

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. For example, a 2004 Victorian study of ED presentations found that EDs 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 ED occasions of service reported to the NNAPEDCD, which states and territories have used to identify ED 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. For example, the definition does not capture all mental health-related presentations to EDs. 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. The caveats listed in the [data source](#) section should be taken into consideration when interpreting the data presented on mental health-related ED occasions of service.

Key points

- There were an estimated 243,444 ED occasions of service with a mental health-related principal diagnosis in 2010–11.
- Three categories of principal diagnosis comprised more than two-thirds of mental health-related ED occasions of services. These were neurotic, stress-related and somatoform disorders; mental and behavioural disorders due to psychoactive substance use; and mood (affective) disorders.
- Over 80% of 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). Less than 1 in 10 were emergency (patients should be seen in less than 10 minutes) and about 1 in 100 required resuscitation (patient requires immediate care).
- Almost two-thirds (62.3%) of the mental health-related ED occasions of service were recorded as being resolved without the need for admission or referral. Most of the remaining third of mental health-related occasions of service were admitted to hospital (34.6%).
- Mental health-related ED occasions of service were more likely to be classified as urgent and more likely to result in an admission when compared to all ED 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 177,400 public hospital ED occasions of service with a mental health-related principal diagnosis were reported by states and territories in 2010–11. However, there are known data limitations, in particular in relation to how comprehensively the data covers 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 243,444 mental health-related public hospital ED occasions of service in 2010–11.

This estimate represents an increase of 2.9% in the estimated number of mental health-related ED occasions of service compared with the estimate for 2009–10 (236,654).

The highest number of mental health-related ED occasions of service in public hospitals was seen in New South Wales (50,301) and Queensland (43,562) (Figure ED.1).

The Northern Territory had the highest rate of mental health-related ED occasions of service at 160.0 per 10,000 population, noticeably higher than the Australian average (80.0 per 10,000), indicating a greater reliance on this type of care in the Northern Territory. Victoria had the lowest rate at 68.2 per 10,000. At present, information is not available to explain jurisdictional differences, however, explanations are likely to include factors such as differences in the characteristics of the population, health-care systems and service delivery practices.

Figure ED.1: Mental health-related emergency department occasions of service in public hospitals, states and territories, 2010–11



Source: Data provided by state and territory health authorities.

Source data for this figure are accessible from Table ED.1 in the Mental health services provided in emergency departments excel table downloads.

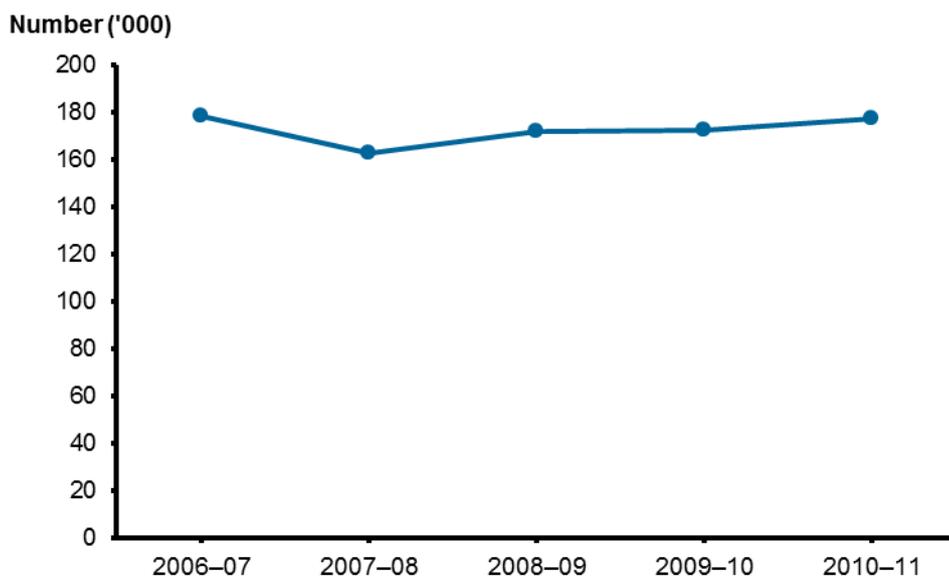
Alt text:

A vertical bar chart which shows the number of mental health-related ED occasions of service for all jurisdictions in 2010–11. NSW had the most occasions of service (50,301), followed by Qld (43,562), Vic (37,493), WA (18,405), SA (15,833), Tas (4,684), NT (3,689) and ACT (3,433). Refer to Table ED.1

Mental health occasions of service over time

The number of recorded mental health-related ED occasions of service has essentially remained unchanged over the 5 years to 2010–11, with an average annual change of 0.2% (Figure ED.2). There was a decrease in the number reported in 2007–08 compared with the previous year, largely due to 1 jurisdiction implementing a new ED information system, providing a more accurate count.

Figure ED.2: Mental health-related emergency department occasions of service in public hospitals, 2006–07 to 2010–11



Source: Data provided by state and territory health authorities.

Source data for this figure are accessible from Table ED.2 in the Mental health services provided in emergency departments excel table downloads.

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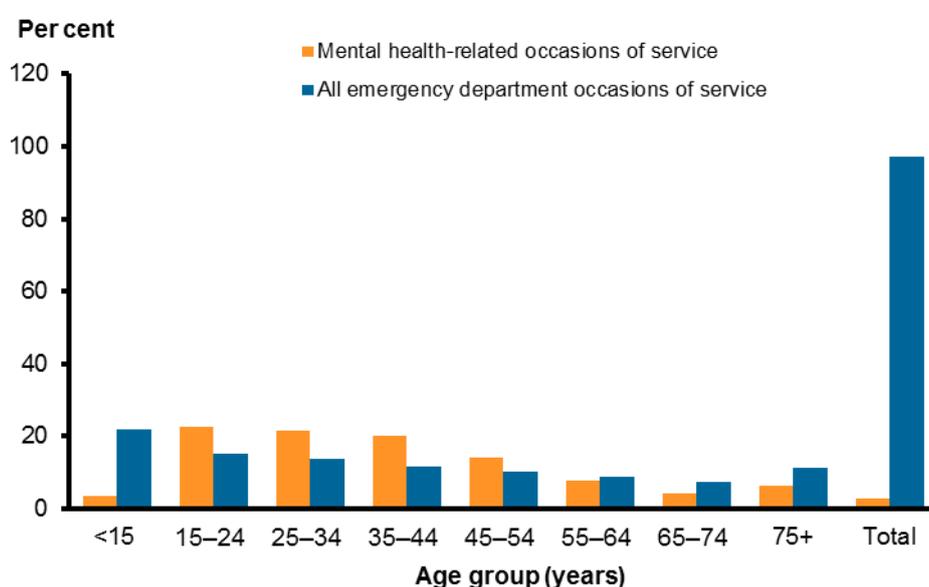
A line chart which shows that the number of mental health-related ED occasions of service in public hospitals has essentially remained unchanged from 2006–07 (178,595) to 2010–11 (177,400). Refer to Table ED.2

Mental health occasions of service, client 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 (78.3%) compared with all emergency department occasions of service (51.0%) and a much lower proportion of patients aged less than 15 (3.4%) compared with all emergency department occasions of service (21.8%) (Figure ED.3) (AIHW 2012).

Figure ED.3: Emergency department occasions of service in public hospitals, by age group, 2010–11



Source: NNAPEDCD and mental health-related data provided by state and territory health authorities. Source data for this figure are accessible from Table ED.3 in the Mental health services provided in emergency departments excel table downloads.

Alt text:

A vertical bar chart which compares the percentage of mental health-related ED occasions of services with all ED occasions of service, by age, in 2010–11. Mental health-related ED occasions of service had a higher proportion of patients aged 15–54 than all ED occasions of services and a lower proportion for those aged less than 15 and those aged 55–75+. Refer to Table ED.3.

Males and females showed similar proportions of mental health-related ED occasions of service, with slightly more visits for men than women (51.1% compared with 48.9%) in 2010–11.

Aboriginal and Torres Strait Islander people accounted for 6.6% of the mental health-related ED occasions of service, and 4.8% of all emergency department occasions of service.

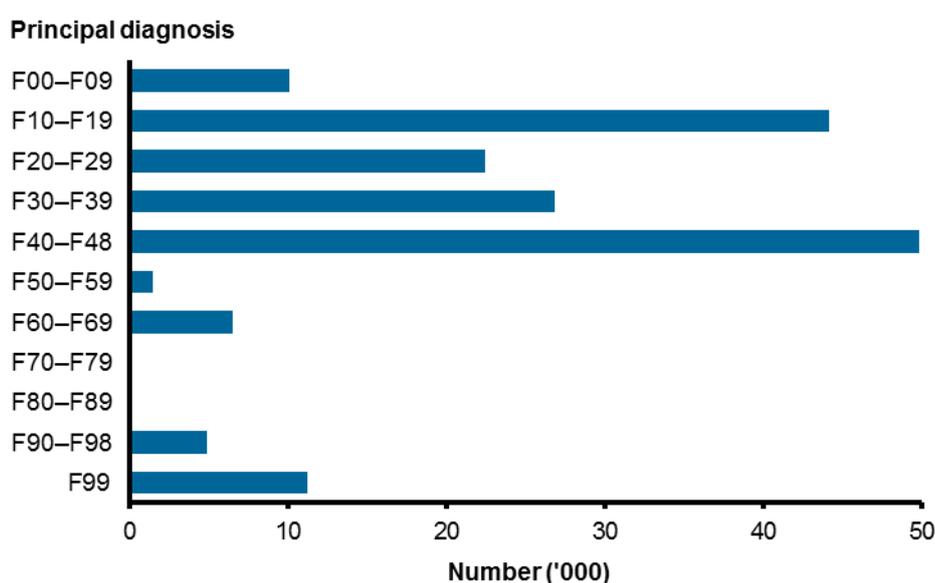
Principal diagnosis

Data on mental health-related occasions of service by principal diagnosis is based on the broad categories within the Mental and behavioural disorders chapter of the ICD-10-AM (Chapter 5).

80.7% of mental health-related ED occasions of service were classified by 1 of 4 principal diagnosis codes in 2010–11 (Figure ED.4). These were:

- neurotic, stress-related and somatoform disorders (F40–F48; 28.1%)
- mental and behavioural disorders due to psychoactive substance use (F10–F19; 24.9%)
- mood (affective) disorders (F30–F39; 15.1%)
- schizophrenia, schizotypal and delusional disorders (F20–F29; 12.6%).

Figure ED.4: Mental health-related emergency department occasions of service in public hospitals, by principal diagnosis, 2010–11



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.

Source data for this figure are accessible from Table ED.4 in the Mental health services provided in emergency departments excel table downloads.

Alt text:

A horizontal bar chart which shows the number of mental health-related ED

occasions of service in public hospitals by principal diagnosis in 2010–11. F40–F48 has the most occasions of service (49,807), followed by F10–F19 (44,160), F30–F39 (26,842), F20–F29 (22,379), F99 (11,205), F00–F09 (10,093), F60–F69 (6,473), F90–F98 (4,872), F50–F59 (1,400), F80–F89 (119) and F70–F79 (50). Refer to Table ED.4

Reference

[AIHW 2012](#). Australian hospital statistics 2010–11. Health services series no. 43. Cat. No. HSE 117. Canberra: AIHW.

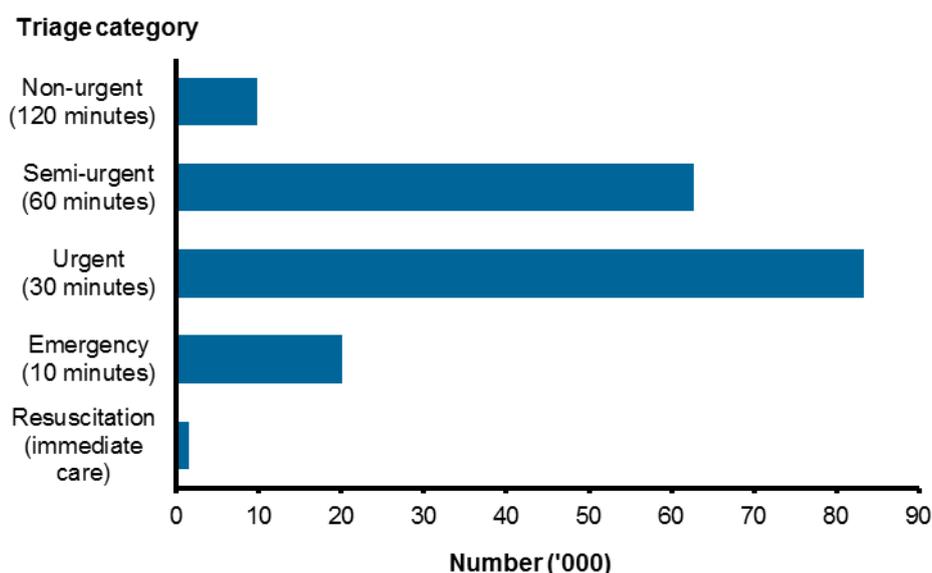
Mental health occasions of service characteristics

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. However, care may or may not actually be received within the designated time frames.

The majority of mental health-related ED occasions of service in 2010–11 (82.3%) were classified as either urgent or semi-urgent. Figure ED.5 shows that 9,782 (5.5%) of mental health-related occasions of service in EDs were considered non-urgent (requiring care within 120 minutes), over one-third (62,639, 35.3%) were recorded as semi-urgent (within 60 minutes) and almost half (83,390, 47.0%) as urgent (within 30 minutes). More than 1 in 9 (20,047, 11.3%) were classified as emergency (requiring care within 10 minutes) and less than 1 in 100 (1,527, 0.9%) as resuscitation (immediate care). Mental health-related occasions of service were more likely than all ED occasions of service to be assessed as either urgent or emergency (58.3% and 42.3% respectively) (AIHW 2012).

Figure ED.5: Mental health-related emergency department occasions of service in public hospitals, by triage category, 2010–11



Source: Data provided by state and territory health authorities. Source data for this figure are accessible from Table ED.5 in the Mental health services provided in emergency departments excel Table downloads.

Alt text:

A horizontal bar chart which shows the number of mental health-related ED occasions of service in public hospitals by triage category in 2010–11. 83,390 of mental health-related occasions of service were classified as urgent, 62,639 semi-urgent, 20,047 emergency, 9,782 non-urgent and 1,527 resuscitation. Refer to Table ED.5

Episode end status

The episode end status for over half (59.1%) of mental health-related ED occasions of service in 2010–11 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 (34.6%) of mental health-related occasions of service, which was a higher rate than that recorded for all ED occasions of service (27.4%) (AIHW 2012). Referrals to other hospitals for admission and the patient leaving the ED before episode completion occurred in less than 1 in 20 occasions of service (3.1% and 3.3% respectively).

Reference

[AIHW 2012](#). Australian hospital statistics 2010-11. Health services series no. 43. Cat. No. HSE 117. Canberra: AIHW.

Data source

Mental health-related emergency department data

While there is no current national agreement (for the 2010–11 collection period) on the collection of information on mental health-related services provided by emergency departments (ED) in hospitals in Australia, states and territories have agreed to provide the AIHW with aggregate data to compile national information.

All state and territory health authorities collect a core set of nationally comparable information on most of the ED 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 2012). 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 2010–11, data were also collected by some states and territories for hospitals in peer groups other than A and B.

The total number of ED occasions of service for all public hospitals in 2010–11 was almost 7.6 million. Episode-level data were collected by state and territory health authorities departments for 81% of these occasions of service (a total of about 6.2 million occasions of service) (AIHW 2012). Episode-level data were available for 100% of all ED occasions of service for public hospitals in peer groups A and B, and about 34% 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 ED occasions of service (NNAPEDCD), there is currently (for the 2010–11 collection period) no national agreement to collect information on the principal diagnosis for ED occasions of service. However, it should be noted that the NAPEDC NMDS will include a principal diagnosis data item from the 2013–14 reporting period. That is, information on the principal diagnosis for ED occasions of service will be collected from 2013–14 and is expected to be reported in 2015.

In addition, there is no standard or agreed classification for diagnoses in use across EDs 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 EDs. Thus it is difficult to identify and report on mental health-related ED occasions of service in a comparable manner across jurisdictions.

Reference

[AIHW 2012](#). Australian hospital statistics 2010–11. Health services series no. 43. Cat. No. HSE 117. Canberra: AIHW.

However, in 2010–11, all jurisdictions did collect 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. 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 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.

Table ED1: 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, 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.

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

Most jurisdictions had coded the principal diagnosis of ED occasions of service in 2010–11 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 ED1 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.

Guide to interpretation and caveats

To ensure that the data on ED 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 EDs.
- 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 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 2010–11, an estimated 19% of the 6.1 million public hospital ED 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 EDs in private acute and psychiatric hospitals are not included.
The Australian Bureau of Statistics (ABS) estimates there were 516,000 non-admitted patient occasions of service provided by accident and EDs in private acute and psychiatric hospitals in 2010–11 (ABS 2012).
 - Not all occasions of service episode-level data collected by state and territory authorities include diagnosis information.
 - It is estimated that in 2010–11 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, 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.
- 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 ED occasions of service in 2010–11, 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 73% 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 243,400 rather than the reported 177,400 (see Table ED2 below).

In addition, it should be noted that coverage of the data is biased toward the larger metropolitan EDs. 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 did not report diagnosis data and are not included in this report. Albury hospital was a Victorian hospital in 2010–11 however, data supplied by Victoria does not include mental health-related ED occasions of service at the Albury hospital. 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. In Victoria, diagnosis codes were not available for one country hospital (accounting for 2% of mental health-related occasions of service).

Table 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, 2010–11

	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)	50	36	19	14	21	72	..	100	34
Total estimated per cent^(c)	83	90	72	74	68	93	100	100	81
Estimated per cent of occasions of service reported at episode-level that have a principal diagnosis code ^(d)	89	98	95	76	97	95	100	100	92
Estimated per cent of total emergency department occasions of service with a principal diagnosis ^(e)	74	88	68	56	66	88	100	100	75
Number of emergency department occasions of service with a mental health-related principal diagnosis ^(f)	50,301	37,493	43,562	18,405	15,833	4,684	3,433	3,689	177,400
Estimated number of emergency department occasions of service with a mental health-related principal diagnosis ^(g)	68,094	42,509	63,687	32,726	24,004	5,302	3,433	3,689	243,444

.. Not applicable

(a) The proportion of all occasions of service in emergency departments in public hospitals in 2010–11 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 2010–11 (AIHW 2012).

(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 2010–11 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 2010–11 (AIHW 2012).

References

Australian Bureau of Statistics (ABS) 2012. Private hospitals, Australia, 2010–11. ABS cat.no. 4390.0. Canberra: ABS.

[AIHW 2012](#). Australian hospital statistics 2010–11. Health services series no. 43. Cat. No. HSE 117. 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. The triage categories include: <ul style="list-style-type: none">• Non-urgent (requiring care within 120 minutes)• Semi-urgent (requiring care within 60 minutes)• Urgent (requiring care within 30 minutes)• Emergency (requiring care within 10 minutes)• Resuscitation (requiring immediate care).

Reference

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