69	76	75	51	68	70	81	73
Semi-urgent	87	81	87	86	68	84	85	83	84
Non-urgent	94	91	93	95	82	94	93	88	93
<i>Total<sup>(d)</sup></i>	<i>84</i>	<i>76</i>	<i>81</i>	<i>81</i>	<i>61</i>	<i>80</i>	<i>78</i>	<i>83</i>	<i>80</i>
<b>Public acute group B hospitals</b>									
Resuscitation	59	44	56	60	75	44	..	..	56
Emergency	65	66	73	70	61	63	..	..	67
Urgent	76	70	77	78	69	79	..	..	75
Semi-urgent	87	80	91	88	86	91	..	..	86
Non-urgent	95	91	97	96	96	96	..	..	95
<i>Total<sup>(d)</sup></i>	<i>83</i>	<i>77</i>	<i>84</i>	<i>84</i>	<i>80</i>	<i>86</i>	<i>..</i>	<i>..</i>	<i>82</i>
<b>Public acute group C hospitals</b>									
Resuscitation	70	52	..	49	97	..	..	72	66
Emergency	70	65	..	73	88	..	..	79	70
Urgent	84	78	..	86	87	..	..	83	83
Semi-urgent	94	90	..	95	95	..	..	87	93
Non-urgent	98	96	..	97	98	..	..	91	97
<i>Total<sup>(d)</sup></i>	<i>91</i>	<i>87</i>	<i>..</i>	<i>92</i>	<i>94</i>	<i>..</i>	<i>..</i>	<i>87</i>	<i>90</i>
<b>All hospitals<sup>(e)</sup></b>									
Resuscitation	62	44	57	58	55	52	48	64	57
Emergency	70	65	71	73	61	64	60	67	69
Urgent	77	71	76	77	60	71	66	74	74
Semi-urgent	87	82	88	88	77	84	79	82	85
Non-urgent	95	91	94	96	89	92	89	89	94
<b>Total<sup>(d)</sup></b>	<b>84</b>	<b>78</b>	<b>82</b>	<b>84</b>	<b>71</b>	<b>80</b>	<b>75</b>	<b>80</b>	<b>81</b>

(a) Includes presentations for all types of visit.

(b) For patients whose episode end status was other than *Admitted to this hospital (either short-stay unit, hospital-in-the-home, or non-emergency department hospital ward)*.

(c) Includes presentations for which the NAPEDC NBEDS/DSS episode end status category was other than *Transferred for admitted patient care in this hospital (either short-stay unit, hospital-in-the-home, or non-emergency department hospital ward)*.

(d) The total includes presentations for which the triage category was not reported.

(e) Includes *Principal referral and women's and children's hospitals, Public acute group A hospitals, Public acute group B hospitals, and hospitals in other peer groups that reported to the NNAPEDCD*.

Note: See appendixes A, B, and C for more information on terminology, data limitations, and methods.

## 6.3 How long did clinical care take?

The **duration of clinical care** is measured as the time from the commencement of clinical care to the conclusion of the non-admitted component of care (episode end). This is a measure of the amount of time during which the patient receives clinical care (is treated and/or observed), excluding any time spent as an admitted patient in the emergency department (see Figure 5.1).

The duration of clinical care measures presented in tables 6.7 and 6.8 are for *Emergency presentations* only. The calculations exclude presentations for which the measures of time could not be calculated due to missing or invalid values (for example, if the time of episode end was recorded as occurring before the time of commencement of clinical care).

Generally, the duration of clinical care was greater for patients who were subsequently admitted to the same hospital than for other patients (tables 6.7 and 6.8).

For patients subsequently admitted to the same hospital:

- 9% of presentations had a duration of clinical care of less than 1 hour (Table 6.7)
- 55% had a duration of clinical care ranging from 1 hour to less than 4 hours
- 35% had a duration of clinical care of 4 hours or more
- patients with an *Urgent* triage category were most likely to spend more than 4 hours in ED (37%), while Non-urgent patients the least likely (21%).

For patients not subsequently admitted:

- 29% of presentations had a duration of clinical care of less than 1 hour (Table 6.8)
- 54% had a duration of clinical care ranging from 1 hour to less than 4 hours
- 12% had a duration of clinical care of 4 hours or more
- 38% of *Resuscitation* patients had a duration of clinical care of 4 hours or more, while 54% of *Non-urgent* patients had a duration of clinical care of less than 1 hour.

For about 261,000 records, the duration of clinical care could not be calculated. Of these:

- 194,000 had an episode end status of *Did not wait to be attended to by a health care professional, Dead on arrival, or Registered, advised of another health care service, and left the emergency department without being attended by a health care professional*
- 32,000 could not be calculated, because the date and time of episode end were missing
- 22,000 could not be calculated, because the date and time of commencement of clinical care was missing.

**Table 6.7: Duration of clinical care statistics for *Emergency presentations*<sup>(a)</sup> for patients subsequently admitted to this hospital<sup>(b)</sup>, by triage category, 2017–18**

Duration	Triage category					Total <sup>(c)</sup>
	Resuscitation	Emergency	Urgent	Semi-urgent	Non-urgent	
<b>Number of presentations</b>						
Less than 1 hour	6,201	40,683	105,075	64,229	7,483	223,683
1 hour to <2 hours	7,924	94,420	189,811	97,268	6,612	396,041
2 hours to <3 hours	8,283	129,644	248,675	111,895	5,915	504,418
3 hours to <4 hours	7,650	123,563	233,440	95,991	4,685	465,331
4 hours or more	15,285	222,689	455,667	175,177	6,725	875,547
<b>Total<sup>(d)</sup></b>	<b>45,369</b>	<b>611,516</b>	<b>1,234,727</b>	<b>546,330</b>	<b>31,941</b>	<b>2,469,946</b>
<b>Proportion (%) of presentations</b>						
Less than 1 hour	14	7	9	12	23	9
1 hour to <2 hours	17	15	15	18	21	16
2 hours to <3 hours	18	21	20	20	19	20
3 hours to <4 hours	17	20	19	18	15	19
4 hours or more	34	36	37	32	21	35
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

(a) Includes presentations for which type of visit was *Emergency presentation* only.

(b) For patients with an episode end status of *Admitted to this hospital* (either *short-stay unit*, *hospital-in-the-home*, or *non-emergency department hospital ward*).

(c) Includes records for which triage category was unknown.

(d) Total includes about 5,000 records (less than 1%) for which the duration of clinical care could not be calculated.

Note: See appendixes A and B for more information on terminology, data limitations, and methods.

**Table 6.8: Duration of clinical care statistics for *Emergency presentations*<sup>(a)</sup> for patients not subsequently admitted to this hospital<sup>(b)</sup>, by triage category, 2017–18**

Duration	Triage category					Total <sup>(c)</sup>
	Resuscitation	Emergency	Urgent	Semi-urgent	Non-urgent	
<b>Number of presentations<sup>(d)</sup></b>						
Less than 1 hour	1,730	33,918	304,957	927,014	315,398	1,583,230
1 hour to <2 hours	2,224	82,806	426,570	720,720	128,929	1,361,286
2 hours to <3 hours	2,577	102,901	389,209	417,268	52,684	964,651
3 hours to <4 hours	2,645	86,011	259,616	216,685	22,392	587,354
4 hours or more	5,667	116,710	309,291	202,053	16,405	650,133
<b>Total<sup>(e)</sup></b>	<b>15,047</b>	<b>429,098</b>	<b>1,752,641</b>	<b>2,615,916</b>	<b>587,681</b>	<b>5,402,951</b>
<b>Proportion (%) of presentations</b>						
Less than 1 hour	11	8	17	35	54	29
1 hour to <2 hours	15	19	24	28	22	25
2 hours to <3 hours	17	24	22	16	9	18
3 hours to <4 hours	18	20	15	8	4	11
4 hours or more	38	27	18	8	3	12
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

(a) Includes presentations for which type of visit was *Emergency presentation* only.

(b) For patients with an episode end status other than *Admitted to this hospital* (either *short-stay unit*, *hospital-in-the-home*, or *non-emergency department hospital ward*).

(c) Includes records for which triage category was unknown.

(d) About 155,000 records that were assigned an episode end status of *Did not wait to be attended to by a health care professional*, *Dead on arrival*, or *Registered, advised of another health care service, and left the emergency department without being attended to by a health care professional* were assigned a duration of clinical care.

(e) Total includes about 261,000 records (5%) for which the duration of clinical care could not be calculated.

Note: See appendixes A and B for more information on terminology, data limitations, and methods.

# Appendix A: What data are reported?

This section presents information on the data used in this report, and their limitations. The data quality statement for the NNAPEDCD is available online at [www.aihw.gov.au/about-our-data/our-data-collections/national-hospitals-data-collection](http://www.aihw.gov.au/about-our-data/our-data-collections/national-hospitals-data-collection).

## National Non-admitted Patient Emergency Department Care Database

The AIHW has collected and reported on the data in this report under the auspices of the Australian Health Ministers' Advisory Council, through the National Health Information Agreement.

The data supplied by state and territory health authorities for the Non-admitted Patient Emergency Department Care (NAPEDC) National Minimum Data Set/National Best Endeavours Data Set (NMDS/NBEDS) were used by the AIHW to assemble the National Non-admitted Patient Emergency Department Care Database (NNAPEDCD). The data cover waiting times and other characteristics of presentations to public hospital emergency departments.

The NNAPEDCD provides information on the care provided (including waiting times for care) for non-admitted patients registered for care in public hospital emergency departments that have:

- purposely designed and equipped area with designated assessment, treatment, and resuscitation areas
- the ability to provide resuscitation, stabilisation, and initial management of all emergencies
- availability of medical staff in the hospital 24 hours a day
- designated emergency department nursing staff 24 hours per day 7 days per week, and a designated emergency department nursing unit manager.

Emergency departments (including 'accident and emergency' or 'urgent care centres') that do not meet the criteria above are not in scope for the NMDS, but data may have been provided for some of these by some states and territories.

Patients who were dead on arrival are in scope if an emergency department clinician certified the death of the patient. Patients who leave the emergency department after being registered/triaged to receive care and then advised of alternative treatment options are also in scope.

The scope includes only physical presentations to emergency departments. Advice provided by telephone or video conferencing is not in scope, although it is recognised that advice received by telehealth may form part of the care provided to patients physically receiving care in the emergency department. Also excluded from the scope of the NMDS is care provided to patients in general practitioner co-located units.

Since 2003–04, data for the NNAPEDCD have been reported annually. The most recent reference period for this data set includes records for Non-admitted patient emergency department service episodes between 1 July 2017 and 30 June 2018.

Since 2015–16, jurisdictions were able to provide data for the NNAPEDCD using the NAPEDC NMDS or the NAPEDC NBEDS/DSS. Episodes are included in the NAPEDC NMDS, but excluded for the NAPEDC NBEDS/DSS, where:

- only a clerical service is provided to people supporting a pre-arranged admission
- people are awaiting transit to another facility, and receive no clinical care.

## Summary of key data quality issues

Overall, the quality of the data in the NNAPEDCD is sufficient to be published in this report. However, the following limitations of the data should be taken into consideration when data are interpreted.

States and territories are primarily responsible for the quality of the data they provide. However, the AIHW undertakes extensive validations on receipt of data. Potential errors are queried with jurisdictions, and corrections and resubmissions may be made in response to these edit queries. The AIHW does not adjust data to account for possible data errors or missing values, except where stated.

Comparisons between states and territories and reporting years should be made with reference to the accompanying notes in the chapters and in this appendix.

The AIHW takes active steps to improve the consistency of these data over time.

- The NNAPEDCD may not include emergency presentations to hospitals that have emergency departments that are not in scope for the NAPEDC NMDS/NBEDS.
- The following jurisdictions have provided data to the NNAPEDCD using the NAPEDC NBEDS specification: Queensland (from 2015–16); Victoria and Western Australia (from 2016–17). All other states and territories used the NAPEDC NMDS. The data provided using the NAPEDC NBEDS may not be entirely comparable with data provided using the NAPEDC NMDS.
- For 2017–18, waiting times information could not be calculated for about 20,000 emergency presentations (for which waiting times are applicable).
- Changes in definitions for *Episode end status* in the NMDS and NBEDS between 2015–16 and 2016–17 may affect the comparability of the 2016–17 and 2017–18 *Episode end status* data with that for reporting periods prior to 2016–17.
- For 2015–16, Australian Capital Territory emergency department care data were not available at the time of publication. Therefore, comparisons over time should be interpreted with caution. The 2015–16 data for Australian Capital Territory may be available for inclusion in future reports.
- Although there are national standards for data on non-admitted patient emergency department services, the way those services are defined and counted varies across states and territories, and over time.
- The quality of the data reported for Indigenous status has not been formally assessed; therefore, caution should be used when interpreting these data.
- For Western Australia, the date and time of commencement of clinical care was missing for about 23,000 ED presentations for a *Public acute group B hospital* in 2016–17, and for about 43,000 in 2015–16. As a result, the 2015–16 and 2016–17 waiting times data for Western Australia (and particularly for *Public acute group B hospitals*) should be interpreted with caution.

## Missing or invalid data

In some cases, the data provided may include missing values (for example, the date/time of physical departure was not recorded), or invalid values (for example, if the time of physical departure was recorded as occurring before the time of presentation).

Due to missing or invalid values (such as time of presentation, or time of start of clinical care), valid waiting time could not be calculated for about 20,000 records with a type of visit of *Emergency presentation*—this excludes records with an episode end status of *Did not wait to be attended to by a health care professional* (298,000 records), *Dead on arrival* (251 records), or *Registered, advised of another health care service, and left the emergency department without being attended by a health care professional* (about 51,000 records). These records were not used in the derivation of waiting time statistics.

Further, because of missing or invalid values (such as time of start of clinical care, or time of episode end), duration of clinical care could not be calculated for about 55,000 records—this excludes records with an episode end status of *Did not wait to be attended to by a health care professional*, *Dead on arrival*, or *Registered, advised of another health care service, and left without being attended by a health care professional*.

The length of emergency department stay could not be calculated for about 5,000 records due to missing, or invalid values (such as for time of presentation, or time of physical departure).

## How has the scope of the collection changed?

From 2013–14 onwards, the scope of the NAPEDC NMDS (and for the NAPEDC NBEDS/DSS in 2015–16 and 2016–17) has been patients registered for care in public hospital emergency departments as described in ‘National Non admitted Patient Emergency Department Care Database’.

For 2012–13 and earlier years, the scope of the NAPEDC NMDS was public hospitals that were classified to peer groups A and B, for the purpose of reporting in *Australian hospital statistics* for the previous financial year period (using the AIHW’s previous peer group classification). As a result, any comparisons of time series data should take into consideration changes in the scope of the collection from 2013–14 onwards. For more information, see <<http://meteor.aihw.gov.au/content/index.phtml/itemId/612346>>.

## How has data coverage changed over time?

Because the scope of the NAPEDC NMDS is restricted to formal emergency departments, the number of ED presentations reported to the NNAPEDCD does not include all emergency or urgent care provided by public hospitals.

Between 2003–04 and 2013–14, the data coverage of the NNAPEDCD was estimated by comparing the number of ED presentations reported to the NNAPEDCD with the number of non-admitted patient emergency occasions of service reported to the National Public Hospital Establishments Database (NPHEd). The NPHEd estimate was considered to be a more complete count of emergency care services, because it included emergency care data for all public hospitals, regardless of whether they had a formal emergency department, or other arrangements for providing emergency care. This provided an estimate but not an exact measure of the coverage.

For 2014–15, an approximate estimate of coverage was calculated based on emergency occasions of service that were reported to the NPHEd in 2013–14. Using this approach, national coverage of the NNAPEDCD was estimated at about 88% in 2014–15. Estimated

coverage by remoteness area of the hospital (using the same approach) varied among remoteness areas, ranging from 100% in *Major Cities* to 18% in *Very remote* areas (AIHW 2015b).

However, emergency occasions of service were not reported to the NPHEd from 2014–15 onwards, which meant it was no longer possible to calculate the proportion of all emergency occasions of service that were reported to the NNAPEDCD.

Estimates of coverage from 2015–16 onwards have not been calculated.

## Variation in reporting

### Variation in hospitals reporting

Between 2013–14 and 2017–18, the number of hospitals that reported ED presentations to the NNAPEDCD was relatively stable for most states and territories and included the major public hospitals in all states and territories (Tables A1 to A2).

A summary of the key changes in hospital reporting between 2013–14 and 2017–18 is provided below:

- In New South Wales, Byron Central Hospital commenced providing emergency department care in 2015–16, replacing care previously provided by Mullumbimby Hospital and Byron Bay Hospital.
- In Queensland, the Sunshine Coast University Hospital opened in March 2017, but this did not constitute a change in coverage, as the emergency department services were previously provided by a number of smaller hospitals in the region, which reported data for the NNAPEDCD.
- Data for the Royal Children’s Hospital and the Mater Children’s Hospital were included in reporting from 2013–14 to 2014–15. During 2014–15, they were replaced by the Lady Cilento Children’s Hospital. All 3 hospitals reported emergency department care data in 2014–15.
- In Western Australia:
  - Perth’s Children’s Hospital opened in June 2018 and Princess Margaret Hospital closed. The data for these hospitals are reported separately
  - the St John of God Midland Public Hospital opened, and the Swan District Hospital closed in November 2015. Both hospitals were reported in 2015–16
  - in 2014–15, Busselton Health Campus began reporting emergency department care data, after the Busselton hospital was redeveloped to include a larger emergency department. This constituted a change in coverage as the activity was previously not reported for the NNAPEDCD
  - also in 2014–15, the Fremantle Hospital’s emergency department was replaced by the Fiona Stanley Hospital emergency department. Both hospitals were reported for 2014–15.

Change in coverage due to the opening or closing of hospitals should be taken into account when interpreting changes over time. There was no change in the coverage of the NNAPEDCD between 2016–17 and 2017–18 (assessed by comparing the hospitals included for the two years).

**Table A1: Public hospital emergency departments, by state and territory, 2013–14 to 2017–18<sup>(a)</sup>**

	2013–14	2014–15	2015–16	2016–17	2017–18
New South Wales	180	178	177	177	176
Victoria	40	40	40	40	40
Queensland	28	28	26	27	26
Western Australia <sup>(b)</sup>	17	19	19	18	19
South Australia	14	14	14	14	14
Tasmania	4	4	4	4	4
Australian Capital Territory <sup>(c)</sup>	2	2	n.a.	2	2
Northern Territory	5	5	5	5	5
<b>Total</b>	<b>290</b>	<b>290</b>	<b>285</b>	<b>287</b>	<b>286</b>

(a) Interpretation of all changes over time presented in this report should take into account changes in coverage, as noted in Appendix A and summarised in the footnotes below.

(b) Busselton Hospital reported emergency department care data for the first time in 2014–15.

(c) Excludes public hospitals for the Australian Capital Territory in 2015–16, for which data were not available at the time of publication.

Note: See appendixes A and B for more information on terminology, data limitations, and methods.

**Table A2: Public hospitals emergency departments, by public hospital peer group, 2013–14 to 2017–18<sup>(a)</sup>**

Public hospital peer group	2013–14	2014–15 <sup>(b)</sup>	2015–16 <sup>(c)</sup>	2016–17	2017–18
Principal referral and Women's and children's hospital	40	41	38	40	41
Public acute group A hospitals	60	60	59	60	60
Public acute group B hospitals	45	45	45	44	43
Public acute group C hospitals	55	55	55	55	55
Other hospitals <sup>(d)</sup>	90	89	88	88	87
<b>All hospitals</b>	<b>290</b>	<b>290</b>	<b>285</b>	<b>287</b>	<b>286</b>

(a) Interpretation of all changes over time presented in this report should take into account changes in coverage, as noted in Appendix A.

(b) Busselton Hospital reported emergency department care data for the first time in 2014–15.

(c) Excludes public hospitals for the Australian Capital Territory, for which data were not available at the time of publication.

(d) Includes hospitals not included in the specified hospital peer groups. See appendix C for more information about peer groups.

Note: See appendixes A, B, and C for more information on terminology, data limitations, and methods.

In 2017–18, 286 public hospital emergency departments reported ED presentations. These included most major public hospitals—classified as *Principal referral and women's and children's hospitals*, *Public acute group A hospitals*, and *Public acute group B hospitals*—as well as some smaller hospitals located in regional and remote areas (Table A3).

**Table A3: Public hospital emergency departments reported to the NNAPEDCD, by public hospital peer group, states and territories, 2017–18**

Public hospital peer group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Principal referral and Women's and children's hospitals	13	9	7	6	3	1	1	1	41
Public acute group A hospitals	22	15	12	4	3	2	1	1	60
Public acute group B hospitals	17	9	7	5	4	1	..	..	43
Public acute group C hospitals	38	6	0	4	4	0	..	3	55
Other hospitals <sup>(a)</sup>	86	1	0	0	0	0	0	..	87
<b>All hospitals</b>	<b>176</b>	<b>40</b>	<b>26</b>	<b>19</b>	<b>14</b>	<b>4</b>	<b>2</b>	<b>5</b>	<b>286</b>

(a) Includes hospitals not included in the specified hospital peer groups. See appendix C for more information about peer groups.

Note: See appendixes A, B, and C for more information on terminology, data limitations, and methods.

## Possible variation in triage categorisation

Of the 8.0 million presentations reported to the NNAPEDCD for 2017–18, 98.2% were *Emergency presentations*, and 1.5% were *Return visit, planned*. The remaining types of visit accounted for about 0.3%. The proportion of presentations by triage category varied by state or territory.

New South Wales had the highest proportion of emergency presentations that were assigned a triage category of *Non-urgent* (10.3%). South Australia had the highest proportion assigned a triage category of *Resuscitation* (1.4%) and Queensland had the highest proportions assigned to the triage categories of *Emergency* (15.8%) and *Urgent* (46.0%) (Table A4). This may reflect different triage categorisation, differing mixes of patients, or both.

**Table A4: Proportion (%) of *Emergency presentations* by triage category, states and territories, 2017–18**

Triage category	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total <sup>(a)</sup>
	Per cent								
Resuscitation	0.7	0.5	0.9	0.8	1.4	0.7	0.5	0.9	0.8
Emergency	12.7	11.8	15.8	13.6	14.4	10.0	10.1	13.9	13.2
Urgent	34.4	37.9	46.0	34.7	40.4	35.8	42.3	31.3	37.9
Semi-urgent	41.7	41.8	33.0	44.3	37.6	43.6	39.3	45.5	40.2
Non-urgent	10.3	7.9	4.3	6.5	6.2	9.9	7.8	8.5	7.9
<b>Total</b>	<b>100.0</b>								

(a) Includes emergency presentations for which the triage category was not reported.

Variation in the proportion of patients admitted to the hospital by triage category may indicate variation in the way emergency departments triage patients. Although triage category is not a measure of the need for admission to hospital, the proportion of presentations in each category that had an episode end status of *Admitted to this hospital* can be used to indicate the comparability of the triage categorisation.

The proportion of patients who were subsequently admitted does not include patients referred to another hospital for admission. For example, nationally, about 31% of *Emergency presentations* had an episode end status of *Admitted to this hospital*. Victoria, Queensland and the Northern Territory had the highest proportions (36%), and New South Wales had the lowest (26%) (Table 4.11). For *Resuscitation* patients, about 75% had an episode end status of *Admitted to this hospital* nationally, with the proportion ranging from 69% in New South Wales to 87% in the Northern Territory.

## Variation in reporting diagnosis information

For the 2017–18 NAPEDC NMDS/NBEDS, diagnosis information was not reported using a uniform classification. The classifications that were reported were:

- Systematized Nomenclature of Medicine—Clinical Terms—Australian version, Emergency Department Reference Set (SNOMED CT-AU EDRS)
- International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM), 2nd edition
- International Classification of Diseases and Related Health Problems, 10th Revision, Australian Modification (ICD-10-AM) 6th edition, 7th edition, 8th edition, 9th edition, or 10th edition.

Table A5 presents information on the numbers of presentations for which diagnosis information was reported, by the type of classification used. The majority of records (68%) were reported using various editions of ICD-10-AM.

Most states and territories reported patients' diagnoses using a single type of classification. A principal diagnosis was not reported for about 283,000 records. In addition, about 8,000 records had an ICD-9-CM or a SNOMED CT-AU diagnosis that did not map to a valid ICD-10-AM diagnosis using the methodology outlined in Appendix B.

**Table A5: Provision of diagnosis information for emergency presentations by diagnosis classification type, states and territories, 2017–18**

Classification	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
SNOMED-CT-AU (EDRS)	2,275,026	0	0	0	0	0	0	0	2,275,026
ICD-9-CM, 2nd ed.	0	34,665	0	0	0	0	0	0	34,665
ICD-10-AM, 6th ed.	0	0	0	566,002	0	0	0	0	566,002
ICD-10-AM, 7th ed.	0	0	0	0	0	0	0	146,592	146,592
ICD-10-AM, 8th ed.	0	0	0	265,120	0	0	147,778	0	412,898
ICD-10-AM, 9th ed.	541,423	0	1,432,638	0	0	162,426	0	0	2,136,487
ICD-10-AM, 10th ed.	0	1,670,219	0	0	492,364	0	0	0	2,162,583
Principal diagnosis not reported	63,838	88,022	79,480	25,585	14,130	15	0	12,169	283,239
<b>Total</b>	<b>2,880,287</b>	<b>1,792,906</b>	<b>1,512,118</b>	<b>856,707</b>	<b>506,494</b>	<b>162,441</b>	<b>147,778</b>	<b>158,761</b>	<b>8,017,492</b>

## Quality of Indigenous status data

The quality of the data reported for Indigenous status in emergency departments has not been formally assessed. In addition, the scope of the NNAPEDCD may not include some emergency services provided in areas where the proportion of Indigenous people (compared with other Australians) is higher than average. Therefore, the information on Indigenous status presented in this report should be used with caution.

All states and territories consider the Indigenous status data used in this report to be of a quality appropriate for publication. Indigenous status was not reported for fewer than 1% of ED presentations in 2017–18 (Table 3.2).

## Other factors affecting interpretation of the NNAPEDCD data

This section presents other information about the quality of the data provided for the NNAPEDCD, and factors that may affect the interpretation of the information presented in this report.

### Remoteness area of usual residence

In 2017–18, jurisdictions provided area of usual residence using either the 2016 Statistical Area Level 2 or Statistical Area Level 1.

The AIHW mapped the Statistical Area Level 2 area of usual residence information for each presentation to remoteness area categories based on the ABS Australian Statistical Geography Standard Remoteness Structure for 2016. This mapping was done on a

probabilistic basis. About 1.5% of records could not be mapped to a remoteness of area of usual residence.

The remoteness area information for 2017–18 are based on the ABS's ASGS 2016 classification, whereas the remoteness area information reported for 2013–14 to 2016–17 were based on the ABS's ASGS 2011 classification. Therefore, the remoteness (and socioeconomic status) data presented for 2017–18 are not comparable with similar information presented in earlier reports.

## Type of visit

For 2017–18, Victoria, Queensland, and Western Australia provided data for the NNAPEDCD using the NAPEDC NBEDS specifications, for which *Patient in transit* is not a valid type of visit category. Under the NAPEDC NBEDS specification, patients in transit are included as *Emergency presentation*.

## Episode end status

For the purposes of reporting, the NAPEDC NBEDS episode end status category *Transferred for admitted patient care in this hospital (either short-stay unit, hospital-in-the-home, or non-emergency department hospital ward)* was mapped to the NAPEDC NMDS episode end status category *Admitted to this hospital (either short-stay unit, hospital-in-the-home, or non-emergency department hospital ward)*.

For the NAPEDC NMDS, patients who are admitted to the hospital, and subsequently die before leaving the emergency department are included in the NAPEDC NMDS *Episode end status* category of *Admitted to this hospital (either short-stay unit, hospital-in-the-home, or non-emergency department hospital ward)*.

For the NAPEDC NBEDS specifications, patients who died or otherwise left the emergency department are not included in the NAPEDC NBEDS category of *Transferred for admitted patient care in this hospital (either short-stay unit, hospital-in-the-home, or non-emergency department hospital ward)*. As a result, Victoria, Queensland, and Western Australia data may not be entirely comparable with data provided for other states and territories.

Caution should be used when interpreting changes over time for episode end status because:

- between 2015–16 and 2016–17, a change in the episode end status data element resulted in a new category—*Registered, advised of another health care service, and left the emergency department without being attended by a health care professional* (METeOR identifier: 616654). As a result, the 2016–17 and 2017–18 data presented for episode end status are not comparable with previous years
- between 2014–15 and 2015–16, a change in practice in the certification of death in Victoria resulted in a decrease in the number of presentations with an episode end status of *Dead on arrival*—from 1,313 in 2015–16 to 111 in 2016–17.

There is a difference between the number of presentations with a type of visit of *Dead on arrival* (3,402; Table 4.1) and the number of presentations with an episode end status of *Dead on arrival* (3,510; Table 4.10). All presentations with a type of visit of *Dead on arrival* had an episode end status of *Dead on arrival*. However, some presentations with an episode end status of *Dead on arrival* did not have a type of visit of *Dead on arrival*. The majority of these presentations were in New South Wales (2,846 with a type of visit of *Dead on arrival* and 2,938 with an episode end status of *Dead on arrival*).

## Quality of waiting times and length of stay data

### Waiting time

For 2017–18, about 20,000 records that should have been included in the calculation of waiting times statistics were excluded, as they did not have a valid commencement of clinical care time recorded.

The criteria used to determine the proportion of *Resuscitation* patients seen on time varies between jurisdictions, therefore, the proportions of *Resuscitation* patients seen on time presented in this report may differ from those reported by individual jurisdictions.

### Emergency department length of stay

For about 5,000 records, the emergency department length of stay could not be calculated, as the date and time of physical departure were missing. These records were distributed across multiple hospitals, mainly from New South Wales. Of those, about 800 had an episode end status of *Did not wait to be attended by a health care professional*, *Dead on arrival*, or *Registered, advised of another health care service, and left the emergency department without being attended by a health care professional*

### Emergency department duration of clinical care

For about 67,000 records, the duration of clinical care could not be calculated. For about 32,000 of those it was because the date and time of episode end were missing. For about 23,000 it was because the date and time of commencement of clinical care was missing. About 73% of these records had an episode end status of *Did not wait to be attended to by a health care professional*, indicating that the patient had not received care.

For 2017–18, a duration of clinical care was reported for about 155,000 records with an episode end status of *Did not wait to be attended to by a health care professional*, *Dead on arrival*, or *Registered, advised of another health care service, and left the emergency department without being attended by a health care professional*—for which a time of episode end is not applicable. These records were distributed across multiple hospitals, mainly from Queensland.

## NHA Performance indicators

In 2016–17, there was a change in the definition of the indicator *Waiting times for emergency department care—proportion seen on time* to exclude records for which the episode end status was *Registered, advised of another health care service, and left the emergency department without being attended by a health care professional*. Therefore, the 2016–17 and 2017–18 data presented for proportion seen on time are not comparable with previous years.

For 2017–18, this resulted in about 49,200 records being excluded from the calculation of this indicator that, in previous years, may have been included. About 48,000 of these records were in New South Wales.

# Appendix B: Technical notes

## What terms and methods are used?

This section presents the main calculation methods and common terms used throughout this report. Terms relevant to the data on emergency department care are summarised in the text and more terms are included in the 'Glossary'.

## Definitions

If not otherwise indicated, data elements were defined according to the 2017–18 definitions in the *National health data dictionary*, versions 16, 16.1 and 16.2 (AIHW 2012, 2015c, 2015d) (summarised in the Glossary).

### Public hospital peer groups

Public hospital peer groups are used to classify hospitals that share similar characteristics, to provide a basis for meaningful comparisons.

This report presents analyses by hospital peer group, including the NHA performance indicators, using the AIHW's peer group classification. The Steering Committee for the Review of Government Service Provision will also use these peer groups to report the NHA performance indicators in the *Report on government services 2019*.

Before 2014–15, this information was presented using the AIHW's previous peer group classification. As a result, the data presented here by public hospital peer group are not directly comparable with those presented in AIHW reports before 2014–15.

See Appendix C and the AIHW publication *Australian hospital peer groups* (AIHW 2015a) for more information.

## Data presentation

Data are presented by the state or territory of the hospital, not by the state or territory of usual residence of the patient.

Except as noted in this section, the totals in tables include data only for those states and territories for which data were available, as indicated in the tables. Throughout the report, percentages may not add up to 100.0 because of rounding. Percentages and rates shown as 0.0 or 0 indicate a zero. The symbol '<0.1' has been used to denote less than 0.05, but greater than 0.

Data on waiting times (50th and 90th percentiles) and the proportion seen on time have been suppressed if there were fewer than 100 presentations in the category being presented. The abbreviation 'n.p.' has been used to denote these suppressions. For these tables, the totals include the suppressed information.

# Methods

## Changes over time

Time series data in this report show average annual changes from 2013–14 to 2017–18, and the annual change between 2016–17 and 2017–18. The average annual rate of change, expressed as a percentage is calculated as follows:

$$\left( \left( \frac{p_n}{p_0} \right)^{\left( \frac{1}{N} \right)} - 1 \right) \times 100$$

where

$p_n$  = indicator value in later time period

$p_0$  = indicator value in earlier time period

$N$  = number of years between two time periods.

The rates were not adjusted for other changes in data coverage, except where noted in the text.

## Median and 90th percentiles

The 50th percentile (the median, or the middle value in a group of data arranged from lowest to highest value for minutes waited) represents the number of minutes within which 50% of patients commenced clinical care (or completed their episode, or were admitted)—half the waiting times will have been shorter, and half longer than the median.

The 90th percentile data represent the number of minutes (or hours and minutes) within which 90% of patients commenced clinical care (or completed their episode, or were admitted).

The 50th percentile and 90th percentile waiting times are calculated using an empirical distribution function with averaging. Using this method, observations are sorted in ascending order.

The calculation is where:

$n$  is the number of observations, and

$p$  is the percentile value divided by 100,

then  $n \times p = i + f$  (where  $i$  is an integer and  $f$  is the fractional part of  $n \times p$ ).

If  $n \times p$  is an integer, the percentile value will correspond to the average of the values for the  $i^{\text{th}}$  and  $(i+1)^{\text{th}}$  observations.

If  $n \times p$  is not an integer, the percentile value will correspond to the value for the  $(i+1)^{\text{th}}$  observation.

For example, if there were 100 observations, the median waiting time will correspond to the average waiting time for the 50th and 51st observations (ordered according to waiting time). Similarly, the 90th percentile will correspond to the average waiting time for the 90th and 91st observations if there are 100 observations.

If there were 101 observations, the median waiting time will correspond to the waiting time for the 51st observation, and the 90th percentile waiting time will correspond to the waiting time for the 91st observation.

The 50th and 90th percentiles have been rounded to the nearest whole number of minutes.

## Principal diagnosis reporting

For the 2017–18, diagnosis information was reported for the NNAPEDCD using the following classifications:

- Systematized Nomenclature of Medicine—Clinical Terms—Australian version, Emergency Department Reference Set
- International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM), 2nd edition
- International Classification of Diseases and Related Health Problems, 10th Revision, Australian Modification (ICD-10-AM) 6th, 7th, 8th, 9th or 10th editions.

See Table A2 for information on the numbers of presentations for which diagnosis information was reported, by the type of classification used.

The AIHW mapped all diagnosis information to a single classification.

### Method of mapping provided diagnosis codes to a single classification

The AIHW used mapping files to assign diagnosis information provided in the different classifications to a single classification (to 3-character categories in ICD-10-AM 10th edition). This mapping involved the use of:

- ICD-9-CM to ICD-10-AM historical mapping files
- ICD-10-AM to ICD-10-AM edition mapping files
- SNOMED CT-AU (EDRS) to ICD-10-AM 6th edition mapping file.

#### Step 1: mapping SNOMED-CT-AU EDRS to ICD-10-AM 6th edition

Establishments that used SNOMED-CT-AU EDRS provided 2.2 million presentations.

The principal diagnosis data coded in SNOMED-CT-AU EDRS were mapped to ICD-10-AM 6th edition codes using a mapping file provided by the Independent Hospital Pricing Authority.

About 3,000 presentations with valid SNOMED-CT-AU EDRS codes did not map to an ICD-10-AM 6th edition diagnosis code. These corresponded to about 850 unique SNOMED-CT-AU EDRS codes that contained concepts that did not have equivalent codes in ICD-10-AM (for example, dressing of wound, preparation of medical certificate, and patient left against medical advice).

The principal diagnoses for the remaining presentations were mapped to 2,749 unique ICD-10-AM 6th edition codes. Following the mapping, a relatively small number of ICD-10-AM 6th edition diagnosis codes were mapped to ICD-10-AM 10th edition.

#### Step 2: assigning ICD-10-AM codes to diagnosis data provided in ICD-9-CM

About 34,400 presentations provided by establishments reported diagnoses using ICD-9-CM. Of these, about 4,900 records did not have a valid ICD-9-CM code—the majority had truncated ICD-9-CM codes (for example, an invalid 3-digit code was provided for a condition that required a 4-digit code).

The principal diagnoses for the remaining 29,500 presentations were mapped to ICD-10-AM 1st edition codes, and were subsequently mapped to ICD-10-AM 10th edition.

### **Step 3: assigning ICD-10-AM 10th edition codes for records provided using ICD-10-AM**

More than 5.2 million presentations provided by establishments reported coding diagnoses using ICD-10-AM 6th, 7th, 8th, 9th and 10th editions.

The majority of diagnosis codes in the 6th, 7th, 8th and 9th editions were the same as the corresponding diagnosis codes in ICD-10-AM 10th edition. A small number of diagnosis codes were mapped to the 10th edition.

### **Step 4: assessment of completeness of mapping**

Following mapping, about 96% of principal diagnoses were mapped to valid ICD-10-AM 10th edition diagnosis codes.

## **Waiting times (Chapter 5)**

### **Waiting time to commencement of clinical care**

The waiting times are determined as the time elapsed between presentation to the emergency department and the commencement of clinical care. The calculation is restricted to presentations with a type of visit of *Emergency presentation*, and presentations were excluded if the waiting time was missing or invalid, or if the patient *Did not wait to be attended by a health care professional*, or was *Dead on arrival*.

See Appendix A for information on the completeness of the data provided for waiting times calculations.

### **Proportion of presentations seen on time**

The proportion of presentations seen on time was determined as the proportion of presentations in each triage category with a waiting time less than or equal to the maximum waiting time stated in the Australasian Triage Scale definition.

For this report, a patient with a triage category of *Resuscitation* was considered to be seen on time if the waiting time to commencement of clinical care was less than or equal to 2 minutes.

The calculation is restricted to presentations with a type of visit of *Emergency presentation*, and presentations were excluded if the waiting time was missing or invalid, if the patient *Did not wait to be attended by a health care professional*, or was *Dead on arrival*, or if the triage category was not reported.

### **Proportion of presentations ending in admission**

The proportion of presentations ending in admission is determined as the proportion of all emergency presentations with an episode end status of *Admitted to this hospital (either short-stay unit, hospital-in-the-home, or non-emergency department hospital ward)* (for the NAPEDC NMDS), or *Transferred for admitted patient care in this hospital (either short-stay unit, hospital-in-the-home, or non-emergency department hospital ward)* (for the NAPEDC NBEDS). The calculation is restricted to presentations with a type of visit of *Emergency presentation*.

## Emergency department length of stay (Chapter 6)

### Emergency department length of stay

The length of stay is determined as the time elapsed between presentation and the physical departure of the patient. Length of stay statistics are calculated for all emergency department type of visit categories.

### Proportion of presentations completed in 4 hours or less

The proportion of presentations completed in 4 hours or less is determined as the proportion of all emergency presentations for which the time elapsed between the presentation and the physical departure of the patient was less than or equal to 240 minutes.

Presentations were excluded if either (or both) of the presentation date/time or physical departure date/time were missing or invalid, or if the calculation resulted in an invalid length of stay (that is, missing or a negative number of minutes).

### Admission to hospital from emergency departments

Admission to hospital from emergency departments (for patients who were subsequently admitted) is calculated using the emergency department length of stay for presentations with an episode end status of:

- *Admitted to this hospital (either short-stay unit, hospital-in-the-home, or non-emergency department hospital ward)* (for the NAPEDC NMDS), or
- *Transferred for admitted patient care in this hospital (either short-stay unit, hospital-in-the-home or non-emergency department hospital ward)* (for the NAPEDC NBEDS).

### Duration of clinical care

The duration of clinical care is determined as the time elapsed between commencement of clinical care and the end of the non-admitted patient emergency department episode (the end of clinical care).

See Appendix A for information on the completeness of the data used to calculate the duration of clinical care. Duration of clinical care statistics are calculated for presentations with a type of visit of *Emergency presentation*.

### Age and sex of patient

All states and territories supplied the date of birth of the patient, from which the age of the patient at the date of presentation was calculated.

For 317 records, the age of the patient could not be calculated, as date of birth was missing. For 567 records, the sex of the patient was reported as either *Intersex or indeterminate* or *Not stated/inadequately described*.

### Age-standardised rates

Unless noted otherwise, population rates (presentation rates) presented in this report are age-standardised, calculated using the direct standardisation method and 5 year age groups.

The ABS' population estimates for 30 June at the beginning of the reporting period were used for the observed rates.

For time series tables in this report, the age-standardised presentation rates (per 1,000 population) have been calculated using estimated resident populations relevant to the reporting period.

The total Australian population for 30 June 2001 was used as the standard population against which expected rates were calculated.

There was some variation in the age group used for age-standardising. For example:

- presentation rates by hospital state, remoteness areas and by quintiles of socioeconomic advantage/disadvantage (SES) were directly age-standardised, using the estimated resident populations as at 30 June 2017. The estimated resident populations had a highest age group of 85 and over
- presentation rates by Indigenous status were directly age-standardised, using the projected Indigenous population (low series) as at 30 June 2017. The population for other Australians was based on the estimated resident populations as at 30 June 2017. As the projected Indigenous population estimates had a highest age group of 65 and over, standardised rates calculated for analyses by Indigenous status are not directly comparable with other standardised rates presented in this report which used a highest age group of 85 and over.

### **Presentation rate ratios**

For some tables reporting comparative presentation rates, presentation rate ratios are presented. These ratios are calculated by dividing the age-standardised presentation rate for a population of interest (an observed rate) by the age-standardised presentation rate for a comparison population (the expected rate). The calculation is as follows:

$$\text{Presentation rate ratio} = \text{observed rate/expected rate}$$

A rate ratio of 1.0 indicates that the population of interest (for example, Indigenous Australians) had a presentation rate similar to that of the comparison group (for example, other Australians). A rate ratio of 1.2 indicates that the population of interest had a rate that was 20% greater than that of the comparison population and a rate ratio of 0.8 indicates a rate 20% smaller.

The populations used for the observed and expected rates vary in this report. For example for:

- Indigenous status, the rate ratio is equal to the presentation rate for Indigenous Australians divided by the presentation rate for other Australians (other Australians includes Indigenous status not reported)
- analyses by state or territory of residence, remoteness areas and SES of area of residence, the rate ratio is equal to the presentation rate for the state or territory of residence, remoteness area, or SES group, divided by the presentation rate for Australia.

# Appendix C: Public hospital peer groups

This report uses the AIHW's public hospital peer group classification, which was published in *Australian hospital peer groups* (AIHW 2015a). A summary of the peer group classification is presented in Table C1.

**Table C1: Public hospital peer groups**

Group	Description
<b>Acute public hospitals</b>	<b>Are identified according to the hospital's service profile:</b>
<b>Principal referral hospitals</b>	Provide a very broad range of services, including some very sophisticated services, and have very large patient volumes. Most include an intensive care unit, a cardiac surgery unit, a neurosurgery unit, an Infectious diseases unit and a 24-hour emergency department.
<b>Public acute group A hospitals</b>	Provide a wide range of services to a large number of patients and are usually situated in metropolitan centres or inner regional areas. Most have an intensive care unit and a 24-hour emergency department. They are among the largest hospitals, but provide a narrower range of services than the <i>Principal referral</i> group. They have a range of specialist units, potentially including bone marrow transplant, coronary care and oncology units.
<b>Public acute group B hospitals</b>	Most have a 24-hour emergency department and perform elective surgery. They provide a narrower range of services than the <i>Principal referral</i> and <i>Public acute group A hospitals</i> . They have a range of specialist units, potentially including obstetrics, paediatrics, psychiatric and oncology units.
<b>Public acute group C hospitals</b>	These hospitals usually provide an obstetric unit, surgical services and some form of emergency facility. They are generally smaller than the <i>Public acute group B hospitals</i> .
<b>Public acute group D hospitals</b>	Often situated in regional and remote areas and offer a smaller range of services relative to the other public acute hospitals (groups A–C). Hospitals in this group tend to have a greater proportion of non-acute separations compared with the larger acute public hospitals.
<b>Very small hospitals</b>	Generally have less than 200 admitted patient separations each year.
<b>Specialist hospital groups</b>	<b>Perform a readily identified role within the health system</b>
<b>Women's and children's hospitals</b>	
Children's hospitals	Specialise in the treatment and care of children.
Women's hospitals	Specialise in treatment of women.
Women's and children's hospitals	Specialise in the treatment of both women and children.
<b>Early parenting centres</b>	Specialise in care and assistance for mothers and their very young children.
<b>Drug and alcohol hospitals</b>	Specialise in the treatment of disorders relating to drug or alcohol use.

(continued)

**Table C1 (continued): Public hospital peer groups**

<b>Group</b>	<b>Description</b>
<b>Psychiatric hospitals</b>	Specialise in providing psychiatric care and/or treatment for people with a mental disorder or psychiatric disability.
Psychogeriatric hospitals	Specialise in the psychiatric treatment of older people.
Child, adolescent, and young adult psychiatric hospitals	Specialise in the psychiatric treatment of children and young people.
General acute psychiatric hospitals	Provide acute psychiatric treatment.
General non-acute psychiatric hospitals	Provide non-acute psychiatric treatment—mainly to the general adult population.
Forensic psychiatric hospitals	Provide assessment and treatment of people with a mental disorder and a history of criminal offending, or those who are at risk of offending.
<b>Same-day hospitals</b>	Treat patients on a same-day basis. The hospitals in the same-day hospital peer groups tend to be highly specialised.
Other day procedure hospitals	Provide a variety of specialised services on a same-day basis.
<b>Other acute specialised hospitals</b>	Specialise in a particular form of acute care, not grouped elsewhere. This group is too diverse to be considered a peer group for comparison purposes. It includes hospitals that specialise in the treatment of cancer, rheumatology, eye, ear, and dental disorders.
<b>Subacute and non-acute hospitals</b>	
Rehabilitation and geriatric evaluation and management hospitals	Primarily provide rehabilitation and/or geriatric evaluation and management in which the clinical purpose or treatment goal is improvement in the functioning of a patient.
Mixed subacute and non-acute hospitals	Primarily provide a mixture of subacute (rehabilitation, palliative care, geriatric evaluation and management, psychogeriatric care) and non-acute (maintenance) care that is not covered by the hospitals in the rehabilitation and geriatric evaluation and management hospital peer group.
<b>Outpatient hospitals</b>	Provide a range of non-admitted patient services. They generally do not admit patients.
<b>Unpeered hospitals</b>	Could not be placed in one of the other peer groups.

# Appendix D: National hospital statistics-related committees

The Australian Institute of Health and Welfare (AIHW) currently provides secretariat support for the following national committees that are relevant to hospital statistics:

- the Strategic Committee for National Health Information (SCHNI)
- the National Health Data and Information Standards Committee (NHDISC)
- the Australian Hospital Statistics Advisory Committee (AHSAC).

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# Abbreviations

ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
AIHW	Australian Institute of Health and Welfare
DSS	data set specification
ED	emergency department
ICD-9-CM	International Classification of Diseases, 9th Revision, Clinical Modification
ICD-10-AM	International Statistical Classification of Diseases and Related Health Problems, 10th Revision, Australian Modification
MDB	major diagnostic block
METeOR	Metadata Online Registry
NAPEDC	Non-admitted Patient Emergency Department Care
NBEDS	National Best Endeavours Data Set
NHA	National Healthcare Agreement
NMDS	National Minimum Data Set
NNAPEDCD	National Non-admitted Patient Emergency Department Care Database
NPHEd	National Public Hospital Establishments Database
NSW	New South Wales
NT	Northern Territory
Qld	Queensland
SA	South Australia
SNOMED CT-AU EDRS	Systematized Nomenclature of Medicine—Clinical Terms—Australian version, Emergency Department Reference Set
Tas	Tasmania
Vic	Victoria
WA	Western Australia

# Symbols

<	less than
..	not applicable
n.a.	not available
n.p.	not publishable because of small numbers, confidentiality or other concerns about the quality of the data

# Glossary

Most definitions in this glossary contain an identification number from the Metadata Online Registry (METeOR). METeOR is Australia's central repository for health, community services, and housing assistance metadata, or 'data about data'. It provides definitions for data for topics related to health and community services, and specifications for related national minimum data sets. METeOR can be viewed at <[www.meteor.aihw.gov.au](http://www.meteor.aihw.gov.au)>.

For more information on the terms used in this report, see the definitions in the *National health data dictionary version 16* (AIHW 2012).

**access block:** The situation where patients who have been admitted and need a hospital bed are delayed from leaving the Emergency Department (ED) because of lack of inpatient (admitted patient) bed capacity (ACEM 2018).

**admitted patient:** A patient who undergoes a hospital's formal admission process to receive treatment and/or care. This treatment and/or care is provided over a period of time, and can occur in hospital and/or in the person's home (for hospital-in-the-home patients). METeOR identifier: 268957.

**diagnosis classification type:** The type of classification used for recording emergency department diagnoses. METeOR identifier: 651975.

**duration of clinical care:** The period between when clinical care commences and the end of the non-admitted patient emergency department episode.

**emergency department stay:** The period between when a patient presents at an emergency department, and when that person is recorded as having physically departed the emergency department. METeOR identifier: 472757.

**emergency department waiting time to admission:** Time elapsed for each patient from presentation to the emergency department to admission to hospital. This is calculated from physical departure date and time minus presentation date and time for those emergency department patients who are admitted.

**emergency department waiting time to clinical care:** Time elapsed in minutes for each patient from presentation in the emergency department to the commencement of the emergency department non-admitted clinical care. METeOR identifier: 621840.

**episode:** See **emergency department stay**.

**episode end status:** The status of the patient at the end of the non-admitted patient emergency department service episode. METeOR identifier: 616654 for the NAPEDC NMDS and METeOR identifier: 645857 for the NAPEDC NBEDS.

**hospital:** A health care facility established under Commonwealth, state, or territory legislation as a hospital or a free-standing day procedure unit, and authorised to provide treatment and/or care to patients. METeOR identifier: 404245.

**Indigenous status:** A measure of whether a person identifies as being of Aboriginal or Torres Strait Islander origin. This is in accord with the first 2 of 3 components of the Australian Government definition:

An Aboriginal or Torres Strait Islander is a person of Aboriginal or Torres Strait Islander descent who identifies as an Aboriginal or Torres Strait Islander and is accepted as such by the community in which he or she lives. METeOR identifier: 602543.

**major diagnostic block:** The urgency related group major diagnostic block category into which the patient's emergency department diagnosis is grouped. METeOR identifier: 547612.

**non-admitted patient:** A patient who does not undergo a hospital's formal admission process. There are 3 categories of non-admitted patient: emergency department patient, outpatient, and other non-admitted patient (treated by hospital employees of the hospital site—includes community/outreach services). METeOR identifier: 268973.

**non-admitted patient emergency department service episode:** The treatment or care between when a patient presents at an emergency department, and when the non-admitted patient emergency department clinical care ends. METeOR identifier: 474114.

**patient presentation at emergency department:** The presentation of a patient at an emergency department occurs following the arrival of the patient at the emergency department. It is the earliest occasion of being registered clerically, or triaged. METeOR identifier: 471889.

**peer group:** A classification of hospitals into broadly similar groups in terms of characteristics. METeOR identifier: 584661.

**performance indicator:** A statistic or other unit of information that reflects, directly or indirectly, the extent to which an expected outcome is achieved, or the quality of processes leading to that outcome.

**presentation:** See **patient presentation at emergency department**. Also used as the counting unit for emergency department care.

**principal diagnosis:** The diagnosis established at the conclusion of the patient's attendance in an emergency department to be mainly responsible for occasioning the attendance following consideration of clinical assessment. METeOR identifier: 651874.

**private hospital:** A privately owned and operated institution, catering for patients who are treated by a doctor of their own choice. Patients are charged fees for accommodation and other services provided by the hospital and relevant medical and paramedical practitioners. Acute care and psychiatric hospitals are included, as are private free-standing day hospital facilities.

**public hospital:** A hospital controlled by a state or territory health authority. Public hospitals offer free diagnostic services, treatment, care and accommodation to all eligible patients.

**remoteness area:** A classification of the remoteness of a location using the Australian Statistical Geography Standard Remoteness Structure (2016). The Australian Statistical Geography Standard-Remoteness Area is a geographical classification that defines locations in terms of remoteness, that is, the physical distance of a location from the nearest urban centre. METeOR identifier: 531713.

**triage category:** A category used in the emergency departments of hospitals to indicate the urgency of the patient's need for medical and nursing care. Patients are triaged into 1 of 5 categories on the Australasian Triage Scale. The triage category is allocated by an experienced registered nurse or medical practitioner. METeOR identifier: 646659.

**type of visit:** The reason the patient presents to an emergency department. METeOR identifier: 495958 (NAPEDC NMDS); METeOR identifier: 550725 (NAPEDC NBEDS).

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# List of tables

Table 2.1:	Emergency department presentations, by public hospital peer group, 2013–14 to 2017–18 .....	4
Table 2.2:	Emergency department presentations, by state and territory, 2013–14 to 2017–18 .....	5
Table 2.3:	Emergency department presentations, by public hospital peer group, states and territories, 2017–18 .....	6
Table 3.1:	Emergency department presentations by age group and sex, states and territories, 2017–18 .....	8
Table 3.2:	Emergency department presentations by Indigenous status, states and territories, 2017–18 .....	10
Table 3.3:	Emergency department presentations by triage category and remoteness of patient’s area of usual residence, 2017–18 .....	12
Table 3.4:	Emergency department presentations by triage category and socioeconomic status of patient’s area of usual residence, 2017–18 .....	13
Table 4.1:	Emergency department presentations by type of visit, states and territories, 2017–18 .....	15
Table 4.2:	Emergency department presentations, by triage category and arrival mode, states and territories, 2017–18 .....	18
Table 4.3:	Emergency department presentations by age group, sex and triage category, public hospital emergency departments, 2017–18 .....	20
Table 4.4:	Proportion (%) of presentations by day of week and time of presentation, 2017–18 .....	22
Table 4.5:	Emergency department presentations by principal diagnosis in ICD-10-AM chapters, states and territories, 2017–18 .....	27
Table 4.6:	Emergency department presentations by principal diagnosis in ICD-10-AM chapters and triage category, 2017–18 .....	28
Table 4.7:	Emergency department presentations by principal diagnosis in ICD-10-AM chapters, and admission status, 2017–18 .....	29
Table 4.8:	Emergency department presentations by age group and principal diagnosis in ICD-10-AM chapters, public hospitals, 2017–18.....	30
Table 4.9:	The 20 most common principal diagnoses (3-character level) for emergency department presentations, states and territories, 2017–18 .....	32
Table 4.10:	The 20 most common principal diagnoses (3-character level) for patients who were subsequently admitted to the hospital, by triage category, 2017–18 .....	33
Table 4.11:	The 5 most common principal diagnoses in 3-character ICD-10-AM groupings by age group, public hospital emergency departments, 2017–18 .....	34
Table 4.12:	Emergency department presentations, by episode end status and triage category, 2017–18 .....	37
Table 4.13:	Emergency department presentations by episode end status, states and territories, 2017–18 .....	38

Table 4.14:	Proportion (%) of <i>Emergency presentations</i> with an episode end status of <i>Admitted to this hospital</i> , by triage category, states and territories, 2017–18 .....	38
Table 4.15:	Emergency department presentations by age group and episode end status, public hospital emergency departments, 2017–18 .....	39
Table 5.1:	<i>Emergency presentation</i> waiting time statistics, states and territories, 2013–14 to 2017–18 .....	43
Table 5.2:	<i>Emergency presentation</i> waiting time statistics, states and territories, 2017–18 .....	44
Table 5.3:	Proportion (%) of <i>Emergency presentations</i> seen on time, by public hospital peer group and triage category, states and territories, 2017–18 .....	45
Table 5.4:	Median waiting time (minutes) for <i>Emergency presentations</i> , by triage category and remoteness of area of usual residence , 2017–18 .....	46
Table 5.5:	Proportion (%) of <i>Emergency presentations</i> seen on time, by Indigenous status and triage category, states and territories, 2017–18 .....	47
Table 5.6:	Median waiting time (minutes) for <i>Emergency presentations</i> , by Indigenous status and triage category, states and territories, 2017–18 .....	48
Table 6.1:	Emergency department presentations 90th percentile length of emergency department stay by admission status, states and territories, 2013–14 to 2017–18 .....	51
Table 6.2:	Emergency department presentations 90th percentile length of stay by admission status and triage category, states and territories, 2017–18 .....	52
Table 6.3:	Proportion (%) of presentations to emergency departments with a length of stay of 4 hours or less, for all patients and patients subsequently admitted, states and territories, 2013–14 to 2017–18 .....	54
Table 6.4:	Proportion (%) of presentations to emergency departments with a length of stay of 4 hours or less, by public hospital peer group and triage category, states and territories, 2017–18 .....	55
Table 6.5:	Proportion (%) of presentations to emergency departments with a length of stay of 4 hours or less, for patients subsequently admitted to the hospital, by public hospital peer group and triage category, states and territories, 2017–18 .....	57
Table 6.6:	Proportion (%) of presentations to emergency departments with a length of stay of 4 hours or less, for patients not subsequently admitted to the hospital, by public hospital peer group and triage category, states and territories, 2017–18 .....	58
Table 6.7:	Duration of clinical care statistics for <i>Emergency presentations</i> for patients subsequently admitted to this hospital, by triage category, 2017–18 .....	60
Table 6.8:	Duration of clinical care statistics for <i>Emergency presentations</i> for patients not subsequently admitted to this hospital, by triage category, 2017–18 .....	60
Table A1:	Public hospital emergency departments, by state and territory, 2013–14 to 2017–18 .....	65
Table A2:	Public hospitals emergency departments, by public hospital peer group, 2013–14 to 2017–18 .....	65
Table A3:	Public hospital emergency departments reported to the NNAPEDCD, by public hospital peer group, states and territories, 2017–18 .....	65

Table A4: Proportion (%) of <i>Emergency presentations</i> by triage category, states and territories, 2017–18 .....	66
Table A5: Provision of diagnosis information for emergency presentations by diagnosis classification type, states and territories, 2017–18 .....	67
Table C1: Public hospital peer groups.....	76

## List of figures

Figure 4.1: Emergency department presentations (number), by hour of presentation and triage category, 2017–18 .....	23
Figure 4.2: Proportion (%) of presentations, by hour of presentation for each triage category, 2017–18 .....	23
Figure 5.1: Patient progress through an emergency department .....	41

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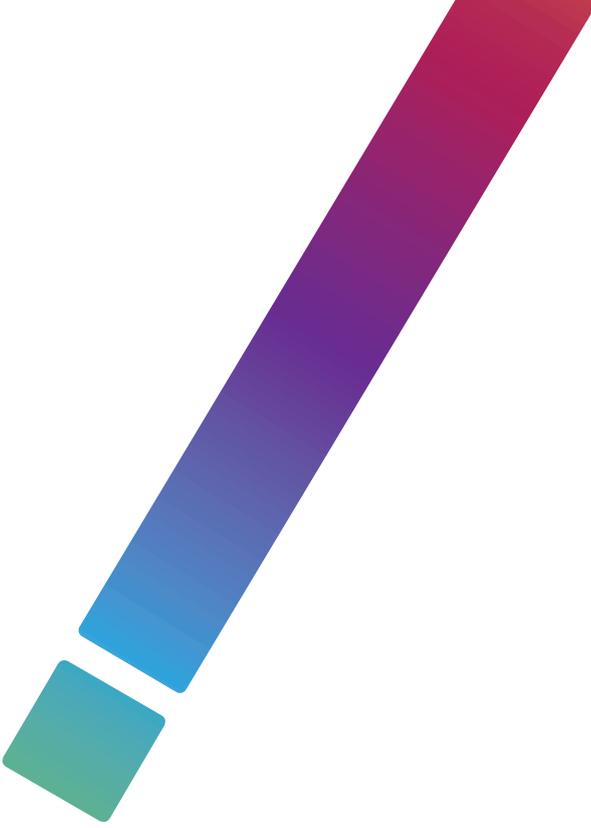
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*Emergency department care 2017-18: Australian hospital statistics* presents information on care provided in public hospital emergency departments between 1 July 2017 and 30 June 2018. It includes information on overall activity, nationally agreed performance indicators on waiting times for care, time spent in the ED, and other waiting times statistics. It also includes comparative information for the previous 4 reporting periods.

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