

Services provided in emergency departments

Hospital emergency departments play a role in treating mental illness and can be the initial point of care for a range of reasons. For example, a 2004 Victorian study of emergency department presentations found that emergency departments were 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 (Victorian Government Department of Human Services 2006).

State and territory health authorities collect a core set of nationally comparable information on most public hospital [emergency department occasions of service](#) in their jurisdiction, which is compiled annually into the National Non-Admitted Patient Emergency Department Care Database (NNAPEDCD). Jurisdictions also collect [principal diagnosis](#) information (in some form) for many emergency department occasions of service reported to the NNAPEDCD, which states and territories have used to identify emergency department occasions of service that were mental health-related for this section.

The definition of [mental health-related emergency department occasions of service](#) in this section has a number of limitations. As a consequence, the data presented in this section are likely to under-report the actual number of mental health-related emergency department occasions of service. Further information on data collection limitations can be found in the [data source](#) section.

Key points

- There were an estimated 236,654 emergency department occasions of service with a mental health-related principal diagnosis in 2009–10.
- There has been an average annual increase of 3.6% in the total number of mental health-related emergency department occasions of service recorded between 2005–06 and 2009–10.
- *Neurotic, stress-related and somatoform disorders*, followed by *mental and behavioural disorders due to psychoactive substance use* and then *mood (affective) disorders* comprised more than three quarters of recorded principal diagnosis for mental health-related occasions of service.
- Over 80% of mental health-related emergency department occasions of service were classified as either urgent (within 30 minutes) or semi-urgent (within 60 minutes). Approximately 1 in 10 were emergency (<10 minutes) and about 1 in 100 required resuscitation (immediate care).
- Almost two-thirds of the mental health-related emergency department occasions of service were resolved without the need for admission or referral. Most of the remaining mental health-related occasions of service were admitted to hospital.
- Mental health-related emergency department occasions of service were more likely to be classified as urgent and more likely to result in an admission when compared to all emergency department occasions of service.

Reference

Victorian Government Department of Human Services 2006. Mental health presentations to the emergency department. Melbourne: Victorian Government. Viewed April 2011, <http://www.health.vic.gov.au/mentalhealth/emergency/mh-presentations.pdf> (PDF file 793KB)

Mental health occasions of service by states and territories

A total of 172,445 public hospital emergency department occasions of service with a mental health-related principal diagnosis were reported by states and territories in 2009–10 (Figure 3.1). However, there are known data limitations, in particular in relation to coverage. 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 around 236,654 mental health-related public hospital emergency department occasions of service in 2009–10.

This estimate represents a decrease of 11.6% in the estimated number of mental health-related emergency department occasions of service compared with the estimate for 2008–09 (267,300). It should be noted that these numbers are based on estimates, and analysis of the 'raw' data shows a marginal increase of 0.3% in the number of mental health-related emergency department occasions of service reported from 2008–09 to 2009–10 (see below).

Number of occasions of service

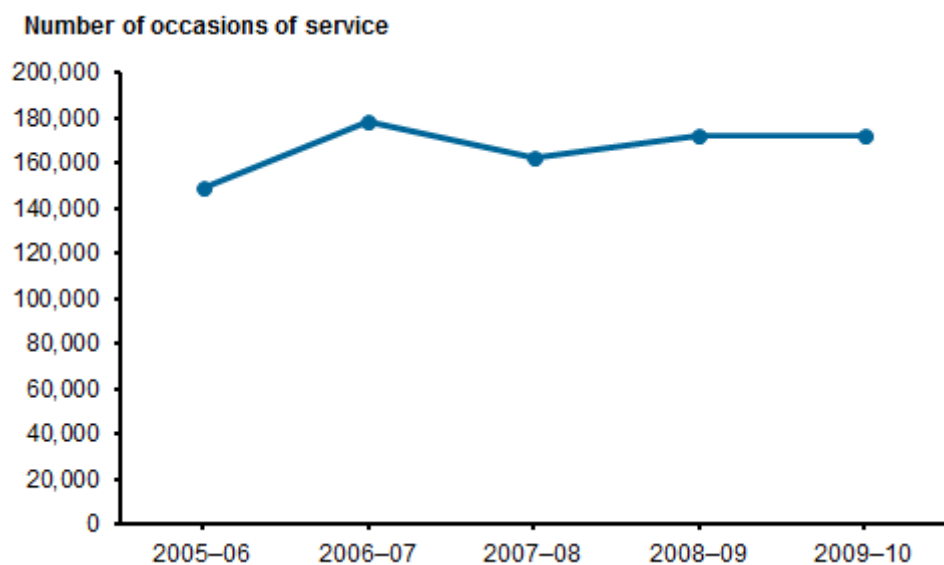


Source: Data provided by state and territory health authorities.

Figure 3.1: Mental health-related emergency department occasions of service in public hospitals, states and territories, 2009–10

Mental health occasions of service over time

The number of recorded mental health-related emergency department occasions of service has increased over the 5 years to 2009–10 at an average annual rate of 3.6% (Figure 3.2). There was a decrease in the number reported in 2007–08 compared with the previous year, largely due to one jurisdiction implementing a new emergency department information system, which impacted their reporting of activity in 2007–08.



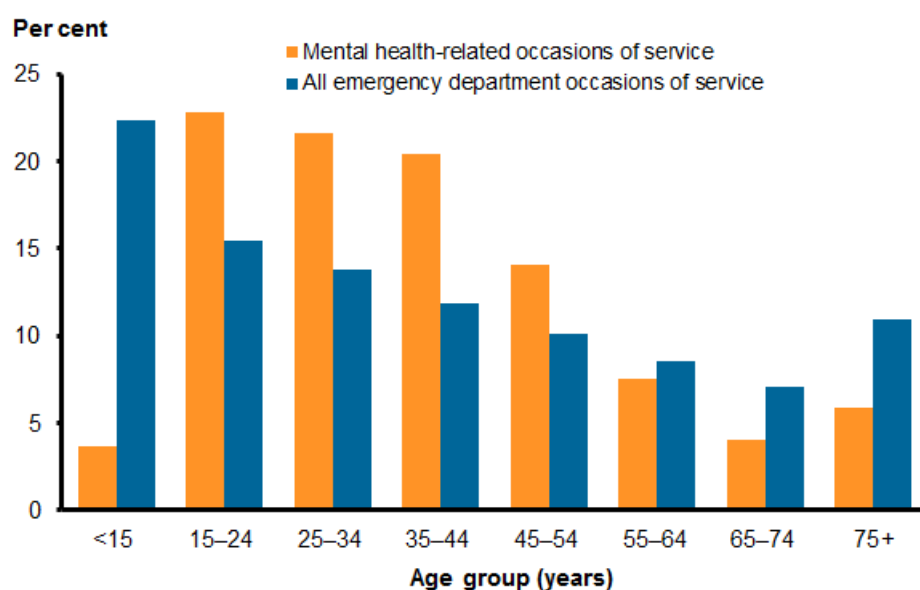
Source: Data provided by state and territory health authorities.

Figure 3.2: Mental health-related emergency department occasions of service in public hospitals, 2005–06 to 2009–10

Mental health occasions of service client characteristics

Patient demographics

There is a difference in the age profile for mental health-related emergency department occasions of service compared with all emergency department occasions of service. Mental health-related emergency department occasions of service had a higher proportion of patients aged 15–54 (78.9% compared with 51.1%) and a much lower proportion of patients aged less than 15 (3.6% compared with 22.3%) (Figure 3.3).



Source: NNAPEDCD and mental health-related data provided by state and territory health authorities.

Figure 3.3: Emergency department occasions of service in public hospitals, by age group, 2009–10

Males and females showed similar proportions of mental health-related emergency department occasions of service (51.1% compared with 48.9%) in 2009–10.

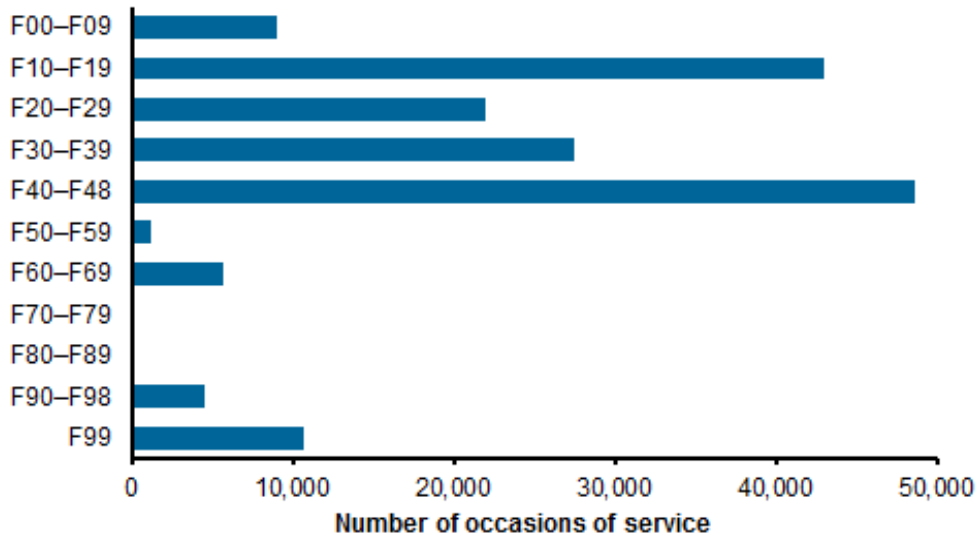
Aboriginal and Torres Strait Islander people accounted for 6.2% of the mental health-related emergency department occasions of service, and 4.5% of all emergency department occasions of service.

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 in the ICD-10-AM (Chapter 5).

More than three-quarters (81.8%) of mental health-related emergency department occasions of service were categorised by one of four principal diagnosis codes in 2009–10 (Figure 3.4). These were *neurotic, stress-related and somatoform disorders* (F40–F48; 28.2%), *mental and behavioural disorders due to psychoactive substance use* (F10–F19; 24.9%), *mood (affective) disorders* (F30–F39; 15.9%) and *schizophrenia, schizotypal and delusional disorders* (F20–F29; 12.8%).

Principal diagnosis



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: Data provided by state and territory health authorities.

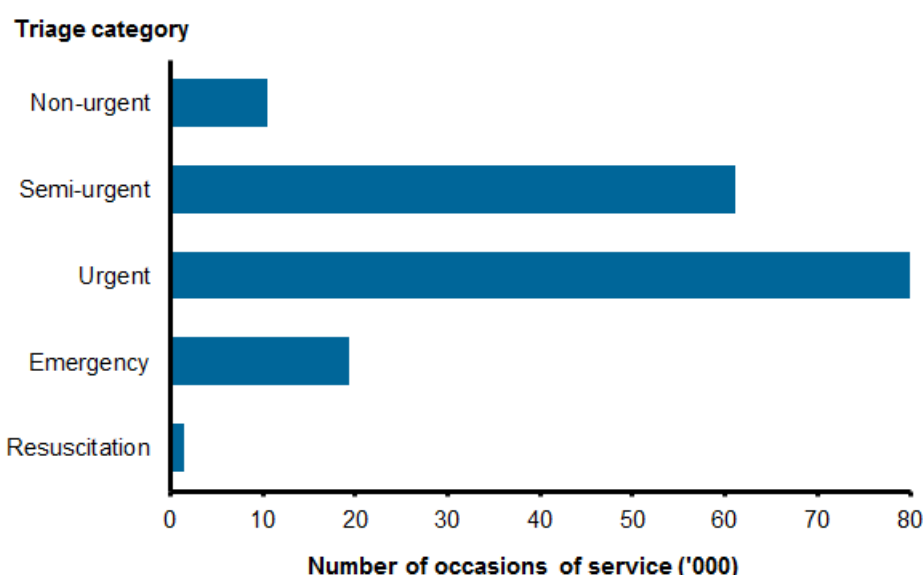
Figure 3.4: Mental health-related emergency department occasions of service in public hospitals, by principal diagnosis, 2009-10

Mental health occasions of service characteristics

Triage category

When presenting to an emergency department, a patient is 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. However, care may or may not actually be received within the designated time frames.

The majority of mental health-related emergency department occasions of service in 2009–10 (81.8%) were classified as either urgent or semi-urgent. The breakdown in Figure 3.5 shows that more than 1 in 16 (10,569, 6.1%) of mental health-related occasions of service in emergency departments were considered non-urgent (requiring care within 120 minutes), more than a third (61,021, 35.4%) were recorded as semi-urgent (within 60 minutes) and almost half (79,961, 46.4%) as urgent (within 30 minutes). More than 1 in 9 (19,360, 11.2%) were classified as emergency (requiring care within 10 minutes) and less than 1 in 100 (1,531, 0.9%) as resuscitation (immediate care). In 2009–10, mental health-related occasions of service were more likely than all emergency department occasions of service to be assessed as either urgent or emergency (57.6% and 41.4% respectively) (AIHW 2011).



Source: Data provided by state and territory health authorities.

Figure 3.5: Mental health-related emergency department occasions of service in public hospitals, by triage category, 2009–10

Episode end status

The episode end status for almost two-thirds (61.7%) of mental health-related emergency department occasions of service in 2009–10 was recorded as completed, indicating service resolution within the emergency department without admission or referral to another hospital. Admission to the presenting hospital occurred in almost a third (30.8%) of mental health-related occasions of service, which was a higher rate than that recorded for all emergency department occasions of service (26.9%) (AIHW 2011). Referrals to other hospitals for admission and the patient leaving the emergency department before episode completion occurred in less than 1 in 20 occasions of service (4.0% and 3.5% respectively).

AIHW 2011. Australian hospital statistics 2009-10. Health services series no. 40. Cat. No. HSE 107.
Canberra: AIHW.

Data source

Mental health related emergency department data

While there is no current national agreement on the collection of information on mental health-related services provided by emergency departments in hospitals in Australia, states and territories have agreed to provide the AIHW with aggregate data to compile national information on this.

All state and territory health authorities collect a core set of nationally comparable information on most of the emergency department occasions of service in public hospitals within their jurisdiction. The AIHW compiles these episode-level data annually to form the National Non-Admitted Patient Emergency Department Care Database (NNAPEDCD) (AIHW 2011). The data are collected by state and territory health authorities according to definitions in the Non-admitted Patient Emergency Department National Minimum Data Set (NAPEDC NMDS) and cover occasions of service provided in emergency departments 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 2009–10, data were also collected by some states and territories for hospitals in peer groups other than A and B.

The total number of emergency department occasions of service for all public hospitals in 2009–10 was almost 7.4 million. Episode-level data were collected by state and territory health authorities departments for 81% of these occasions of service (a total of around 5.9 million occasions of service) (AIHW 2011). Episode-level data were available for 100% of all emergency department occasions of service for public hospitals in peer groups A and B, and about 35% for other public hospitals.

Definition of mental health related emergency department occasions of service

While there is a national data compilation of episode-level data on emergency department occasions of service (NNAPEDCD), there is currently no national agreement to collect information on the principal diagnosis for emergency department occasions of service. In addition, there is no standard or agreed classification for diagnoses in use across emergency departments that could be used uniformly to identify mental health-related care, or any other data item (for example, reason for the occasion of service, intentional self harm codes and mental health flags) collected in a nationally consistent manner that would allow for the identification of mental health-related occasions of service in emergency departments. Thus it is difficult to identify and report on mental health-related emergency department occasions of service in a comparable manner across jurisdictions.

However, in 2009–10, all jurisdictions did collect some information on the principal diagnosis of an estimated 90% of emergency service department occasions of service for which they reported episode-level data to the NNAPEDCD. As a result, it was determined that a definition of 'mental health-related' based on the collected diagnosis information could be applied nationally for the purposes of compiling data for this publication.

Data on mental health-related emergency department occasions of service in this report provided by the state and territory health authorities are defined as: *occasions of service in public hospital emergency departments 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.

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

ICD-10-AM ^(a) codes	ICD-9-CM ^(b) codes
F00–F09 Organic, including symptomatic,	290, 293, 294, 310

mental disorders		
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.

This definition does not capture all mental health-related presentations to emergency departments, and the caveats listed below should be taken into consideration when interpreting the data presented on mental health-related emergency department occasions of service.

Most jurisdictions had coded the principal diagnosis of emergency department occasions of service in 2009–10 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 (see table above).

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.

Caveats

To ensure that the data on emergency department mental health-related occasions of service are interpreted correctly, the following limitations should be noted:

- 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.

- Not all potential mental health-related emergency department occasions of service are represented in the data, for the following reasons:
 - Not all emergency department occasions of service are collected by state and territory authorities at the episode level.
 - Nationally, in 2009–10, an estimated 19% of the 5.9 million public hospital emergency department occasions of service were not reported with episode-level data and thus not included in the NNAPEDCD (see table below). In addition, non-admitted patient occasions of service provided by accident and emergency departments in private acute and psychiatric hospitals are not included. The Australian Bureau of Statistics (ABS) estimates there were 527,000 non-admitted patient occasions of service provided by accident and emergency departments in private acute and psychiatric hospitals in 2009–10 (ABS 2011).
 - Not all occasions of service episode-level data collected by state and territory authorities include diagnosis information.
 - It is estimated that in 2009–10 the proportion of reported occasions of service with a diagnosis was 92% (see table below).
 - The principal diagnosis codes included in the definition do not cover all mental health-related conditions. For example, emergency department 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 emergency department.
- 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.

Coverage

As noted above, episode-level data were available for 81% of public hospital emergency department occasions of service in 2009–10, and these data are mainly from the larger metropolitan hospitals (see table below). Of the data available on emergency department 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 74% of all public hospital emergency department 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 about 236,700 rather than the reported 172,445 (see table below).

In addition, it should be noted that coverage of the data is biased toward the larger metropolitan emergency departments. Mental health-related occasions of service in smaller rural hospitals may differ from those in the larger metropolitan hospitals. In particular, country hospitals in South Australia do not report diagnosis data and are not included in this report. In addition, ICD-10-AM diagnosis codes in Western Australia are not available for one metropolitan hospital and are only available for one Western Australian Country Health Service site.

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, 2009–10

	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: ^(a)									
Peer group A and B ^{(b)(c)}	100	100	100	100	100	100	100	100	100
Other hospitals ^(c)	46	39	18	37	21	59	..	100	35
Total estimated per cent^(c)	83	90	72	73	68	89	100	100	81
Estimated per cent of occasions of service reported at episode-level that have a principal diagnosis code ^(d)	92	94	95	76	97	89	100	100	92
Estimated per cent of total emergency department occasions of service with a principal diagnosis ^(e)	76	84	68	55	66	76	100	100	74
Number of emergency department occasions of service with a mental health-related principal diagnosis ^(f)	53,254	35,510	42,114	15,179	15,513	4,603	3,102	3,170	172,445
Estimated number of emergency department occasions of service with a mental health-related principal diagnosis ^(g)	69,741	42,108	61,570	27,359	23,519	6,085	3,102	3,170	236,654

.. Not applicable

(a) The proportion of all occasions of service in emergency departments in public hospitals in 2009–10 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. See Australian hospital statistics 2009–10 (AIHW 2011).

(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 2009–10 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 2009–10 (AIHW 2011).

References

ABS 2011. Private hospitals, Australia, 2009–10. ABS cat.no. 4390.0. Canberra: ABS.

AIHW 2011. Australian hospital statistics 2009-10. Health services series no. 40. Cat. No. HSE 107. Canberra: AIHW.

Key concepts

Mental health-related care in emergency departments

Key Concept	Description
Emergency department occasion of service	Emergency department occasion of service 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).
Mental health-related emergency department occasion of service	Mental health-related emergency department occasion of service 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 data source section.
Principal diagnosis	Currently, there is no national standard definition of principal diagnosis 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.
Triage	Triage 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.

Reference

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