

# Mental health services provided in emergency departments

Hospital emergency departments (EDs) play a role in treating mental illness and can be the initial point of care for a range of reasons. Hospital EDs are often used as an initial point of care for those seeking mental health-related services for the first time, as well as an alternative point of care for people seeking after-hours mental health care (Morphet et al. 2012).

State and territory health authorities collect a core set of nationally comparable information on most public hospital [ED occasions of service](#) in their jurisdiction, which is compiled annually into the National Non-Admitted Patient Emergency Department Care Database (NNAPEDCD). The mental health-related ED data reported here, however, are currently supplied outside of this process by jurisdictions directly to AIHW as the NNAPEDCD has only recently included information on the principal diagnosis for each occasion of service (see [Data source](#) for more information).

[Mental health-related ED occasions of service](#) in this section are defined as occasions of service in public hospital EDs that have a [principal diagnosis](#) of Mental and behavioural disorders. This definition has a number of limitations. For example, the definition does not fully capture all mental health-related presentations to EDs such as intentional self-harm. As a consequence, the data presented in this section are likely to under-report the actual number of mental health-related ED occasions of service. A number of caveats relating to the quality of these data are listed in the [Data source](#) section.

## Key points

- There were an estimated 276,300 ED occasions of service with a mental health-related principal diagnosis in 2012–13, that is about 3% of all ED occasions of service reported in public hospitals (about 8 million occasions of service).
- Four categories of principal diagnosis comprised almost 4 out of 5 (79%) of mental health-related ED occasions of service. These were: neurotic, stress-related and somatoform disorders; mental and behavioural disorders due to psychoactive substance use; mood (affective) disorders; and schizophrenia, schizotypal and delusional disorders.
- More than 4 in 5 (82%) mental health-related ED occasions of service were classified as either semi-urgent (patient should be seen within 60 minutes) or urgent (patient should be seen within 30 minutes). Just over 1 in 9 (12%) were emergency (patients should be seen in less than 10 minutes) and about 1 in 100 (1%) required resuscitation (patient requires immediate care).
- Three in five (60%) mental health-related ED occasions of service were recorded as being resolved without the need for admission or referral. Most of the remaining mental health-related occasions of service (32%) were admitted to hospital.
- Mental health-related ED occasions of service were more likely to result in an urgent admission when compared to all ED occasions of service (47% and 34% respectively).

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## Reference

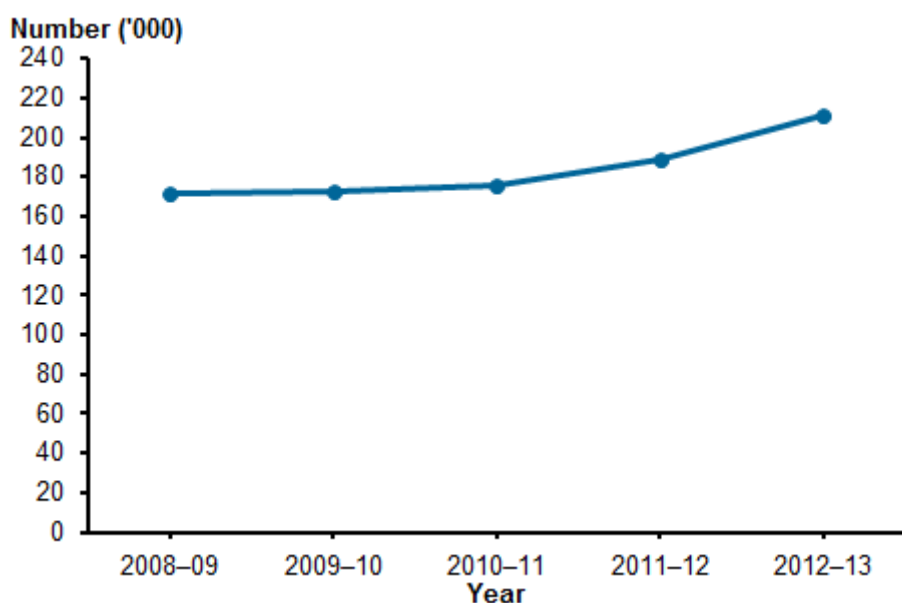
Morphet J, Innes K, Munro I, O'Brien A, Gaskin CJ, Reed F et al. 2012. Managing people with mental health presentations in emergency departments—A service exploration of the issues surrounding responsiveness

## Service provision

### Occasions of service over time

The number of recorded mental health-related ED occasions of service has increased over the 5 years to 2012–13, with an average annual change of 5% (Figure ED.1).

**Figure ED.1: Mental health-related emergency department occasions of service in public hospitals, 2008–09 to 2012–13**



Source: Unpublished data provided by state and territory health authorities.

Source data: Mental health-related emergency department occasions of service Table ED.2 (201 KB XLS).

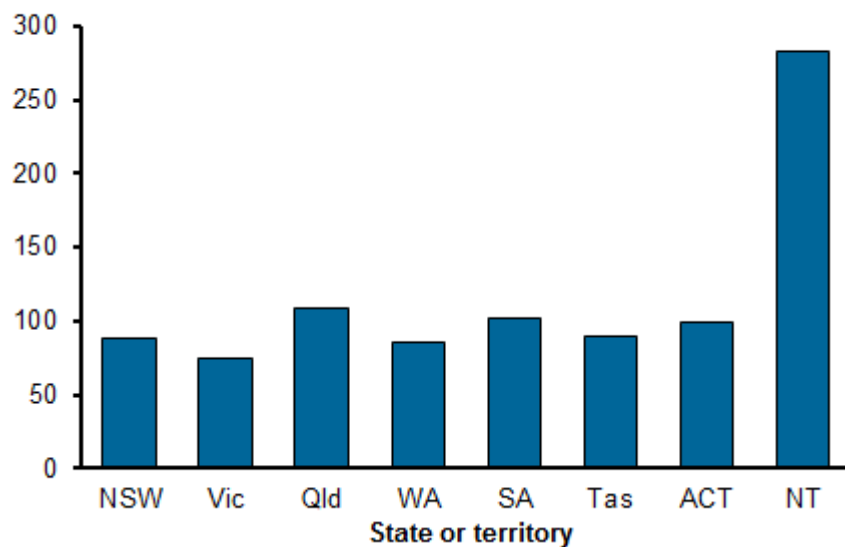
### Occasions of service by states and territories

A total of 211,139 public hospital ED occasions of service with a mental health-related principal diagnosis were reported by states and territories in 2012–13, representing 3.1% of all ED occasions of service. However, there are known data limitations, in particular in relation to how comprehensively the principal diagnosis data cover all occasions of service. Once state and territory coverage estimates and the proportion of occasions of service with a reported principal diagnosis have been taken into account (see section on [Coverage](#)), it is estimated that there were 276,310 mental health-related public hospital ED occasions of service in 2012–13. This represents an increase of 11% compared with the estimate for 2011–12 (248,501).

Nationally, the rate of mental health-related ED occasions of service was 92 per 10,000 population. The Northern Territory had the highest rate (282) and Victoria the lowest rate (75) (Figure ED.2). The observed jurisdictional differences are likely to be due to varying population characteristics, health-care systems and service delivery practices.

**Figure ED.2: Mental health-related emergency department occasions of service in public hospitals, states and territories, 2012–13**

Rate (per 10,000 population)



Source: Unpublished data provided by state and territory health authorities.

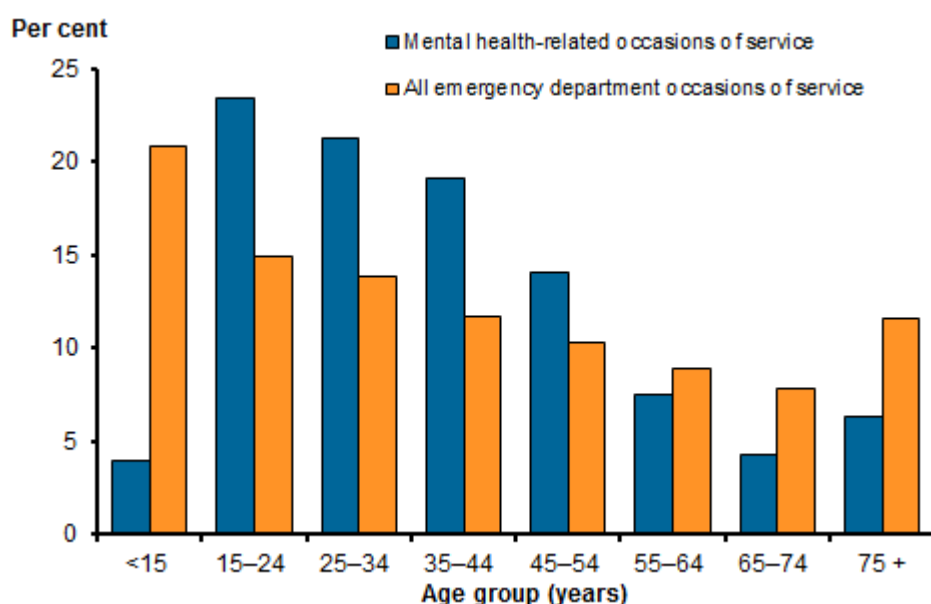
Source data: Mental health-related emergency department occasions of service Table ED.1 (201 KB XLS).

# Patient characteristics

## Patient demographics

There is a difference in the age profile for mental health-related ED occasions of service compared with all ED occasions of service. Mental health-related ED occasions of service had a higher proportion of patients aged 15–54 (78%) compared with all emergency department occasions of service (51%) and a much lower proportion of patients aged less than 15 (4%) compared with all emergency department occasions of service (21%) (Figure ED.3).

**Figure ED.3: Emergency department occasions of service in public hospitals, by age group, 2012–13**



Source: Unpublished data provided by state and territory health authorities.

Source data: Mental health-related emergency department occasions of service Table ED.3 (201KB XLS).

Males and females were similarly represented in mental health-related ED occasions of service (51% and 49% respectively) in 2012–13.

Aboriginal and Torres Strait Islander people accounted for 9% of mental health-related ED occasions of service, compared with 6% of all ED occasions of service.

Among Indigenous Australians aged 15–24, 25–34, 35–44 and 45–54, mental health-related occasions of service made up 4% to 5% of all ED occasions of service in these groups. In other age groups, mental health-related occasions of service made up smaller proportion of all ED occasions of service.

Mental health-related occasions of service made up a slightly higher proportion of all ED occasions of service for Indigenous Australians than for other Australians (5% and 3% respectively).

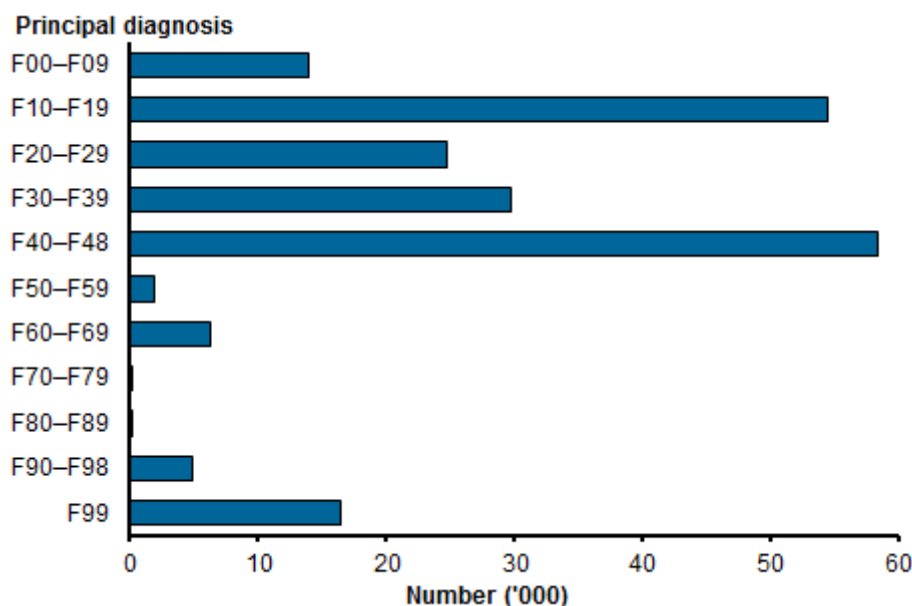
## Principal diagnosis

Data on mental health-related occasions of service by principal diagnosis is based on the broad categories within the Mental and behavioural disorders chapter of the ICD-10-AM (Chapter V). See [data source](#) for more details on diagnosis codes.

Almost 4 in 5 (79%) of mental health-related ED occasions of service were classified by 4 principal diagnosis codes in 2012–13 (Figure ED.4). These were:

- neurotic, stress-related and somatoform disorders (F40–F48; 28%)
- mental and behavioural disorders due to psychoactive substance use (F10–F19; 26%)
- mood (affective) disorders (F30–F39; 14%)
- schizophrenia, schizotypal and delusional disorders (F20–F29; 12%).

**Figure ED.4: Mental health-related emergency department occasions of service in public hospitals, by principal diagnosis, 2012–13**



**Key**

- F00–09: Organic, including symptomatic, mental disorders
- F10–19: Mental and behavioural disorders due to psychoactive substance use
- F20–29: Schizophrenia, schizotypal and delusional disorders
- F30–39: Mood (affective) disorders
- F40–48: Neurotic, stress-related and somatoform disorders
- F50–59: Behavioural syndromes associated with physiological disturbances and physical factors
- F60–69: Disorders of adult personality and behaviour
- F70–79: Mental retardation
- F80–89: Disorders of psychological development
- F90–98: Behavioural and emotional disorders with onset usually occurring in childhood and adolescence
- F99: Unspecified mental disorder

Source: Unpublished data provided by state and territory health authorities.  
 Source data: Mental health-related emergency department occasions of service Table ED.4 (201KB XLS).

## Mental health occasions of service characteristics

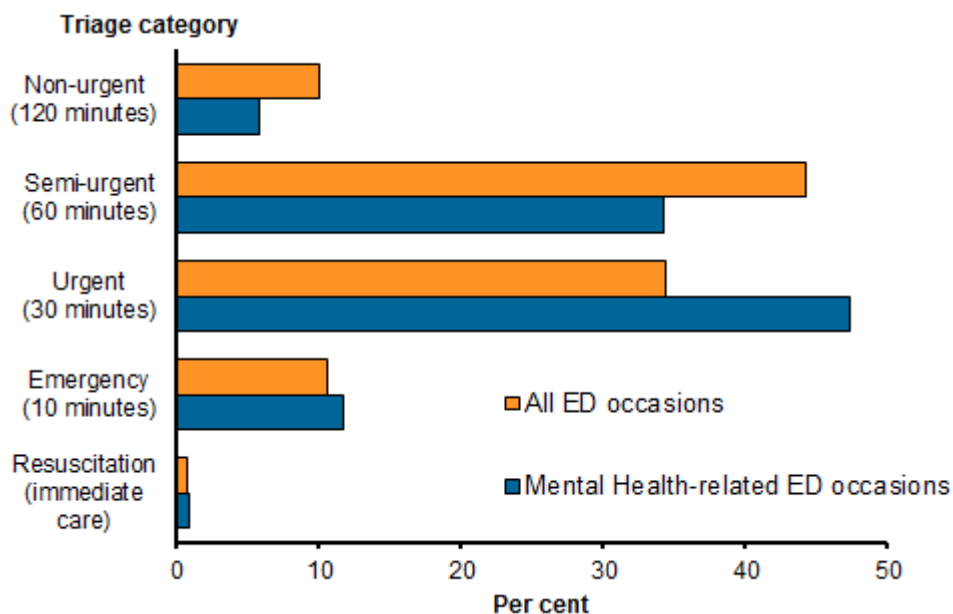
### Triage category

When presenting to an emergency department, patients are triaged to assess their need for care and an appropriate triage category is assigned to reflect priority for care. For example, patients triaged to the

'emergency' category are assessed as requiring care within 10 minutes. Care may or may not, however, be actually received within the designated time frames.

The majority of mental health-related ED occasions of service in 2012–13 (82%) were classified as either urgent or semi-urgent. This figure is similar to all ED occasions of service (78%). Compared to all ED occasions of service, mental health-related occasions of service was more often classified either as urgent (34% and 47% respectively) or emergency (11% and 12% respectively).

**Figure ED.5: Emergency department occasions of service in public hospitals, by triage category, 2012–13**



Source: Unpublished data provided by state and territory health authorities.

Source data: Mental health-related emergency department occasions of service Table ED.5 (201KB XLS) and AIHW (2013).

### Episode end status

The episode end status for over half (60%) of mental health-related ED occasions of service in 2012–13 was recorded as completed, indicating service resolution within the ED without admission or referral to another hospital. Admission to the presenting hospital occurred in just over one-third (32%) of mental health-related occasions of service, which was a higher rate than that recorded for all ED occasions of service (27%) (AIHW 2013). A small proportion of mental health-related ED occasions of service led to referrals to other hospitals for admission (3%) or patient leaving the ED before episode completion (3%).

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### Reference

AIHW 2013. Australian hospital statistics 2012–13: emergency department care. Health services series no. 52. Cat. no. HSE 142. Canberra: AIHW.

## Data source

### Mental health-related emergency department data

All state and territory health authorities collect a core set of nationally comparable information on most of the ED occasions of service (including mental health-related emergency department occasions of service) in public hospitals within their jurisdiction. The AIHW compiles these data annually to form the National Non-Admitted Patient Emergency Department Care Database (NNAPEDCD) (AIHW 2014a). The data are collected by state and territory health authorities according to definitions in the Non-admitted Patient Emergency Department Care National Minimum Data Set (NAPEDC NMDS) and cover occasions of service provided in EDs of public hospitals categorised in the previous financial year as peer groups A (principal referral and specialist women's and children's hospitals) and B (large hospitals). For 2012–13, data were also collected by some states and territories for hospitals in peer groups other than A and B.

In 2012–13, the estimated total number of Emergency Department (ED) occasions of service for all public hospitals was approximately 8.0 million (AIHW 2014b). Episode-level data were collected by state and territory health authorities departments for 6.7 million or 84% of these occasions of service.

Starting from 1 July 2013, the NNAPEDCD includes information on the patient's diagnosis. Preliminary analysis of these newly available data elements are currently underway (AIHW 2014b). For the period 2013 onwards, diagnostic information in the NNAPEDCD may be used to explore how mental health-related emergency presentations are serviced.

For the period 2012–13 reported in this section, however, the NNAPEDCD did not include diagnostic information. For reporting in *Mental Health Services in Australia*, states and territories have agreed to provide the AIHW with aggregate data to compile national information. In 2012–13, all jurisdictions collected some information on the principal diagnosis of an estimated 92% of emergency service department occasions of service for which they reported episode-level data to the NNAPEDCD (see Table Data Source ED2). This section draws on information provided by the jurisdictions regarding mental health-related emergency department occasions of service.

### Definition of mental health-related emergency department occasions of service

Data on mental health-related ED occasions of service in this report provided by the state and territory health authorities are defined as occasions of service in public hospital EDs that have a principal diagnosis of Mental and behavioural disorders (that is, codes F00–F99) in ICD-10-AM or the equivalent codes in ICD-9-CM. These codes are listed below (see Table Data Source ED1).

Most jurisdictions had coded the principal diagnosis of ED occasions of service in 2012–13 using ICD-10-AM. However, for those using ICD-9-CM, mapping of the relevant ICD-10-AM codes to ICD-9-CM codes was undertaken by the relevant state or territory.

Aggregate data on the demographic characteristics of the patients, the triage category, episode end status and the diagnosis category were provided by all states and territories to AIHW for occasions of service that met the definition of a mental health-related occasion of service.

## Data Source ED1: Mental health-related emergency department occasions of service, principal diagnosis codes included, ICD-10-AM and ICD-9-CM

ICD-10-AM <sup>(a)</sup> codes	ICD-9-CM <sup>(b)</sup> codes
F00–F09 Organic, including symptomatic, mental disorders	290, 293, 294, 310
F10–F19 Mental and behavioural disorders due to psychoactive substance use	291, 292, 303, 304, 305 (excluding 305.8 and 305.9)
F20–F29 Schizophrenia, schizotypal and delusional disorders	295, 297, 298 (excluding 298.0, 298.1, 298.2), 301.22
F30–F39 Mood (affective) disorders	296, 298.0, 298.1, 300.4, 301.1, 311
F40–F48 Neurotic, stress-related and somatoform disorders	298.2, 300 (excluding 300.4, 300.19), 306 (excluding 306.3, 306.51, 306.6), 307.53, 307.80, 307.89, 308, 309 (excluding 309.21, 309.22)
F50–F59 Behavioural syndromes associated with physiological disturbances and physical factors	302.7, 305.8, 305.9, 306.3, 306.51, 306.6, 307.1, 307.4, 307.5 (excluding 307.53), 316, 648.44
F60–F69 Disorders of adult personality and behaviour	300.19, 301 (excluding 301.1, 301.22), 302 (excluding 302.7), 312.3
F70–F79 Mental retardation	317, 318, 319
F80–F89 Disorders of psychological development	299, 315, 330.8
F90–F98 Behavioural and emotional disorders with onset usually occurring in childhood and adolescence	307.0, 307.2, 307.3, 307.6, 307.7, 307.9, 309.21, 309.22, 312 (excluding 312.3), 313, 314
F99 Unspecified mental disorder	. .

. . Not applicable.

(a) International Statistical Classification of Diseases and Related Health Problems, 10th revision, Australian Modification.

(b) International Classification of Diseases and Related Health Problems, 9th revision, Clinical Modification.

The ICD-10-AM codes presented above do not fully capture all mental health-related presentations to EDs, and as such, the caveats listed below should be taken into consideration when interpreting the data presented on mental health-related ED occasions of service.

### Limitations of ED data presented in this section

The ED occasions of service data collected from jurisdictions presented in this section have the following limitations:

- There is no nationally agreed upon method of identifying mental health-related occasions of service in emergency departments.
- There is no standard diagnosis classification in use across states and territories for emergency department data.
- There is no standard way to disaggregate those occasions of service identified as mental health-related into subcategories of mental health conditions.
- The definition is based on the principal diagnosis only. As a result, if a mental health-related condition was reported as a second or other diagnosis and not as the principal diagnosis, the occasion of service will not be included as mental health-related.
- The data refer to occasions of service and not to individuals. An individual may have had multiple occasions of service within the same year.



- Not all potential mental health-related ED occasions of service are represented in the data, for the following reasons:
  - Not all ED occasions of service are collected by state and territory authorities at the episode level.
    - Nationally, in 2012–13, an estimated 16% of the 8.0 million public hospital ED occasions of service were not reported with episode-level data and thus not included in the NNAPEDCD.
    - Non-admitted patient occasions of service provided by accident and EDs in private acute and psychiatric hospitals are not included.
  - Not all occasions of service episode-level data collected by state and territory authorities include diagnosis information.
  - The principal diagnosis codes included in the definition do not cover all mental health-related conditions. For example, ED occasions of service for which the principal diagnosis did not fall within the Mental and behavioural disorders chapter (codes F00–F99) but for which an external cause of morbidity or mortality was identified as intentional self-harm are not included.
  - The mental health-related condition or illness may not have been coded as the diagnosis, if it was either not diagnosed by the emergency department or was not recognised (and thus not recorded) as a reason for presentation at an ED.

## Coverage

As noted above, episode-level data were available for 84% of public hospital ED occasions of service in 2012–13, and these data are mainly from the larger metropolitan hospitals (see Table ED2 below). Of the data available on ED occasions of service, it is estimated that 92% had a diagnosis code.

Using these figures, and assuming that mental health-related occasions of service are evenly distributed, it is estimated that the number of mental health-related occasions of service reported in this publication represents approximately 78% of all public hospital ED mental health-related occasions of service as defined above. Taking this into account, it is estimated that the actual number of such occasions of service could be more than 276,000 rather than the reported 211,139 (see Table ED2 below).

### Data Source ED2: Emergency department occasions of service in public hospitals, estimated coverage and estimated actual number of mental health-related occasions of service, by state and territory, 2011–12

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Estimated per cent of total public hospital emergency department occasions of service with episode-level data for the following hospital groups: <sup>(a)</sup>									
Peer group A and B <sup>(b)(c)</sup>	100	100	100	100	100	100	100	100	100
Other hospitals <sup>(c)</sup>	63	39	19	22	51	68	na	100	43
<b>Total estimated per cent<sup>(c)</sup></b>	<b>88</b>	<b>91</b>	<b>72</b>	<b>78</b>	<b>80</b>	<b>92</b>	<b>100</b>	<b>100</b>	<b>84</b>
Estimated per cent of occasions of service reported at episode-level that have a principal diagnosis code <sup>(d)</sup>	90	98	95	76	98	100	100	100	92
Estimated per cent of total emergency department occasions of service with a principal diagnosis <sup>(e)</sup>	79	89	68	59	78	92	100	100	78
Number of emergency department occasions of service with a mental health-related principal diagnosis <sup>(f)</sup>	65,027	42,515	50,183	21,372	16,949	4,605	3,751	6,737	211,139
Estimated number of emergency department occasions of service with a mental health-related principal	82,105	47,673	73,367	36,053	21,619	5,005	3,751	6,737	276,310

. . Not applicable

(a) The proportion of all occasions of service in emergency departments in public hospitals in 2012–13 that are reported at episode-level to the NNAPEDCD.

(b) Peer group A: Principal referral and specialist women's and children's hospitals; Peer group B: Large hospitals.

(c) The number of presentations reported to NNAPEDCD divided by the number of accident and emergency (A+E) occasions of service reported to the National Public Hospital Establishments Database (NPHEd) as a percentage. This may underestimate the NNAPEDCD coverage because some A+E occasions of service are for other than emergency presentations. As A+E occasions of service may have been under enumerated for some jurisdictions, coverage may also be overestimated. The coverage has been adjusted to 100% for jurisdictions where the number of presentations reported to the NNAPEDCD exceeded the number of A+E occasions of service reported to the NPHEd.

(d) The proportion of emergency department occasions of service reported at episode-level to the NNAPEDCD that had a diagnosis. Total is estimated based on state and territory proportions and numbers.

(e) Calculated by multiplying the total percentage of all occasions of service in emergency departments in public hospitals in 2012–13 that are reported at episode-level to the NNAPEDCD by the percentage of emergency department occasions of service reported at episode-level to the NNAPEDCD that had a diagnosis (divided by 100).

(f) Number of Mental health-related emergency department occasions of service as defined for the purposes of this publication, and provided by state and territory health authorities.

(g) Estimate of the actual number of mental health related emergency department occasions of service, as defined for the purposes of this publication, if coverage were 100%.

*Sources:* Data provided by state and territory health authorities, Australian hospital statistics 2012–13 (AIHW 2014b).

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## Reference

AIHW 2014a. Australian hospital statistics 2012–13. Health services series no. 54. Cat. no. HSE 145. Canberra: AIHW.

AIHW 2014b. Australian hospital statistics 2013–14: emergency department care. Health services series no. 58. Cat. no. HSE 153. Canberra: AIHW.

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## Key concepts

### Mental health-related care in emergency departments

Key Concept	Description
<b>Emergency department occasion of service</b>	<b>Emergency department occasion of service</b> refers to the period of treatment or care between when a patient presents at an emergency department and when the non-admitted emergency department treatment ends. It includes presentations of patients who do not wait for treatment once registered or triaged in the emergency department, those who are dead on arrival, and those who are subsequently admitted to hospital or to beds or units in the emergency department. An individual may have multiple occasions of service in a year. For further information, see the definition of <i>Non-admitted patient emergency department service episode</i> in the <i>National health data dictionary, Version 14</i> (HDSC 2008).
<b>Mental health-related emergency department occasion of service</b>	<b>Mental health-related emergency department occasion of service</b> refers to an emergency department occasion of service that has a principal diagnosis that falls within the Mental and behavioural disorders chapter (Chapter 5) of ICD-10-AM (codes F00–F99) or the equivalent ICD-9-CM codes. It should be noted that this definition does not encompass all mental health-related presentations to emergency departments, as detailed above. Additional information about this and applicable caveats can be found in the <a href="#">Data source</a> section.
<b>Principal diagnosis</b>	Currently, there is no national standard definition of <b>principal diagnosis</b> for emergency department data. Thus, for the purposes of the data presented in this section, states and territories provided data on principal diagnosis based on local definitions used within their jurisdiction or emergency departments.
<b>Triage</b>	<b>Triage</b> is the process by which a patient is briefly assessed upon arrival in the emergency department to determine the urgency of their need for medical and nursing care. The triage categories include: <ul style="list-style-type: none"><li>• Non-urgent (requiring care within 120 minutes)</li><li>• Semi-urgent (requiring care within 60 minutes)</li><li>• Urgent (requiring care within 30 minutes)</li><li>• Emergency (requiring care within 10 minutes)</li><li>• Resuscitation (requiring immediate care).</li></ul>

#### Reference

Health Data Standards Committee (HDSC) 2008. National health data dictionary. Version 14. AIHW Cat. no. HWI 101. Canberra: AIHW.