

Healthcare in Focus

# People's use and experiences of mental health care in NSW

Technical supplement

# Contents

Introduction .....	1
Data sources and methods.....	2
The Commonwealth Fund International Health Policy Survey .....	2
Productivity Commission Report on Government Services .....	3
Australian Institute of Health and Welfare Mental Health Services in Australia .....	3
Your Experience of Service (YES) Survey .....	3
NSW Health Admitted Patient Data Collection.....	3
NSW Health Emergency Department Data Collection .....	3
Bureau of Health Information NSW Patient Survey Program .....	3
NSW Ministry of Health Information for Mental Health.....	4
Measure specifications, by chapter .....	5
Care in the community .....	5
Emergency department care .....	6
Inpatient care .....	14
Appendix 1: Hospitals in emergency department chapter .....	21
Appendix 2: NSW public hospitals with specialised mental health units .....	27
References .....	29

# Introduction

This document is a supplement to the Bureau of Health Information (BHI's) annual healthcare performance report, *Healthcare in Focus: People's use and experiences of mental health care in NSW*. It describes the data sources and methods used to calculate the descriptive statistics and measures included in the report. This supplement is technical in nature, and is intended for audiences interested in the creation and analysis of health performance information.

**To produce the report, BHI used the following data sources:**

- The Commonwealth Fund International Health Policy Survey 2016
- Productivity Commission Report on Government Services 2019
- Australian Institute of Health and Welfare Mental Health Services in Australia
- Your Experience of Service (YES) survey 2017–18
- Bureau of Health Information NSW Patient Survey Program 2017–2018
- NSW Health Admitted Patient Data Collection, accessed via the Health Information Exchange
- NSW Health Emergency Department Data Collection, accessed via the Health Information Exchange
- NSW Ministry of Health, System Information and Analytics Branch, InforMH.

For the statistical analysis of data published in the report, BHI used SAS/STAT™ software.<sup>1</sup>

# Data sources and methods

## The Commonwealth Fund International Health Policy Survey

The Commonwealth Fund is a philanthropic organisation in the United States. Each year, it commissions an international health policy survey of 11 countries to support public reports that benchmark the performance of comparable healthcare systems.

The 2016 International Health Policy Survey drew its sample from adults aged 18+ years. BHI, as a partner, invested in an additional sample to obtain estimates for NSW.

Telephone interviews, using mobile and landline numbers, were conducted between March and June 2016.

NSW results are based on the responses of 1,175 people. The combined response rate for NSW and Australia was 25% (Table 1).

### Statistical analysis

Respondents who reported 'yes' when asked if they had ever been told by a doctor they had depression, anxiety or other mental health problems were defined as a mental health group.

For the purposes of the analysis, only five countries were retained as having a sufficient number of respondents who reported mental health issues. The NSW estimates are compared with the rest of Australia and each of the four other countries (Table 1).

All analyses were weighted using SAS procedure SURVEYLOGISTIC, so the results are representative of the population aged 18+ years. They may not reflect the experiences of those in population sub-groups such as people with mental health issues.

Logistic regression was used to compare the percentage of people who selected a response category between people with and without mental health issues in NSW. Similarly, logistic regression was used to compare the experiences of respondents in NSW who reported having mental health issues with those in other countries.

Results that were statistically significant at a 5% level were noted with an asterisk (\*) in the report.

Table 1 The Commonwealth Fund International Health Policy Survey of Adults aged 18+ years, 2016, number of respondents and response rates, by country

Country	Number of respondents	Survey response rate	Number of respondents with mental health issues
Australia (New South Wales)	2,500 (1,175)	25%	545 (401)
Canada	4,549	23%	821
Sweden	7,000	29%	1,066
Switzerland	3,238	45%	194
United States	1,392	19%	456

## Productivity Commission Report on Government Services

Each year the Australian Productivity Commission releases a *Report on Government Services* (RoGS).<sup>2</sup> The 2019 report includes information on the performance of healthcare services. Information from the report was reproduced in this *Healthcare in Focus* report and referenced wherever used.

## Australian Institute of Health and Welfare Mental Health Services in Australia

*Mental health services in Australia* is an online report that has been published since 2011. It is updated throughout the year when data becomes available and provides a picture of the health and welfare system's national response to Australians' mental health care needs. Information from this report for NSW, including rates on seclusion and restraint, were reproduced in this *Healthcare in Focus* report and referenced wherever used.

## Your Experience of Service (YES) Survey

Your Experience of Service (YES) is a national questionnaire that gathers information from patients about their experiences of care in public mental health services.

The System Information and Analytics (SIA) Branch of the NSW Ministry of Health produces a yearly report of NSW-specific YES data.<sup>3</sup> Information from the 2017–18 report was reproduced in *Healthcare in Focus* and referenced wherever used.

## NSW Health Admitted Patient Data Collection

The Admitted Patient Data Collection (APDC) was accessed via the Health Information Exchange (HIE), NSW Ministry of Health. The APDC contains information on patients' episodes of care in NSW public hospitals.

## NSW Health Emergency Department Data Collection

The Emergency Department Data Collection (EDDC) was accessed via the Health Information Exchange (HIE), NSW Ministry of Health. The EDDC contains information on patient presentations to NSW public hospital emergency department (EDs).

## Bureau of Health Information NSW Patient Survey Program

BHI conducts a regular, comprehensive statewide patient experience survey program. The NSW Patient Survey Program collects information from patients across NSW about their experiences with a variety of healthcare services.

In each of the surveys used in this report, patients were asked: "which if any of the following longstanding conditions do you have?". Patients were grouped by whether or not they reported having a longstanding mental health condition.

The number of respondents for each survey, together with the number of respondents with a mental health condition and survey response rates are shown in Table 2.

Table 2 Number of respondents and response rates, by BHI patient survey, 2017–2018

BHI patient survey	Number of respondents	Survey response rate	Number of respondents with a mental health condition
Emergency Department	15,995	24%*	1,596
Outpatient Cancer Clinics	11,301	49%	799
Maternity Care	4,787	35%	353

\* Emergency Department Patient Survey response rate is an adjusted rate, reflecting use of a stratified sample by age and stay type.

## Statistical analysis

Estimates were calculated using sampling weights and the SAS procedure SURVEYFREQ<sup>1</sup> by whether or not patients had a longstanding mental health condition.

Percentages are weighted estimates, intended to reflect the views of the survey-specific population (e.g. only women in the Maternity Care Survey). They may not reflect the experiences of those in population sub-groups such as people with a mental health condition.

Proc SURVEYLOGISTIC was used to determine whether there were differences in experiences of patients with and without a longstanding mental health condition. Results that were statistically significant at a 5% level were noted with an asterisk (\*) in the report.

In the *Emergency Department Patient Survey (EDPS)* and the *Outpatient Cancer Clinics Survey*, comparisons also found differences in the two groups by age, sex, language spoken at home (English or other). For the *Maternity Care Survey*, comparisons were adjusted for age and language spoken at home.

Further details about BHI's NSW Patient Survey Program and technical supplements for each survey, describing the sampling and facilities included, are available at [bhi.nsw.gov.au/nsw\\_patient\\_survey\\_program](https://bhi.nsw.gov.au/nsw_patient_survey_program)

### NSW Ministry of Health Information for Mental Health

Information for Mental Health (InforMH) is a unit within the NSW Ministry of Health's System Information and Analytics Branch. InforMH provided BHI with measures on community follow-up within seven days of hospital discharge and is referenced wherever used.

# Measure specifications, by chapter

## Care in the community

All but one of the measures used in this chapter are referenced on pages 2–3 of this technical supplement. The exception is in Table 3 below, where extra interpretation by BHI was required. For this measure BHI grouped diagnosis codes into a select number of groups for reporting.

**Table 3** Specifications for measures calculated by BHI, care in the community chapter

Measure	Cohort description (numerator, denominator)	Further details (inclusions, exclusions, references)	Data source
Percentage of publicly-funded specialised community mental health care services by principal diagnosis, NSW, 2016–17	Cohort: Total number of publicly-funded specialised community mental health care service contacts in NSW	<p>Mental health diagnoses grouped as follows, using ICD-10 codes:</p> <p>Organic mental disorders (incl. dementia F00–F03 Dementia, F04–F09 Other organic mental disorders)</p> <p>Mental and behavioural disorders due to substance abuse F10 Mental and behavioural disorders due to use of alcohol, F11–F19 Mental and behavioural disorders due to other psychoactive substance use</p> <p>Psychotic disorders F20 Schizophrenia, F22 Persistent delusional disorders, F23 Acute and transient psychotic disorders, F25 Schizoaffective disorders, F29 Schizotypal and other delusional disorders</p> <p>Mood disorders F30 Manic episode, F31 Bipolar affective disorder, F32 Depressive episode, F33 Recurrent depressive disorders, F34 Persistent mood (affective) disorders, F38–F39 Other and unspecified mood (affective) disorders</p> <p>Adjustment and anxiety disorders F40 Phobic anxiety disorders, F41 Other anxiety disorders, F42 Obsessive-compulsive disorders, F43 Reaction to severe stress and adjustment disorders, F44 Dissociative (conversion) disorders, F45–F48 Somatoform and other neurotic disorders</p> <p>Others F50 Eating disorder, F51–F59 Other behavioural syndromes associated with physiological disturbances and physical factors, F80–F89 Disorders of psychological development, F90 Hyperkinetic disorders, F92–F98 Other and unspecified disorders with onset in childhood and adolescence</p> <p>Personality disorders F60 Specific personality disorder, F61–F69 Disorders of adult personality and behaviour</p> <p>Intellectual disability F70–F79 Mental retardation</p> <p>Unspecified mental disorder F99 Mental disorder not otherwise specified</p>	Australian Institute of Health and Welfare Mental health services in Australia

## Emergency department care

Measures in the ED chapter were calculated using data from the Emergency Department Data Collection (EDDC), accessed via the Health Information Exchange (HIE), NSW Ministry of Health.

### Identifying mental health presentations

The EDDC has diagnoses recorded by medical, nursing or clerical personnel while the patient is in the ED. EDs use various classifications to record the diagnosis, principally ICD-9-CM<sup>4</sup> (Clinical Modification), ICD-10-AM<sup>4</sup> (Australian Modification), or SNOMED-CT<sup>5</sup>. For this report, all diagnoses were mapped to ICD-10-AM clinical groupings.

Patients with mental health-related issues were identified using ED 'principal' diagnosis codes, in line with definitions provided by the NSW Ministry of Health.<sup>6</sup> The diagnosis codes used in this chapter to identify mental health-related issues are shown in Table 4.

**Table 4**      **Diagnosis codes used to identify mental health-related emergency department presentations, by classification grouping**

ICD9CM:	ICD10AM:	SNOMED-CT
<ul style="list-style-type: none"><li>• first three characters '294'–'301' or '306'–'314'</li><li>• whole codes 'V71.01'–'V71.09'</li><li>• whole code '799.2'</li><li>• whole codes 'E950.00'–'E959.99'</li></ul>	<ul style="list-style-type: none"><li>• first three characters 'F20'–'F51' or 'F53'–'F63' or 'F65'–'F69' or 'F80'–'F99' or 'R44'–'R45' or 'X60'–'X84'</li><li>• first two characters 'F1', include only those of form 'F1n.5' where n is an integer 0–9</li></ul>	<ul style="list-style-type: none"><li>• mapped to ICD10AM V6, using mapping table provided by NSW Ministry of Health</li><li>• defined using the ICD10AM codes.</li></ul>



## Mental health-related diagnostic groups

Following the identification of mental health-related presentations to NSW EDs, diagnosis codes were allocated to diagnostic groups for further analysis in the chapter. The mental health-related diagnostic groupings that were included in the chapter are shown in Table 5.

Mental health-related diagnostic groups excluded from analyses in the chapter include: Organic mental disorders (including dementia): F00–F09, Mental and behavioural disorders due to substance abuse: F10–F19 (excludes F10.n–F19.n, where n=5), and Intellectual disability: F70–F79.

**Table 5** Mental health-related diagnostic groups included in emergency department chapter analyses

Diagnostic groups	ICD 10AM codes
Adjustment and anxiety disorders	F40–48 Neurotic, stress-related and somatoform disorders
Intentional self-harm	X60–84 Intentional self-harm
Mood disorders	F30–39 Mood [affective] disorders
Other mental-health related	F50–59 Behavioural syndromes associated with physiological disturbances and physical factors F80–89 Disorders of psychological development F90–F98 Behavioural and emotional disorders with onset usually occurring in childhood and adolescence
Personality disorders	F60–69 Disorders of adult personality and behaviour
Psychotic disorders	F20–29 Unspecified mental disorder F1n.5, where n is an integer 0–9. Drug and alcohol use where psychotic disorder is present
Symptoms and signs of mental health-related issues	R44–R45 Symptoms and signs involving cognition, perception, emotional state and behaviour
Unspecified mental disorder	F99 Unspecified mental disorder

## Hospitals included in analyses

The number of EDs submitting presentation data electronically to the EDDC has increased over time as the necessary capabilities have been extended to include most EDs in NSW. Most of the additional EDs included in the EDDC since 2013–14 are at smaller, regional hospitals. BHI used records from as many EDs as possible, depending on the time period. The EDs included are shown in Appendix 1.

Two groups of EDs were used in this chapter:

1. ED cohort for 2017–18.  
BHI included all 175 EDs that were reporting to the EDDC in 2017–18 for measures specific to 2017–18.
2. Consistent cohort of hospitals in EDDC from 2013–14 to 2017–18.  
For comparisons spanning more than one year, BHI used a consistent cohort of 115 hospitals included in the EDDC from 2013–14 to 2017–18 to ensure fair comparisons of performance measures over time. Had this not been done, differences over time may have been overstated or biased.

Tables 6 and 7 include specifications for measures included in the ED chapter, including key data items and derived variables.

**Table 6** Specifications for measures calculated by BHI, emergency department chapter

Measures	Cohort description (numerator, denominator)	Further details (inclusions, exclusions, references)	Data sources
Number of ED presentations for all patients, by mental health-related presentation or other reasons, NSW, 2013–14 to 2017–18	Cohort: 'Mental health' refers to patients with a mental health-related presentation (Table 5). 'Not mental health' refers to all other reasons for presenting to the ED that are not in the mental health-related list. 'All patients' includes those with no recorded reason for presenting.	Consistent cohort of hospitals in EDDC from 2013–14 to 2017–18	NSW Health Emergency Department Data Collection
Mental health-related ED presentations per 10,000 population, by age group, NSW, 2013–14 and 2017–18	Denominator: ABS estimated residential population in age group. Numerator: Mental health-related (Table 5) ED presentations by age group.	Consistent cohort of hospitals in EDDC from 2013–14 to 2017–18	NSW Health Emergency Department Data Collection  Estimates of residential population for June each year, extracted from Secure Analytics for Population Health Research and Intelligence (SAPHaRI)

Measures	Cohort description (numerator, denominator)	Further details (inclusions, exclusions, references)	Data sources
Aboriginal mental health-related ED presentations per 10,000 population, by age group, NSW, 2017–18	Denominator: ABS-estimated Aboriginal residential population for NSW by age group. Numerator: Aboriginal mental health-related ED presentations (Table 5) by age group.	Consistent cohort of hospitals in EDDC from 2013–14 to 2017–18	NSW Health Emergency Department Data Collection  Estimates of Aboriginal and Torres Strait Islander Australians, June 2016, extracted from Australian Bureau of Statistics (ABS) (accessed 16 April 2019)
Number of mental health-related ED presentations by presenting condition, NSW, 2017–18	Cohort: Number of mental health-related ED presentations by condition group (Table 5).	ED cohort for 2017–18	NSW Health Emergency Department Data Collection
Percentage of mental health-related ED presentations, by presenting condition, NSW, 2017–18	Denominator: All mental health-related ED presentations. Numerator: Number of mental health-related ED presentations by condition group (Table 5).	ED cohort for 2017–18	NSW Health Emergency Department Data Collection
Percentage of Aboriginal mental health-related ED presentations, by presenting condition, NSW 2017–18	Denominator: All Aboriginal mental health-related ED presentations. Numerator: Number of Aboriginal mental health-related ED presentations by condition group (Table 5).	ED cohort for 2017–18	NSW Health Emergency Department Data Collection
Percentage of ED presentations, by presentation for mental health-related or other reasons and age, NSW, 2017–18	Denominator: All mental health-related ED presentations (Table 5). Numerator: Number of mental health-related ED presentations by age group.	ED cohort for 2017–18	NSW Health Emergency Department Data Collection
Percentage of mental health-related ED presentations, by age and presenting condition, NSW, 2017–18	Denominator: All mental health-related ED presentations by age group. Numerator: Number of mental health-related ED presentations by age group and presenting condition (Table 5).	ED cohort for 2017–18	NSW Health Emergency Department Data Collection
Percentage of Aboriginal mental health-related ED presentations, by age and presenting condition, NSW, 2017–18	Denominator: All Aboriginal mental health-related ED presentations by age group. Numerator: Number of Aboriginal mental health-related ED presentations by age group and presenting condition group (Table 5).	ED cohort for 2017–18	NSW Health Emergency Department Data Collection
Percentage of ED presentations by arrival mode and by presentation for mental health-related or other reasons, NSW, 2017–18	Denominator: All mental health-related ED presentations by presentation for mental health-related or other reasons (Table 5). Numerator: Number of mental health-related ED presentations by presentation for mental health-related or other reasons and by arrival mode.	ED cohort for 2017–18	NSW Health Emergency Department Data Collection

Measures	Cohort description (numerator, denominator)	Further details (inclusions, exclusions, references)	Data sources
Percentage of ED presentations by triage category and by presentation for mental health-related or other reasons, NSW, 2017–18	Denominator: All mental health-related ED presentations by presentation for mental health-related or other reasons (Table 5).  Numerator: Number of mental health-related ED presentations by presentation for mental health-related or other reasons and by triage category.	ED cohort for 2017–18	NSW Health Emergency Department Data Collection
Percentage of ED presentations whose treatment started on time, by presentation for mental health or other reasons, NSW, 2017–18	Denominator: Emergency presentations to NSW public hospital EDs by presentation for mental health-related or other reasons (Table 5).  Numerator: Denominator cases starting treatment on time based on recommended timeframes for each triage category Triage 1: Resuscitation (within two minutes) Triage 2: Emergency (within 10 minutes) Triage 3: Urgent (within 30 minutes) Triage 4: Semi-urgent (within 60 minutes) Triage 5: Non-urgent (within 120 minutes)  Time to treatment is calculated as the difference between presentation time and start of treatment time.	ED cohort for 2017–18  For further details on the treatment started on time calculation, see the <i>Healthcare Quarterly</i> technical supplement at <a href="http://bhi.nsw.gov.au/BHI_reports/healthcare_quarterly">bhi.nsw.gov.au/BHI_reports/healthcare_quarterly</a>	NSW Health Emergency Department Data Collection
Median and 90th percentile time spent in the ED, by presentations for mental health-related and other reasons, NSW, 2013–14 to 2017–18	Cohort: All presentations to NSW public hospital EDs for mental-health related or other reasons (Table 5).  Median: Time from presentation by which half of patients started their treatment. The other half of patients took equal to or longer than this time.  90th percentile: Time from presentation by which 90% of patients started treatment. The final 10% of patients took equal to or longer than this time.	Consistent cohort of hospitals in EDDC from 2013–14 to 2017–18	NSW Health Emergency Department Data Collection
Percentage of presentations for mental health-related and other reasons, by length of time spent in ED, NSW, 2017–18	Denominator: All presentations to NSW public hospital EDs for mental-health related or other reasons (Table 5).  Numerator: Denominator cases where the time between presentation at and departure from the ED was: (a) four hours or less (b) more than four hours and less than 24 hours (c) more than 24 hours.	ED cohort for 2017–18  For further details of calculation of time spent in the ED, see the <i>Healthcare Quarterly</i> technical supplement at <a href="http://bhi.nsw.gov.au/BHI_reports/healthcare_quarterly">bhi.nsw.gov.au/BHI_reports/healthcare_quarterly</a>	NSW Health Emergency Department Data Collection

Measures	Cohort description (numerator, denominator)	Further details (inclusions, exclusions, references)	Data sources
Percentage of Aboriginal presentations for mental health-related and other reasons, by length of time spent in ED, NSW, 2017-18	<p>Denominator: All Aboriginal presentations to NSW public hospital EDs for mental-health related or other reasons (Table 5).</p> <p>Numerator: Denominator Aboriginal cases where the time between presentation at and departure from the ED was:</p> <p>(a) four hours or less</p> <p>(b) more than four hours and less than 24 hours</p> <p>(c) more than 24 hours.</p>	<p>ED cohort for 2017–18</p> <p>For further details of calculation of time spent in the ED, see the <i>Healthcare Quarterly</i> technical supplement at <a href="http://bhi.nsw.gov.au/BHI_reports/healthcare_quarterly">bhi.nsw.gov.au/BHI_reports/healthcare_quarterly</a></p>	NSW Health Emergency Department Data Collection
Percentage of presentations for mental health-related and other reasons, by length of time spent in ED and age, NSW, 2017-18	<p>Denominator: All presentations to NSW public hospital EDs for mental-health related or other reasons, by age group (Table 5).</p> <p>Numerator: Denominator cases in each age group where the time between presentation at and departure from the ED was:</p> <p>(a) four hours or less</p> <p>(b) more than four hours and less than 24 hours</p> <p>(c) more than 24 hours.</p>	<p>ED cohort for 2017–18</p> <p>For further details of calculation of time spent in the ED, see the <i>Healthcare Quarterly</i> technical supplement at <a href="http://bhi.nsw.gov.au/BHI_reports/healthcare_quarterly">bhi.nsw.gov.au/BHI_reports/healthcare_quarterly</a></p>	NSW Health Emergency Department Data Collection
Percentage of patients whose treatment started within clinically recommended time, by presentations for mental health-related and other reasons, NSW LHDs, 2017–18	<p>Denominator: Emergency presentations to NSW public hospital EDs by presentation for mental health-related or other reasons (Table 5), by NSW local health district (LHD).</p> <p>Numerator: Denominator cases starting treatment on time based on recommended time frames for each triage category:</p> <p>Triage 1: Resuscitation (within two minutes)</p> <p>Triage 2: Emergency (within 10 minutes)</p> <p>Triage 3: Urgent (within 30 minutes)</p> <p>Triage 4: Semi-urgent (within 60 minutes)</p> <p>Triage 5: Non-urgent (within 120 minutes)</p> <p>Time to treatment is calculated as the difference between presentation time and start of treatment time.</p>	<p>ED cohort for 2017–18</p> <p>For further details of calculation of time to start treatment, see the <i>Healthcare Quarterly</i> technical supplement at <a href="http://bhi.nsw.gov.au/BHI_reports/healthcare_quarterly">bhi.nsw.gov.au/BHI_reports/healthcare_quarterly</a></p>	NSW Health Emergency Department Data Collection
Percentage of mental health-related ED presentations, by hours spent in department, NSW LHDs, 2017–18	<p>Denominator: All presentations to NSW public hospital EDs for mental-health related or other reasons (Table 5), by NSW LHD.</p> <p>Numerator: Denominator cases in each age group where the time between presentation at and departure from the ED was:</p> <p>(a) four hours or less</p> <p>(b) more than four hours and less than 24 hours</p> <p>(c) more than 24 hours.</p>	<p>ED cohort for 2017–18</p> <p>For further details of calculation of time spent in the ED, see the <i>Healthcare Quarterly</i> technical supplement at <a href="http://bhi.nsw.gov.au/BHI_reports/healthcare_quarterly">bhi.nsw.gov.au/BHI_reports/healthcare_quarterly</a></p>	NSW Health Emergency Department Data Collection

Measures	Cohort description (numerator, denominator)	Further details (inclusions, exclusions, references)	Data sources
Percentage of ED presentations, by mode of separation and presentations for mental health-related and other reasons, NSW, 2017–18	<p>Cohort: All presentations to NSW public hospital EDs for mental-health related or other reasons (Table 5).</p> <p>Numerator: Denominator cases in each mode of separation group. For more on mode of separation see definitions in Table 7.</p>	ED cohort for 2017–18	NSW Health Emergency Department Data Collection
Percentage of ED presentations, by mode of separation and presentations for mental health-related and other reasons, and age, NSW, 2017–18	<p>Cohort: All presentations to NSW public hospital EDs for mental-health related or other reasons (Table 5) and age group.</p> <p>Numerator: Denominator cases in each mode of separation and age group. For more on mode of separation see definitions in Table 7.</p>	ED cohort for 2017–18	NSW Health Emergency Department Data Collection
Percentage of ED presentations, by mode of separation and mental health-related presenting condition, NSW, 2017–18	<p>Cohort: All presentations to NSW public hospital EDs for mental-health related reasons by presenting condition group (Table 5).</p> <p>Numerator: Denominator cases in each mode of separation. For more on mode of separation see definitions in Table 7.</p>	ED cohort for 2017–18	NSW Health Emergency Department Data Collection

**Table 7** Definitions and derived data items used in the emergency department chapter

Data item	Description
Aboriginality	<p>The Indigenous status variable in the EDDC was used for ED measures presented by Aboriginality. Aboriginality includes people who identify as: Aboriginal (Indigenous status =1), Torres Strait Islander (2) or Aboriginal and Torres Strait Islander (3). 'Non-Aboriginal' are people who did not identify as Aboriginal (4). People who declined (8) or did not respond (9) were excluded from analyses of Aboriginality. Completeness of Aboriginal data reported by HealthStats NSW.<sup>7</sup></p>
Mental-health related and other presentations	<p>Presentations are defined as 'mental-health related' where the principal diagnosis code is in the list of mental health diagnostic groups (Table 5). Presentations that have a diagnosis code which is not in this list are described as not mental-health related. Presentations which do not have a diagnosis code are excluded.</p>
All emergency department presentations	<p>'All ED presentations' is the count of every record in the ED visit database of the HIE. This count includes presentations of all ED visit types including emergency presentations, planned return visits, pre-arranged admissions, some outpatient visits, private referrals, persons pronounced dead on arrival and patients in transit.</p> <p>This count excludes records entered in error (mode of separation = 99), telehealth and eHealth presentations (ED visit type = 12), and presentations by patients already admitted to the same hospital (ED visit type = 13).</p>
Emergency presentations	<p>'Emergency presentations' are records in the ED visit database of the HIE with an ED visit type of: emergency (1), an unplanned return visit for a continuing condition (3) or disaster (11).</p>
Mode of arrival	<p>ED presentations by mode of arrival includes all presentations at the ED. Mode of arrival categories include:</p> <p>State ambulance (01), air ambulance (05) and helicopter rescue service (04)</p> <p>Police/correctional services vehicle (07)</p> <p>Other – all other arrival modes, including no transport (walked in) (09), private vehicle (03) and community/public transport (02)</p>
Mode of separation	<p>ED presentations by mode of separation includes all presentations at the ED that have a departure time recorded. Mode of separation categories include:</p> <p>Treated and discharged – presentations with mode of separation: admitted and discharged as patient within ED (2) and departed with treatment complete (4).</p> <p>Treated and admitted to hospital – presentations with modes of separation: admitted to a ward/inpatient unit (1), admitted and died in ED (3), admitted to a critical care ward (10), admitted via an operating theatre (11) or admitted – left at own risk (13).</p> <p>Left without, or before completing, treatment – presentations with modes of separation: departed, did not wait (6) and departed – left at their own risk (7). Patients who 'did not wait' were triaged, but left the ED before treatment commenced. Patients who 'left at their own risk' were triaged and treatment had begun by a clinician or nurse, but the patient left prior to completing their treatment.</p> <p>Transferred to another hospital – presentations with mode of separation: transferred to another hospital (5) or admitted and then transferred to another hospital (12).</p> <p>Other – presentations with modes of separation: dead on arrival (8) or departed for another clinical service location (9). Presentations with missing mode of separation are also included in this cohort.</p>
Triage category	<p>A classification system based on how urgent the patient's need is for treatment:</p> <p>Triage category 1: Resuscitation (for example, cardiac arrest)</p> <p>Triage category 2: Emergency (for example, chest pain, severe burns)</p> <p>Triage category 3: Urgent (for example, moderate blood loss, dehydration)</p> <p>Triage category 4: Semi-urgent (for example, sprained ankle, earache)</p> <p>Triage category 5: Non-urgent (for example, small cuts, abrasions).</p>

## Inpatient care

Measures in the inpatient care chapter were calculated using data from the Admitted Patient Data Collection (APDC), accessed via the Health Information Exchange (HIE), Ministry of Health.

### Identifying diagnostic groups for mental health-related admissions

BHI's method for identifying the diagnostic groups of mental health-related admissions to inpatient care is set out below.

To identify which diagnosis groups to allocate for each mental health-related illness, BHI used the following method:

- When a mental health-related illness (Table 8) appeared as a primary diagnosis, this record was included as an episode of care on a specialised mental health inpatient unit for that diagnosis group.
- If there was no mental health-related illness as a primary diagnosis, the secondary diagnoses were scanned. When a mental health-related illness appeared, this record was included as an episode of care on a specialised mental health inpatient unit for that diagnosis group. There may be multiple secondary diagnoses in one episode of care.
- This method identified the first related diagnosis and discarded the rest. Where there was no primary or secondary diagnosis in the mental health-related list, this episode of care was allocated as 'diagnosis not on this list'.

The only exception to this method was intentional self-harm. According to ICD-10 guidelines, intentional self-harm is not recorded as a primary diagnosis. For this analysis all secondary diagnosis codes for intentional self-harm were scanned, regardless of what other preceding or subsequent diagnosis codes were recorded.

This differs from BHI's method of identifying diagnosis groups for episodes of care in specialised mental health facilities, as finding episodes of care for intentional self-harm was prioritised to get an idea of the overall volume of intentional self-harm episodes in NSW public hospitals.



**Table 8**      **Mental health-related diagnostic groups included in inpatient chapter analyses**

Diagnostic groups	ICD 10-AM codes
<b>Adjustment and anxiety disorders</b>	F40–48 Neurotic, stress-related and somatoform disorders
<b>Intentional self-harm</b>	X60–84 Intentional self-harm
<b>Mental and behavioural disorders due to substance abuse</b>	F10–F19 excluding 'F1n.5' where n is an integer 0–9. Mental and behavioural disorders due to psychoactive substance use
<b>Mood disorders</b>	F30–39 Mood [affective] disorders
<b>Other mental-health related</b>	F50–59 Behavioural syndromes associated with physiological disturbances and physical factors F80–89 Disorders of psychological development F90–F98 Behavioural and emotional disorders with onset usually occurring in childhood and adolescence Z60 Problems related to social environment Z63 Other problems related to primary support groups, including family circumstance
<b>Personality disorders</b>	F60-69 Disorders of adult personality and behaviour
<b>Psychotic disorders</b>	F20–29 Unspecified mental disorder F1n.5 where n is an integer 0–9. Drug and alcohol use where psychotic disorder is present
<b>Symptoms and signs of mental health-related issues</b>	R44–R45 Symptoms and signs involving cognition, perception, emotional state and behaviour
<b>Unspecified mental disorder</b>	F99 Unspecified mental disorder

Note: Organic mental disorders (incl. dementia) diagnostic grouping was excluded from detailed analyses in the inpatient care chapter.

## Specialised mental health inpatient units

Specialised overnight admitted patient mental health care takes place within a designated psychiatric unit. The unit is staffed by health professionals with specialist mental health qualifications or training whose principal function is the treatment and care of patients affected by mental health issues. This is also referred to as specialised psychiatric care.

Patients who were admitted to designated specialised mental health inpatient units were identified by the mental health service entity register (MH-SER) provided by the NSW Ministry of Health. This register contains a list of all designated specialised mental health inpatient units in NSW.

## Exclusions

Episodes of care in Albury Hospital were excluded from this analysis, as responsibility for Albury Hospital was transferred to Victoria in July 2014.

Some of the measures in this chapter excluded data from Transitional Behavioural Assessment and Intervention Service (T-BASIS) and Older Persons Mental Health (OPMH) units. This is because these units are typically small, specialist units that focus on older adults who have organic mental disorders. Same-day admitted episodes of care in mental health social day programs and ECT clinics were also excluded. These exclusions are noted in the measure specification.

Tables 9 and 10 include specifications for measures included in the Inpatient chapter, including key data items and derived variables.

Table 9 Specifications for measures calculated by BHI, inpatient care chapter

Measure	Cohort description (numerator, denominator)	Further details (inclusions, exclusions, references)	Data sources
Percentage of mental health-related admitted patient episodes of care on general wards in NSW public hospitals, by primary diagnoses, 2017–18	Denominator: Episodes of care in NSW public hospital general wards, which have a primary diagnosis of mental health-related illness (Table 8) Numerator: Denominator cases in each diagnosis group.	Exclusions: Episodes with a stay either fully or partially in a specialised mental health inpatient unit.	NSW Ministry of Health, Health Information Exchange
Percentage of mental health-related admitted patient episodes of care in specialised mental health inpatient units in NSW public hospitals where there is a primary or subsequent diagnosis of a mental health condition, or a secondary diagnosis of intentional self-harm, NSW, 2017–18	Denominator: Episodes of care in NSW public hospital specialised mental health inpatient units, which have a primary, or subsequent diagnosis of mental health-related illness (Table 8) Numerator: Denominator cases in each diagnosis group.	Exclusions: Episodes in small specialist mental health inpatient units that focus on older adults who have organic mental disorders (i.e. seven T-Basis and SMHSOP non-acute units which included 293 episodes of care in 2017–18). Same-day admitted episodes of care in mental health social day programs and ECT clinics have also been excluded (i.e eight social day programs and ECT clinics which included 3962 episodes of care in 2017–18).	NSW Ministry of Health, Health Information Exchange. NSW Ministry of Health, mental health Service Entity Register.

Measure	Cohort description (numerator, denominator)	Further details (inclusions, exclusions, references)	Data sources
Number of mental health-related admitted patient episodes of care in specialised mental health inpatient units in NSW public hospitals where there is a primary or subsequent diagnosis of a mental health condition, or a secondary diagnosis of intentional self-harm, by care type, 2017–18	Cohort: Episodes of care in NSW public hospital specialised mental health inpatient units, which have a primary, or subsequent diagnosis of mental health-related illness (Table 8)	Exclusions:  Episodes in small specialist mental health inpatient units that focus on older adults who have organic mental disorders (i.e. seven T-Basis and SMHSOP non-acute units which included 293 episodes of care in 2017–18). Same-day admitted episodes of care in mental health social day programs and ECT clinics have also been excluded (i.e eight social day programs and ECT clinics which included 3962 episodes of care in 2017–18).	NSW Ministry of Health, Health Information Exchange. NSW Ministry of Health, mental health Service Entity Register.
Number of episodes of care in specialised mental health inpatient units and general wards in NSW public hospitals, 2013–14 to 2017–18	Cohort: Episodes of care in NSW public hospital general wards and specialised mental health inpatient units for the corresponding financial years.	Exclusions:  Between 1 July 2016 and 30 June 2017, all LHDs and health networks introduced a mental health stay type when classifying newly admitted or longstanding mental health patients. Fair comparisons cannot be made with results from the policy phase-in period due to staggered implementation across LHDs that affected activity counts in the acute, non-acute and mental health categories. Accordingly, comparisons between the pre- and post-policy period should be made with caution.	NSW Ministry of Health, Health Information Exchange. NSW Ministry of Health, mental health Service Entity Register.
Overnight acute episodes of care per 10,000 population in specialised mental health inpatient units in NSW public hospitals, by age, 2013–14 and 2017–18	Denominator: NSW estimated resident population for the corresponding financial years.  Numerator: Overnight acute episodes of care in NSW public hospital specialised mental health inpatient units.	Exclusions:  Episodes where age not reported	NSW Ministry of Health, Health Information Exchange. NSW Ministry of Health, mental health Service Entity Register.  Estimates of residential population for June each year, extracted from Secure Analytics for Population Health Research and Intelligence (SAPHaRI)

Measure	Cohort description (numerator, denominator)	Further details (inclusions, exclusions, references)	Data sources
Overnight acute episodes of care among Aboriginal patients per 10,000 Aboriginal population in specialised mental health inpatient units in NSW public hospitals, by age, 2017–18	Denominator: NSW estimated resident Aboriginal population for the corresponding financial year.  Numerator: Overnight acute episodes of care among Aboriginal patients, in NSW public hospital specialised mental health inpatient units.	Exclusions:  Episodes where age not reported	NSW Ministry of Health, Health Information Exchange. NSW Ministry of Health, mental health Service Entity Register.  Estimates of Aboriginal and Torres Strait Islander Australians, June 2016, extracted from Australian Bureau of Statistics (ABS) (accessed 16 April 2019)
Percentage of overnight acute episodes of care in specialised mental health inpatient units in NSW public hospitals, by mental health-related episodes and others and age, 2017–18	Denominator: Overnight acute episodes of care in specialised mental health inpatient units, and general wards, in NSW public hospitals.  Numerator: Denominator cases which belong to corresponding age and unit/ward type.	Exclusions:  Episodes where age not reported	NSW Ministry of Health, Health Information Exchange. NSW Ministry of Health, mental health Service Entity Register.
Percentage of overnight acute episodes of care in specialised mental health inpatient units in NSW public hospitals where there is a primary or subsequent diagnosis of a mental health-related condition, or a secondary diagnosis of intentional self-harm, by mental health diagnosis and age, 2017–18	Denominator: Overnight acute episodes of care in specialised mental health inpatient units in NSW public hospitals where there is a primary or subsequent diagnosis of a mental health-related condition, or a secondary diagnosis of intentional self-harm, by mental health diagnosis (Table 8) and age.  Numerator: Denominator cases which belong to corresponding diagnosis and age groups.	Exclusions:  Episodes where age not reported	NSW Ministry of Health, Health Information Exchange. NSW Ministry of Health, mental health Service Entity Register.
Percentage of overnight acute episodes of care among Aboriginal patients in specialised mental health inpatient units in NSW public hospitals, where there is a primary or subsequent diagnosis of a mental health-related condition, or a secondary diagnosis of intentional self-harm, by mental health diagnosis and age, 2017–18	Denominator: Overnight acute episodes of care among Aboriginal patients in specialised mental health inpatient units in NSW public hospitals, where there is a primary or subsequent diagnosis of a mental health-related condition, or a secondary diagnosis of intentional self-harm, by mental health diagnosis (Table 8) and age.  Numerator: Denominator cases which belong to corresponding diagnosis groups and age.	Exclusions:  Episodes where age not reported.	NSW Ministry of Health, Health Information Exchange. NSW Ministry of Health, mental health Service Entity Register.

Measure	Cohort description (numerator, denominator)	Further details (inclusions, exclusions, references)	Data sources
Percentage of overnight acute episodes of care and bed days in specialised mental health inpatient units by legal status, NSW public hospitals, 2017–18	<p>Episodes</p> <p>Denominator: Overnight acute episodes of care in specialised mental health inpatient units in NSW public hospitals.</p> <p>Numerator: Denominator cases which belong to corresponding legal status.</p> <p>Bed days</p> <p>Denominator: Total bed days from overnight acute episodes of care in specialised mental health inpatient units in NSW public hospitals.</p> <p>Numerator: Denominator cases which belong to corresponding legal status.</p>		NSW Ministry of Health, Health Information Exchange. NSW Ministry of Health, mental health Service Entity Register.
Percentage of episodes of care with intentional self-harm in general wards and specialised mental health inpatient units, by age, NSW, 2017–18	<p>Denominator: Episodes of care with a secondary diagnosis of intentional self-harm in NSW public hospitals.</p> <p>Numerator: Denominator cases which belongs to corresponding age group.</p>		NSW Ministry of Health, Health Information Exchange. NSW Ministry of Health, mental health Service Entity Register.

Table 10 Definitions and derived data items for the Inpatient care chapter

Data item	Description
Aboriginality	<p>The Indigenous status variable in the APDC was used for inpatient admission measures presented by Aboriginality. Aboriginality includes people who identify as: Aboriginal (Indigenous status =1), Torres Strait Islander (2) or Aboriginal and Torres Strait Islander (3). 'Non-Aboriginal' are people who did not identify as Aboriginal (4). People who declined (8) or did not respond (9) are excluded from analyses of Aboriginality. Completeness of Aboriginal data reported by HealthStats NSW.<sup>8</sup></p>
Care type	<p>Same-day refers to patients who were admitted and discharged on the same day. Overnight refers to patients who spent at least one night in hospital.</p>
Voluntary and involuntary admissions	<p>A person can be admitted to a specialised mental health unit as an involuntary or voluntary patient. The <i>NSW Mental Health Act 2007</i> (the Act) sets out strict criteria that must be met in order for someone to be admitted involuntarily. To be admitted involuntarily, a person must be found to be mentally ill or mentally disordered, as defined by the Act, and there must be no other care of a less restrictive kind that is appropriate or reasonably available.</p> <p>A person can be admitted to a mental health unit as a voluntary patient if an authorised medical officer is satisfied that they are likely to benefit from care and treatment at the facility and the person agrees to be admitted.</p>
Episode of care	<p>An episode of care is a period of care in a hospital or other healthcare facility with a defined start and end. When a person is admitted to hospital they begin what is termed an admitted patient episode or 'episode of care'. Acute episodes are typically short-term admissions for immediate care or treatment. Non-acute episodes include admissions for rehabilitation, palliative care and other non-acute reasons.</p> <p>Patients can have more than one episode of care during the same hospital admission. For example, a patient may begin with acute care and then change to rehabilitation or palliative care.</p>

# Appendix 1: Hospitals in emergency department chapter

**Table 11** NSW public hospitals in Emergency Department Data Collection in 2017–18, accessed via the Health Information Exchange (HIE), NSW Ministry of Health

Facility name	Peer group	Local health district	Included in 2017–18 ED cohort	Included in consistent cohort (2013–14 to 2017–18)
Bankstown-Lidcombe Hospital	A1	SWSLHD	Yes	Yes
Concord Repatriation General Hospital	A1	SLHD	Yes	Yes
Gosford Hospital	A1	CCLHD	Yes	Yes
John Hunter Hospital	A1	HNELHD	Yes	Yes
Liverpool Hospital	A1	SWSLHD	Yes	Yes
Nepean Hospital	A1	NBMLHD	Yes	Yes
Prince of Wales Hospital	A1	SESLHD	Yes	Yes
Royal North Shore Hospital	A1	NSLHD	Yes	Yes
Royal Prince Alfred Hospital	A1	SLHD	Yes	Yes
St George Hospital	A1	SESLHD	Yes	Yes
St Vincent's Hospital Sydney	A1	SVHN	Yes	Yes
Westmead Hospital	A1	WSLHD	Yes	Yes
Wollongong Hospital	A1	ISLHD	Yes	Yes
Sydney Children's Hospital, Randwick	A2	SCHN	Yes	Yes
The Children's Hospital at Westmead	A2	SCHN	Yes	Yes
Calvary Mater Newcastle	A3	HNELHD	Yes	Yes
Sydney Hospital and Sydney Eye Hospital	A3	SESLHD	Yes	Yes
Auburn Hospital	B	WSLHD	Yes	Yes
Blacktown Hospital	B	WSLHD	Yes	Yes
Campbelltown Hospital	B	SWSLHD	Yes	Yes
Canterbury Hospital	B	SLHD	Yes	Yes
Coffs Harbour Health Campus	B	MNCLHD	Yes	Yes
Dubbo Base Hospital	B	WNSWLHD	Yes	Yes
Fairfield Hospital	B	SWSLHD	Yes	Yes
Hornsby Ku-ring-gai Hospital	B	NSLHD	Yes	Yes
Lismore Base Hospital	B	NNSWLHD	Yes	Yes
Maitland Hospital	B	HNELHD	Yes	Yes
Manly Hospital	B	NSLHD	Yes	Yes

Facility name	Peer group	Local health district	Included in 2017–18 ED cohort	Included in consistent cohort (2013–14 to 2017–18)
Manning Hospital	B	HNELHD	Yes	Yes
Mona Vale Hospital	B	NSLHD	Yes	Yes
Orange Health Service	B	WNSWLHD	Yes	Yes
Port Macquarie Base Hospital	B	MNCLHD	Yes	Yes
Shoalhaven District Memorial Hospital	B	ISLHD	Yes	Yes
Sutherland Hospital	B	SESLHD	Yes	Yes
Tamworth Hospital	B	HNELHD	Yes	Yes
The Tweed Hospital	B	NNSWLHD	Yes	Yes
Wagga Wagga Rural Referral Hospital	B	MLHD	Yes	Yes
Wyong Hospital	B	CCLHD	Yes	Yes
Armidale Hospital	C1	HNELHD	Yes	Yes
Bathurst Health Service	C1	WNSWLHD	Yes	Yes
Belmont Hospital	C1	HNELHD	Yes	Yes
Bowral and District Hospital	C1	SWSLHD	Yes	Yes
Broken Hill Health Service	C1	FWLHD	Yes	Yes
Goulburn Base Hospital and Health Service	C1	SNSWLHD	Yes	Yes
Grafton Base Hospital	C1	NNSWLHD	Yes	Yes
Griffith Base Hospital	C1	MLHD	Yes	Yes
Hawkesbury District Health Services (public hospital services only)	C1	NBMLHD	Yes	Yes
Mount Druitt Hospital	C1	WSLHD	Yes	Yes
Murwillumbah District Hospital	C1	NNSWLHD	Yes	Yes
Ryde Hospital	C1	NSLHD	Yes	Yes
Shellharbour Hospital	C1	ISLHD	Yes	Yes
South East Regional Hospital	C1	SNSWLHD	Yes	Yes
Ballina District Hospital	C2	NNSWLHD	Yes	Yes
Batemans Bay District Hospital	C2	SNSWLHD	Yes	Yes
Blue Mountains District Anzac Memorial Hospital	C2	NBMLHD	Yes	Yes
Byron Central Hospital	C2	NNSWLHD	Yes	Yes
Casino and District Memorial Hospital	C2	NNSWLHD	Yes	Yes
Cessnock Hospital	C2	HNELHD	Yes	Yes
Cooma Hospital and Health Service	C2	SNSWLHD	Yes	
Cowra Health Service	C2	WNSWLHD	Yes	
Deniliquin Hospital and Health Services	C2	MLHD	Yes	Yes
Gunnedah Hospital	C2	HNELHD	Yes	Yes
Inverell Hospital	C2	HNELHD	Yes	Yes



Facility name	Peer group	Local health district	Included in 2017–18 ED cohort	Included in consistent cohort (2013–14 to 2017–18)
Kempsey District Hospital	C2	MNCLHD	Yes	Yes
Kurri Kurri Hospital	C2	HNELHD	Yes	Yes
Lachlan Health Service — Forbes	C2	WNSWLHD	Yes	
Lithgow Hospital	C2	NBMLHD	Yes	Yes
Macksville District Hospital	C2	MNCLHD	Yes	Yes
Maclean District Hospital	C2	NNSWLHD	Yes	Yes
Milton Ulladulla Hospital	C2	ISLHD	Yes	Yes
Moree Hospital	C2	HNELHD	Yes	Yes
Moruya District Hospital	C2	SNSWLHD	Yes	Yes
Mudgee Health Service	C2	WNSWLHD	Yes	
Muswellbrook Hospital	C2	HNELHD	Yes	Yes
Narrabri Hospital	C2	HNELHD	Yes	Yes
Queanbeyan Hospital and Health Service	C2	SNSWLHD	Yes	Yes
Singleton Hospital	C2	HNELHD	Yes	Yes
Young Health Service	C2	MLHD	Yes	Yes
Balranald Multipurpose Service	F3	FWLHD	Yes	
Baradine Multipurpose Service	F3	WNSWLHD	Yes	
Barham-Koondrook Soldiers Memorial Hospital	D1b	MLHD	Yes	Yes
Barraba Multipurpose Service	F3	HNELHD	Yes	Yes
Batlow/Adelong Multipurpose Service	F3	MLHD	Yes	
Bellinger River District Hospital	D1a	MNCLHD	Yes	
Berrigan Health Service	F3	MLHD	Yes	
Bingara Multipurpose Service	F3	HNELHD	Yes	Yes
Blayney Multipurpose Service	F3	WNSWLHD	Yes	
Boorowa Multipurpose Service	F3	MLHD	Yes	Yes
Bourke Multipurpose Service	F3	WNSWLHD	Yes	
Brewarrina Multipurpose Service	F3	WNSWLHD	Yes	
Bulahdelah Hospital	D1b	HNELHD	Yes	Yes
Bulli Hospital	F4	ISLHD	Yes	Yes
Camden Hospital	D1b	SWSLHD	Yes	Yes
Canowindra Soldiers Memorial Hospital	D1b	WNSWLHD	Yes	
Cobar Health Service	D1b	WNSWLHD	Yes	
Collarenebri Multipurpose Service	F3	WNSWLHD	Yes	
Condobolin Health Service	D1b	WNSWLHD	Yes	
Coolah Multipurpose Service	F3	WNSWLHD	Yes	
Coolamon-Ganmain Hospital	F3	MLHD	Yes	

Facility name	Peer group	Local health district	Included in 2017–18 ED cohort	Included in consistent cohort (2013–14 to 2017–18)
Coonabarabran Health Service	D1b	WNSWLHD	Yes	
Coonamble Multipurpose Service	F3	WNSWLHD	Yes	
Cootamundra District Hospital	D1a	MLHD	Yes	
Corowa Health Service	D1a	MLHD	Yes	Yes
Crookwell District Hospital	D1b	SNSWLHD	Yes	
Culcairn Multipurpose Service	F3	MLHD	Yes	Yes
Delegate Multipurpose Service	F3	SNSWLHD	Yes	
Denman Multipurpose Service	F3	HNELHD	Yes	Yes
Dorrigo Health Campus	F3	MNCLHD	Yes	
Dunedoo Multipurpose Service	F3	WNSWLHD	Yes	
Dungog Hospital	D1b	HNELHD	Yes	Yes
Finley Hospital	D1b	MLHD	Yes	Yes
Gilgandra Multipurpose Service	F3	WNSWLHD	Yes	
Glen Innes Hospital	D1a	HNELHD	Yes	Yes
Gloucester Soldier's Memorial Hospital	D1a	HNELHD	Yes	Yes
Grenfell Multipurpose Service	F3	WNSWLHD	Yes	
Gulargambone Multipurpose Service	F3	WNSWLHD	Yes	
Gulgong Multipurpose Service	F3	WNSWLHD	Yes	
Gundagai District Hospital	F3	MLHD	Yes	Yes
Guyra Multipurpose Service	F3	HNELHD	Yes	Yes
Hay Health Service	D1b	MLHD	Yes	Yes
Henty Health Service	F3	MLHD	Yes	
Hillston Multipurpose Service	F3	MLHD	Yes	Yes
Holbrook Health Service	F3	MLHD	Yes	
Ivanhoe Health Service	F8	FWLHD	Yes	
Jerilderie District Hospital	F3	MLHD	Yes	Yes
John Prior Multipurpose Service – Boggabri	F3	HNELHD	Yes	Yes
Junee Multipurpose Service	F3	MLHD	Yes	
Kyogle Memorial Hospital	F3	NNSWLHD	Yes	Yes
Lachlan Health Service – Parkes	D1a	WNSWLHD	Yes	
Lake Cargelligo Multipurpose Health Service	F3	MLHD	Yes	Yes
Leeton Health Service	D1a	MLHD	Yes	
Lightning Ridge Multipurpose Service	F3	WNSWLHD	Yes	
Lockhart and District Hospital	F3	MLHD	Yes	Yes
Manilla Hospital	F3	HNELHD	Yes	Yes
Menindee Health Service	F8	FWLHD	Yes	

Facility name	Peer group	Local health district	Included in 2017–18 ED cohort	Included in consistent cohort (2013–14 to 2017–18)
Merriwa Multipurpose Service	F3	HNELHD	Yes	Yes
Molong Multipurpose Service	D1b	WNSWLHD	Yes	
Murrumburrah–Harden District Hospital	F3	MLHD	Yes	Yes
Narrandera District Hospital	D1a	MLHD	Yes	
Narromine Health Service	D1b	WNSWLHD	Yes	
Nimbin Multipurpose Centre	F3	NNSWLHD	Yes	
Nyngan Health Service	F3	WNSWLHD	Yes	
Oberon Multipurpose Service	F3	WNSWLHD	Yes	
Pambula District Hospital	D1a	SNSWLHD	Yes	
Peak Hill Multipurpose Service	F3	WNSWLHD	Yes	
Quirindi Hospital	D1b	HNELHD	Yes	Yes
Rylstone Multipurpose Service	F3	WNSWLHD	Yes	
Scott Memorial Hospital – Scone	D1a	HNELHD	Yes	Yes
Temora District Hospital	D1a	MLHD	Yes	Yes
Tenterfield Hospital	D1b	HNELHD	Yes	Yes
Tibooburra Health Service	F8	FWLHD	Yes	
Tingha Multipurpose Service	F3	HNELHD	Yes	Yes
Tocumwal Hospital	D1b	MLHD	Yes	
Tomaree Hospital	D1b	HNELHD	Yes	Yes
Tottenham Multipurpose Service	F3	WNSWLHD	Yes	
Trangie Multipurpose Service	F3	WNSWLHD	Yes	
Trundle Multipurpose Service	F3	WNSWLHD	Yes	
Tullamore Multipurpose Service	F3	WNSWLHD	Yes	
Tumbarumba Multipurpose Service	F3	MLHD	Yes	Yes
Tumut Health Service	D1a	MLHD	Yes	Yes
Urana Health Service	F3	MLHD	Yes	
Urbenville and District Multipurpose Service	F3	NNSWLHD	Yes	
Vegetable Creek Multipurpose Service – Emmaville	F3	HNELHD	Yes	Yes
Walcha Multipurpose Service	F3	HNELHD	Yes	Yes
Walgett Multipurpose Service	F3	WNSWLHD	Yes	
Warialda Multipurpose Service	F3	HNELHD	Yes	Yes
Warren Multipurpose Service	F3	WNSWLHD	Yes	
Wee Waa Hospital	D1b	HNELHD	Yes	Yes
Wellington Health Service	D1b	WNSWLHD	Yes	
Werris Creek Multipurpose Service	F3	HNELHD	Yes	Yes
West Wyalong Health Service	D1b	MLHD	Yes	Yes

Facility name	Peer group	Local health district	Included in 2017–18 ED cohort	Included in consistent cohort (2013–14 to 2017–18)
White Cliffs Health Service	F8	FWLHD	Yes	
Wilcannia Multipurpose Service	F3	FWLHD	Yes	
Wilson Memorial Hospital – Murrurundi	D1b	HNELHD	Yes	Yes
Yass District Hospital	D1b	SNSWLHD	Yes	

## Appendix 2: NSW public hospitals with specialised mental health units

**Table 12** NSW public hospitals with specialised mental health units used in the Inpatient care chapter, Mental Health Service Entity Register, NSW Ministry of Health.

Facility name	Peer group	Local health district	Has a specialised mental health inpatient unit
Bankstown-Lidcombe Hospital	A1	SWSLHD	Yes
Concord Repatriation General Hospital	A1	SLHD	Yes
Gosford Hospital	A1	CCLHD	Yes
John Hunter Hospital	A1	HNELHD	Yes
Liverpool Hospital	A1	SWSLHD	Yes
Nepean Hospital	A1	NBMLHD	Yes
Prince of Wales Hospital	A1	SESLHD	Yes
Royal North Shore Hospital	A1	NSLHD	Yes
Royal Prince Alfred Hospital	A1	SLHD	Yes
St George Hospital	A1	SESLHD	Yes
St Vincent's Hospital Sydney	A1	SVHN	Yes
Westmead Hospital	A1	WSLHD	Yes
Wollongong Hospital	A1	ISLHD	Yes
Sydney Children's Hospital, Randwick	A2	SCHN	Yes
The Children's Hospital at Westmead	A2	SCHN	Yes
Blacktown Hospital	B	WSLHD	Yes
Campbelltown Hospital	B	SWSLHD	Yes
Coffs Harbour Health Campus	B	MNCLHD	Yes
Dubbo Base Hospital	B	WNSWLHD	Yes
Hornsby Ku-ring-gai Hospital	B	NSLHD	Yes
Lismore Base Hospital	B	NNSWLHD	Yes
Maitland Hospital	B	HNELHD	Yes
Manly Hospital	B	NSLHD	Yes
Manning Hospital	B	HNELHD	Yes
Orange Health Service	B	WNSWLHD	Yes
Port Macquarie Base Hospital	B	MNCLHD	Yes
Shoalhaven District Memorial Hospital	B	ISLHD	Yes
Sutherland Hospital	B	SESLHD	Yes
Tamworth Hospital	B	HNELHD	Yes

Facility name	Peer group	Local health district	Has a specialised mental health inpatient unit
The Tweed Hospital	B	NNSWLHD	Yes
Wagga Wagga Rural Referral Hospital	B	MLHD	Yes
Wyong Hospital	B	CCLHD	Yes
Armidale Hospital	C1	HNELHD	Yes
Bathurst Health Service	C1	WNSWLHD	Yes
Bowral and District Hospital	C1	SWSLHD	Yes
Broken Hill Health Service	C1	FWLHD	Yes
Goulburn Base Hospital and Health Service	C1	SNSWLHD	Yes
Mount Druitt Hospital	C1	WSLHD	Yes
Shellharbour Hospital	C1	ISLHD	Yes
South East Regional Hospital	C1	SNSWLHD	Yes
Blue Mountains District Anzac Memorial Hospital	C2	NBMLHD	Yes
Kempsey District Hospital	C2	MNCLHD	Yes
Byron Central Hospital	D1b	NNSWLHD	Yes
Coral Tree Family Service	F1	NSLHD	Yes
Cumberland Hospital	F1	WSLHD	Yes
Hunter New England Mater Mental Health Centre	F1	HNELHD	Yes
Kenmore Hospital	F1	SNSWLHD	Yes
Macquarie Hospital	F1	NSLHD	Yes
Morisset Hospital	F1	HNELHD	Yes
Braeside Hospital	F4	SWSLHD	Yes
Greenwich Hospital	F4	NSLHD	Yes
St Joseph's Hospital, Auburn	F4	SVHN	Yes
Wingham Hospital	F6	HNELHD	Yes
Long Bay Hospital	F8	JH	Yes
Metropolitan Remand Detoxification Inpatient Service	F8	JH	Yes
Mulawa Correctional Centre Inpatient Service	F8	JH	Yes
Rivendell Child and Adolescent unit	F8	SLHD	Yes
The Forensic Hospital	F8	JH	Yes

# References

1. SAS Institute. The SAS System for Windows, version 9.4 Cary (NC). SAS Institute, 2016. (Note: SAS and all other SAS Institute Inc. product or service names are registered trademarks or trademarks of SAS Institute Inc. in the USA and other countries. ® indicates USA registration).
2. Steering Committee for the Review of Government Service Provision, Report on Government Services. Canberra: Productivity Commission, 2019.
3. NSW Ministry of Health. Your Experience of Service: What consumers say about NSW Mental Health Services, 2017-2018 [online] [cited 10 April 2019]. Available from: [health.nsw.gov.au/mentalhealth/Documents/yes-report-2017-18.pdf](http://health.nsw.gov.au/mentalhealth/Documents/yes-report-2017-18.pdf)
4. World Health Organization. International Classification of Diseases (ICD) Information Sheet, 2019. [Online] [cited 11 June 2019]. Available from: <https://www.who.int/classifications/icd/factsheet/en/>
5. The University of Sydney. Classifications and terminology, SNOMED CT – Systematized Nomenclature of Medicine – Clinical Terms, 2012. [Online] [cited 11 June 2019]. Available from: <https://sydney.edu.au/medicine/fmrc/snomed/index.php>
6. NSW Ministry of Health. 2018–19 KPI and Improvement Measure Data Supplement, 30 October 2018. [Online] [cited 11 June 2019]. Available from: [https://www1.health.nsw.gov.au/pds/ActivePDSDocuments/IB2018\\_048.pdf](https://www1.health.nsw.gov.au/pds/ActivePDSDocuments/IB2018_048.pdf)
7. NSW Ministry of Health. Centre for Epidemiology and Evidence. HealthStats NSW: Reporting of Aboriginality in Emergency Department data. [Online] [cited 9 April 2019]. Available from: [http://www.healthstats.nsw.gov.au/Indicator/dqi\\_era\\_eddc/dqi\\_era\\_eddc?&topic=Aboriginal%20health&topic1=topic\\_aboriginal\\_health&code=atsi%20dqi%20hlp](http://www.healthstats.nsw.gov.au/Indicator/dqi_era_eddc/dqi_era_eddc?&topic=Aboriginal%20health&topic1=topic_aboriginal_health&code=atsi%20dqi%20hlp)
8. NSW Ministry of Health. Centre for Epidemiology and Evidence. HealthStats NSW: Reporting of Aboriginality in hospital data. [Online] [cited 9 April 2019]. Available from: [http://www.healthstats.nsw.gov.au/Indicator/dqi\\_era\\_apd/dqi\\_era\\_apd?&topic=Aboriginal%20health&topic1=topic\\_aboriginal\\_health&code=atsi%20dqi%20hlp](http://www.healthstats.nsw.gov.au/Indicator/dqi_era_apd/dqi_era_apd?&topic=Aboriginal%20health&topic1=topic_aboriginal_health&code=atsi%20dqi%20hlp)