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Number 58

# Australian hospital statistics 2013–14

**Emergency department care** 

Australian Institute of Health and Welfare Canberra

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## **Foreword**

I am pleased to present this report on emergency department care in Australian public hospitals for the period July 2013 to June 2014.

This report is one of a series of products produced by the AIHW to report on Australia's hospitals each year. A separate report on elective surgery waiting times was also released in October, with a report on hospital-associated *Staphylococcus aureus* bacteraemia cases scheduled for release in December. Reports on care provided for admitted patients, non-admitted patients and on hospital resources for 2013–14 will be published in early 2015.

As in previous reports, *Australian hospital statistics* 2013–14: *emergency department care* answers questions about the number of presentations to emergency departments, the amount of time that patients waited for clinical care and the length of stay in the emergency department. It also presents comparative information for the past four years.

For the first time, national emergency department data includes information on the patient's diagnosis. Preliminary information on these data is included in this report and more detailed information will be released later in 2014–15.

The performance information published in this report matches the data to be provided by the AIHW to the Steering Committee for the Review of Government Service Provision for their *Report on government services*, due for publication in early 2015 and to incorporate performance indicators for the National Healthcare Agreement. The data will also match the data to be provided by the AIHW to the National Health Performance Authority for the *MyHospitals* website. In this way, the AIHW supports the principle of 'supply once, use often' so that national data are used efficiently and consistently.

David Kalisch
Director
October 2014

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# **Abbreviations**

ABS Australian Bureau of Statistics

ACT Australian Capital Territory

AIHW Australian Institute of Health and Welfare

ASGS Australian Statistical Geography Standard

GP general practitioner

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

NEAT National Emergency Access Target

NHA National Healthcare Agreement

NHPF National Health Performance Framework

NHRA National Health Reform Agreement

NMDS national minimum data set

NNAPEDCD National Non-admitted Patient Emergency Department Care Database

NPA IPHS National Partnership Agreement on Improving Public Hospital Services

NPHED National Public Hospital Establishments Database

NSW New South Wales

NT Northern Territory

Qld Queensland

SA South Australia

SA2 Statistical Area Level 2

SEIFA Socio-Economic Indexes for Areas

SES socioeconomic status

SLA Statistical Local Area

SNOMED CT- Systematized Nomenclature of Medicine - Clinical Terms - Australian

AU (EDRS) version, Emergency Department Reference Set

Tas Tasmania

URG urgency related group

Vic Victoria

WA Western Australia

# **Symbols**

. not applicable

n.p. not published

< less than

# number

# **Summary**

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

Almost 7.2 million emergency department presentations were reported by public hospital emergency departments in 2013–14, corresponding to over 19,700 presentations each day.

Emergency department presentations increased by 7.2% between 2012–13 and 2013–14. Over this period the estimated coverage of the collection increased from 85% to 88% of presentations. Between 2009–10 and 2013–14, emergency department presentations increased by 4.8% on average each year (while coverage increased by an average of 2.3%).

Around two-thirds of resuscitation patients (those requiring treatment immediately) presented between 10:00 am and 10:00 pm. Half of emergency patients (requiring treatment within 10 minutes) presented between midday and 8:00 pm and half of non-urgent patients (requiring treatment within 120 minutes) presented between 8:00 am and 2:00 pm.

#### How long did patients wait?

In 2013–14, 75% of emergency department patients were 'seen on time'. The proportion 'seen on time' varied across the states and territories, ranging from 57% in the Northern Territory to 81% in New South Wales.

Almost 100% of resuscitation patients, 82% of emergency patients and 92% of non-urgent patients were seen on time.

Between 2009–10 and 2013–14, the overall proportion of patients 'seen on time' increased from 70% to 75%. Over the same period, the median waiting time of *Emergency presentations* decreased from 23 minutes to 18 minutes.

#### How long did patients stay?

The length of stay in the emergency department is from the time the patient first presents to the emergency department until they physically depart the emergency department.

Nationally, the proportion of emergency department visits completed in 4 hours or less increased from 64% to 73% between 2011–12 and 2013–14.

For New South Wales the proportion completed in 4 hours or less increased from 60% in 2011–12 to 74% in 2013–14. Queensland also showed a notable increase in the proportion completed in 4 hours or less, rising from 64% in 2011–12 to 76% in 2013–14.

Western Australia had the highest proportion completed in 4 hours or less (79%) and the Australian Capital Territory and Northern Territory had the lowest (62%).

Three in ten (29%) emergency department patients were admitted to hospital after their emergency department care. For these patients, 45% had completed their emergency department visit in 4 hours or less, and just over 90% were admitted within 12 hours. Queensland and Western Australia had the highest proportion (53%) of emergency department patients admitted within 4 hours or less and the Northern Territory had the lowest (22%).

# 1 Introduction

Australian hospital statistics 2013–14: emergency department care continues the series of summary annual reports produced by the Australian Institute of Health and Welfare (AIHW) that describe the characteristics and activity of Australia's hospitals (see *Related publications*). The *Australian hospital statistics* series of products presents data supplied by state and territory health authorities on admitted patient care, elective surgery waiting times, emergency department care, non-admitted patient care, public hospital establishments and rates of infection with *Staphylococcus aureus* bacteraemia (an indicator of hospital safety and quality).

This report presents information on care provided in public hospital emergency departments for the period 1 July 2013 to 30 June 2014. It includes information on overall activity, nationally agreed performance indicators on waiting times for care and time spent in the emergency department, and other waiting times statistics. Comparative information for the previous four reporting periods is also included.

For the first time, information related to the patient's diagnosis in the emergency department (in the form of Principal and additional diagnoses, major diagnostic blocks [MDBs] and urgency related groups [URGs]) has been reported in the National Non-admitted Patient Emergency Department Care Database (NNAPEDCD) (see Appendix C).

Data based on the national minimum data sets (NMDSs) for Admitted patient care, Public hospital establishments and Non-admitted patient care will be provided by state and territory health authorities later in 2014. These data will be reported by the AIHW in early 2015 and will include information on emergency occasions of service not included in this report, sourced from data provided for the Public hospital establishments NMDS.

Data for the same period for elective surgery waiting times was released in the report *Australian hospital statistics* 2013–14: *elective surgery waiting times* also in October 2014 (AIHW 2014a). A report on hospital-associated *Staphylococcus aureus* bacteraemia cases – *Australian hospital statistics* 2013–14: Staphylococcus aureus *bacteraemia in Australian public hospitals* – is scheduled for release in December 2014.

This chapter presents information on:

- Data sources and methods
- Other information on emergency department activity
- What's in this report.

## Data sources and methods

#### **NNAPEDCD**

The data supplied by state and territory health authorities were used by the AIHW to assemble the NNAPEDCD. The data cover waiting times and other characteristics for public hospital emergency departments.

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

Overall, the quality of the data in the NNAPEDCD is sufficient to be published in this report. However, the limitations of the data (as outlined in Box 1.1 and Appendix A) should be taken into consideration when data are interpreted. Detailed information about the AIHW's NNAPEDCD is in the Data Quality Statement at Appendix A and accompanying this report online at <www.aihw.gov.au>.

Terms relevant to the data on emergency department care are summarised in Box 1.2.

#### **Box 1.1: Data limitations**

#### Data quality

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 or incorrect values.

Caution should be used when interpreting the data presented in this report, as they have not been checked against the establishment-level data provided in the National Public Hospital Establishments Database (NPHED) as those data are not yet available. The NPHED includes information on the number of emergency occasions of service for each public hospital, and is used to check counts of presentations. The data presented here have therefore not been subjected to the usual level of confirmation.

Approximately 114,000 records for which a valid waiting time could not be calculated due to missing or incorrect values (for example, for time of presentation or commencement of clinical care) were not used to derive waiting time statistics.

#### Scope of the collection

Between 2012–13 and 2013–14, the scope of the Non-admitted patient emergency department care (NAPEDC) NMDS changed.

For 2013–14, the NAPEDC NMDS scope is patients registered for care in emergency departments in public hospitals where the emergency department meets the following criteria:

- purposely designed and equipped area with designated assessment, treatment and resuscitation areas
- 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 and nursing unit manager 24 hours per day 7 days per week.

For 2012–13 and earlier years, the scope of the NAPEDC NMDS was public hospitals that were classified in peer groups A and B, for *Australian hospital statistics* for the previous financial year period. Therefore, comparisons of these data with earlier periods should take into consideration changes in both scope and coverage.

#### Data coverage

Data coverage is estimated by comparing the number of emergency department presentations reported in the NNAPEDCD to the number of non-admitted patient emergency occasions of service reported to the NPHED, which includes data for all public hospitals, regardless of whether they have an emergency department. The coverage estimate is only indicative, as not all emergency occasions of service are provided through formal emergency departments.

(continued)

#### Box 1.1 (continued): Data limitations

In addition, the coverage cannot be accurately determined for 2013–14 until the establishment-level data in the NPHED become available. For 2013–14, a preliminary estimate is that about 88% of emergency occasions of service were reported to the NNAPEDCD.

#### Data comparability among the states and territories

Statistics on emergency department presentations for non-admitted patients may be affected by variations in reporting practices across states and territories and over time. Where possible, these variations have been noted in the text. Comparisons between states and territories and reporting years should be made with reference to the accompanying notes in the chapters and the appendixes.

New South Wales did not report against the episode end status *Died in emergency department* as a non-admitted patient before 2012–13. Therefore, caution should be used when making comparisons over time.

See Appendix A for more information.

#### Box 1.2: Summary of terms relating to emergency department care

An emergency department **presentation** occurs following the arrival of the patient at the emergency department and is the earliest occasion of being registered clinically or triaged. The presentation is also used as a counting unit and is interchangeable with other terms including 'occasion of service'.

An **emergency occasion of service** is any examination, consultation, treatment or other services provided as an individual session to a non-admitted patient in the emergency services functional unit of an establishment.

**Emergency presentation** refers to attendance for an actual or suspected condition which is sufficiently serious to require acute unscheduled care. Only presentations for which the type of visit was reported as *Emergency presentation* are included. Excluded are presentations for planned return visits, for example.

An **emergency department stay** is the period between when a patient presents at an emergency department and when that person is recorded as having physically departed the emergency department.

The **episode end status** indicates the status of the patient at the end of the non-admitted patient emergency department service episode.

The **type of visit** to the emergency department indicates the reason the patient presented to the emergency department.

The **triage category** indicates the urgency of the patient's need for medical and nursing care. It is usually assigned by an experienced registered nurse or medical practitioner 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...?'.

(continued)

#### Box 1.2 (continued): Summary of terms relating to emergency department care

The Australasian Triage Scale has five categories — as defined in the *National health data dictionary, version 16* (AIHW 2012a) — that incorporate the time by which the patient should receive care:

- *Resuscitation*: immediate (within seconds)
- *Emergency*: within 10 minutes
- *Urgent*: within 30 minutes
- *Semi-urgent*: within 60 minutes
- *Non-urgent*: within 120 minutes.

These categories are equivalent to the Australasian Triage Scale triage categories ATS 1 to ATS 5, respectively (ACEM 2013).

Emergency department waiting time to commencement of clinical care is the time elapsed in minutes for each patient from presentation in the emergency department to the commencement of the emergency department non-admitted clinical care.

**Proportion 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, usually represented as a percentage.

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. Also, presentations were excluded if the waiting time was missing or invalid or the patient *Did not wait to be attended by a health care professional*, or was *Dead on arrival*.

There is some variation between jurisdictions in the criteria used to determine the proportion of *Resuscitation* patients seen on time; therefore, these data may differ from those reported by individual jurisdictions.

**Proportion ending in admission** is the proportion of presentations for which the episode end status was reported as *Admitted to this hospital*, usually represented as a percentage. This includes being admitted to units or beds within the emergency department.

See Appendix A for more information.

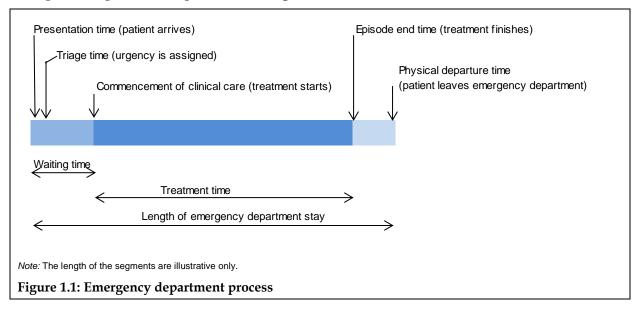
## Measurement of time in the emergency department

The progress of the patient through the emergency department is recorded in the NNAPEDCD by five different time points:

- *presentation time*—the time of first recorded contact with an emergency department staff member. This may be commencement of clerical registration or of the triage process
- triage time the time at which the patient was assigned a triage category
- *clinical care commencement* the time at which care commenced by a doctor, nurse, mental health practitioner or other health professional
- *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 emergency department.

These time points are used to derive the patient's waiting time to commencement of clinical care (see Chapter 3), the length of treatment time and the length of the emergency department stay (Chapter 4).

The patient's process is represented in Figure 1.1.



#### **Hospital performance indicators**

'Performance measurement is essential to assessing the population's health and the success of health services and the health system more broadly, as well as highlighting where improvements need to be made' (AIHW 2014c).

Performance indicators are defined as statistics or other units of information that, directly or indirectly, reflect either the extent to which an expected outcome is achieved or the quality of the processes leading to that outcome (NHPC 2001).

This report presents data on the following performance indicators relevant to emergency department care:

- National Healthcare Agreement (NHA) performance indicator #21a: Waiting times for emergency hospital care: proportion seen on time. This performance indicator can be related to the National Health Performance Framework (NHPF) 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.
- NHA performance indicator #21b: Waiting times for emergency department care: proportion completed within four hours. This performance indicator can be related to the NHPF 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*.

This performance indicator is reported on financial year data and is equivalent to the National Health Reform Agreement (NHRA) National Partnership Agreement on Improving Public Hospital Services (NPA IPHS) National Emergency Access Target (NEAT) indicator that is reported on a calendar year basis.

• NPA IPHS indicator: Admission to hospital from emergency departments (for all patients presenting to a public hospital emergency department [including publicly funded privately operated hospitals] who are subsequently admitted to the same hospital). This indicator has two parts: the percentage of presentations where the length of the emergency department stay is less than or equal to 4 hours and the length of emergency department stay at the 90th percentile. This performance indicator can be related to the NHPF dimension 'Accessibility' within the domain 'Health system performance'.

Previously, reports in this series had reported NHA performance indicator #19: Selected potentially avoidable GP-like presentations in emergency departments, using an interim specification. The AIHW has been undertaking work to improve the specification of the indicator. This work has led to the AIHW deciding that the limitations of the current specification are such that it is not fit for purpose and that it should not be reported in *Australian hospital statistics*. The indicator may be improved in the future, for example if new data can be used to improve the estimation of GP-like presentations. In that case, the AIHW would resume reporting of the indicator.

#### Public hospital peer groups

This report presents data using two different public hospital peer group classifications, AIHW's revised peer group classification and the previous public hospital peer group classification.

The AIHW's revised peer group classification (as described in Appendix D) is used to report presentations that include breakdowns by peer group (tables 2.3, 4.2, 4.3, 4.4 and Internet only tables S2.1, S2.2, S3.1) and for the following performance indicator, which is defined for all hospitals reporting emergency department care data:

• NHA #21b: Waiting times for emergency hospital care: proportion completed within four hours (Table 4.2).

The previous public hospital peer group classification used in *Australian hospital statistics* publications between 1998–99 and 2011–12 is used to present information for the NHA performance indicators for which the scope has been defined as:

'presentation to public hospital emergency departments in *Principal referral and specialist women's and children's hospitals* (Peer group A) and *Large hospitals* (Peer group B) in *Australian hospital statistics* of the previous financial reporting period'.

These performance indicators are:

• NHA #21a: Waiting times for emergency hospital care: proportion seen on time (tables 3.5, 3.6 and Internet tables S3.2 and S3.3).

The use of the previous peer group classification for these NHA performance indicators will align AIHW reporting with that proposed to be reported by the Steering Committee for the Review of Government Service Provision in relation to the National Healthcare Agreement performance indicator in the *Report on government services* 2015.

See Appendix D for more information.

#### Other information on emergency department activity

There are a number of national sources of information on emergency department activity other than the NNAPEDCD. They are summarised here.

#### Private hospital emergency department activity

Information about emergency occasions of service provided by private hospitals is reported to the Australian Bureau of Statistics' (ABS's) Private Health Establishments Collection (PHEC) and is presented in the ABS's *Private hospitals, Australia* reports.

In 2012–13, accident and emergency services were provided at 34 acute and psychiatric private hospitals. These hospitals included those which did not have a formal accident and emergency unit but treated accident and emergency patients. These private hospitals provided 483,600 accident and emergency occasions of service (ABS 2014).

There were 23 hospitals with emergency departments, defined as those providing levels 4 to 6 of emergency services as defined by the *Guide to the role delineation of health services* (NSW Health 2002).

#### Patient experience in emergency departments

The ABS Patient Experience Survey collects national data on access and barriers to a range of health care services, including emergency visits for persons aged 15 years and over (ABS 2013).

Almost 2.5 million people aged 15 years and over reported visiting an emergency department in the last 12 months. Almost a quarter of these people visted the emergency department 2 or 3 times in the last 12 months, and 5.8% visted an emergency department 4 or more times.

The 2012–13 survey found the main reasons respondents presented at emergency departments instead of a general practitioner on the most recent occasion was because they considered their condition was serious or life threatening (49.9%), the time of day or day of the week they needed care (25.5%), they were sent there by their general practitioner (6.7%) and the waiting times for a general practitioner were too long (2.5%).

#### **National Public Hospital Establishments Database**

All states and territories provide hospital-level data on emergency occasions of service for the NPHED, which has full coverage of public hospitals. The emergency occasions of service data reported for the NPHED have wider scope than data provided for the NNAPEDCD which covers emergency departments only.

In 2012–13, there were 7,924,000 emergency occasions of service reported in public hospitals. The NPHED data for 2013–14 are not yet available but will be reported in the AIHW's annual report *Australian hospital statistics* 2013–14, to be released in early 2015.

# What's in this report?

Chapter 2 presents activity information on patients registered for care in public hospital emergency departments. This chapter includes the numbers of hospitals reporting in each peer group, numbers of presentations by state and territory, the type of presentation and estimated proportions of emergency services reported to the NNAPEDCD in 2013–14, as well as comparable information for the past 4 years.

Chapter 3 presents waiting times information, including relevant performance indicators on the proportion of patients seen on time and the median and 90th percentile waiting times (in minutes), nationally and by state and territory; Indigenous status; triage category; and public hospital peer group.

Chapter 4 presents emergency department length of stay information, including relevant performance indicators on the proportion of emergency department stays that were completed within 4 hours and the 90th percentile length of emergency department stay for patients subsequently admitted to hospital. Similar information is included for all patients. The Chapter also includes information on the length of time that patients received treatment in the emergency department.

Appendix A presents data quality information. It includes additional information on apparent variations in the reporting of the data used in this report, including variation in the quality of Indigenous identification.

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

Appendix C presents summary information on patient diagnoses reported for the NNAPEDCD.

Appendix D presents information on public hospital peer group classifications.

#### Additional data online

This report is available as a PDF at <www.aihw.gov.au>. All tables (including additional tables not included in the report) are downloadable as Excel spread sheets.

#### **Updates**

*Australian hospital statistics* 2013–14, to be published in early 2015, will include updates for the tables that present estimates of the proportion of episodes included in the NNAPEDCD, based on 2013–14 data from the Public hospital establishments NMDS.

Online tables and interactive data are also updated in the event of errors being found in the report after publication, or if data are resupplied by jurisdictions after release of the publication.

# 2 Emergency department activity

This chapter presents information about the almost 7.2 million presentations to emergency departments in public hospitals included in the NNAPEDCD. These include the major public hospitals in each state and territory. The terms used are explained in Box 1.2.

The chapter is particularly focused on information related to total activity, the type of care received and how patients left the emergency department.

# How has activity changed over time?

Between 2009–10 and 2013–14, the number of emergency department presentations reported to the NNAPEDCD increased by 20.7%, with an average annual increase of 4.8% (Table 2.1). However, over this period the coverage of the NNAPEDCD collection increased, with the estimate coverage increasing from 81% to 88%. This coverage change should be taken into account in interpreting changes over time. After adjusting for coverage changes, the number of presentations increased by an average of 2.9% each year.

The increase in the number of emergency department presentations between 2012–13 and 2013–14 was 7.2%. The change in the number of reporting hospitals over this period was due to the inclusion of 85 additional establishments in New South Wales in 2013–14. After adjusting for coverage changes, the number of presentations increased by 2.4%.

Table 2.1: Emergency department presentations, public hospital emergency departments, 2009–10 to 2013–14

						Change (%) <sup>(a)(b)</sup>	
	2009–10	2010–11	2011–12	2012–13	2013–14	Average since 2009–10	Since 2012–13
Number of hospitals reporting emergency department data	184	186	203	204	289		
Presentations	5,957,961	6,183,288	6,547,342	6,712,357	7,195,903	4.8	7.2
Estimated proportion (%) <sup>(c)</sup>	81	81	84	85	88	2.3	4.3

<sup>(</sup>a) Between 2009–10 and 2013–14, the coverage of the NNAPEDCD collection increased. This coverage change should be taken into consideration when interpreting the increase in activity over this period. After adjusting for coverage changes, the number of presentations increased by an average of 2.9% each year.

#### States and territories

Between 2009–10 and 2013–14, the largest percentage increase in the estimated proportion of emergency services reported for the NNAPEDCD occurred in South Australia (from 67% to 83% of all emergency occasions of service) and in New South Wales (from 83% to 99% of all emergency occasions of service) (Table 2.2).

Between 2012–13 and 2013–14, the greatest percentage increases in emergency department presentations were reported for the Australian Capital Territory (5.8%) and Queensland (5.2%) (Table 2.2).

<sup>(</sup>b) Between 2012–13 and 2013–14, the coverage of the NNAPEDCD collection increased. This coverage change should be taken into consideration when interpreting the increase in activity over this period. After adjusting for this coverage change, the number of presentations increased by 2.4%.

<sup>(</sup>c) The number of presentations reported to the NNAPEDCD divided by the number of emergency occasions of service reported to the NPHED as a percentage. For 2013–14, the proportion of emergency occasions of service reported to NNAPEDCD is a preliminary estimate.

Note: See boxes 1.1 and 1.2 and appendixes A and B for more information on terminology, data limitations and methods.

Table 2.2: Emergency department presentations, public hospital emergency departments, states and territories, 2009–10 to 2013–14

						Change	<b>(%)</b> <sup>(a)</sup>
	2009–10	2010–11	2011–12	2012–13	2013–14	Average since 2009–10	Since 2012–13
New South Wales <sup>(b)</sup>							
Number of hospitals	84	86	95	95	180		
Presentations <sup>(c)</sup>	2,035,783	2,074,098	2,235,455	2,278,591	2,646,415	n.p.	n.p.
Estimated proportion (%) <sup>(d)</sup>	83	83	88	88	99	4.5	12.6
Victoria							
Number of hospitals	39	39	40	40	40		
Presentations	1,432,745	1,483,159	1,509,065	1,528,609	1,572,787	2.4	2.9
Estimated proportion (%) <sup>(d)</sup>	90	90	91	92	92	0.6	0.0
Queensland <sup>(e)</sup>							
Number of hospitals	26	26	26	27	27		
Presentations	1,134,092	1,195,325	1,238,522	1,284,158	1,351,573	4.5	5.2
Estimated proportion (%) <sup>(d)</sup>	72	72	72	74	74	0.6	0.0
Western Australia							
Number of hospitals	16	16	17	17	17		
Presentations	600,613	649,215	732,351	754,252	742,615	5.4	-1.5
Estimated proportion (%) <sup>(d)</sup>	73	74	78	78	78	1.7	0.0
South Australia <sup>(f)</sup>							
Number of hospitals	8	8	14	14	14		
Presentations	373,700	383,992	427,011	455,220	463,171	n.p.	1.7
Estimated proportion (%) <sup>(d)</sup>	67	68	80	83	83	5.5	0.0
Tasmania							
Number of hospitals	4	4	4	4	4		
Presentations	141,630	143,848	141,700	147,064	148,278	1.2	0.8
Estimated proportion (%) <sup>(d)</sup>	89	93	92	92	92	1.0	0.3
Australian Capital Territory							
Number of hospitals	2	2	2	2	2		
Presentations	106,815	112,232	118,396	118,931	125,888	4.2	5.8
Estimated proportion (%) <sup>(d)</sup>	100	100	100	100	100	0.0	0.0
Northern Territory							
Number of hospitals	5	5	5	5	5		
Presentations	132,583	141,419	144,842	145,532	145,176	2.3	-0.2
Estimated proportion (%) <sup>(d)</sup>	100	100	100	100	100	0.0	0.0
Total							
Number of hospitals	184	186	203	204	289		
Presentations	5,957,961	6,183,288	6,547,342	6,712,357	7,195,903	4.8	7.2
Estimated proportion (%) <sup>(d)</sup>	81	81	84	85	88	2.3	4.3

<sup>(</sup>a) Between 2009–10 and 2013–14, the estimated coverage of the NNAPEDCD increased from 81% to 88% and this should be taken into consideration when interpreting the increase in activity over this period. After adjusting for coverage changes, the number of presentations increased by an average of 2.9% each year.

<sup>(</sup>b) Between 2009–10 and 2013–14, the estimated coverge of the NNAPEDCD in New South Wales increased from 83% to 99% and this should be taken into consideration when interpreting the increase in activity over this period.

<sup>(</sup>c) The average change is not shown due to the change in coverage.

<sup>(</sup>d) The number of presentations reported to the NNAPEDCD divided by the number of emergency occasions of service reported to the NPHED as a percentage. For 2013–14, the proportion of emergency occasions of service reported to the NNAPEDCD is a preliminary estimate.

<sup>(</sup>e) Between 2011–12 and 2012–13, the change in the number of reporting hospitals was due to a Queensland hospital that started reporting separately in 2012–13 that had previously reported data under a parent facility.

<sup>(</sup>f) For South Australia, 7 large country hospitals were first included in South Australia's emergency department data collection in 2011–12, while units at 2 metropolitan hospitals were removed as they no longer functioned as true emergency departments. The net effect was a large increase in presentations between 2010–11 and 2011–12.

# How much activity was there in 2013–14?

About 32% of presentations (2.3 million) to public hospital emergency departments in 2013–14 occurred in *Principal referral and Women's and children's hospitals*, 36% in *Public acute group A hospitals* and 19% in *Public acute group B hospitals* (Table 2.3). For an explanation of the public hospital peer groups classification see Appendix D.

Data on all emergency occasions of service, based on the 2013–14 NPHED, will be reported in *Australian hospital statistics* in early 2015. This includes emergency data on all emergency occasions of service provided by approximately 330 hospitals that generally do not have emergency departments but have other arrangements for providing emergency services and are not included in this report.

Table 2.3: Emergency department presentations, by public hospital peer group<sup>(a)</sup>, public hospital emergency departments, states and territories, 2013–14

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total		
Principal referral and Wom	en's and ch	nildren's ho	spitals								
Hospitals	13	9	7	4	3	1	1	1	39		
Presentations	782,302	502,899	430,693	224,194	192,937	54,008	70,613	65,501	2,323,147		
Estimated proportion (%) <sup>(b)</sup>	100	100	100	100	100	100	100	99	100		
Public acute group A hosp	itals										
Hospitals	22	15	12	4	3	2	1	1	60		
Presentations	819,173	627,664	609,926	256,703	145,809	67,720	55,275	43,918	2,626,188		
Estimated proportion (%) <sup>(b)</sup>	100	100	100	100	100	99	100	100	100		
Public acute group B hosp	Public acute group B hospitals										
Hospitals	17	9	8	6	4	1	0	0	45		
Presentations	444,874	317,129	310,954	199,305	83,276	26,550			1,382,088		
Estimated proportion (%) <sup>(b)</sup>	100	100	100	95	100	97			100		
Other hospitals											
Hospitals	128	7	0	3	4	0	0	3	145		
Presentations	600,066	125,095		62,413	41,149			35,757	864,480		
Estimated proportion (%) <sup>(b)</sup>	100	49		23	31			94	49		
Total											
Hospitals	180	40	27	17	14	4	2	5	289		
Presentations	2,646,415	1,572,787	1,351,573	742,615	463,171	148,278	125,888	145,176	7,195,903		
Estimated proportion (%) <sup>(b)</sup>	99	92	74	78	83	92	100	100	88		

<sup>(</sup>a) Revised AIHW public hospital peer groups have been used for this table. Refer to Appendix D for more information on the peer group classification.

#### Who used these services?

#### Sex and age group

Males accounted for just over half of emergency department presentations. Substantially more boys than girls aged 0 to 14 presented to emergency departments (56% and 44%, respectively) (Table 2.4). The most common age group reported for emergency department presentations was 15–24 (14.4%), followed by 25–34 (13.8%). Females accounted for a higher proportion of presentations in these age groups than males.

<sup>(</sup>b) The number of presentations reported to the NNAPEDCD divided by the number of emergency occasions of service reported to the NPHED as a percentage. This is a preliminary estimate.

Note: See boxes 1.1 and 1.2 and appendixes A, B and D for more information on terminology, data limitations and methods.

Table 2.4: Emergency department presentations by age group and sex, public hospital emergency departments, states and territories, 2013-14

Sex	Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Males										
	0–4	171,035	103,673	87,451	54,903	31,050	8,258	8,346	8,628	473,344
	5–14	147,451	82,892	79,365	45,071	25,127	7,552	6,267	6,774	400,499
	15–24	175,871	99,566	101,006	53,107	30,313	11,158	9,065	9,993	490,079
	25–34	162,316	96,365	90,183	54,193	27,490	9,385	8,486	12,653	461,071
	35–44	151,060	87,049	81,341	43,544	24,912	8,417	7,043	11,510	414,876
	45–54	140,971	80,873	71,903	37,688	24,311	8,171	6,120	10,609	380,646
	55-64	130,040	71,433	60,945	30,997	21,380	7,585	5,452	7,379	335,211
	65–74	124,631	66,836	53,999	25,824	19,261	7,167	4,780	4,593	307,091
	75–84	104,681	58,739	41,128	20,906	18,034	5,474	3,707	1,780	254,449
	85 and over	52,939	29,135	18,991	10,346	10,586	2,278	2,001	486	126,762
	Total males <sup>(a)</sup>	1,361,332	776,562	686,312	376,579	232,464	75,445	61,267	74,419	3,644,380
Females										
	0–4	131,552	79,896	68,834	43,507	23,698	6,075	6,417	6,967	366,946
	5–14	114,405	66,884	63,936	37,702	21,086	6,700	5,200	5,830	321,743
	15–24	184,645	114,630	116,557	58,422	34,282	12,454	10,937	10,974	542,901
	25–34	174,836	133,143	99,303	59,607	30,810	9,847	11,118	13,263	531,927
	35–44	140,298	94,070	79,624	42,908	24,225	8,221	7,658	12,374	409,378
	45–54	126,682	76,390	67,609	35,164	22,896	7,747	6,370	9,764	352,622
	55–64	115,882	66,491	54,318	27,873	19,643	6,971	5,389	6,353	302,920
	65–74	107,583	60,352	46,979	22,690	18,365	6,154	4,518	3,101	269,742
	75–84	107,579	61,032	40,571	21,872	19,783	5,477	3,999	1,576	261,889
	85 and over	81,282	43,331	27,468	16,075	15,872	3,182	3,013	542	190,765
	Total females <sup>(a)</sup>	1,284,941	796,219	665, 199	365,820	230,660	72,828	64,619	70,753	3,551,039
All persons <sup>(a)(b)</sup>		2,646,415	1,572,787	1,351,573	742,615	463,171	148,278	125,888	145,176	7,195,903

<sup>(</sup>a) Includes presentations for which the age group of the patient was not reported.

<sup>(</sup>b) Includes presentations for which the sex of the patient was not reported.

#### **Aboriginal and Torres Strait Islander people**

Nationally, 5.4% of all emergency department presentations were for Indigenous Australians (Table 2.5) who represent about 2.6% of the Australian population.

The Northern Territory, the jurisdiction with the highest proportion of Indigenous residents (30.4%) and for which NNAPEDCD data are reported for all hospitals, had the highest proportion of emergency department presentations for Indigenous Australians (43.1%). Victoria, the state with the lowest proportion of Indigenous residents (0.7%), recorded the lowest proportion of emergency department presentations for Indigenous Australians (1.6%). See Box 2.1 for information on the quality of Indigenous status data.

#### Box 2.1: Quality of Indigenous status data

The AIHW report *Indigenous identification in hospital separations data: quality report* (AIHW 2013c) found that nationally, about 88% of Indigenous Australians were identified correctly in hospital admissions data in the 2011–12 study period, and the 'true' number of separations for Indigenous Australians was about 9% higher than reported.

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 Appendix A for comments provided by states and territories on the perceived quality of Indigenous status data provided for the NNAPEDCD.

Table 2.5: Emergency department presentations by Indigenous status, public hospital emergency departments, states and territories, 2013–14

	Indigenous	Non-Indigenous	Not reported	Total
New South Wales	133,733	2,372,465	140,217	2,646,415
Victoria	24,891	1,538,209	9,687	1,572,787
Queensland	82,770	1,252,940	15,863	1,351,573
Western Australia	57,284	681,926	3,405	742,615
South Australia	20,596	422,852	19,723	463,171
Tasmania	6,832	139,370	2,076	148,278
Australian Capital Territory	3,499	121,325	1,064	125,888
Northern Territory	62,537	82,475	164	145,176
Total	392,142	6,611,562	192,199	7,195,903

Note: See boxes 1.1, 1.2 and 2.1 and appendixes A and B for more information on terminology, data limitations and methods.

## How did people access these services?

The emergency department data element 'arrival mode — transport' indicates the mode of transport by which the patient arrived at the emergency department. The category *Other* includes presentations where patients either walked into the emergency department or came by private transport, public transport, community transport or taxi.

In 2013–14, the majority of presentations to emergency departments had a reported arrival mode of *Other* (Table 2.6). Arrival mode varied by triage category. About 84% of *Resuscitation* patients (who need to be treated immediately) arrived by *Ambulance, air ambulance or helicopter rescue service* compared with 4% of *Non-urgent* patients (who need to be treated

within 2 hours). State and territory breakdowns of arrival modes and triage categories are provided in Table 2.13.

Table 2.6: Emergency department presentations, by arrival mode and triage category, public hospital emergency departments, 2013–14

	Triage category							
Arrival mode	Resuscitation	Emergency	Urgent	Semi- urgent	Non- urgent	Total <sup>(a)</sup>		
Ambulance, air ambulance or helicopter rescue service	39,256	361,697	833,462	466,862	29,677	1,731,371		
Police/correctional services vehicle	286	8,438	22,954	14,293	5,630	51,634		
Other <sup>(b)</sup>	7,151	415,397	1,606,906	2,615,484	754,940	5,405,889		
Not stated/unknown	48	259	1,006	3,920	1,516	7,009		
Total	46,741	785,791	2,464,328	3,100,559	791,763	7,195,903		

<sup>(</sup>a) Includes presentations for which the triage category was not reported.

Note: See boxes 1.1 and 1.2 and appendixes A and B for notes on data limitations and methods of analysis. See Table 2.13 for additional information for states and territories.

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

The time of presentation at the emergency department is defined as the earliest occasion of being registered clerically or triaged. This time was recorded for all non-admitted patient emergency department presentations reported to the NNAPEDCD.

Table 2.7 presents the day of the week and the time of day that presentations occurred. There were more presentations on the weekends and on Mondays compared with other days. In 2013–14, the highest number of presentations occurred between 10:00 am and 11:59 am, particularly on Sundays and Mondays.

Figure 2.1 presents the number of presentations by triage category and hour of presentation. This figure highlights the uneven use of emergency department resources throughout the average day. Over two-thirds (69%) of emergency department presentations occurred between 8:00 am and 8:00 pm. Triage categories relate to the urgency with which patients require care; more information about them is on page 17.

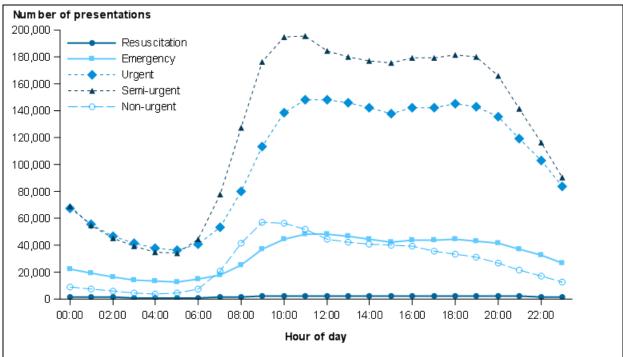
Figure 2.2 illustrates the relative distribution of presentations within each triage category across the 24-hour period. The figure shows that for the triage category *Resuscitation*, presentations are more evenly distributed throughout the day than for other triage categories.

<sup>(</sup>b) Other includes presentations where patients either walked into the emergency department or came by private transport, public transport, community transport or taxi.

Table 2.7: Proportion of presentations by day of week and time of presentation, public hospital emergency departments, 2013–14 (%)

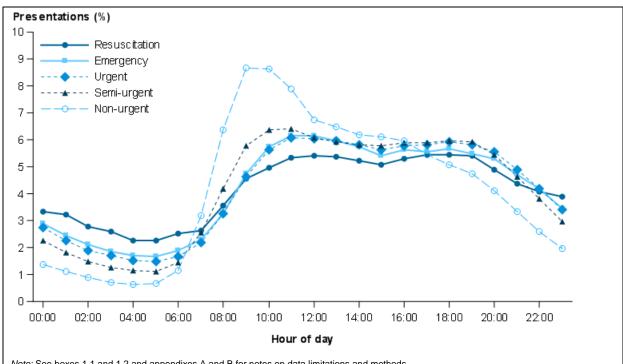
Time of presentation	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Total
Midnight to 1:59 am	0.7	0.6	0.6	0.6	0.6	0.6	0.7	4.3
2 am to 3:59 am	0.5	0.4	0.4	0.4	0.4	0.4	0.5	3.0
4 am to 5:59 am	0.4	0.4	0.3	0.3	0.3	0.3	0.4	2.5
6 am to 7:59 am	0.6	0.6	0.6	0.6	0.6	0.6	0.6	4.1
8 am to 9:59 am	1.5	1.7	1.4	1.4	1.4	1.4	1.3	10.0
10 am to 11:59 am	2.0	2.1	1.8	1.7	1.7	1.8	1.8	12.9
Midday to 1:59 pm	1.8	1.9	1.7	1.6	1.6	1.7	1.8	12.1
2 pm to 3:59 pm	1.8	1.8	1.6	1.5	1.6	1.6	1.8	11.6
4 pm to 5:59 pm	1.7	1.8	1.6	1.6	1.6	1.6	1.7	11.5
6 pm to 7:59 pm	1.7	1.7	1.7	1.6	1.6	1.5	1.5	11.4
8 pm to 9:59 pm	1.4	1.5	1.4	1.4	1.4	1.3	1.3	9.8
10 pm to 11:59 pm	1.0	1.0	0.9	1.0	0.9	1.0	1.0	6.8
Total	15.2	15.4	14.0	13.7	13.7	13.7	14.4	100.0
Presentations <sup>(a)</sup>	1,095,552	1,106,524	1,003,523	984,839	982,059	986,871	1,034,066	7,193,434

<sup>(</sup>a) The date and time of presentation were not reported for 2,469 records: these records are excluded from the total in this table.



Note: See boxes 1.1 and 1.2 and appendixes A and B for notes on data limitations and methods.

Figure 2.1: Emergency department presentations, by hour of presentation and triage category, public hospital emergency departments, 2013–14



 $\textit{Note:} \ \text{See boxes 1.1 and 1.2 and appendixes A and B for notes on data limitations and methods}.$ 

Figure 2.2: Proportion of presentations, by hour of presentation for each triage category, public hospital emergency departments, 2013–14

#### Why did people receive the care?

The reason that a patient presents to the emergency department can be described in terms of the:

- type of visit
- principal diagnosis.

For the first time, the 2013–14 emergency department care data include information on the patients' diagnoses. The quality of the data has not yet been fully assessed, so this report only includes summary information about the data, in Appendix C of this report.

#### Type of visit

The **type of visit** to the emergency department describes the reason the patient presented to the emergency department. The type of visit can be reported as:

- *Emergency presentation:* attendance for an actual or suspected condition which is sufficiently serious to require acute unscheduled care
- *Return visit, planned:* presentation is planned and is a result of a previous emergency department presentation or return visit
- *Pre-arranged admission:* a patient who presents at the emergency department 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 emergency department 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.

Of the almost 7.2 million presentations reported to the NNAPEDCD for 2013–14, about 97% were *Emergency presentations*, and 2.6% were *Return visit*, planned (Table 2.8).

Reporting of information about patients who were *Dead on arrival* varies between states and territories. For South Australia and the Northern Territory, patients who are *Dead on arrival* are not managed or reported by emergency departments. For Western Australia, emergency departments only occasionally manage and report patients who are *Dead on arrival*, as the majority of these patients are taken directly to the state morgue.

Table 2.8: Emergency department presentations by type of visit, public hospital emergency departments, states and territories, 2013–14

Type of visit	NSW	Vic	Qld	WA <sup>(a)(b)</sup>	SA <sup>(c)</sup>	Tas	ACT	NT <sup>(c)</sup>	Total
Emergency presentation	2,501,754	1,552,361	1,325,662	732,427	460,334	144,233	125,641	141,526	6,983,938
Return visit, planned	128,783	17,912	18,023	9,365	2,540	3,630	226	3,611	184,090
Pre-arranged admission	8,886	369	7,579	287	35	0	12	0	17,168
Patient in transit	301	335	220	0	0	0	6	20	882
Dead on arrival	2,962	1,810	51			414	3		5,245
Not reported	3,729	0	38	536	262	1	0	14	4,580
Total	2,646,415	1,572,787	1,351,573	742,615	463,171	148,278	125,888	145,176	7,195,903

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

Note: See boxes 1.1 and 1.2 and appendixes A and B for more information on terminology, data limitations and methods.

## How urgent was the care?

The triage category indicates the urgency of the patient's need for medical and nursing care (see Box 1.2 for more detail).

Nationally in 2013–14, fewer than 1% of *Emergency presentations* were assigned a triage category of *Resuscitation*, and about 11% were assigned a triage category of *Emergency* (Table 2.9). The majority (79%) of *Emergency presentations* were assigned as *Urgent* or *Semi-urgent*.

The Australian Capital Territory had the highest proportion of presentations that were assigned as *Non-urgent* (13.1%) and South Australia had the highest proportions of presentations assigned as either *Resuscitation* or *Emergency* (1.2% and 12.9%, respectively). For data quality information on triage category, see Table A1 at Appendix A.

<sup>(</sup>b) Some Western Australian hospitals only provide presentations for which the type of visit was *Emergency presentation*. These hospitals may have under-reported activity for presentations with a type of visit of *Return visit*, *planned*, *Pre-arranged admission*, *Patient in transit*, *Dead on arrival* or *Not reported*.

<sup>(</sup>c) For South Australia and the Northern Territory, patients who are Dead on arrival are not managed or reported by emergency departments.

Table 2.9: *Emergency presentations* by triage category, public hospital emergency departments, states and territories, 2013–14

Triage category	NSW	Vic	Qld	WA <sup>(a)</sup>	SA	Tas	ACT	NT	Total
Resuscitation	16,016	7,503	9,844	5,260	5,727	737	461	937	46,485
Emergency	273,060	159,530	163,405	88,213	59,409	12,180	12,216	14,822	782,835
Urgent	795,327	538,841	561,585	249,188	170,028	49,775	43,070	41,127	2,448,941
Semi-urgent	1,096,168	703,431	524,786	336,300	191,047	67,997	53,395	72,292	3,045,416
Non-urgent	317,052	143,056	66,042	53,462	34,123	13,544	16,499	12,348	656,126
Total <sup>(b)</sup>	2,501,754	1,552,361	1,325,662	732,427	460,334	144,233	125,641	141,526	6,983,938

<sup>(</sup>a) A portion of Western Australian hospitals only provide presentations for which the *Type of visit* was *Emergency presentation*. These hospitals may have under reported activity for presentations with a *Type of visit* of *Return visit*, *planned*, *Pre-arranged admission*, *Patient in transit*, *Dead on arrival* or *Not reported*.

Note: See boxes 1.1 and 1.2 for more information on terminology, data limitations and methods. For information on *Emergency presentations* by triage category and peer group for states and territories, see Table S3.1 accompanying this report online at <www.aihw.gov.au>.

#### How was care completed?

The **episode end status** describes the status of the patient at the conclusion of the non-admitted patient episode in the emergency department. The episode end status can be reported as:

- *Admitted to this hospital* (either short stay unit, hospital-in-the-home or non-emergency department hospital ward)
- Non-admitted patient emergency department service episode completed *departed* without being admitted or referred to another hospital
- Non-admitted patient emergency department service episode completed referred to another hospital for admission
- *Did not wait* to be attended by a health care professional
- Left at own risk after being attended by a health care professional but before the non-admitted patient emergency department service episode was completed
- *Died in emergency department* as a non-admitted patient
- Dead on arrival; emergency department clinician certified the death of the patient.

For 2013–14, almost two-thirds (65%) of presentations (for all types of visit) reported an episode end status of *Departed without being admitted or referred*, and this proportion was higher for less urgent triage categories (Table 2.10). About 28% of all presentations were *Admitted to this hospital* at the conclusion of treatment in the emergency department, and this proportion was lower for less urgent triage categories –77% for *Resuscitation* patients and 4% for *Non-urgent* patients.

About 4% of emergency department presentations had an episode end status of *Did not wait*. This proportion varied by triage category, and was highest for *Non-urgent* patients.

<sup>(</sup>b) Includes Emergency presentations for which the triage category was Not reported.

Table 2.10: Emergency department presentations by triage category and episode end status, public hospital emergency departments, 2013–14

Episode end status	Resuscitation	Emergency	Urgent	Semi-urgent	Non-urgent	Total <sup>(a)</sup>
Admitted to this hospital	35,883	467,063	990,721	488,661	34,993	2,017,540
Departed without being admitted or referred	4,531	278,390	1,338,228	2,369,021	683,088	4,674,875
Referred to another hospital for admission	2,898	28,635	50,394	24,258	2,420	108,613
Did not wait	9	1,473	45,099	159,910	54,764	263,671
Left at own risk	324	8,918	38,928	57,942	13,240	119,416
Died in emergency department	3,014	1,156	480	114	67	4,832
Dead on arrival	70	4	25	34	3,004	5,402
Total <sup>(b)</sup>	46,741	785,791	2,464,328	3,100,559	791,763	7,195,903

<sup>(</sup>a) Includes presentations for which the triage category was Not reported.

Western Australia and Tasmania had higher proportions of presentations with an episode end status of *Departed without being admitted or referred* than the national average (70% and 71%, respectively) (Table 2.11). Western Australia had the lowest proportion of presentations where the patient *Did not wait* and the highest proportion of presentations where the patient was *Referred to another hospital for admission*.

There is a difference between the number of presentations with a type of visit of *Dead on arrival* (5,245, Table 2.8) and the number of presentations with an episode end status of *Dead on arrival* (5,402, Table 2.11). All presentations with a type of visit of *Dead on arrival* had an episode end status of *Dead on arrival*. For presentations with an episode end status of *Dead on arrival* that were not assigned a type of visit of *Dead on arrival*, all had a type of visit of *Emergency presentation*.

The comparability of the data may be influenced by the comparability of the triage categories among the states and territories. 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.

Nationally, 29% of all *Emergency presentations* had an episode end status of *Admitted to this hospital* (Table 2.12). The proportion of patients subsequently admitted varied by triage category between states and territories. For example, for *Resuscitation* patients, the proportion subsequently admitted ranged from 68% in Western Australia to 80% in South Australia and the Australian Capital Territory. Western Australia also had the lowest proportion of *Emergency, Urgent, Semi-urgent* and *Non-urgent* patients *Admitted to this hospital*. The proportions admitted do not include patients referred to another hospital for admission.

<sup>(</sup>b) Includes presentations for which the episode end status was Not reported.

Table 2.11: Emergency department presentations by episode end status, public hospital emergency departments, states and territories, 2013–14

Episode end status	NSW <sup>(a)</sup>	Vic	Qld	WA <sup>(b)</sup>	SA <sup>(c)</sup>	Tas	ACT	NT <sup>(c)</sup>	Total
Admitted to this hospital	718,016	472,510	399,192	178,741	139,545	36,067	34,213	39,256	2,017,540
Departed without being admitted or referred	1,756,750	968,726	853,470	523,452	294,147	104,545	81,874	91,911	4,674,875
Referred to another hospital for admission	26,147	27,366	26,046	17,079	8,692	1,393	1,677	213	108,613
Did not wait	87,041	79,311	39,578	18,091	16,055	4,750	6,517	12,328	263,671
Left at own risk	52,558	22,039	32,590	4,582	3,885	817	1,526	1,419	119,416
Died in emergency department	2,096	1,025	649	626	220	96	78	42	4,832
Dead on arrival	3,116	1,810	48	2		416	3		5,402
Not reported	691	0	0	42	627	194	0	0	1,554
Total	2,646,415	1,572,787	1,351,573	742,615	463,171	148,278	125,888	145,176	7,195,903

<sup>(</sup>a) In New South Wales, the *Not reported* category includes some records for patients who were triaged and chose to attend a GP clinic (including GP clinics located within the hospital).

Table 2.12: Proportion of *Emergency presentations* with an episode end status of *Admitted to this hospital*, by triage category, public hospital emergency departments, states and territories, 2013–14

Triage category	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Resuscitation	79	74	78	68	80	77	80	74	77
Emergency	62	60	60	50	59	58	58	56	59
Urgent	41	43	39	35	40	37	39	43	40
Semi-urgent	16	19	13	12	15	13	17	16	16
Non-urgent	5	5	4	3	6	4	5	5	5
Total	28	30	30	24	30	25	27	27	29

#### Additional information

Additional information is available in tables accompanying this report online at <a href="https://www.aihw.gov.au/hospitals/">www.aihw.gov.au/hospitals/</a>>.

Table S2.1: Emergency department presentation statistics, by triage category and public hospital peer group, public hospital emergency departments, 2009–10 to 2013–14.

Table S2.2: Emergency department presentations by type of visit and public hospital peer group, public hospital emergency departments, states and territories, 2013–14.

<sup>(</sup>b) Western Australian emergency departments only occasionally manage and report patients who are *Dead on arrival*, as the majority of these patients are taken directly to the state morgue.

<sup>(</sup>c) For South Australia and the Northern Territory, patients who are Dead on arrival are not managed or reported by emergency departments.

Note: See boxes 1.1 and 1.2 and appendixes A and B for more information on terminology, data limitations and methods. More information by triage category is available in tables accompanying this report online.

Table 2.13: Emergency department presentations, by triage category and arrival mode, public hospital emergency departments, states and territories, 2013–14

Triage category and arrival mode	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Resuscitation									
Ambulance, air ambulance or helicopter rescue service	13,624	6,115	8,543	4,434	4,831	661	411	637	39,256
Police/correctional services vehicle	79	51	71	44	20	3	2	16	286
Other <sup>(a)</sup>	2,356	1,343	1,389	786	869	73	50	285	7,151
Not stated/unknown	38	0	0	1	8	0	1	0	48
Total	16,097	7,509	10,003	5,265	5,728	737	464	938	46,741
Emergency									
Ambulance, air ambulance or helicopter rescue service	124,475	71,887	87,360	31,341	29,791	6,855	4,604	5,384	361,697
Police/correctional services vehicle	1,965	2,151	2,161	941	398	218	207	397	8,438
Other <sup>(a)</sup>	147,822	85,636	75,068	56,132	29,184	5,111	7,395	9,049	415,397
Not stated/unknown	124	0	0	31	93	1	10	0	259
Total	274,386	159,674	164,589	88,445	59,466	12,185	12,216	14,830	785,791
Urgent									
Ambulance, air ambulance or helicopter rescue service	264,762	179,463	222,540	60,218	62,489	19,894	12,800	11,296	833,462
Police/correctional services vehicle	4,613	4,696	5,872	3,755	1,491	657	598	1,272	22,954
Other <sup>(a)</sup>	532,703	356,091	338,593	186,067	105,700	29,350	29,702	28,700	1,606,906
Not stated/unknown	203	1	0	190	579	21	12	0	1,006
Total	802,281	540,251	567,005	250,230	170,259	49,922	43,112	41,268	2,464,328
Semi-urgent Semi-urgent									
Ambulance, air ambulance or helicopter rescue service	181,672	104,960	93,439	30,200	28,863	11,331	6,867	9,530	466,862
Police/correctional services vehicle	3,339	1,658	2,595	2,403	1,092	361	218	2,627	14,293
Other <sup>(a)</sup>	938,253	605,320	439,868	307,003	159,081	57,914	46,378	61,667	2,615,484
Not stated/unknown	278	0	0	394	3,222	21	5	0	3,920
Total	1,123,542	711,938	535,902	340,000	192,258	69,627	53,468	73,824	3,100,559

(continued)

Table 2.13 (continued): Emergency department presentations, by triage category and arrival mode, public hospital emergency departments, states and territories, 2013–14

Triage category and arrival mode	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Non-urgent									
Ambulance, air ambulance or helicopter rescue service	15,893	4,423	4,434	1,171	1,869	669	469	749	29,677
Police/correctional services vehicle	2,016	340	1,133	537	396	688	40	480	5,630
Other <sup>(a)</sup>	406,922	146,842	68,507	56,809	32,620	14,035	16,118	13,087	754,940
Not stated/unknown	789	0	0	150	575	1	1	0	1,516
Total	425,620	151,605	74,074	58,667	35,460	15,393	16,628	14,316	791,763
All triage categories <sup>(b)</sup>									
Ambulance, air ambulance or helicopter rescue service	600,757	366,913	416,316	127,366	127,843	39,429	25,151	27,596	1,731,371
Police/correctional services vehicle	12,034	8,904	11,832	7,680	3,397	1,930	1,065	4,792	51,634
Other <sup>(a)</sup>	2,032,133	1,196,969	923,425	606,800	327,454	106,677	99,643	112,788	5,405,889
Not stated/unknown	1,491	1	0	769	4,477	242	29	0	7,009
Total	2,646,415	1,572,787	1,351,573	742,615	463,171	148,278	125,888	145,176	7,195,903

<sup>(</sup>a) Other includes presentations where patients either walked into the emergency department or came by private transport, public transport, community transport or taxi.

<sup>(</sup>b) Includes presentations for which the triage category was not reported.

# 3 Waiting times for emergency department care

This chapter presents information on the amount of time that patients waited for clinical care after first presenting to the emergency department.

Patients who present to the emergency department with a type of visit of *Return visit*, *Planned, Pre-arranged admission* or *Patient in transit* are not included. They do not necessarily undergo the same processes as patients with *Emergency presentations*, and their waiting times may rely on factors outside the control of the emergency department.

This chapter presents information for the NHA performance indicator PI #21a 'Waiting times for emergency hospital care: proportion seen on time' using the AIHW's previous peer group classification (used in *Australian hospital statistics* reports between 1998–99 and 2011–12) (see Appendix D for more information). This indicator is limited to *Principal referral and specialist women's and children's hospitals* and *Large hospitals*, as defined using the AIHW's previous peer group classification.

Emergency department waiting time is 'the time elapsed for each patient from presentation in the emergency department to commencement of clinical care' (see Figure 1.1).

The proportion 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, usually represented as a percentage. (The Australasian Triage Scale has five categories that incorporate the time by which the patient should receive care; see Box 1.2.)

Records were excluded from the calculation of waiting time statistics if the triage category was not reported, if the patient did not wait or was dead on arrival, or if the waiting time was missing or otherwise invalid. For 2013–14, there were 261,000 presentations with an episode end status of *Did not wait* or *Dead on arrival* that were excluded from this analysis. Approximately 114,000 additional presentations with missing or invalid waiting times were also excluded.

# How have waiting times changed over time?

Between 2009–10 and 2013–14, the proportion of *Emergency presentations* that were seen on time increased from 70% to 75% (Table 3.1). Over the same period, the median waiting time of *Emergency presentations* decreased from 23 minutes to 18 minutes, and the time by which 90% of presentations were seen decreased from 115 minutes to 93 minutes.

Between 2009–10 and 2013–14, all states and territories reported improvements in waiting time statistics (Table 3.1). South Australia recorded the largest improvement in the median waiting time, decreasing from 24 minutes to 16 minutes, and Tasmania recorded the greatest improvement in the proportion seen on time, increasing from 63% to 72%. New South Wales and Queensland also had notable improvements in waiting times over the 5 year period.

Table 3.1: *Emergency presentation* waiting time statistics, public hospital emergency departments, states and territories, 2009–10 to 2013–14

	2009–10	2010–11	2011–12	2012-13	2013–14
New South Wales					
Median waiting time (minutes)	20	19	19	17	15
90th percentile waiting time (minutes)	107	108	103	92	80
Proportion seen on time (%)	75	76	76	78	81
Victoria <sup>(a)</sup>					
Median waiting time (minutes)	22	22	21	20	19
90th percentile waiting time (minutes)	118	118	113	109	100
Proportion seen on time (%)	72	71	72	73	75
Queensland					
Median waiting time (minutes)	24	23	22	18	19
90th percentile waiting time (minutes)	115	111	103	91	91
Proportion seen on time (%)	66	67	69	74	73
Western Australia					
Median waiting time (minutes)	28	30	29	26	24
90th percentile waiting time (minutes)	113	113	104	108	95
Proportion seen on time (%)	64	63	65	66	70
South Australia <sup>(b)</sup>					
Median waiting time (minutes)	24	20	15	16	16
90th percentile waiting time (minutes)	117	104	90	90	93
Proportion seen on time (%)	67	71	76	75	73
Tasmania					
Median waiting time (minutes)	29	29	24	24	23
90th percentile waiting time (minutes)	139	144	109	102	98
Proportion seen on time (%)	63	62	71	71	72
Australian Capital Territory <sup>(c)</sup>					
Median waiting time (minutes)	36	43	38	44	33
90th percentile waiting time (minutes)	169	191	187	197	152
Proportion seen on time (%)	62	55	55	51	61
Northern Territory					
Median waiting time (minutes)	38	38	39	35	34
90th percentile waiting time (minutes)	152	136	158	152	151
Proportion seen on time (%)	56	58	54	57	57
Total					
Median waiting time (minutes)	23	23	21	19	18
90th percentile waiting time (minutes)	115	114	108	101	93
Proportion seen on time (%)	70	70	72	73	75

<sup>(</sup>a) From 2009–10, the data for Albury Base Hospital are included in statistics for Victoria.

<sup>(</sup>b) For South Australia, 7 large country hospitals were first included in South Australia's emergency department data collection in 2011–12, while units at 2 metropolitan hospitals were removed as they no longer functioned as true emergency departments. The net effect was a large increase in presentations between 2010–11 and 2011–12.

<sup>(</sup>c) The waiting times data for the periods 2009–10 to 2010–11 presented in this report for the Australian Capital Territory (ACT) differ from the information presented in *Australian hospital statistics* reports published before 2012. For the period 2008–09 to 2011–12, the ACT corrected information used to calculate the waiting time to commencement of clinical care and length of stay in the emergency department for 12,000 records that were identified as changed contrary to established audit and validation policies.

## How long did people wait for care in 2013–14?

In 2013–14, the states and territories varied in the proportion of patients seen on time and in the median waiting time to commencement of clinical care.

The overall proportion seen on time ranged from 57% in the Northern Territory to 81% in New South Wales (Table 3.2).

In general, the proportion seen on time was higher for the more urgent triage categories, with 100% of *Resuscitation* and 82% of *Emergency* patients seen on time. For *Non-urgent* patients—for which the clinically recommended time is within 2 hours—92% were seen on time. For *Urgent* presentations (which account for 34% of presentations), the proportion seen on time ranged from 50% for the Australian Capital Territory to 76% for New South Wales (Table 3.2).

The median waiting time to commencement of clinical care ranged from 15 minutes in New South Wales to 34 minutes in the Northern Territory.

The 90th percentile waiting time also varied, from 80 minutes in New South Wales to 152 minutes in the Australian Capital Territory (Table 3.2).

Table 3.2: *Emergency presentation* statistics, public hospital emergency departments, states and territories, 2013–14

Triage category	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total		
	Number										
Emergency presentations	2,501,754	1,552,361	1,325,662	732,427	460,334	144,233	125,641	141,526	6,983,938		
			Pr	oportion	seen on ti	me (%) <sup>(a)</sup>					
Resuscitation	100	100	100	100	100	100	100	100	100		
Emergency	83	84	80	86	74	85	83	61	82		
Urgent	76	73	67	58	65	66	50	51	70		
Semi-urgent	80	71	75	71	77	71	57	53	75		
Non-urgent	94	88	92	94	92	90	86	89	92		
Total	81	75	73	70	73	72	61	57	75		
	Waiting time (minutes) <sup>(a)</sup>										
Median waiting time	15	19	19	24	16	23	33	34	18		
90th percentile waiting time	80	100	91	95	93	98	152	151	93		

<sup>(</sup>a) Records were excluded from the calculation of waiting time if the patient Did not wait or was Dead on arrival, or if the waiting time was missing or otherwise invalid. Records were also excluded from the calculation of proportion seen on time if the triage category was missing.

Note: See boxes 1.1 and 1.2 and appendixes A and B for more information on terminology, data limitations and methods. More detailed information by public hospital peer group is available in Table S3.1, accompanying this report online.

## How did waiting times vary by Indigenous status?

More than 379,000 *Emergency presentations* were reported for patients identified as Aboriginal and/or Torres Strait Islander people. Overall, the median waiting time for Indigenous Australians was the same as that for other Australians (18 minutes) (Table 3.3).

In most states and terirtories, the overall median waiting times for Indigenous Australians were lower than those for other Australians; they were higher in Tasmania and the Australian Capital Territory (Table 3.3).

By triage category, the national median waiting times for Indigenous Australians were shorter than those for other Australians for *Urgent* patients and were the same for patients in all other triage categories.

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 to other Australians.

The data presented in Table 3.3 differ from that presented in Table 3.5, which is restricted to emergency departments in *Principal referral and specialist women's and children's hospitals* and *Large hospitals* using the AIHW's previous peer group classification.

As the quality of the Indigenous status data in the NNAPEDCD has not been formally assessed, these data should be interpreted with caution.

Table 3.3: Median waiting time<sup>(a)</sup> for *Emergency presentations* (minutes), by Indigenous status and triage category, public hospital emergency departments, states and territories, 2013–14

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total	Emergency presentations <sup>(b)</sup>
Indigenous										
Resuscitation	0	0	0	0	0	0	0	0	0	2,586
Emergency	5	4	6	4	4	5	4	8	5	35,774
Urgent	15	17	17	17	15	23	34	24	17	123,852
Semi-urgent	20	29	27	27	15	33	56	47	27	175,256
Non-urgent	18	26	26	26	13	29	44	27	22	41,463
Total <sup>(c)</sup>	15	19	18	19	12	25	39	29	18	379,233
Other Australians <sup>(d)</sup>										
Resuscitation	0	0	0	0	0	0	0	0	0	43,899
Emergency	5	4	6	4	5	6	4	9	5	747,061
Urgent	15	16	20	25	19	21	30	35	18	2,325,089
Semi-urgent	21	30	29	36	23	33	50	60	27	2,870,160
Non-urgent	16	30	25	29	20	31	37	29	22	614,663
Total <sup>(c)</sup>	15	19	19	25	17	23	32	38	18	6,604,705

<sup>(</sup>a) Records were excluded from the calculation if the triage category was unknown, if the patient *Did not wait* or was *Dead on arrival*, or if the waiting time was missing or otherwise invalid.

Note: See boxes 1.1 and 1.2 and appendixes A and B for more information on terminology, data limitations and methods.

# Performance indicator: waiting times for emergency department care—proportion seen on time

The NHA performance indicator #21a: 'Waiting time for emergency hospital care: proportion seen on time' can be related to the NHPF 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.

The scope of this indicator is emergency departments in public hospitals classified as *Principal referral and specialist women's and children's hospitals* and *Large hospitals*, using the AIHW's previous peer group classification. See Appendix D for more information.

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

<sup>(</sup>c) The total number of emergency presentations includes records for which triage category was unknown.

<sup>(</sup>d) Other Australians includes records for which Indigenous status was Not reported.

In 2013–14, the overall proportion of presentations in which patients commenced clinical care within the recommended time was 74%, ranging from 50% in the Northern Territory to 79% in New South Wales.

The proportion of presentations seen on time also varied by triage category; more urgent presentations were generally more likely to be seen on time. Overall, almost all *Resuscitation* patients and 82% of *Emergency* patients were seen on time. For *Non-urgent* patients, the proportion seen on time (within 2 hours) was 80% or over for all states and territories (Table 3.4).

Table 3.4: Proportion<sup>(a)</sup> of *Emergency presentations* seen on time, by triage category, *Principal referral and specialist women's and children's hospitals* and *Large hospitals*, states and territories, 2013–14 (%)

Peer group and triage category <sup>(b)</sup>	NSW	Vic	Qld	WA	SA	Tas <sup>(c)</sup>	ACT	NT	Total
Principal referral and specialist wor	nen's and c	hildren's	hospitals						
Resuscitation	100	100	100	100	100	100	100	100	100
Emergency	83	84	81	85	71	86	83	59	82
Urgent	74	72	70	52	60	59	50	46	68
Semi-urgent	78	70	76	66	72	65	57	46	72
Non-urgent	93	88	93	93	88	88	86	80	91
Total	79	74	75	65	68	67	61	50	73
Large hospitals									
Resuscitation	100	100	100	100	100	100			100
Emergency	85	85	85	89	90	82			86
Urgent	77	77	56	73	69	81			73
Semi-urgent	79	71	68	80	76	82			75
Non-urgent	93	86	90	96	92	95			90
Total	80	76	66	80	76	82			77
Principal referral and specialist wor	nen's and c	:hildren's	hospitals	and Larg	e hospita	als			
Resuscitation	100	100	100	100	100	100	100	100	100
Emergency	84	84	81	86	73	85	83	59	82
Urgent	75	73	68	57	61	66	50	46	69
Semi-urgent	78	70	75	70	72	71	57	46	73
Non-urgent	93	87	93	94	89	90	86	80	91
Total	79	74	74	69	69	72	61	50	74

<sup>(</sup>a) Records were excluded from the calculation of waiting time statistics if the triage category was unknown, if the patient *Did not wait* or was *Dead on arrival*, or if the waiting time was missing or otherwise invalid.

Note: See boxes 1.1 and 1.2 and appendixes A, B and D for more information on terminology, data limitations and methods.

#### How did the proportion seen on time vary by Indigenous status?

For 2013–14, there were over 280,000 emergency department presentations for patients identified as Aboriginal and/or Torres Strait Islander in public hospitals classified as *Principal referral and specialist women's and children's hospitals* and *Large hospitals*, using the AIHW's previous peer group classification (Table 3.5). This was about 4.8% of all emergency department presentations for these hospitals. The proportion varied from 1.5% in Victoria to 40% in the Northern Territory.

<sup>(</sup>b) The peer groups used in this table are from the AIHW's previous peer group classification (see Appendix D). The hospitals in these peer groups differ from the hospitals in the revised AIHW peer groups presented in Table 2.3.

<sup>(</sup>c) For NHA purposes, the Mersey Community Hospital in Tasmania is classified as a Large hospital.

Overall, the proportion of presentations seen on time (for these hospitals) for Indigenous Australians (73%) was similar to the proportion of presentations seen on time for other Australians (74%).

There was some variation among the states and territories with Victoria, Queensland, Western Australia and the Northern Territory all reporting a higher proportion of Indigenous Australians seen on time compared with other Australians.

The data presented in Table 3.5 differ from those presented in Table 3.3, for which all hospitals that reported to the NNAPEDCD were included.

As the quality of the Indigenous status data in the NNAPEDCD has not been formally assessed, these data should be interpreted with caution.

Table 3.5: Proportion<sup>(a)</sup> of *Emergency presentations* seen on time, by triage category and Indigenous status, *Principal referral and specialist women's and children's hospitals* and *Large hospitals*<sup>(b)</sup>, states and territories, 2013–14

	NSW	Vic	Qld	WA	SA	Tas <sup>(c)</sup>	ACT	NT	Total
				Р	er cent				
Indigenous Australians									
Resuscitation	100	100	100	100	100	100	100	100	100
Emergency	83	84	83	86	72	85	81	62	80
Urgent	73	73	72	68	61	62	48	54	68
Semi-urgent	77	71	75	77	70	72	52	49	71
Non-urgent	92	88	92	95	87	90	82	77	91
Total	78	75	76	77	68	71	57	54	73
	Number								
Emergency presentations <sup>(d)</sup>	77,632	22,325	74,709	40,732	11,411	6,619	3,495	43,558	280,481
				Р	er cent				
Other Australians <sup>(e)</sup>									
Resuscitation	100	100	100	100	100	100	100	100	100
Emergency	84	84	81	86	73	85	83	58	82
Urgent	75	73	68	56	61	66	50	41	69
Semi-urgent	78	70	75	69	73	71	57	45	73
Non-urgent	93	87	93	94	89	90	86	81	91
Total	79	74	74	69	69	72	61	47	74
				N	lumber				
Emergency presentations <sup>(d)</sup>	1,767,204	1,443,926	1,078,083	625,324	342,389	137,614	122,146	65,099	5,581,785

<sup>(</sup>a) Records were excluded from the calculation of waiting time statistics if the triage category was unknown, if the patient *Did not wait* or was *Dead on arrival*, or if the waiting time was missing or otherwise invalid.

Note: See boxes 1.1, 1.2 and 2.1 and appendixes A, B and D for more information on terminology, data limitations and methods.

<sup>(</sup>b) The peer groups used in this table are from the AIHW's previous peer group classification (see Appendix D). The hospitals in these peer groups differ from those in the revised AIHW peer groups presented in Table 2.3.

<sup>(</sup>c) For NHA purposes, the Mersey Community Hospital in Tasmania is classified as a Large hospital.

<sup>(</sup>d) Includes all emergency presentations, including those for which the triage category was unknown, for which the episode end status was *Did not wait* or *Dead on arrival*, and those for which the waiting time was missing or otherwise invalid.

<sup>(</sup>e) Other Australians includes records for which Indigenous status was Not reported.

#### **Additional information**

Additional information is available in tables accompanying this report online at <a href="https://www.aihw.gov.au/hospitals/">www.aihw.gov.au/hospitals/</a>>.

Table S3.1: Emergency presentation statistics, by public hospital peer group and triage category, public hospital emergency departments, states and territories, 2013–14.

Table S3.2: Proportion of *Emergency presentations* seen on time, by triage category and remoteness of usual residence, *Principal referral and specialist women's and children's hospitals* and *Large hospitals*, states and territories, 2013–14.

Table S3.3: Proportion of *Emergency presentations* seen on time, by triage category and socioeconomic status of usual residence, *Principal referral and specialist women's and children's hospitals* and *Large hospitals*, states and territories, 2013–14.

# 4 Time spent in the emergency department

This chapter presents information on the amount of time spent in the emergency department including:

- **length of stay**: measured from the time of presentation of the patient to the emergency department to the time of physical departure. This includes any time spent as an admitted patient in the emergency department, except the time spent in 'short stay units' (see Figure 1.1).
- **treatment time**: 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 service (is treated and/or observed), excluding any time spent as an admitted patient in the emergency department (see Figure 1.1).

This chapter includes data on the following length of stay performance indicators relevant to emergency department care:

- the NHA performance indicator #21b: 'Waiting times for emergency department care: proportion completed within four hours'.
- the NHRA NPA IPHS indicator: 'Admission to hospital from emergency departments' (for patients subsequently admitted), including the percentage of presentations where the length of the emergency department stay is less than or equal to 4 hours; and emergency department stay length at the 90th percentile.

The length of stay measures (tables 4.1 to 4.6) include all emergency department *Type of visit* categories. Therefore, the data presented in this report may not be comparable with data presented in *Australian hospital statistics* reports before 2011–12, where this information was presented only for the *Type of visit* category: *Emergency presentation*.

The treatment time measures presented in tables 4.7 and 4.8 are for *Emergency presentations* only.

The calculations exclude presentations for which the measures of time could not be calculated due to missing or incorrect values (for example, if the time of physical departure was reported as occurring before the time of presentation).

## How long did patients stay?

The length of emergency department stay can differ according to whether the patient is subsequently admitted to the same hospital. As a result, summary length of stay statistics are presented separately for patients subsequently admitted to the same hospital (those with an episode end status of *Admitted to this hospital*) and for patients not subsequently admitted to the same hospital (including those referred to another hospital).

#### How did length of stay change over time?

Between 2011–12 and 2013–14, the proportion of presentations completed in 4 hours or less increased from 64% to 73% (Table 4.1). New South Wales had the largest increase in the proportion of presentations completed within 4 hours (from 60% to 74%) while the proportion in the Northern Territory decreased (from 65% to 62%).

For patients subsequently admitted, the proportion of presentations that were completed in 4 hours or less increased from 29% in 2011–12 to 45% in 2013–14 (Table 4.1). The proportion increased in New South Wales, Victoria, Queensland and Tasmania, decreased in the Northern Territory and fluctuated in Western Australia, South Australia and the Australian Capital Territory.

Between 2011–12 and 2013–14, the length of time spent in the emergency department for 90% of patients subsequently admitted decreased from 14 hours and 30 minutes to 11 hours and 49 minutes (Table 4.1). Queensland had the largest reduction in emergency department length of stay at the 90th percentile for patients subsequently admitted (from 16 hours in 2011–12 to 9 hours and 19 minutes in 2013–14).

Table 4.1: Proportion of presentations<sup>(a)</sup> to emergency departments with a length of stay<sup>(b)</sup> of 4 hours or less, for all patients and patients subsequently admitted and length of stay at the 90th percentile for patients subsequently admitted, states and territories, 2011–12 to 2013–14

	2011–12	2012–13	2013–14
Waiting times for emergency department care	(a)—proportion completed within 4 ho	ours	
New South Wales	60	64	74
Victoria	65	66	69
Queensland	64	72	76
Western Australia	79	77	79
South Australia (c)	64	66	64
Tasmania	66	67	68
Australian Capital Territory	58	57	62
Northern Territory	65	64	62
Total	64	67	73
Admission to hospital from emergency depart than or equal to 4 hours	ments <sup>(d)</sup> —percentage of presentation	ns where the length of	stay is less
New South Wales	24	30	42
Victoria	31	38	46
Queensland	23	41	53
Western Australia	52	46	53
South Australia <sup>(c)</sup>	36	41	38
Tasmania	25	25	28
Australian Capital Territory	32	29	34
Northern Territory	29	24	22
Total	29	36	45

(continued)

Table 4.1 (continued): Proportion of presentations<sup>(a)</sup> to emergency departments with a length of stay<sup>(b)</sup> of 4 hours or less, for all patients and patients subsequently admitted and length of stay at the 90th percentile for patients subsequently admitted, states and territories, 2011–12 to 2013–14

	2011–12	2012–13	2013–14
Admission to hospital from emergency departs	ments <sup>(d)</sup> —emergency department ler	ngth of stay at the 90th	percentile
New South Wales	15:28	14:31	12:29
Victoria	13:29	14:07	11:54
Queensland	16:00	11:40	9:19
Western Australia	9:02	9:42	8:55
South Australia <sup>(c)</sup>	14:58	13:35	14:01
Tasmania	16:53	20:47	19:33
Australian Capital Territory	14:09	16:55	15:12
Northern Territory	16:13	17:53	19:44
Total	14:30	13:41	11:49

<sup>(</sup>a) Includes presentations for all types of visit.

#### How many visits were completed in 4 hours or less in 2013-14?

# Performance indicator: Waiting times for emergency department care—proportion completed within four hours

The NHA performance indicator #21b: 'Waiting time for emergency hospital care: proportion completed within four hours' can be related to the NHPF 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.

The calculation of this performance indicator includes all types of visits (not just *Emergency presentations*) and all episode end types. Patients are considered to have completed their visit to the emergency department when they physically leave (regardless of whether they were admitted to the hospital, referred to another hospital, were discharged or left at their own risk), not when the non-admitted component of care ends.

Western Australia had the highest proportion (79%) of emergency department visits completed in 4 hours or less and the Australian Capital Territory and the Northern Territory had the lowest (62%). New South Wales and Queensland also had high proportions of emergency department visits completed in 4 hours or less (74% and 76%, respectively). In South Australia 64% of emergency department visits were completed in 4 hours or less (Table 4.2).

Public acute group B hospitals generally achieved a higher proportion of visits completed in 4 hours or less (77%) than Principal referral and Women's and children's hospitals and Public acute group A hospitals (68% and 69%, respectively) (Table 4.2). See Appendix D for more information on public hospital peer groups.

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

<sup>(</sup>c) For South Australia, 7 large country hospitals were first included in South Australia's emergency department data collection in 2011–12, while units at 2 metropolitan hospitals were removed as they no longer functioned as true emergency departments. The net effect was a large increase in presentations between 2010–11 and 2011–12.

<sup>(</sup>d) 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).

In general, presentations for patients who required more urgent treatment (reflected by the triage category) were not as likely to be completed in 4 hours or less. For example, 80% of *Semi-urgent* visits and 93% of *Non-*urgent visits were completed in 4 hours or less, compared with 56% of *Resuscitation* and *Emergency* visits (Table 4.2).

The performance indicator is reported here based on financial year data and is equivalent to the NPA IPHS NEAT indicator (based on calendar year data) for the percentage of presentations where the length of the emergency department stay is less than or equal to 4 hours.

State and territory data relevant to the NEAT for the calendar years 2012 and 2013 were reported in *Australian hospital statistics* 2012–13 (AIHW 2014b).

Table 4.2: Proportion of presentations<sup>(a)</sup> to emergency departments with a length of stay<sup>(b)</sup> of 4 hours or less, by triage category and public hospital peer group, public hospital emergency departments, states and territories, 2013–14

Peer group and triage category	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
				Р	er cent				
Principal referral and Women's an	nd children's	s hospital	s						
Resuscitation	54	58	60	69	52	56	66	53	57
Emergency	50	54	62	70	47	43	51	37	54
Urgent	55	60	68	75	51	49	43	40	60
Semi-urgent	74	73	85	89	70	66	60	60	76
Non-urgent	89	89	92	96	85	87	81	75	89
Total <sup>(c)</sup>	65	67	74	82	59	61	56	51	68
Public acute group A hospitals									
Resuscitation	51	51	57	55	51	61	53	43	53
Emergency	50	53	60	61	43	40	47	35	53
Urgent	58	56	68	65	45	52	55	50	60
Semi-urgent	76	74	86	82	64	80	77	73	78
Non-urgent	92	90	94	94	80	96	92	90	91
Total <sup>(c)</sup>	68	66	<i>7</i> 5	74	55	69	69	63	69
Public acute group B hospitals									
Resuscitation	55	52	58	59	74	45			57
Emergency	56	60	68	68	62	49			62
Urgent	66	63	72	71	66	64			68
Semi-urgent	82	76	89	87	85	89			83
Non-urgent	93	90	96	96	96	97			93
Total <sup>(c)</sup>	77	73	81	80	79	78			77
All hospitals <sup>(d)</sup>									
Resuscitation	55	54	59	63	54	56	62	49	56
Emergency	54	54	62	66	49	43	50	38	56
Urgent	62	60	69	71	54	53	49	48	63
Semi-urgent	80	75	86	87	75	77	68	69	80
Non-urgent	94	90	94	96	88	91	86	88	93
V	Vaiting time	s for eme	rgency de	partment	care—pro	portion o	ompleted	within fo	ur hours
Total <sup>(c)</sup>	74	69	76	79	64	68	62	62	73

<sup>(</sup>a) Includes presentations for all types of visit.

Note: See boxes 1.1 and 1.2 and appendixes A, B and D for more information on terminology, data limitations and methods.

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

<sup>(</sup>c) The total includes presentations for which the triage category was not reported.

<sup>(</sup>d) All hospitals 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.

#### How did the proportion completed within 4 hours vary by admission status?

For patients subsequently admitted, the length of stay indicates the amount of time spent in the emergency department before being moved to another ward in the hospital. About 45% of presentations for patients subsequently admitted were completed in 4 hours or less, with the highest rates of completion in 4 hours or less for *Non-urgent* patients (Table 4.3).

About 83% of presentations for patients who were not subsequently admitted completed their visit in 4 hours or less (Table 4.4).

Table 4.3: Proportion of presentations<sup>(a)</sup> to emergency departments with a length of stay<sup>(b)</sup> of 4 hours or less, for patients subsequently admitted to the hospital, by public hospital peer group and triage category, public hospital emergency departments, states and territories, 2013–14

Peer group and triage category	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
			Presen	tations en	ding in a	dmission	(%)		
Principal referral and Women's ar	d children's	s hospitals	s						
Resuscitation	52	61	62	72	52	55	66	49	58
Emergency	42	49	53	65	38	33	47	17	47
Urgent	38	49	51	62	33	24	29	11	44
Semi-urgent	44	50	58	63	38	27	32	11	47
Non-urgent	61	60	65	64	61	37	39	10	59
Total <sup>(c)</sup>	42	50	53	63	37	28	34	14	46
Public acute group A hospitals									
Resuscitation	48	53	56	55	50	64	53	40	52
Emergency	39	46	51	47	25	29	39	21	43
Urgent	33	39	51	34	21	22	30	21	38
Semi-urgent	35	41	57	36	24	26	37	19	40
Non-urgent	58	60	70	48	33	64	61	44	58
Total <sup>c)</sup>	36	41	53	39	23	25	34	21	40
Public acute group B hospitals									
Resuscitation	47	49	54	56	85	55			53
Emergency	46	59	58	57	67	41			54
Urgent	42	47	50	46	66	38			47
Semi-urgent	46	45	54	46	68	46			48
Non-urgent	68	54	67	58	83	76			65
Total <sup>(c)</sup>	45	48	53	49	67	41			49
All hospitals <sup>(d)</sup>									
Resuscitation	51	57	59	66	54	58	63	46	56
Emergency	43	49	53	58	37	33	45	21	47
Urgent	40	44	51	51	35	25	29	21	43
Semi-urgent	44	45	57	52	42	28	33	22	46
Non-urgent	65	60	68	60	59	44	45	50	62
		Admiss	sion to ho	spital fron	n emerge	ncy depa	rtments—		
ţ	ercentage o	of present	ations wh	ere the ler	ngth of st	ay is less	than or ec	ual to 4	hours
Total <sup>(c)</sup>	42	46	53	53	38	28	34	22	45

<sup>(</sup>a) Includes presentations for all types of visit.

Note: See boxes 1.1 and 1.2 and appendixes A, B and D for more information on terminology, data limitations and methods.

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

<sup>(</sup>c) The total includes presentations for which the triage category was not reported.

<sup>(</sup>d) All hospitals 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.

Table 4.4: Proportion of presentations<sup>(a)</sup> to emergency departments with a length of stay<sup>(b)</sup> of 4 hours or less for patients not subsequently admitted to the hospital, by public hospital peer group and triage category, public hospital emergency departments, states and territories, 2013–14

Peer group and triage category	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
			Presenta	tions not	ending in	admissio	n (%)		
Principal referral and Women's an	d children's	s hospital	s						
Resuscitation	67	45	53	51	47	62	63	61	56
Emergency	69	65	78	80	65	69	60	56	70
Urgent	72	72	81	88	66	69	56	57	74
Semi-urgent	82	80	90	95	78	77	68	69	83
Non-urgent	92	91	94	98	88	90	84	79	91
Total <sup>(c)</sup>	79	78	86	92	73	77	68	65	80
Public acute group A hospitals									
Resuscitation	60	45	58	56	56	52	52	80	55
Emergency	69	62	74	71	68	48	52	79	68
Urgent	76	69	80	77	61	67	66	83	74
Semi-urgent	85	82	91	88	72	86	82	88	85
Non-urgent	94	92	95	96	83	97	92	94	93
Total <sup>(c)</sup>	83	77	86	83	69	80	77	87	81
Public acute group B hospitals									
Resuscitation	70	54	64	60	65	38			62
Emergency	66	61	77	74	60	56			69
Urgent	79	70	82	81	67	75			77
Semi-urgent	88	81	92	91	86	92			87
Non-urgent	94	92	97	97	96	97			94
Total <sup>(c)</sup>	86	79	88	87	81	86			85
All hospitals <sup>(d)</sup>									
Resuscitation	67	47	58	56	53	51	58	60	58
Emergency	70	63	76	75	65	56	56	60	70
Urgent	78	71	80	81	66	69	61	68	76
Semi-urgent	87	82	91	92	81	85	75	78	86
Non-urgent	96	92	95	97	90	93	88	90	95
Total <sup>(c)</sup>	86	79	86	88	76	80	72	76	83

<sup>(</sup>a) Includes presentations for all types of visit.

Note: See boxes 1.1 and 1.2 and appendixes A, B and D for more information on terminology, data limitations and methods.

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

<sup>(</sup>c) The total includes presentations for which the triage category was not reported.

<sup>(</sup>d) All hospitals 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.

#### Performance indicator: Admission to hospital from emergency departments

The NHRA NPA IPHS indicator: 'Admission to hospital from emergency departments' (for all patients presenting to a public hospital emergency department [including publicly funded privately operated hospitals] who are subsequently admitted to the same hospital) is also known by the common name of 'Access block indicator'.

This performance indicator includes the percentage of presentations where the length of the emergency department stay is less than or equal to 4 hours; and the length of emergency department stay at the 90th percentile.

Nationally, 45% of emergency department visits for patients subsequently admitted were completed within 4 hours. The proportion ranged from 22% in the Northern Territory to 53% in Queensland and Western Australia (Table 4.3).

The percentage of emergency department stays completed within 4 hours varied by triage category. For patients subsequently admitted, *Resuscitation* and *Non-urgent* patients were generally reported as having higher proportions of emergency department stays completed within 4 hours than other triage categories.

Nationally, 90% of emergency department visits for patients subsequently admitted were completed within 11 hours and 49 minutes, ranging from 8 hours and 55 minutes in Western Australia to 19 hours and 44 minutes in the Northern Territory (Table 4.6). For more information about 90th percentile lengths of stay, see page 38.

#### Median length of stay

The median length of stay represents the amount of time spent in the emergency department at the 50th percentile. Half of the patients had a shorter length of stay and half had a longer length of stay.

The median length of stay for all patients was 2 hours and 40 minutes, varying across states and territories from 2 hours and 23 minutes in Western Australia to 3 hours and 11 minutes in the Australian Capital Territory (Table 4.5).

For patients who were subsequently admitted, the median length of stay was generally longer at 4 hours and 27 minutes, ranging from 3 hours and 55 minutes in Western Australia to 7 hours and 6 minutes in the Northern Territory.

For patients who were not subsequently admitted, the median length of stay was 2 hours and 7 minutes.

Table 4.5: Emergency department presentations<sup>(a)</sup> median length of stay<sup>(b)</sup> (hours: minutes), by triage category and admission status, public hospital emergency departments, states and territories, 2013–14

Triage category	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
		Pre	esentation	s ending i	n admissio	n (hours:	minutes)		
Resuscitation	3:57	3:45	3:39	3:14	3:39	3:34	3:11	4:24	3:46
Emergency	4:38	4:07	3:55	3:43	5:07	5:27	4:26	7:36	4:17
Urgent	5:01	4:30	3:59	3:59	5:23	6:20	6:00	7:14	4:38
Semi-urgent	4:39	4:27	3:48	3:58	4:42	6:08	5:28	6:58	4:25
Non-urgent	3:18	3:39	3:14	3:37	3:14	4:42	4:24	4:04	3:27
Total <sup>(c)</sup>	4:46	4:23	3:56	3:55	5:05	6:02	5:28	7:06	4:27
		Pres	entations	not ending	j in admis	sion (hour	s: minutes	s)	
Resuscitation	3:06	4:14	3:37	3:41	3:46	3:58	2:35	3:07	3:35
Emergency	3:04	3:21	2:48	2:45	3:13	3:37	3:37	3:28	3:03
Urgent	2:37	2:57	2:37	2:28	3:06	2:55	3:19	2:56	2:43
Semi-urgent	1:52	2:16	1:54	1:48	2:11	1:54	2:35	2:20	1:59
Non-urgent	0:51	1:31	1:22	1:15	1:28	1:22	1:51	1:15	1:08
Total <sup>(c)</sup>	1:52	2:24	2:10	1:59	2:28	2:08	2:41	2:23	2:07
			All p	oresentatio	ons (hours	: minutes	)		
Resuscitation	3:49	3:50	3:38	3:21	3:41	3:42	3:08	4:02	3:43
Emergency	3:52	3:50	3:29	3:15	4:06	4:37	4:02	5:09	3:45
Urgent	3:28	3:34	3:09	3:00	3:45	3:48	4:07	4:13	3:23
Semi-urgent	2:10	2:35	2:04	1:59	2:24	2:08	2:53	2:42	2:15
Non-urgent	0:54	1:35	1:24	1:17	1:30	1:25	1:54	1:19	1:11
Total <sup>(c)</sup>	2:30	2:56	2:38	2:23	2:59	2:41	3:11	3:06	2:40

<sup>(</sup>a) Includes presentations for all types of visit.

Note: See boxes 1.1 and 1.2 and appendixes A and B for more information on terminology, data limitations and methods.

### 90th percentile length of stay

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

Nationally, 90% of emergency department presentations were completed within 7 hours and 5 minutes, ranging from 5 hours and 45 minutes in Western Australia to 10 hours and 5 minutes in the Northern Territory (Table 4.6).

For patients who were not subsequently admitted, 90% of presentations were completed within 5 hours and 1 minute, ranging from 4 hours and 23 minutes in Western Australia to 6 hours and 18 minutes in the Australian Capital Territory.

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

<sup>(</sup>c) The total includes presentations for which the triage category was not reported.

Table 4.6: Emergency department presentations<sup>(a)</sup> 90th percentile length of stay<sup>(b)</sup> (hours: minutes), by triage category and admission status, public hospital emergency departments, states and territories, 2013–14

Triage category	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
		F	Presentatio	ns ending i	n admissio	n (hours: m	ninutes)		
Resuscitation	11:09	10:08	8:21	7:32	11:28	10:33	8:02	12:40	9:55
Emergency	12:29	12:03	9:21	8:32	14:06	17:54	13:50	22:03	11:46
Urgent	13:01	12:10	9:29	9:12	14:39	20:44	16:49	19:36	12:08
Semi-urgent	11:57	11:35	8:53	8:53	13:02	18:57	13:25	18:45	11:34
Non-urgent	8:36	8:46	7:32	7:50	9:57	12:32	11:38	17:31	8:50
				•	U	ency depart y at the 90tl		•	
Total <sup>(c)</sup>	12:29	11:54	9:19	8:55	14:01	19:33	15:12	19:44	11:49
		Pre	esentations	not ending	g in admiss	ion (hours:	minutes)		
Resuscitation	7:00	9:41	8:14	8:58	10:09	9:45	8:04	8:03	8:23
Emergency	6:35	8:07	6:08	6:37	7:31	8:42	8:32	8:05	6:59
Urgent	5:40	6:33	5:17	5:16	6:59	6:39	7:36	6:43	5:54
Semi-urgent	4:30	5:08	3:58	3:51	5:12	4:43	5:49	5:30	4:36
Non-urgent	3:02	3:48	3:22	2:57	4:01	3:32	4:17	4:04	3:21
Total <sup>(c)</sup>	4:43	5:35	<i>4</i> :36	4:23	5:52	5:23	6:18	5:51	5:01
			All	presentati	ons (hours	minutes)			
Resuscitation	10:06	9:58	8:19	8:01	11:07	10:16	8:03	11:36	9:34
Emergency	10:02	10:30	8:11	7:36	11:45	13:26	11:11	16:18	9:47
Urgent	8:48	9:01	7:10	6:52	10:06	11:34	11:19	13:01	8:31
Semi-urgent	5:53	6:23	4:39	4:35	6:18	6:19	7:16	7:41	5:46
Non-urgent	3:16	3:59	3:33	3:07	4:21	3:49	4:35	4:28	3:35
Total <sup>(c)</sup>	7:03	7:34	6:16	5:45	8:25	8:28	8:45	10:05	7:05

<sup>(</sup>a) Includes presentations for all types of visit.

Note: See boxes 1.1 and 1.2 and appendixes A and B for more information on terminology, data limitations and methods.

## How long did treatment take?

The length of treatment time is calculated as the time between the commencement of clinical care and the end of the episode (see Figure 1.1).

It can differ according to whether the patient is subsequently admitted to the same hospital. As a result, treatment time statistics are presented separately for patients who were subsequently admitted to the same hospital and for patients not subsequently admitted to the hospital.

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

<sup>(</sup>c) The total includes presentations for which the triage category was not reported.

# Treatment time for patients subsequently admitted to the same hospital

Approximately 10% of *Emergency presentations* for patients subsequently admitted to the hospital had a treatment time of less than 1 hour, 51% had treatment times from 1 hour to less than 4 hours, and 38% had treatment times of 4 hours or more (Table 4.7). Almost 1 in 4 (23%) *Non-urgent* presentations were treated within 1 hour.

Generally, the treatment times were greater for patients *Admitted to this hospital* than for other patients (Table 4.8).

Table 4.7: Treatment time statistics for *Emergency presentations* for patients subsequently *Admitted to this hospital* by triage category, public hospital emergency departments, 2013–14

Treatment time	Resuscitation	Emergency	Urgent	Semi-urgent	Non-urgent	Total <sup>(a)</sup>
		Nu	mber of pres	entations		
Less than 1 hour	5,445	35,962	89,414	58,667	7,004	196,526
1 hour to <2 hours	7,013	74,256	149,121	78,670	5,967	315,050
2 hours to <3 hours	6,247	89,419	176,143	85,118	5,348	362,289
3 hours to <4 hours	5,651	86,278	171,196	77,002	4,008	344,161
4 hours or more	11,227	176,827	389,354	175,216	7,595	760,251
Total <sup>(b)</sup>	35,697	464,851	981,948	479,693	30,948	1,993,351
		Propo	rtion of pres	entations (%)		
Less than 1 hour	15	8	9	12	23	10
1 hour to <2 hours	20	16	15	16	19	16
2 hours to <3 hours	18	19	18	18	17	18
3 hours to <4 hours	16	19	17	16	13	17
4 hours or more	31	38	40	37	25	38
Total <sup>(b)</sup>	100	100	100	100	100	100

<sup>(</sup>a) Includes records for which triage category was unknown.

Note: See boxes 1.1 and 1.2 and appendixes A and B for more information on terminology, data limitations and methods.

# Treatment time for patients not subsequently admitted to the same hospital

Approximately 33% of *Emergency presentations* for patients who were not subsequently admitted to the same hospital had a treatment time of less than 1 hour, 50% had treatment times from 1 hour to less than 4 hours, and 11% had treatment times of 4 hours or more (Table 4.8). Around 37% of *Resuscitation* patients had a treatment time of 4 hours or more, while 56% of *Non-urgent* presentations were treated within 1 hour.

For patients who were not subsequently admitted to the same hospital, the treatment time could not be calculated for about 7% of records (340,600 presentations) as either the time of commencement of clinical care or the time of episode end was not reported. Almost 65% of these records had an episode end status of *Did not wait* indicating that the patient had not received treatment.

<sup>(</sup>b) Includes approximately 15,000 records for which the length of treatment time could not be calculated as the time of episode end was not reported.

Table 4.8: Treatment time statistics for *Emergency presentations* for patients not subsequently admitted to this hospital, by triage category, public hospital emergency departments, 2013–14

Treatment time	Resuscitation	Emergency	Urgent	Semi-urgent	Non-urgent	Total <sup>(a)</sup>
		N	lumber of pres	sentations		
Less than 1 hour	1,437	28,147	288,887	1,002,568	347,853	1,669,295
1 hour to <2 hours	1,484	62,213	353,891	642,822	117,233	1,177,713
2 hours to <3 hours	1,834	75,761	308,266	355,909	46,491	788,308
3 hours to <4 hours	1,842	58,994	208,286	187,041	19,255	475,449
4 hours or more	4,023	86,365	248,809	185,254	14,776	539,264
Total <sup>(b)</sup>	10,788	317,984	1,466,993	2,565,723	625,178	4,990,587
		Prop	ortion of pres	entations (%)		
Less than 1 hour	13	9	20	39	56	33
1 hour to <2 hours	14	20	24	25	19	24
2 hours to <3 hours	17	24	21	14	7	16
3 hours to <4 hours	17	19	14	7	3	10
4 hours or more	37	27	17	7	2	11
Total	100	100	100	100	100	100

<sup>(</sup>a) Includes records for which triage category was unknown.

Note: See boxes 1.1 and 1.2 and appendixes A and B for more information on terminology, data limitations and methods.

<sup>(</sup>b) Includes approximately 340,600 records for which the length of treatment time could not be calculated as the time of episode end was not reported.

# **Appendix A: Data quality information**

This appendix includes a data quality statement and additional detailed information relevant to the interpretation of the National Non-admitted Patient Emergency Department Care Database (NNAPEDCD).

It contains information on changes in the coverage of the database, changes to the national minimum data set specifications, and other variations in hospital reporting that may affect interpretation of the data presented in this report.

The data quality statement for the NNAPEDCD is also available online at <a href="https://www.aihw.gov.au">www.aihw.gov.au</a>.

# Data quality statement: National Non-admitted Patient Emergency Department Care Database 2013–14

#### Summary of key data quality issues

- The NNAPEDCD is a compilation of episode-level data for presentations to selected emergency departments in Australian public hospitals.
- The NNAPEDCD is based on the Non-admitted patient emergency department care national minimum data set (NAPEDC NMDS).
- The scope of the NAPEDC NMDS changed between 2012–13 and 2013–14.
  - Between 2003–04 and 2012–13, the scope of the NAPEDC NMDS was:
    - non-admitted patients registered for care in emergency departments in selected public hospitals that are classified as either Peer Group A or B in the Australian Institute of Health and Welfare's *Australian hospital statistics* publication from the preceding financial year.
  - For 2013–14, the scope of the NAPEDC NMDS was:
    - Patients registered for care in emergency departments in public hospitals where the emergency department meets the following criteria:
    - purposely designed and equipped area with designated assessment, treatment and resuscitation areas
    - 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 and nursing unit manager 24 hours per day 7 days per week.

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 triaged and then advised of alternative treatment options are in scope.

The scope includes only physical presentations to emergency departments. Advice provided by telephone or videoconferencing is not in scope.

- Although there are national standards for data on non-admitted patient emergency department services, there are some variations in how those services are defined and counted 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 exercised when interpreting these data.
- Due to changes in the classifications used to determine remoteness areas and socioeconomic state (SES) groups of area of usual residence, time series presenting these data should be interpreted with caution.

#### **Description**

The NNAPEDCD includes episode-level data on patients presenting to selected emergency departments in Australian public hospitals. The data supplied are based on the Non-Admitted Patient Emergency Department Care National Minimum Data Set (NAPEDC NMDS) and include demographic information, administrative information, information on triage category as well as information on waiting times for treatment and length of time to the completion of the presentation.

The NNAPEDCD includes data for each year from 2003-04 to 2013-14.

#### Institutional environment

The AIHW is a major national agency set up by the Australian Government under the *Australian Institute of Health and Welfare Act 1987* (Cwlth) to provide reliable, regular and relevant information and statistics on Australia's health and welfare. It is an independent statutory authority established in 1987, governed by a management board, and accountable to the Australian Parliament through the Health portfolio.

The AIHW aims to improve the health and wellbeing of Australians through better health and welfare information and statistics. It collects and reports information on a wide range of topics and issues, ranging from health and welfare expenditure, hospitals, disease and injury, and mental health, to ageing, homelessness, disability and child protection.

The Institute also plays a role in developing and maintaining national metadata standards. This work contributes to improving the quality and consistency of national health and welfare statistics. The Institute works closely with governments and non-government organisations to achieve greater adherence to these standards in administrative data collections to promote national consistency and comparability of data and reporting.

One of the main functions of the AIHW is to work with the states and territories to improve the quality of administrative data and, where possible, to compile national data sets based on data from each jurisdiction, to analyse these data sets and to disseminate information and statistics.

The Australian Institute of Health and Welfare Act, in conjunction with compliance to the *Privacy Act 1988* (Cwlth), ensures that the data collections managed by the AIHW are kept securely and under the strictest conditions with respect to privacy and confidentiality.

For further information see the AIHW website <www.aihw.gov.au>.

Data for the NNAPEDCD were supplied to the AIHW by state and territory health authorities under the terms of the National Health Information Agreement (see the following links):

<a href="http://www.aihw.gov.au/nhissc/">http://www.aihw.gov.au/nhissc/</a>

<a href="http://meteor.aihw.gov.au/content/index.phtml/itemId/182135">http://meteor.aihw.gov.au/content/index.phtml/itemId/182135</a>.

The state and territory health authorities received these data from public hospitals. States and territories use these data for service planning, monitoring and internal and public reporting. Hospitals may be required to provide data to states and territories through a variety of administrative arrangements, contractual requirements or legislation.

#### **Timeliness**

Data for the NNAPEDCD are reported annually. The most recent reference period for this data set is 1 July 2013 to 30 June 2014.

States and territories provided a first version of the 2013–14 data to the AIHW during July 2014. This report was published in October 2014. Data provision and publication were in accordance with agreed timetables.

#### **Accessibility**

The AIHW provides a variety of products that draw upon the NNAPEDCD. Published products available on the AIHW website are:

Australian hospital statistics series of products with associated Excel tables.

These products may be accessed on the AIHW website at:

<a href="http://www.aihw.gov.au/hospitals/">http://www.aihw.gov.au/hospitals/</a>.

### Interpretability

Metadata information for the Non-admitted patient emergency department care (NAPEDC) NMDS and the NAPEDC data set specification are published in the AIHW's Metadata Online Registry (METeOR), and the *National health data dictionary*.

METeOR and the National health data dictionary can be accessed on the AIHW website at:

<a href="http://meteor.aihw.gov.au/content/index.phtml/itemId/181162">http://meteor.aihw.gov.au/content/index.phtml/itemId/181162</a>

<a href="http://www.aihw.gov.au/publication-detail/?id=10737422826">http://www.aihw.gov.au/publication-detail/?id=10737422826</a>.

#### Relevance

#### Scope and coverage

#### Scope of the NAPEDC NMDS

The scope of the NAPEDC NMDS changed between 2012–13 and 2013–14.

Between 2003-04 and 2012-13, the scope of the NAPEDC NMDS was:

• non-admitted patients registered for care in emergency departments in selected public hospitals that are classified as either Peer Group A or B in the AIHW's *Australian hospital statistics* publication from the preceding financial year.

In 2013-14, the scope of the NAPEDC NMDS was:

Patients registered for care in emergency departments in public hospitals where the emergency department meets the following criteria:

- purposely designed and equipped area with designated assessment, treatment and resuscitation areas
- 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 and nursing unit manager 24 hours per day 7 days per week.

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 triaged and then advised of alternative treatment options are in scope.

The scope includes only physical presentations to emergency departments. Advice provided by telephone or videoconferencing 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.

#### Coverage of the NNAPEDCD

Data coverage is estimated by comparing the number of emergency department presentations in the NNAPEDCD to the number of non-admitted patient emergency occasions of service reported to the NPHED, which includes data for all public hospitals, regardless of whether they have an emergency department. The coverage estimate is only indicative, as not all emergency occasions of service are provided through formal emergency departments. Between 2003–04 and 2013–14, the estimated proportion of emergency occasions of service reported to the NNAPEDCD increased from 73% to 88%. The coverage estimate for 2013–14 is preliminary and will be finalised when the total numbers of emergency occasions of service are available early in 2015 in the NPHED for 2013-14. Some Western Australian hospitals only provided presentations for which the type of visit was *Emergency presentation*, and hence may have under-reported other emergency department activity.

# Overlap between the NNAPEDCD and the National Hospital Morbidity Database (NHMD)

The care provided to patients in emergency departments is, in most instances, recognised as being provided to non-admitted patients. Patients being treated in emergency departments may subsequently become admitted (including admission to a short stay unit, admission to elsewhere in the emergency department, admission to another hospital ward, or admission to hospital-in-the-home). All patients remain in-scope for this collection until they are recorded as having physically departed the emergency department, regardless of whether they have been admitted. For this reason there is an overlap in the scope of this NNAPEDCD and the admitted patient care data held in the NHMD.

#### Limitations of the NNAPEDCD

Although the NNAPEDCD is a valuable source of information on emergency department care, the data have limitations. For example, sick or injured people who do not present to emergency departments are not included. Persons who present to an emergency department

more than once in a reference year are counted on each occasion. Non-admitted patients who are treated in outpatient clinics are not included in the NNAPEDCD.

Because the scope of the NAPEDC NMDS is limited to emergency departments that meet the nationally agreed criteria above, most of the data provided to the 2013–14 NNAPEDCD relates to hospitals within major cities. Consequently the NNAPEDCD may not include areas where the proportion of Indigenous people (compared with other Australians) may be higher than average. Similarly, disaggregations by socioeconomic status and remoteness should be interpreted with caution.

#### Performance indicator reporting using the NNAPEDCD

The NNAPEDCD is the source of information for four performance indicators for the NHA and other national performance reporting.

#### **Accuracy**

#### Data validation

States and territories are primarily responsible for the quality of the data they provide. However, the AIHW undertakes extensive validations on receipt of data. Data are checked for valid values, logical consistency and historical consistency. Where possible, data in individual data sets are checked with data from other data sets. Potential errors are queried with jurisdictions, and corrections and resubmissions may be made in response to these queries. The AIHW does not adjust data to account for possible data errors or missing or incorrect values, except as stated.

#### Quality of Indigenous identification

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.

#### **Incomplete responses**

For 2013–14, approximately 114,000 records did not have a valid waiting time recorded. For about 356,000 records, the length of treatment time could not be calculated as the date and time of episode end were missing.

#### Geography

Area of usual residence

The NAPEDC NMDS for the 2013–14 period specified that states and territories should provide the Statistical Area Level 2 (SA2) of usual residence of patient. The SA2 is a geographical unit under the Australian Statistical Geography Standard (ASGS). The ASGS was introduced in 2011 by the Australian Bureau of Statistics (ABS).

Not all states provided information on the area of usual residence of the patient in the form of a SA2 code for all presentations. Where necessary, the AIHW mapped the supplied area of residence data for each separation to an SA2 and then to a remoteness area category based on ABS ASGS correspondences and Remoteness Structures for 2011. These mappings were done on a probabilistic basis. Because of the probabilistic nature of the mappings, the SA2 and remoteness areas data for individual records may not be accurate; however, the overall distribution of records by geographical area is considered useful.

Socioeconomic status (SES) of area of residence

SES is based on the SA2 area of usual residence of the patient, mapped to Socio-Economic Indexes for Areas (SEIFA) 2011. For the purpose of this report, the SEIFA categories (quintiles) were assigned on the basis of ranking within the nation, not within the individual state/territory.

#### Coherence

Changes in scope between 2012–13 and 2013–14 NAPEDC NMDS affect the comparability of 2013–14 data with data for other reporting periods (see 'Scope and coverage').

Changes in coverage may affect the comparability of 2013–14 data with data for other reporting periods (see 'Scope and coverage').

For 2012–13 and 2013–14, remoteness area of usual residence was based on the ASGS. Before 2012–13, remoteness area of usual residence was based on the ABS's Australian Standard Geographical Classification Remoteness Structures for 2006. Therefore comparisons of remoteness area of usual residence over time should therefore be interpreted with caution.

For 2012–13 and 2013–14, SES of area of usual residence was based on the SEIFA 2011. For the reference years prior to 2012–13, SES of the area of usual residence was based on the SEIFA 2006. Therefore, comparisons of SES of area of usual residence over time should be interpreted with caution.

Before 2012–13, New South Wales did not report against the episode end status *Died in emergency department as a non-admitted patient*. Therefore, caution should be used when making comparisons over time.

The waiting times data for the Australian Capital Territory for the period 2008–09 to 2010–11 presented in this report, *Australian hospital statistics* 2012–13: *emergency department care* (AIHW 2013a) and in *Australian hospital statistics* 2011–12: *emergency department care* (AIHW 2012b) differ from the information presented in *Australian hospital statistics* reports published before October 2012. In 2012, the Australian Capital Territory corrected information used to calculate the waiting time to commencement of clinical care and length of stay in the emergency department for 12,000 records for the period 2008–09 to 2011–12, that had been identified as changed contrary to established audit and validation policies. The ACT Health Directorate undertook a manual process to over-write the times recorded in the Australian Capital Territory system with the original times retained in the hospital's emergency department information system. A validation process was undertaken to determine that all records had been amended to reflect the originally recorded times.

## Variation in reporting

### Possible variation in triage categorisation

The proportion of presentations by triage category varied by state or territory. New South Wales had the highest proportion of presentations that were *Non-urgent* (12.7%) and South Australia had the highest proportions of presentations that were *Resuscitation* or *Emergency* (1.2% and 12.9%, respectively) (Table A1). This may reflect different triage categorisation, differing mixes of patients or both.

Table A1: Proportion of *Emergency presentations* by triage category, public hospital emergency departments, states and territories, 2013–14 (%)

Triage category	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Resuscitation	0.6	0.5	0.7	0.7	1.2	0.5	0.4	0.7	0.7
Emergency	10.9	10.3	12.3	12.0	12.9	8.4	9.7	10.5	11.2
Urgent	31.8	34.7	42.4	34.0	36.9	34.5	34.3	29.1	35.1
Semi-urgent	43.8	45.3	39.6	45.9	41.5	47.1	42.5	51.1	43.6
Non-urgent	12.7	9.2	5.0	7.3	7.4	9.4	13.1	8.7	9.4
Total <sup>(a)</sup>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

<sup>(</sup>a) Includes emergency presentations for which the triage category was not reported.

Note: See boxes 1.1 and 1.2 for more information on terminology, data limitations and methods.

Variation in the proportion of patients admitted to the hospital by triage category may indicate variation in the triage categorisation of patients presenting to the emergency department. Nationally, around 29% of *Emergency presentations* had an episode end status of *Admitted to this hospital*. Victoria had the highest proportion of patients subsequently *Admitted to this hospital* (30.3%) and Western Australia had the lowest proportion (24.2%) (Table 2.12).

#### **Quality of Indigenous status data**

The successful monitoring of the health of Aboriginal and Torres Strait Islander people depends on the quality of Indigenous identification data in national health data sources, including the hospitals data collections. However, there are inaccuracies in the information on Indigenous status in the data collections.

The quality of the data reported for Indigenous status in emergency departments has not been formally assessed. Therefore, the information on Indigenous status presented in this report should be used with caution.

Indigenous status was not reported for about 3% of emergency department presentations in 2013–14.

The following information has been provided by the states and territories to provide some insight into the quality of Indigenous status data in the NNAPEDCD.

#### **New South Wales**

Indigenous status is a mandatory data item collected by all facilities that provide data to the New South Wales Ministry of Health's Emergency Department Data Collection. In 2013–14, Indigenous status was not reported for about 5% of emergency department records. This is a decrease from the 7% not reported for 2012–13. New South Wales considers that Indigenous status identification in its emergency department data is acceptable.

#### **Victoria**

The Victorian Department of Health reports that, despite data quality improvement in recent years, the Indigenous status in admitted patient data for 2013–14 should still be considered to undercount the number of Aboriginal and Torres Strait Islander patients. The quality of Indigenous status data in emergency department data is improving but is less accurate than data for admitted patients in public hospitals.

#### Queensland

Queensland Health notes that the quality of reporting of Indigenous status has improved compared to previous years. However, the available evidence continues to suggest that the number of Indigenous patients is understated in the Queensland hospital data due to non-reporting as well as misreporting of Indigenous status. Despite this, Queensland Health regards the Indigenous status data used in this report of a quality appropriate for publication.

#### Western Australia

The Western Australian (WA) Department of Health regards the recording of Indigenous status for non-admitted patient emergency department data as being substantially complete, with 99.5% of data identified by Indigenous status in 2013–14.

While a recent sample survey of WA admitted patient records concluded that WA was collecting Indigenous status with a high degree of accuracy, and the data element is well recorded in emergency departments, the state-wide data quality audit of Indigenous status in emergency departments is still to be conducted.

#### South Australia

The SA Department for Health and Ageing considers the quality of Indigenous status data to be better in admitted patient care than in the emergency department data collection. The number of *Not stated* responses in 2013–14 was similar to the previous year but the numbers are still considered to be too high.

The Department contracted the ABS to develop a training package for the collection of the Indigenous identifier aimed at frontline staff in hospitals and other health care units. The package is based on the best practice guidelines developed by the AIHW. The ABS also delivered the training to frontline staff in locations spread across the metropolitan and country areas of South Australia. The Department continues to monitor the proportion of *Not stated* responses.

#### **Tasmania**

The Tasmanian Department of Health and Human Services reports that the quality and the level of Indigenous status identification, across public hospital information collections, are of a high standard. However, as with all data collections, there is constant and continued work to be done in maintaining and improving, where needed, the collection of this data element.

#### **Australian Capital Territory**

The ACT Health Directorate is continuing to undertake a number of initiatives aligned with local and national developments to improve the quality of collection and reporting of Aboriginal and Torres Strait Islander data.

#### **Northern Territory**

The Northern Territory Department of Health reports that the quality of its 2013–14 Indigenous status data for emergency department patients is considered to be acceptable. The department retains historical reporting of Indigenous status. All management and statistical reporting, however, is based on a person's most recently reported Indigenous status.

# **Appendix B: Technical notes**

#### **Definitions**

If not otherwise indicated, data elements were defined according to the 2013–14 definitions in the *National health data dictionary, version 16* (AIHW 2012a) (summarised in the Glossary).

## **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 below, 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 printed as 0.0 or 0 generally 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**

#### 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 the waiting times 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<sup>th</sup> and (i+1)<sup>th</sup> observations.

If  $n \times p$  is not an integer, the percentile value will correspond to the value for the (i+1)<sup>th</sup> 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.

#### Estimated coverage of emergency services

The estimated proportion of emergency occasions of service covered by the NNAPEDCD data is calculated as the number of presentations reported to the NNAPEDCD divided by the number of emergency occasions of service reported to the NPHED, as a percentage.

For 2013–14, as the corresponding public hospital establishment data were not available, a preliminary estimate was based on comparing the number of presentations and hospitals that were reported to the NNAPEDCD for 2012–13 and 2013–14, and the numbers of emergency occasions of service reported to the NPHED for 2012–13.

#### For example:

- If the same hospitals were reported by a jurisdiction for the NNAPEDCD for both 2012–13 and 2013–14, the jurisdiction's coverage was assumed to be the same for both years.
- If the hospitals reported by a jurisdiction changed between 2012–13 and 2013–14, the jurisdiction's coverage was adjusted by increasing (or decreasing) the numerator counts (NNAPEDCD presentations for 2012–13), based on the number of emergency occasions of service reported for the individual hospital(s) to the NPHED for 2012–13.
- If a hospital that was included in the NNAPEDCD for the first time in 2013–14 was not included in the NPHED for 2012–13, it was assumed to be reporting 100% of its emergency occasions of service.

### Waiting time statistics calculations (Chapter 3)

#### Waiting time to commencement of clinical care

The waiting times are determined as the time elapsed between presentation in the emergency department and the commencement of clinical care. The calculation is restricted to presentations with a type of visit of *Emergency presentation*. In addition, 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*.

Approximately 114,000 records for which a valid waiting time could not be calculated due to missing or incorrect values (for example, for time of presentation or commencement of clinical care) were not used to derive waiting time statistics.

#### 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 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.

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

# Emergency department length of stay statistics calculations (Chapter 4)

# Proportion of emergency department 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 with time elapsed between the presentation and the physical departure of the patient of 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).

#### **Emergency department length of stay**

Length of stay statistics are calculated for all emergency department type of visit categories.

The length of stay is determined as the time elapsed between presentation and the physical departure of the patient.

#### Admission to hospital from emergency departments

'Admission to hospital from emergency departments' (for patients subsequently admitted) is calculated using the emergency department length of stay for presentations with an episode end status of *Admitted to this hospital*.

#### **Treatment time**

Treatment time statistics are calculated for presentations with a type of visit of *Emergency presentation*.

The treatment time is determined as the time elapsed between commencement of clinical care and the physical departure of the patient.

#### Other

#### Age of patients

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.

# Appendix C: Diagnosis data in the NNAPEDCD

For 2013–14, five new diagnosis-related data elements were included in the NAPEDC NMDS (see Table C1).

Table C1: Diagnosis related data elements included in the NAPEDC NMDS

Data element	Description (Source: METeOR)
Principal diagnosis (METeOR ID 497490).	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.
Additional diagnosis (METeOR ID 497488).	The condition or complaint coexisting with the emergency department principal diagnosis during a patient's attendance to the emergency department.
Diagnosis classification type (METeOR ID 497496).	The type of classification used for recording emergency department diagnosis.
Major diagnostic block (METeOR ID 449585).	The urgency related group (URG) major diagnostic block category into which the patient's emergency department diagnosis is grouped.
Urgency related group (METeOR ID 498030).	A patient classification scheme which provides a means of relating the number and types of patients treated in an emergency department.

The AIHW is undertaking a project to examine the comparability and utility of the new diagnosis data reported as part of the 2013–14 NAPEDC NMDS and to propose a methodology for coherent and meaningful national reporting of the data. A report from the project will be published later in 2014–15.

This appendix provides some summary information on the data provided for Diagnosis classification type, Principal diagnosis and Major diagnostic block (MDB).

### Diagnosis classification type

For the 2013–14 NAPEDC NMDS, diagnosis information was not reported using a uniform classification. The **diagnosis classification type** element indicates the type of classification used for reporting emergency department diagnoses.

The classifications that could be used 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 or 8th edition.

Table C2 presents data on the numbers of presentations for which diagnosis information was reported, by type of classification used. Most states and territories reported patient's diagnoses using a single type of classification. The majority of records with a diagnosis classification type of 'Classification not provided' did not include any diagnosis codes.

The majority of records (68%) were reported using one edition or another of ICD-10-AM.

Table C2: Provision of diagnosis information for emergency presentations by diagnosis classification type, public hospital emergency departments, states and territories, 2013–14

Classification	NSW	Vic	Qld	WA <sup>(a)</sup>	SA	Tas	ACT	NT	Total
SNOMED -CT-AU (EDRS)	1,872,323	0	0	0	0	0	0	0	1,872,323
ICD-9-CM,									
2nd edn	12,953	32,262	0	0	0	0	0	0	45,215
ICD-10-AM edition not specified	560,146	0	0	0	0	0	0	0	560,146
ICD-10-AM,									
6th edn	0	0	1,351,573	554,788	0	22,807	0	145,176	2,074,344
ICD-10-AM,									
7th edn	0	1,540,525	0	0	0	125,471	125,888	0	1,791,884
ICD-10-AM,									
8th edn	21,988	0	0	0	448,091	0	0	0	470,079
Classification not provided or no diagnosis codes reported	179,005	0	0	187,827	15,080	0	0	0	381,912
Total	2,646,415	1,572,787	1,351,573	742,615	463,171	148,278	125,888	145,176	7,195,903

SNOMED-CT-AU (EDRS)—Systematized Nomenclature of Medicine – Clinical Terms – Australian version – Emergency Department Reference Set:

# **Principal diagnosis**

Summary information on the records reported using ICD-10-AM (representing 68% of total emergency department presentations) is that in 2013–14, *Injury, poisoning and certain other consequences of external causes* was the most common principal diagnosis reported (27%), followed by *Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified* (17%) (Table C3).

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.

<sup>(</sup>a) The majority of Western Australian hospitals that provide principal diagnosis record the data using the ICD-10-AM 2nd edition classification. These diagnoses are mapped by the WA Department of Health to ICD-10-AM 6th edition prior to submission of the data to AIHW.

Table C3: Presentations<sup>(a)</sup> by principal diagnosis ICD-10-AM<sup>(b)</sup> chapter, public hospital emergency departments, 2013–14

Principal c	liagnosis	Number of presentations <sup>(c)</sup>	Per cent
A00-B99	Certain infectious and parasitic diseases	239,864	4.9
C00-D48	Neoplasms	15,997	0.3
D50-D89	Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism	23,095	0.5
E00-E89	Endocrine, nutritional and metabolic diseases	42,297	0.9
F00-F99	Mental and behavioural disorders	172,560	3.5
G00-G99	Diseases of the nervous system	83,578	1.7
H00-H59	Diseases of the eye and adnexa	65,310	1.3
H60-H95	Diseases of the ear and mastoid process	68,917	1.4
100-199	Diseases of the circulatory system	230,940	4.7
J00-J99	Diseases of the respiratory system	376,095	7.7
K00-K93	Diseases of the digestive system	281,579	5.8
L00-L99	Diseases of the skin and subcutaneous tissue	165,968	3.4
M00-M99	Diseases of the musculoskeletal system and connective tissue	185,596	3.8
N00-N99	Diseases of the genitourinary system	205,427	4.2
O00-O99	Pregnancy, childbirth and the puerperium	77,832	1.6
P00-P96	Certain conditions originating in the perinatal period	8,049	0.2
Q00-Q99	Congenital malformations, deformations and chromosomal abnormalities	1,470	0.0
R00-R99	Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	850,901	17.4
S00-T98	Injury, poisoning and certain other consequences of external causes	1,300,423	26.6
Z00-Z99	Factors influencing health status and contact with health services	357,967	7.3
	External causes of injury and poisoning	45,906	0.9
	Not reported	96,682	2.0
Total		4,896,453	100.0

<sup>(</sup>a) Presentations include all type of visits.

# Major diagnostic blocks

The 26 MDBs provide meaningful categories for grouping emergency department principal diagnosis information. MDBs have been adopted by the Independent Hospital Pricing Authority to form part of its Urgency Related Groups emergency care classification, developed for activity based funding purposes (IHPA 2014).

The MDB was reported for 98% of *Emergency presentations*. In 2013–14, *Digestive system illness* was the most common MDB reported for emergency department presentations (12%) followed by *Injury, single site, major* (10%) (Table C4).

<sup>(</sup>b) All ICD-10-AM editions are reported together at the chapter level. The different editions were not mapped to a single edition.

<sup>(</sup>c) The data presented in this table are for the 68% of presentations reported using ICD-10-AM.

Table C4: Emergency presentations  $^{\rm (a)}$  by major diagnostic block version 1.3, public hospital emergency departments, 2013–14

Major diagnostic block	Number of presentations	Per cent
Poisoning, comatose	9,625	0.1
Poisoning, conscious	58,918	0.8
Drug reaction	376	0.0
Alcohol/drug abuse and alcohol/drug induced mental disorders	83,494	1.2
Injury, multiple sites	253,556	3.6
Injury,single site,major	721,605	10.3
Injury, single site, minor	649,939	9.3
Circulatory system illness	653,572	9.4
Respiratory system illness	628,683	9.0
Digestive system illness	857,947	12.3
Urological illness	231,216	3.3
Neurological illness	458,906	6.6
Illness of the eyes	173,344	2.5
Illness of the ear, nose and throat	217,794	3.1
Musculoskeletal/connective tissue illness	207,663	3.0
Illness of skin, subcutaneous tissue, breast	86,826	1.2
Blood/immune system illness	130,960	1.9
Obstetric illness	116,530	1.7
Gynaecological illness	65,288	0.9
Male reproductive system illness	26,737	0.4
System infection/parasites	428,378	6.1
Illness of other and unknown systems	5,820	0.1
Newborn/neonate	14,272	0.2
Hepatobiliary system illness	68,661	1.0
Psychiatric illness	169,102	2.4
Social problem	25,653	0.4
Other presentation	514,720	7.4
Not reported	124,353	1.8
Total	6,983,938	100.0

<sup>(</sup>a) Includes records with a type of visit of *Emergency presentation* only.

# Appendix D: Public hospital peer groups

This report uses a new public hospital peer group classification, developed by the AIHW in consultation with the AIHW's Australian Hospital Statistics Advisory Committee. An AIHW report on the new peer group classification will be released later in 2014 (*Australian hospital peer groups 2014*, AIHW forthcoming). This appendix presents a summary of the method used to develop the new peer groups.

Since 1999, AIHW has grouped public hospitals into peer groups when reporting hospital data. This reflects the need to compare hospitals against other hospitals with similar characteristics when reporting statistics and monitoring performance.

The AIHW's original peer grouping was developed with the National Health Ministers' Benchmarking Working Group (NHMBWG) and the National Health Performance Committee (NHPC). It was developed to examine variability in the average cost per casemix-adjusted separation and to group hospitals into broadly similar groups in terms of their range of admitted patient activities.

This grouping was first published in *Australian hospital statistics* 1998–99 (AIHW 2000) and continued to be used in all subsequent *Australian hospital statistics* publications until the 2011–12 report. It grouped hospitals based on a number of criteria, including specialisation of hospital (categories such as multi-purpose services, hospices, rehabilitation, mothercraft, psychiatric or other non-acute; categorisation was based on advice from states and territories); workload of hospital, measured in acute separations or acute weighted separations; and geographic location (Table D1).

However, changes in hospital workloads and work practices over time highlighted the need for a review of the appropriateness of the peer groups.

The new AIHW peer grouping has been developed as a flexible and robust system for the categorisation of hospitals into peer groups:

- The groups are based on logical groupings of hospitals according to available data. It is based on a broader range of hospital data sources than the original peer group classification and does not rely on advice from state and territories to create particular groups.
- The grouping is intended to be multi-purpose. The peer groups were defined according to common criteria and not for any particular type of statistical analysis or performance reporting purpose. They should be useful for a range of different purposes.
- The grouping is intended to be stable over time. The individual groups have been defined by the type and nature of the services provided rather than by size-based characteristics which can change through activity increases. The stability of the grouping membership was also tested using several years of data.

A summary of the new peer group classification is presented in Table D2.

Table D1: Public hospital peer group classification, 1998 to 2013

Peer group	Subgroup	Code	Definition
Principal referral and specialist women's and children's hospitals	Principal referral	A1	Major city hospitals with >20,000 acute casemix-adjusted separations, and Regional hospitals with >16,000 acute casemix-adjusted separations per annum.
	Specialist women's and children's	A2	Specialised acute women's and children's hospitals with >10,000 acute casemix-adjusted separations per annum.
Large hospitals	Major city	B1	Major city acute hospitals treating more than 10,000 acute casemix-adjusted separations per annum.
	Regional and Remote	B2	Regional acute hospitals treating >8,000 acute casemix- adjusted separations per annum, and Remote hospitals with >5,000 casemix-adjusted separations.
Medium hospitals	Group 1	C1	Medium acute hospitals in Regional and Major city areas treating between 5,000 and 10,000 acute casemix-adjusted separations per annum.
	Group 2	C2	Medium acute hospitals in Regional and Major city areas treating between 2,000 and 5,000 acute casemix-adjusted separations per annum, and acute hospitals treating <2,000 casemix-adjusted separations per annum but with >2,000 separations per annum.
Small acute hospitals	Regional	D1	Small Regional acute hospitals (mainly small country town hospitals), acute hospitals treating <2,000 separations per annum, and with less than 40% non-acute and outlier patient days of total patient days.
	Remote	D3	Small Remote hospitals (<5,000 acute casemix-adjusted separations but not 'multi-purpose services' and not 'small non-acute'). Most are <2,000 separations.
Subacute and non-acute hospitals	Small non-acute	D2	Small non-acute hospitals, treating <2,000 separations per annum, and with more than 40% non-acute and outlier patient days of total patient days.
	Multi-purpose services	E2	
	Hospices	E3	
	Rehabilitation	E4	
	Mothercraft	E5	
	Other non-acute	E9	For example, geriatric treatment centres combining rehabilitation and palliative care, with a small number of acute patients.
Unpeered and other hospitals		G	Prison medical services, dental hospitals, special circumstance hospitals, Major city hospitals with <2,000 acute casemix-adjusted separations, hospitals with <200 separations etc.
Psychiatric hospitals		F	

Table D2: List of new peer groups including number of public hospitals, 2014

Group	Description	Public hospitals
Public acute hospitals	Are identified according to the hospital's service profile:	
Principal referral hospitals	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.	29
Public acute group A hospitals	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.	62
Public acute group B hospitals	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</i> hospitals. They have a range of specialist units, potentially including obstetrics, paediatrics, psychiatric and oncology units.	45
Public acute group C hospitals	These hospitals usually provide an obstetric unit, surgical services and some form of emergency facility. Generally smaller than the <i>Public acute group B</i> hospitals.	143
Public acute group D hospitals	Often situated in regional and remote areas and offer a smaller range of services relative to the other public acute hospitals groups. Hospitals in this group tend to have a greater proportion of non-acute separations compared with other public acute hospitals.	191
Very small hospitals	Generally provide less than 200 admitted patient separations each year.	136
Specialist overnight hospitals	Perform a readily identified role within the health system	
Women's and children's hospitals	3	12
Children's hospitals	Specialise in the treatment and care of children.	6
Women's hospitals	Specialise in treatment of women.	5
Women's and children's hospitals	Specialise in the treatment of both women and children.	1
Early parenting centres	Specialise in care and assistance for mothers and their very young children.	8
Drug and alcohol hospitals	Specialises in the treatment of disorders relating to drug or alcohol use.	2
Psychiatric hospitals	Specialise in providing psychiatric care and/or treatment for people with a mental disorder or psychiatric disability.	27
Psychogeriatric hospitals	Specialise in the psychiatric treatment of older people.	7
Child, adolescent and young adult psychiatric hospitals	Specialise in the psychiatric treatment of children and young people.	4
General acute psychiatric hospitals	Provide acute psychiatric treatment.	5
General non-acute psychiatric hospitals	Provide non-acute psychiatric treatment—mainly to the general adult population.	6
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.	5

Table D2 (continued): List of new peer groups including number of public hospitals, 2014

Group	Description	Public hospitals
Other acute specialised hospitals	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.	3
Subacute and non-acute hospitals	3	
Public rehabilitation 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.	14
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 Public rehabilitation hospitals peer group.	26
Same-day hospitals	Treat patients on a same-day basis. The hospitals in the same-day hospital peer groups tend to be highly specialised.	
Mixed day procedure hospitals	Provide a variety of specialised services on a same-day basis.	4
Outpatient hospitals	Provide a range of non-admitted patient services. Generally do not admit patients.	44
Unpeered hospitals	Could not be placed in one of the other peer groups.	11

# **Glossary**

Most definitions in this glossary contain an identification number from the 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 NMDSs. METeOR can be viewed on the AIHW website at <www.aihw.gov.au>.

For further information on the terms used in this report, refer to the definitions in the *National health data dictionary version 16* (AIHW 2012a).

**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 id: 268957

**Diagnosis classification type:** the type of classification used for recording emergency department diagnoses. METeOR id: 497496

**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 id: 472904

**Emergency department waiting time to admission:** time elapsed for each patient from presentation to the emergency department to admission to hospital. METeOR id: 270004

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 id: 471932

**Emergency occasion of service:** any examination, consultation, treatment or other services provided as an individual session to a non-admitted patient in the emergency services functional unit of an establishment. METeOR id: 270506

**Episode:** see Emergency department stay.

**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 id: 268971

**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 two of three components of the Commonwealth definition below:

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 id: 291036

**Major diagnostic block:** the urgency related group (URG) major diagnostic block category into which the patient's emergency department diagnosis is grouped. METeOR id: 449585.

**Non-admitted patient:** a patient who does not undergo a hospital's formal admission process. There are three 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 id: 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 id: 473100

**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 id: 327262

**Peer group:** a classification of hospitals into broadly similar groups in terms of their volume of admitted patient activity and their geographical location.

**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 id 497490.

**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 (2011). The Australian Statistical Geography Standard-Remoteness Area (ASGS-RA) is a geographical classification which defines locations in terms of remoteness, i.e. the physical distance of a location from the nearest urban centre. METeOR 531713

**Service event:** an instance or occasion of assistance received by a client from a service provider. METeOR id: 320989

**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 will be triaged into one of five categories on the Australasian Triage Scale. The triage category is allocated by an experienced registered nurse or medical practitioner. METeOR id: 474185

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# Related publications

This report, Australian hospital statistics 2013–14: emergency department care, is part of an annual series. The earlier editions and any published subsequently can be downloaded for free from the Australian Institute of Health and Welfare (AIHW) website <a href="https://www.aihw.gov.au/hospitals-publications/">www.aihw.gov.au/hospitals-publications/</a>. The website also includes information on ordering printed copies.

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#### In 2013–14:

- there were almost 7.2 million presentations to public hospital emergency departments
- 75% of patients received treatment within an appropriate time for their urgency (triage) category
- 73% of patients spent 4 hours or less in the emergency department
- 2 million patients were admitted to the hospital from the emergency department, and 45% of these were admitted within 4 hours.