Consumer outcomes in mental health care

Mental health treatment and support services have an important role in the recovery of people with mental health issues. This section presents information about the mental health-related problems faced by consumers of public sector specialised mental health services and whether consumers improve after receiving mental health care, as measured by a set of clinically-derived indicators.

Data are available in this section about consumers of public sector specialised mental health services. There is a range of other mental health services not included here—for example, clinical measures may be collected to aid consumers' recovery in private hospitals, private clinicians' practices, non-government organisations, primary health care networks, and other services. However, outcomes data from those services are not routinely collected under national agreements and thus are not available for reporting.

Clinical measures are particular surveys or forms that are used to gather information about a person's clinical mental health status and functioning. Measures can be completed by clinicians about the consumer (known as clinician-rated), completed by the consumer (consumer-rated), and completed by families and carers about the consumer (carer-rated). When the same clinical measures are completed more than once, they can be used to determine whether a person shows improvement, no change, or deterioration from mental health care.

Data reported in this section are gathered under the National Outcomes and Casemix Collection (NOCC), first specified in 2003 to guide states and territories in the implementation of routine consumer outcomes measurement in public mental health services in Australia. All consumers who receive clinical care in public sector specialised mental health services should be included in the NOCC, including psychiatric inpatient, residential and ambulatory (non-admitted) service settings. More information about the NOCC is in the data source section.

This section provides an overview of the NOCC and key findings. More detailed data are available via the National Outcomes and Casemix Collection Web Decision Support Tool and Reports Portal.

Data downloads:

Excel – Consumer outcomes in mental health care 2018–19 tables

PDF – Consumer outcomes in mental health care 2018–19 section

Link: Data source information and key concepts related to this section.

Data coverage includes the time period 2014–15 to 2018–19. This section is new, and was first released on MHSA in July 2021.

You may also be interested in:

Consumer perspectives of mental health care

Restrictive practices in mental health care

Specialised mental health care facilities

Key Points

- Information was recorded in the NOCC for **196,045** people in 2018–19, which covers **42.7%** of consumers of public mental health services.
- In 2018–19 for consumers aged 11–17, the most common clinically significant problems were emotions, family and peer relationships; for adults aged 18 and over these were depressed mood and comorbid mental/behavioural problems; and for people aged 65 and over physical health problems/disability were also common.
- In 2018–19 clinician-rated measures were completed at much higher rates than consumer-rated measures across all age bands.
- In 2018–19, most consumer episodes involving discharge from inpatient care showed improvement on clinicians' ratings, at **54.4%** (aged 11–17), **73.8%** (aged 18–64) and **72.6%** (65 and older) of episodes; consumers in this setting showed deterioration in up to **9.9%** of episodes across these age bands.
- In 2018–19, around half of consumer episodes involving discharge from ambulatory (non-admitted) care showed improvement on clinicians' ratings, at **52.6%** (aged 11–17), **51.2%** (aged 18–64), and **48.4%** (65 and older) of episodes; consumers in this setting showed deterioration in up to **6.5%** of episodes across these age bands.
- In 2018–19, a higher proportion of consumer episodes involving ongoing ambulatory care showed no change on clinicians' ratings, at **46.1%** (aged 11–17), **56.6%** (aged 18–64) and **60.0%** (65 and older) of episodes; consumers in this setting showed deterioration in up to **18.1%** of episodes across these settings.

What are outcomes and casemix?

The NOCC collects information about a consumer's clinical mental health status and functioning during their mental health care. Measures completed by clinicians about the consumer (known as clinician-rated) and measures completed by the consumer (consumer-rated) are used. These measures are completed at multiple collection occasions during an episode of care to monitor changes in consumers' clinical status and functioning.

Ratings information is used to report on consumers' outcomes of care—that is, whether consumers of mental health services show improvement, no change, or deterioration

from receiving mental health care. Clinical outcomes such as these are just one aspect of a consumer’s recovery.

In addition to outcomes, data items in the NOCC gather information about other factors that together are known as casemix. In this section, casemix items include the consumers’ mental health legal status, diagnoses and phase of care—for example, whether care focuses on assessment, active short-phase treatment (acute care), or to improve personal, social or occupational functioning (gain).

The collection of the NOCC measures is guided by a set of rules on what measures to collect and when to collect them. More information is in the data source section and more detailed information is in the technical specifications.

Confidence intervals

This section reports confidence intervals in the data tables and visualisations. A confidence interval is a range of values that quantifies the uncertainty in estimates that result from natural or random variation. For example, in the number of services provided and the number of persons using services over time. There are also non-random sources of uncertainty, such as incomplete reporting, that are not captured by confidence intervals.

Generally, confidence intervals describe how different an estimate could have been if the underlying conditions stayed the same but random fluctuations had led to a different set of data. Accordingly, it is recommended that confidence intervals are reported alongside a number estimate.

Confidence intervals are calculated with a stated probability (commonly 95%); this means we can be 95% confident that the confidence interval includes the true value if the assumptions made in the construction of the confidence interval hold. Larger numbers of observations yield more precise estimates with narrower confidence intervals. Confidence intervals can be used to perform tests of statistical significance. If the 95% confidence intervals do not overlap—that is, they do not include the same values in the range—the difference can be said to be statistically significant (note that differences can be significant in a subset of cases where the ranges do overlap).

In this section, 95% confidence intervals are shown in all figures and tables.

Further information about confidence intervals, including calculation methods, statistical assumptions behind the calculation and sources of variability can be found in the data source section.

Consumers included in the NOCC

Coverage

All consumers who receive clinical care in public sector specialised mental health services—including psychiatric inpatient, residential and ambulatory (non-admitted) services—should be included in the NOCC.

Nationally, in 2018–19, NOCC measures were collected for 196,045 people, which is 42.7% of the 458,820 people who received clinical care from public sector specialised mental health services (Table NOCC.1).

The proportions of people who received clinical care in public sector specialised mental health services who were included in the NOCC were highest among people aged 75–84 (47.3%) and 85 years and over (46.3%) and lowest among people aged 0–17 and 18-24 (41.1%) and 25–34 years (42.1%) (Table NOCC.2).

Demographics

In 2018–19, 49.9% of the consumers included in the NOCC were male and 50.0% were female. There were 68,909 people aged between 25 and 44 years, accounting for 35.1%. There were 17,693 Aboriginal and Torres Strait Islander peoples, accounting for 9.3%.

People living in *Major cities* made up the majority of consumers included in the NOCC (65.4%) and people living in *Very remote* areas made up the smallest proportion (1.4%). People living in areas of most socio-economic disadvantage made up the largest proportion at 25.3%, while people living in areas of least disadvantage made up the smallest at 14.6% (Figure NOCC.1).

Figure NOCC.1: Demographic characteristics of consumers included in the NOCC, 2018–19

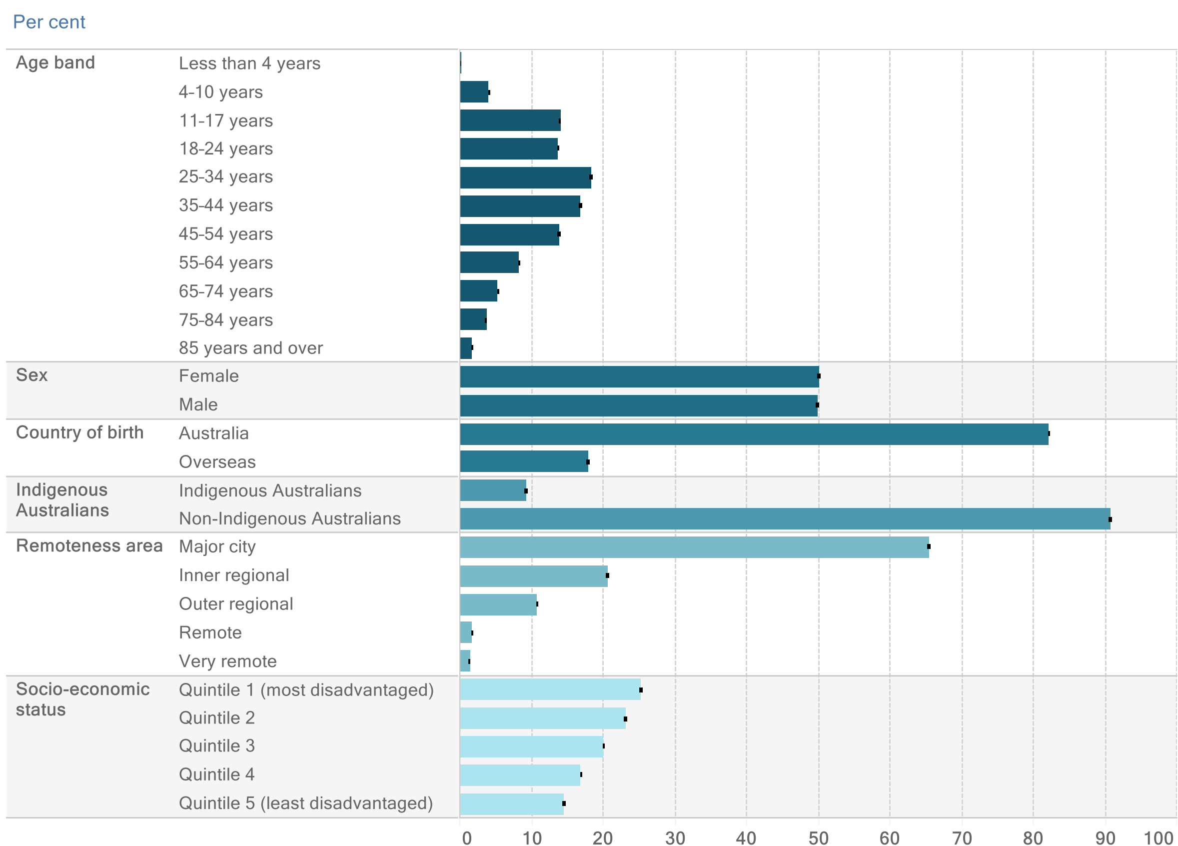


Figure NOCC.1: Demographic characteristics of consumers included in the NOCC, 2018-19

Notes:
1. Black bars representing 95% confidence intervals are displayed. More information is in the Data Source section.
2. Per cent of consumers in the NOCC.

There were 8,326 children aged 10 years and under, accounting for 4.2% of all consumers in the NOCC in 2018–19 (Table NOCC.3). As this is a relatively small number

of consumers, there is less capacity for comprehensive reporting and disaggregations; therefore, data relating to children aged 10 years and under are not further reported in this section. Reports can be generated via other NOCC reporting products (Web Decision Support Tool and Reports Portal).

Collection occasions

Under the NOCC specifications, clinical and casemix measures may be completed at collection occasions. The three collection occasion types are *Admission*, *Review*, and *Discharge*. A person may have multiple collection occasions.

In 2018–19 across all age bands, the majority of collection occasions were in ambulatory service settings—accounting for 54,633 (89.7%) collection occasions for young people aged 11–17 years, 254,987 (71.1%) for people aged 18–64, and 45,194 (82.1%) for people aged 65 years and older.

Inpatient settings accounted for 6,217 (10.2%) collection occasions for young people aged 11–17 years, and 95,885 (26.8%) for people aged 18–64. Within the inpatient setting, the majority of service programs provided acute care, accounting for 97.1% of inpatient collection occasions for 11–17 year olds, 94.7% for people aged 18–64, and 93.3% for people aged 65 years and older (Tables NOCC.4 and NOCC.5).

There were around 7,600 collection occasions in residential services accounting for no more than 2.1% in any age band (Table NOCC.4).

The remainder of this chapter reports data for ambulatory and acute inpatient service settings.

Mental health legal status

Mental health legal status indicates whether the person was treated on an involuntary basis under the relevant state or territory mental health legislation at some point during care.

In 2018–19 for people aged 11–17, *Involuntary* status was recorded for consumers for nearly 1 in 5 collection occasions at discharge in acute inpatient care (494 or 20.2%) and 1 in 45 (278 or 2.2%) for ambulatory care (Figure NOCC.2).

For consumers aged 18–64, *Involuntary* status was recorded for consumers for nearly 1 in 2 collection occasions at discharge in acute inpatient settings (15,824 or 45.5%) and 1 in 8 (7,844 or 12.1%) for ambulatory settings.

For consumers aged 65 years and older, *Involuntary* status was recorded for nearly 2 in 5 collection occasions at discharge in acute inpatient settings (1,363 or 38.6%) and nearly 1 in 12 (967 or 8.6%) in ambulatory settings.

Figure NOCC.2: Involuntary mental health legal status at discharge, by age band and setting, 2018–19

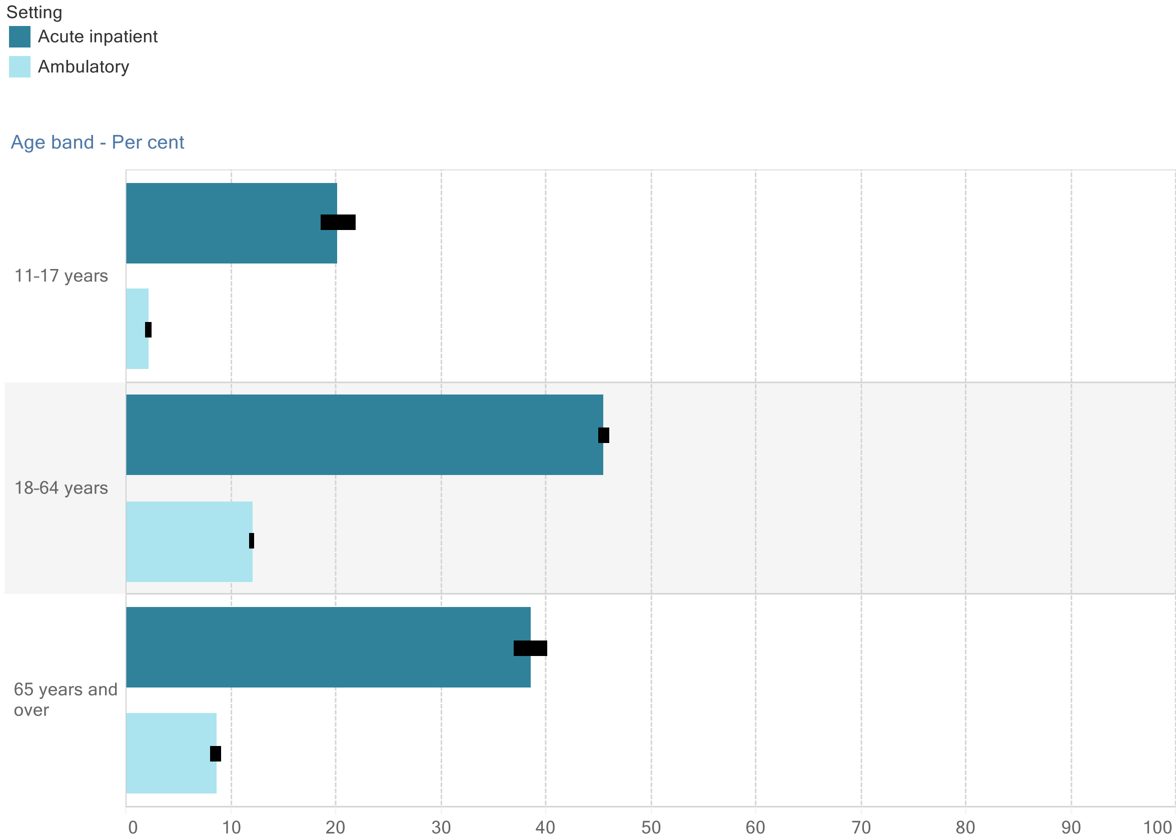


Figure NOCC.2: Involuntary mental health legal status at discharge, by age band and setting, 2018-19

http://www.aihw.gov.au/mhsa

Notes:

1. Black bars representing 95% confidence intervals are displayed. More information is in the Data Source section.
2. Per cent of collection occasions with a completed rating where mental health legal status was recorded as involuntary.

Completion of measures

In 2018–19, clinician-rated measures were completed at much higher rates than consumer-rated measures for each type of collection occasion (admission, discharge and review) and across all age bands for both acute inpatient and ambulatory settings (Figure NOCC.3).

For example, depending on type of collection occasion, age band, and service setting, clinician-rated measures were collected at between 70.9% and 97.0% of expected collection occasions and consumer-rated measures were collected at between 12.4% and 38.3% of expected occasions for adults. More information by age band is presented in the data source section.

Figure NOCC.3: Collection occasions with completed clinical measures, by setting, age band, occasion type and measure type, 2018–19

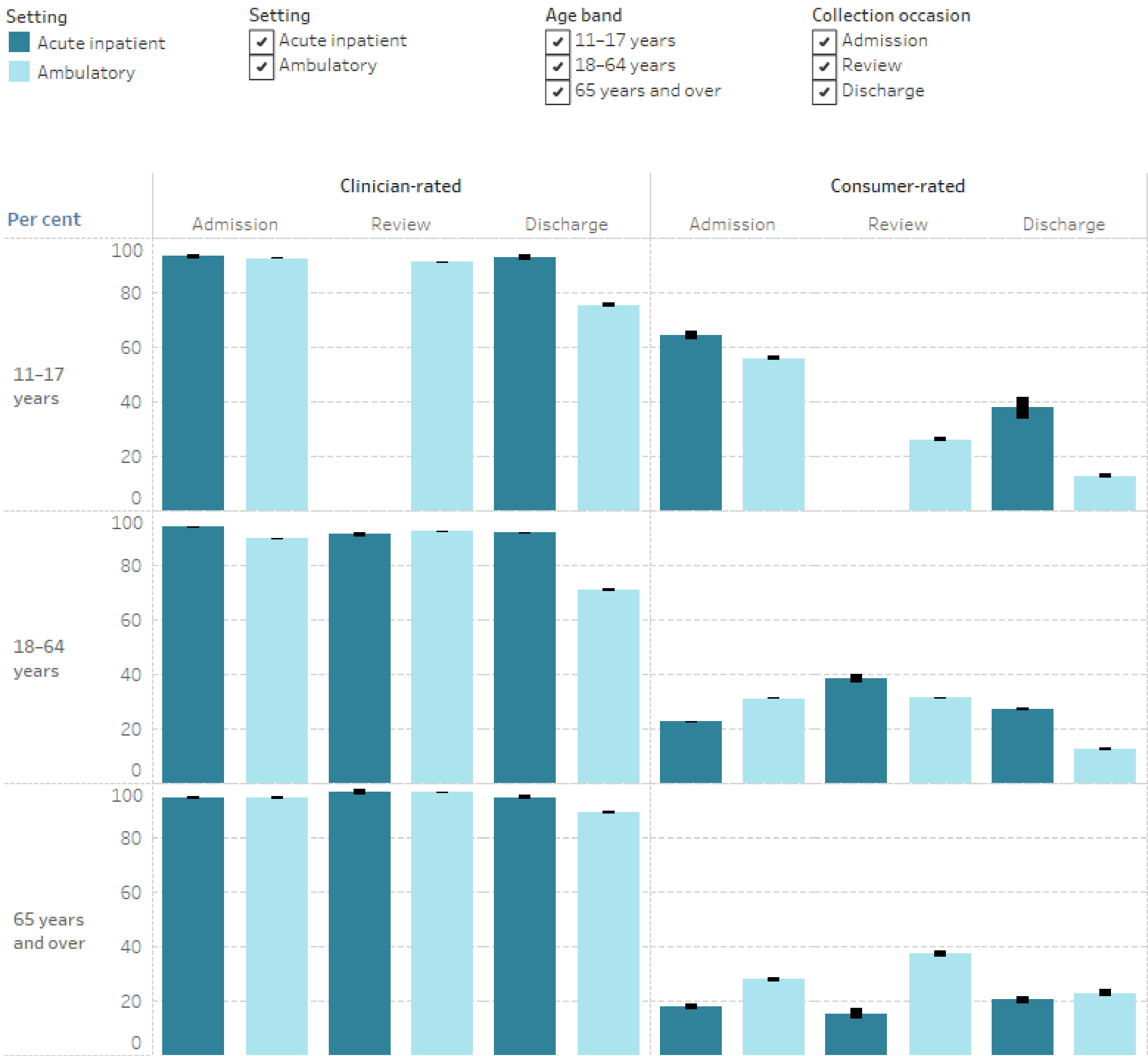


Figure NOCC.3: Collection occasions with completed clinical measures, by setting, age band, occasion type and measure type, 2018–19
http://www.aihw.gov.au/mhsa

Notes:
1. Black bars representing 95% confidence intervals are displayed. More information is in the Data Source section.
2. Per cent of in-scope collection occasions where clinical measures about consumers were completed.

Mental health-related problems for consumers at admission

The suite of Health of the Nation Outcome Scales (HoNOS) measures provide information about the mental health-related problems experienced by consumers at admission to a mental health service that are rated by clinicians to have a clinically significant impact on the consumer (Figure NOCC.4). Data from these measures indicates that in 2018–19, many consumers of public sector specialised mental health services, across all age bands, were facing more than one clinically significant problem.

Children and adolescents (11–17 years)

In 2018–19 for consumers aged 11–17 years, the mental health-related problems most frequently affecting consumers were *Emotional and related symptoms* (89.4% of collection occasions in acute inpatient care, 89.1% in ambulatory care), *Family life and relationships* (72.1% acute inpatient, 72.7% ambulatory), and *Peer relationships* (63.6% acute inpatient, 60.9% ambulatory). *Non-accidental self-injury* was rated a clinicially significant problem for consumers in 66.2% of occasions in acute inpatient care and 42.9% of occasions in ambulatory care.

Figure NOCC.4: Clinically significant problems for consumers at admission, by age band and setting, 2018–19

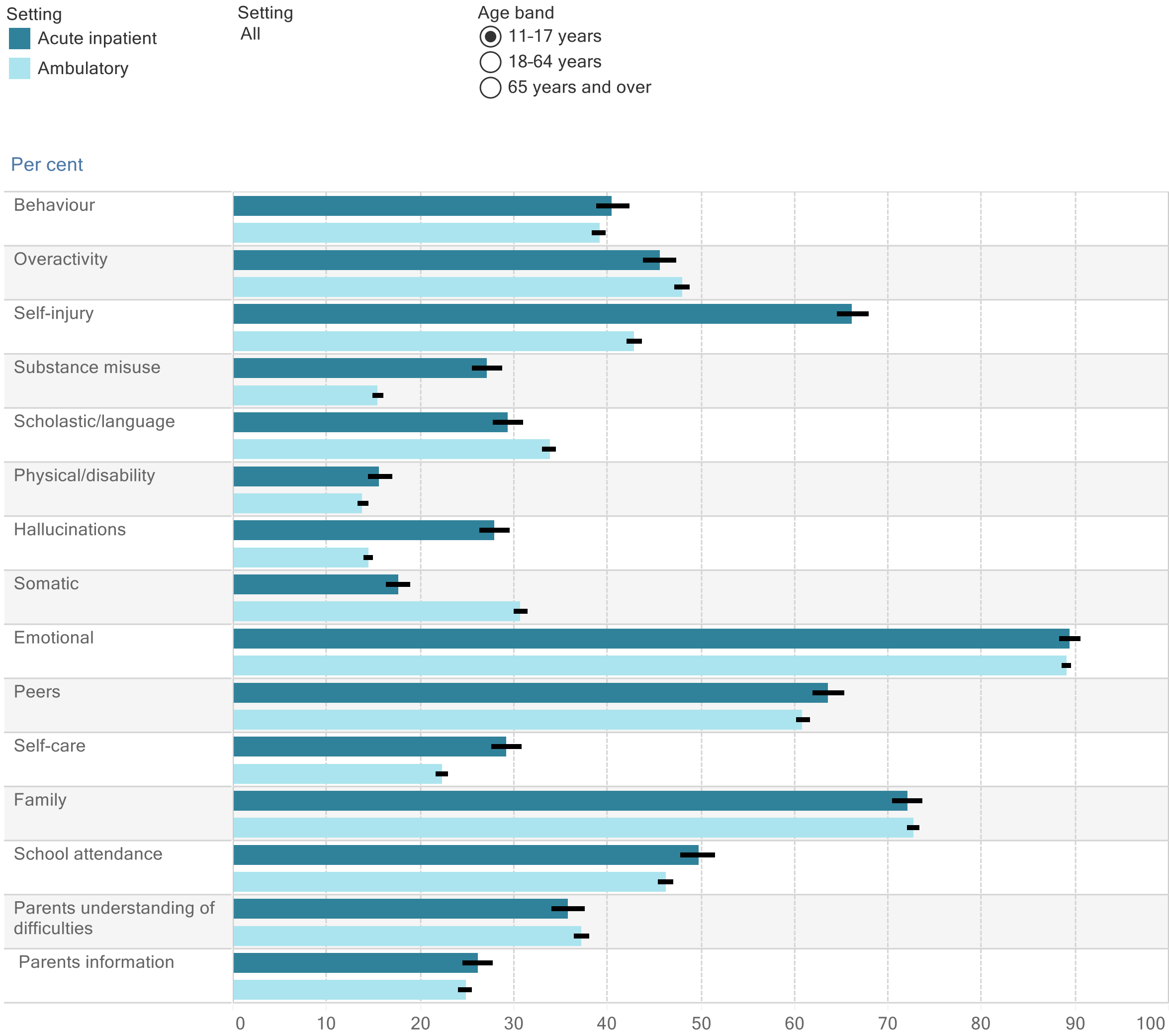


Figure NOCC.4: Clinically significant problems for consumers at admission, by age band and setting, 2018-19

http://www.aihw.gov.au/mhsa

Notes:

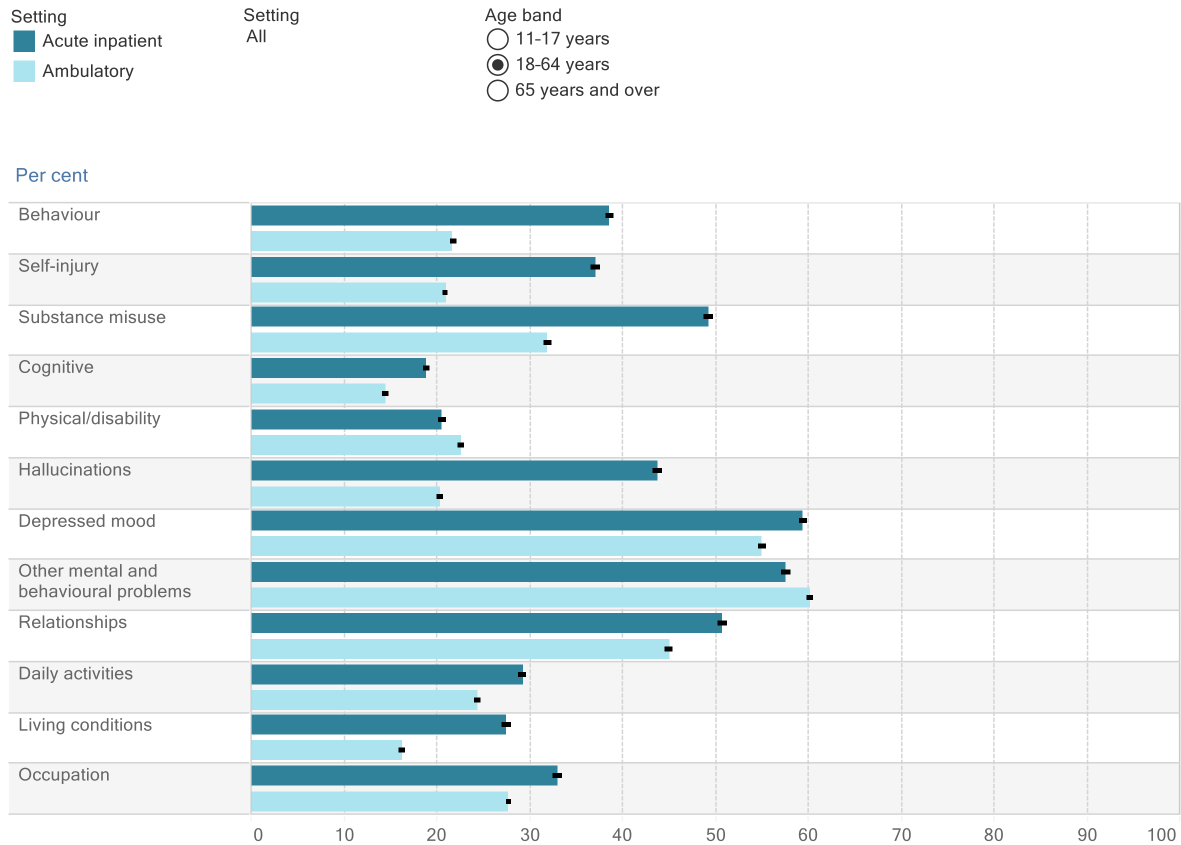
1. Black bars representing 95% confidence intervals are displayed. More information is in the Data Source section.
2. Per cent of collection occasions where clinically significant problems were recorded using the clinician-rated HoNOS measure for the appropriate age band.

Adults (18–64 years)

In 2018–19 for consumers aged 18–64 years, the mental health-related problems most frequently affecting consumers were *Depressed mood* (59.4% of collection occasions in acute inpatient care, 55.0% in ambulatory care), *Other mental and behavioural problems* (57.5% acute inpatient, 60.2% ambulatory), and *Relationships* (50.7% acute inpatient,

45.0% ambulatory). The presence of clinically significant problems in *Other mental and behavioural problems* indicate comorbid problems for the consumer.

Figure NOCC.4: Clinically significant problems for consumers at admission, by age band and setting, 2018–19



Note:
1. Black bars representing 95% confidence intervals are displayed. More information is in the Data Source section.
2. Per cent of collection occasions where clinically significant problems were recorded using the clinician-rated HoNOS measure for the appropriate age band.

Older persons (65 years and older)

In 2018–19 for consumers aged 65 years and older, the mental health-related problems most frequently affecting consumers were *Other mental and behavioural problems* indicating comorbid problems (67.7% of collection occasions in acute inpatient, 55.2% ambulatory), *Physical illness or disability problems* (52.2% acute inpatient, 60.0% ambulatory) and *Depressed mood* (62.1% acute inpatient care, 49.5% in ambulatory care).

Problems with *Behaviour* and *Hallucinations* more frequently affected consumers in acute inpatient care (46.8% and 44.9%, respectively) than in ambulatory care (26.2% and 22.5%, respectively).

Figure NOCC.4: Clinically significant problems for consumers at admission, by age band and setting, 2018–19

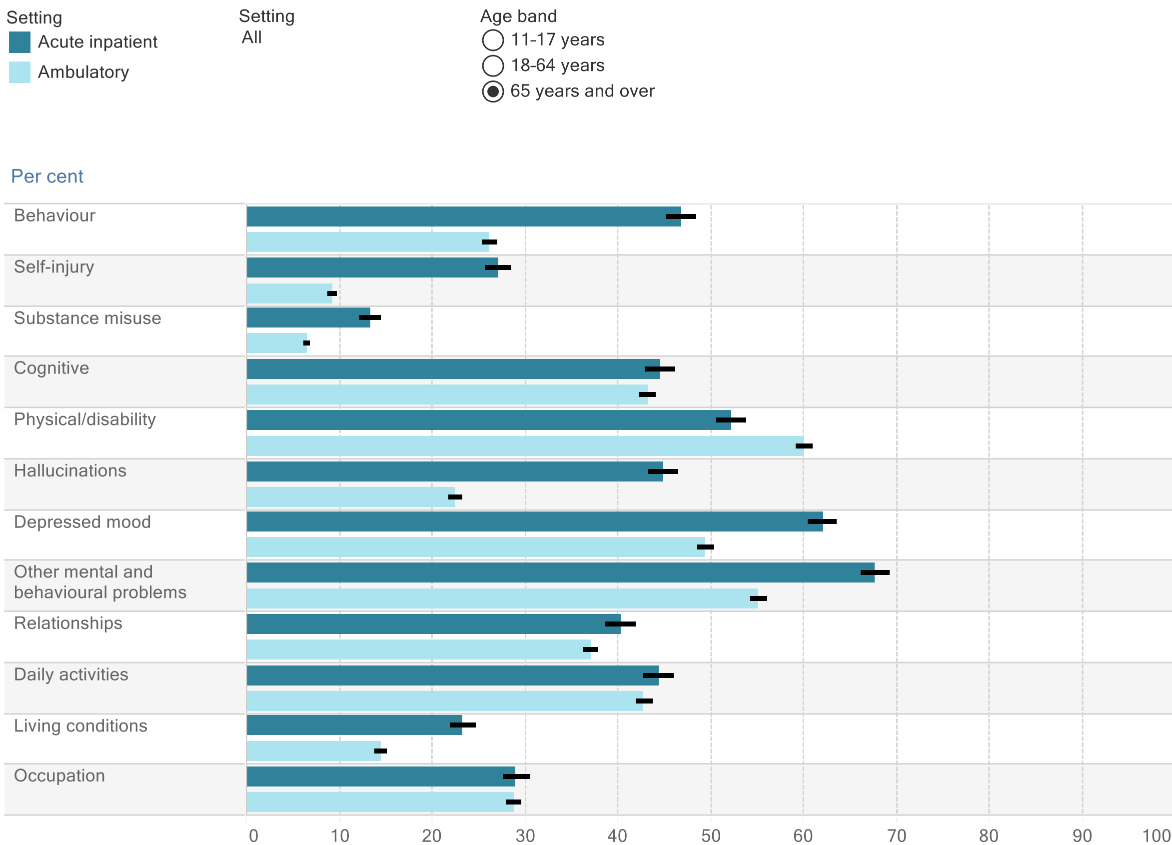


Figure NOCC.4: Clinically significant problems for consumers at admission, by age band and setting, 2018-19

http://www.aihw.gov.au/mhsa

Notes:
1. Black bars representing 95% confidence intervals are displayed. More information is in the Data Source section.
2. Per cent of collection occasions where clinically significant problems were recorded using the clinician-rated HoNOS measure for the appropriate age band.

Principal diagnoses for consumers at discharge

Children and adolescents (11–17 years)

In 2018–19 for consumers aged 11–17, the most frequently recorded mental health-related principal diagnoses at discharge were *Depressive episode* (16.1% of collection occasions in acute inpatient, 10.4% in ambulatory), *Other anxiety disorders* (9.4% acute

inpatient, 16.7% ambulatory), and *Reaction to severe stress and adjustment disorders* (15.0% acute inpatient, 14.6% ambulatory) (Figure NOCC.5).

In acute inpatient settings, *Eating disorders* (4.1%) and *Specific personality disorders* (5.9%) were also among the five most frequently recorded diagnoses at discharge; in ambulatory settings *Other and unspecified disorders* (9.5%) and *Disorders of psychological development* (6.0%) were among the five most frequent diagnoses.

Figure NOCC.5: Five most commonly reported principal diagnoses for consumers at discharge, by age band and setting, 2018–19

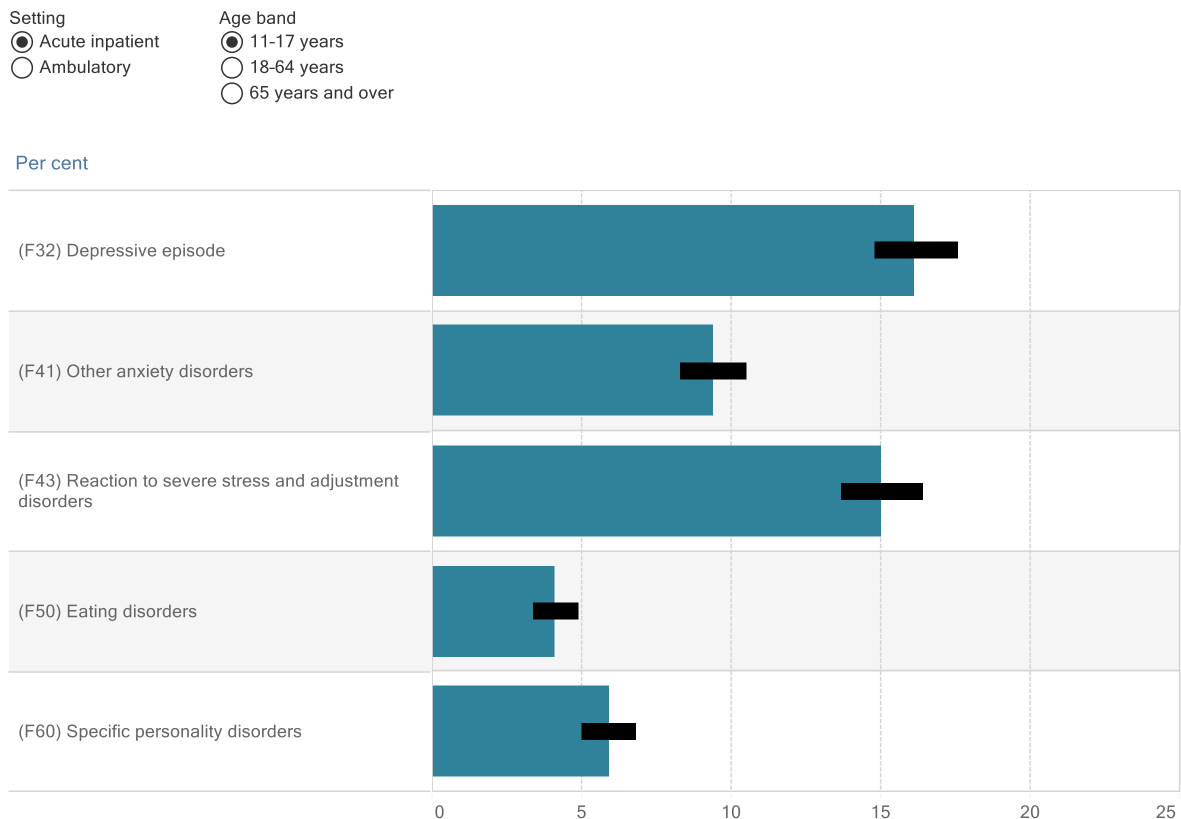


Figure NOCC.5: Five most commonly reported principal diagnoses for consumers at discharge, by age band and setting, 2018-19
http://www.aihw.gov.au/mhsa

Notes:
1. Black bars representing 95% confidence intervals are displayed. More information is in the Data Source section.
2. Per cent of collections occasions where principal diagnosis was recorded.

The ambulatory interactive figure NOCC.5 can be found in the MHSA pages on line.

Adults (18–64 years)

In 2018–19 for consumers aged 18–64, *Schizophrenia* was among the most frequently recorded mental health-related principal diagnoses at discharge (16.3% of collection

occasions in acute inpatient settings, 13.0% ambulatory), followed by *Depressive episode* (9.9% acute inpatient, 10.7% ambulatory), and *Reaction to severe stress and adjustment disorders* (7.4% acute inpatient, 12.0% ambulatory) (Figure NOCC.5).

Bipolar affective disorders (7.3% acute inpatient, 6.1% ambulatory) and *Specific personality disorders* (7.0% acute inpatient, 7.8% ambulatory) were also among the five most frequently recorded diagnoses at discharge.

Figure NOCC.5: Five most commonly reported principal diagnoses for consumers at discharge, by age band and setting, 2018–19

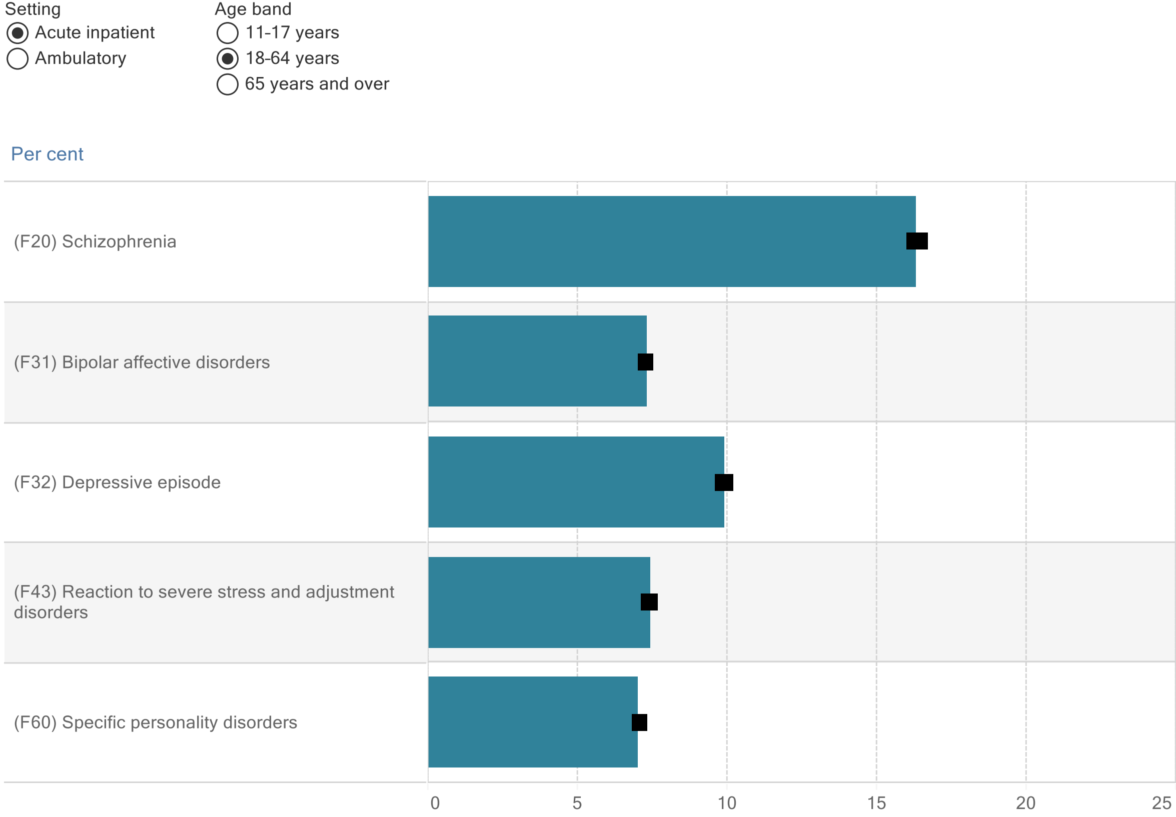


Figure NOCC.5: Five most commonly reported principal diagnoses for consumers at discharge, by age band and setting, 2018-19
http://www.aihw.gov.au/mhsa

Notes:
1. Black bars representing 95% confidence intervals are displayed. More information is in the Data Source section.
2. Per cent of collections occasions where principal diagnosis was recorded.

Older persons (65 years and older)

In 2018–19 for consumers aged 65 years and older, the most frequently recorded mental health-related principal diagnosis at discharge was *Depressive episode* (22.5% of

collection occasions in acute inpatient settings, 19.2% ambulatory), followed by *Dementia* (11.7% acute inpatient, 12.9% ambulatory).

Schizophrenia (11.3% acute inpatient, 7.6% ambulatory) and *Bipolar affective disorders* (11.4% acute inpatient, 7.3% ambulatory) were also among the five most frequently recorded diagnoses at discharge, as were *Schizoaffective disorders* in acute inpatient settings (5.1%) and *Recurrent depressive disorders* in ambulatory settings (7.5%).

Figure NOCC.5: Five most commonly reported principal diagnoses for consumers at discharge, by age band and setting, 2018–19

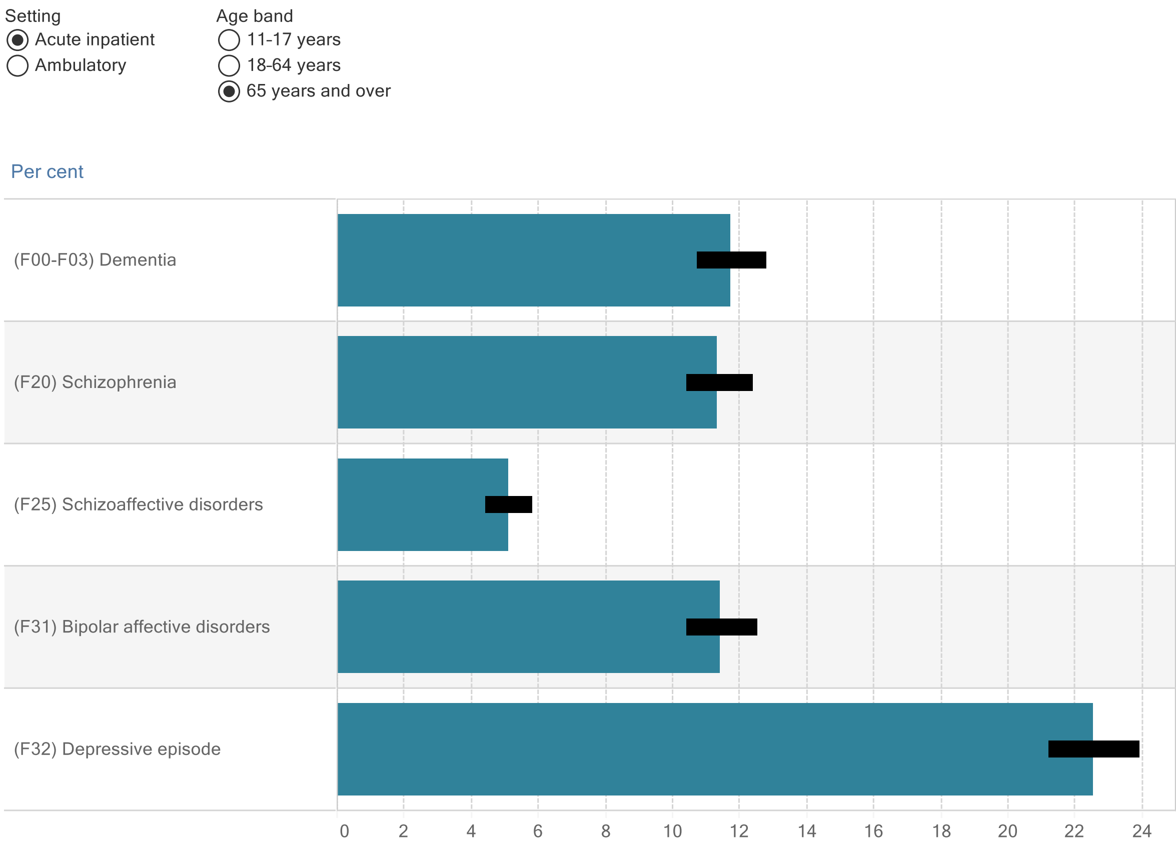


Figure NOCC.5: Five most commonly reported principal diagnoses for consumers at discharge, by age band and setting, 2018-19
http://www.aihw.gov.au/mhsa

Notes:
1. Black bars representing 95% confidence intervals are displayed. More information is in the Data Source section.
2. Per cent of collections occasions where principal diagnosis was recorded.

The ambulatory interactive figure NOCC.5 can be found in the MHSA pages on line.

Clinical outcomes of care

Under the NOCC, measures are completed at multiple collection occasions during an episode of care to monitor changes in consumers' clinical status and functioning. The most frequent episode types are:

- Completed acute inpatient (admitted services)—Duration longer than 3 days.
- Completed ambulatory (non-admitted)—duration longer than 14 days.
- Ongoing ambulatory—episodes of care that were still open at the end of the reporting year (2018–19) (Tables NOCC.15–17).

Where clinical measures have been completed on two collection occasions (matched pairs), tests of effect size are used to determine whether consumers showed significant improvement, no change, or significant deterioration from their episode of mental health care.

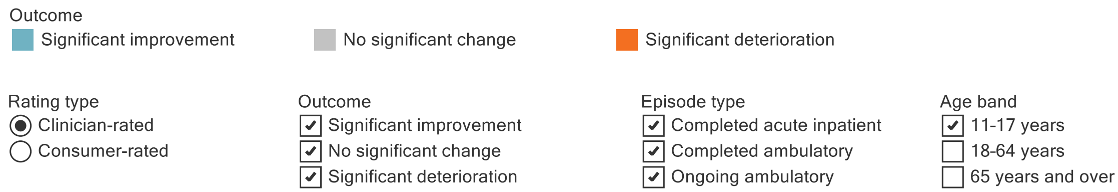
Clinical outcomes can be calculated on a subset of episodes in the NOCC dataset. The data source section provides information on the proportion of episodes for which clinical outcomes could be calculated. The proportions of episodes where consumer-rated measures are completed on two collection occasions are particularly low and means that consumer-rated clinical outcomes could be calculated for 4.9% to 21.7% of episodes, depending on episode type and age band of the consumer. Clinician-rated clinical outcomes could be calculated for 70.6% to 95.5% of episodes. As consumer-rated measures are completed less often than the clinician-rated measures, caution should be applied in comparing outcomes based on the clinician-rated and consumer-rated measures because it cannot be assumed they represent the same groups of people.

Children and adolescents (11–17 years)

In 2018–19 on clinician-rated measures (where matched pairs are available), most consumer episodes for people aged 11–17 showed improvement in outcomes in completed acute inpatient care (54.4% of episodes) and completed ambulatory care (52.6%). However for consumers in this age band the biggest single category for those in ongoing ambulatory care was no change (46.1%) (Figure NOCC.6).

Consumers showed deterioration on clinician-rated measures in 15.4% of ongoing ambulatory episodes, 9.9% of completed acute inpatient episodes and 6.5% of completed ambulatory episodes.

Figure NOCC.6: Clinician- and consumer-rated outcomes for consumers, by age band and episode type, 2018–19



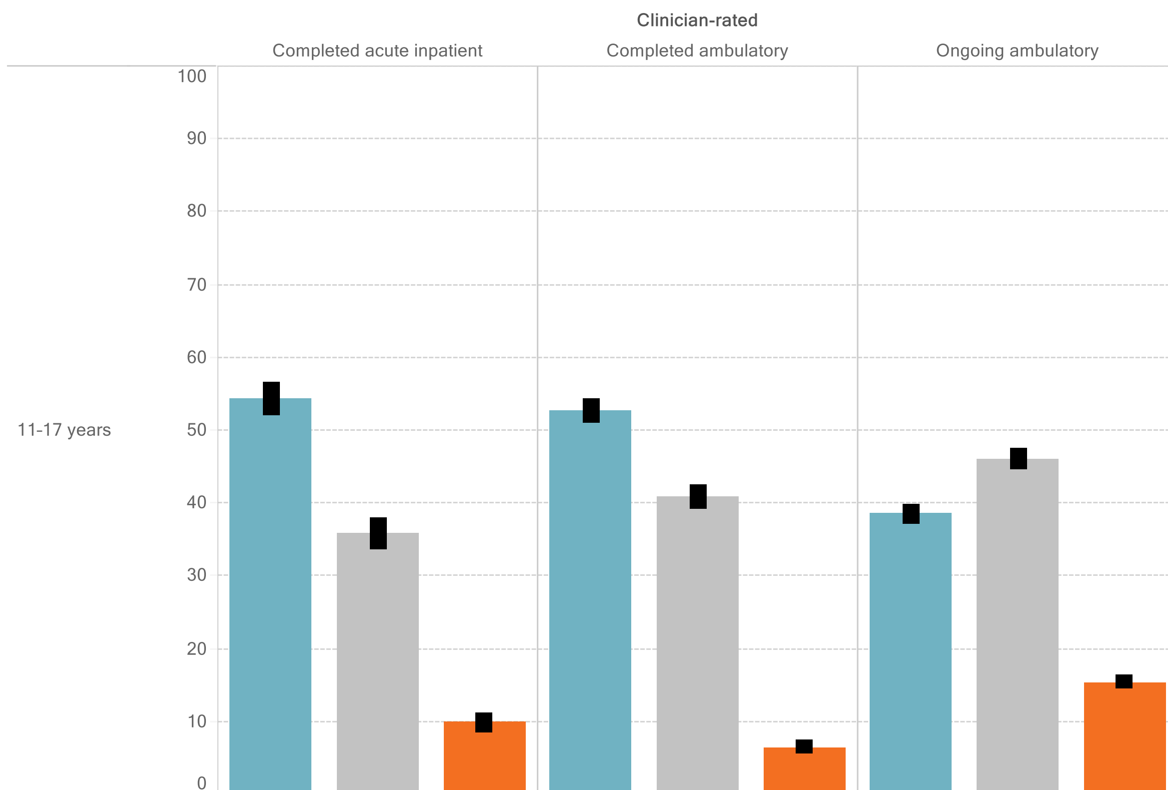


Figure NOCC.6: Clinician- and consumer-rated outcomes for consumers, by age band and episode type, 2018-19

http://www.aihw.gov.au/mhsa

Notes:
1. Black bars representing 95% confidence intervals are displayed. More information is in the Data Source section.
2. Per cent of episodes that contain completed measures for two collection occasions that form a matched pair.

The Consumer-rated interactive figures NOCC.6 can be found in the MHSA pages on line.

Adults (18–64 years)

For both clinician and consumer-rated measures (where matched pairs are available) in 2018–19, most episodes for consumers aged 18–64 showed improvement in completed

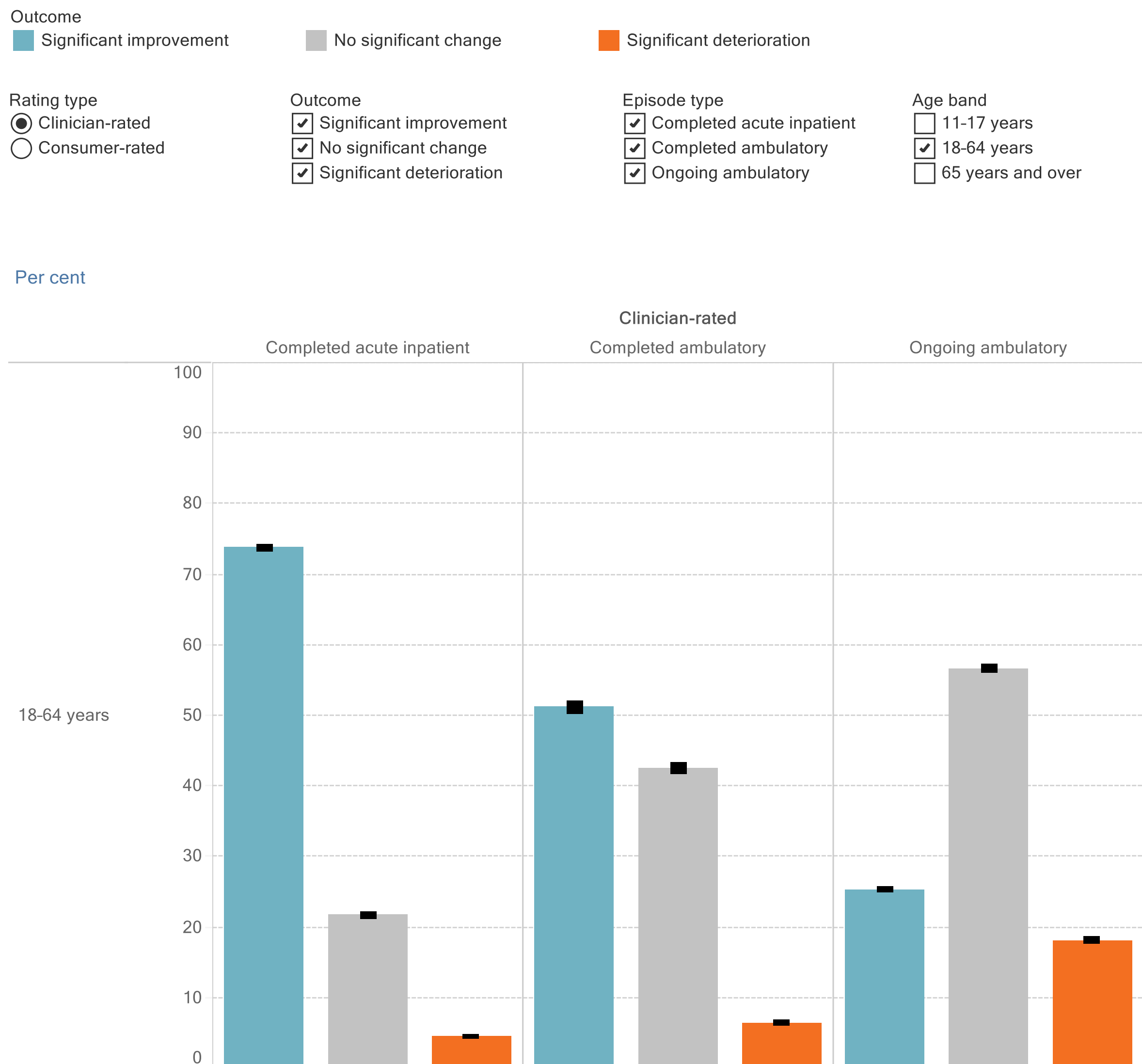
acute inpatient care (73.8% clinician-rated and 62.7% consumer-rated episodes) and completed ambulatory care (51.2% clinician-rated and 54.3% consumer-rated episodes). (Figure NOCC.6).

The biggest single category for consumers in this age band in ongoing ambulatory care on both clinician-rated (56.6%) and consumer-rated (64.3%) measures was no change.

In 2018–19 on clinician-rated measures, consumers aged 18–64 showed deterioration in 18.1% of ongoing ambulatory episodes, 6.4% of completed ambulatory episodes and 4.5% of completed acute inpatient episodes.

On consumer-rated measures, consumers in this age band showed deterioration in 9.7% of ongoing ambulatory episodes, 5.3% of completed ambulatory episodes and 4.5% of completed acute inpatient episodes.

Figure NOCC.6: Clinician- and consumer-rated outcomes for consumers, by age band and episode type, 2018–19



Notes:
1. Black bars representing 95% confidence intervals are displayed. More information is in the Data Source section.
2. Per cent of episodes that contain completed measures for two collection occasions that form a matched pair.

Older persons (65 years and older)

In 2018–19 on clinician-rated measures, most episodes for consumers aged 65 and older in completed acute inpatient care showed improvement (72.6% of episodes). For completed ambulatory care nearly half of all episodes showed improvement on

clinician-rated measures (48.4%). The biggest category for consumers in this age band in ongoing ambulatory care was no change (60.0%) (Figure NOCC.6).

Consumers showed deterioration on clinician-rated measures in 16.4% of ongoing ambulatory episodes, 6.4% of completed ambulatory episodes and 5.1% of completed acute inpatient episodes.

In 2018–19 on consumer-rated measures (where matched pairs are available), most episodes for consumers aged 65 and older in completed acute inpatient care showed improvement (63.1% of episodes). For ongoing ambulatory care most episodes (61.9% of episodes) showed no change. In completed ambulatory care, there was no significant difference between the per cent of consumers' episodes showing improvement and per cent showing no change (47.4% for improvement, 48.1% of episodes for no change).

Consumers showed deterioration on consumer-rated measures in 10.0% of ongoing ambulatory episodes, 4.5% completed ambulatory episodes and 4.1% completed acute inpatient episodes.

Figure NOCC.6: Clinician- and consumer-rated outcomes for consumers, by age band and episode type, 2018–19

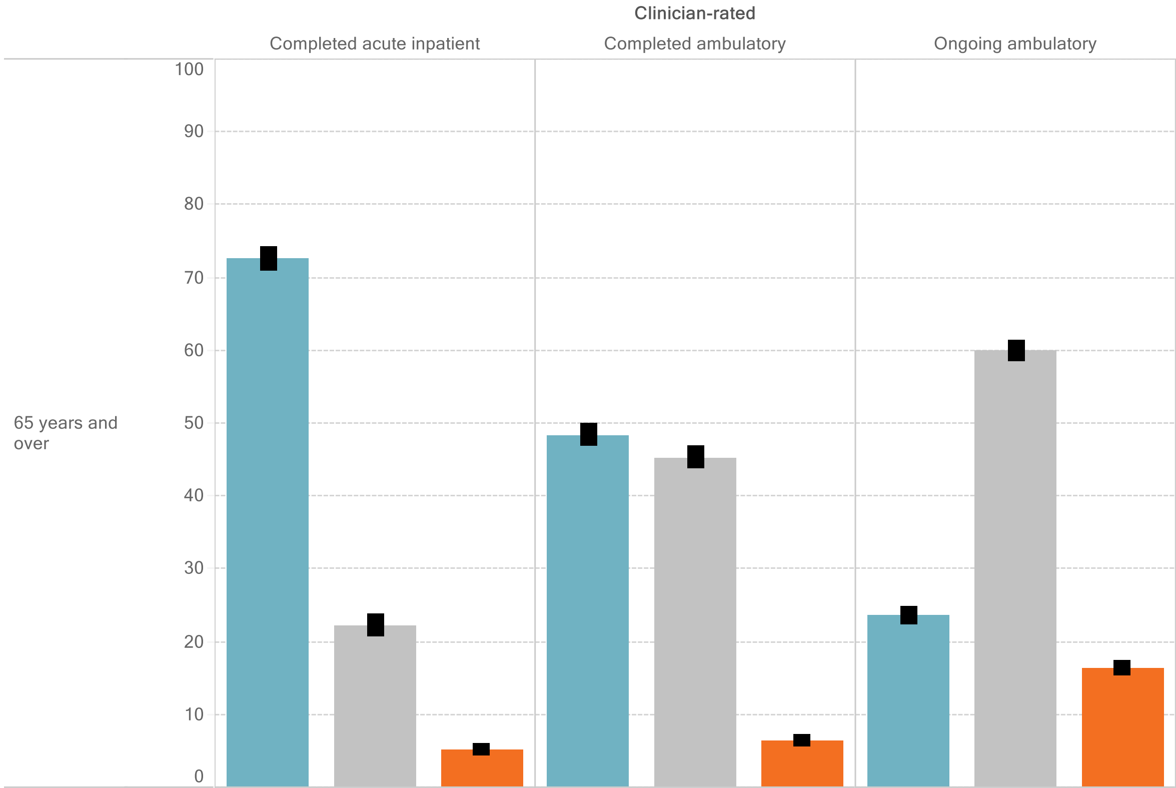


Figure NOCC.6: Clinician- and consumer-rated outcomes for consumers, by age band and episode type, 2018-19

http://www.aihw.gov.au/mhsa

Notes:
1. Black bars representing 95% confidence intervals are displayed. More information is in the Data Source section.
2. Per cent of episodes that contain completed measures for two collection occasions that form a matched pair.

Data source

The National Outcomes and Casemix Collection (NOCC) is a nationally agreed data collection for the routine collection and reporting of consumer outcomes using clinical measures. Under the National Mental Health Policy 1992, Australian governments committed to national monitoring of the effectiveness of public mental health services. The primary objective of the NOCC was to establish the routine use of outcome measures in all publicly funded or managed mental health services, where such measures contribute both to improved practice and service management (Burgess et al. 2015). The NOCC was progressively implemented in state and territory public sector specialised mental health services from 2001 with all jurisdictions reporting by June 2005.

The NOCC captures information about consumers' health and wellbeing during their mental health care using standardised clinical measures, which is used to report on outcomes.

The NOCC also gathers 'casemix' information, which is information about the mix of people who are receiving mental health services according to their clinical status and the nature of the care they are receiving. The casemix information collected in the NOCC supports the introduction of the first version of the Australian Mental Health Care Classification (AMHCC) (Independent Hospital Pricing Authority 2018).

Collection protocol

The collection of the standard clinical measures is guided by an underlying conceptual model and national protocol. Under the NOCC protocol (Box NOCC.1), the clinical measures are completed at key *Collection occasions* during the consumer's episode of mental health care (at admission, review and discharge). The measures are specific to service setting (inpatient, residential and ambulatory) and the consumers' age group (Child or adolescent, aged less than 18 years; Adult, aged 18–64 years; and Older person, aged 65 years and over). Limited exceptions to the protocol allow for circumstances where discharge ratings are not required, for example due to episode brevity or when the collection of consumer/carer-rated measures is not appropriate for clinical or other reasons. More information about the NOCC protocol can be found in the National Outcomes and Casemix Collection: Technical specification of State and Territory reporting requirements, version: 2.02 on the Australian Mental Health Outcomes and Classification Network (AMHOCN) website.

Box NOCC.1: Clinical measures in the National Outcomes and Casemix Collection (NOCC)

Clinical measures	Age Group			Purpose	
	Children and adolescents	Adults	Older people	Outcomes	Casemix
Clinician-rated measures:					
Health of the Nation Outcome Scales (HoNOS)		●		●	●
Health of the Nation Outcome Scales for Older People (HoNOS 65+)			●	●	●
Health of the Nation Outcome Scales for Children and Adolescents (HoNOSCA)	●			●	●
Life Skills Profile (LSP-16)		●	●	●	●
Resource Utilisation Groups - Activities of Daily Living Scale (RUG·ADL)			●		●
Children's Global Assessment Scale (CGAS)	●				●
Factors Influencing Health Status (FIHS)	●			○	●
Mental Health Legal Status	●	●	●	○	●
Principal and Additional diagnosis	●	●	●	○	●
Phase of care	●	●	●	○	●
Consumer and carer-rated measures:					
Kessler Psychological Distress Scale - Plus (K10+), Behavior and Symptom Identification Scales (BASIS-32), or Mental Health Inventory (MHI-38)[a]		●	●	●	
Strengths and Difficulties Questionnaire (SDQ)[b]	●			●	

● Measure is used for the specified purpose of measuring outcomes or describing casemix.

○ Not an outcomes measure but is important for the interpretation of outcome data.

[a] These measures are completed by the consumer. The specific measure used varies across states and territories – K10+ (New South Wales, Northern Territory, South Australia and Western Australia), BASIS-32 (Australian Capital Territory, Tasmania and Victoria), and MHI-38 (Queensland).

[b] The NOCC includes three versions of the SDQ: SDQ-PC (parent report measure for children aged 4-10 years); SDQ-PY (parent report measure for youth aged 11-17 years); and SDQ-YR (self-report measure for youth aged 11-17 years).

The NOCC clinical measures comprise clinician-rated and consumer/carer-rated measures that can be used for outcome and/or casemix purposes. Outcome measures that are collected on at least two occasions allow assessment of change in health status.

Casemix measures are used to describe the mix of people who are receiving mental health services, grouped according to their clinical status and the pattern of services they are receiving. Casemix measures need only be collected at the single most appropriate point for describing and classifying each episode. More information about the NOCC clinical measures can be found in the National Outcomes and Casemix Collection: Overview of Clinician-Rated and Consumer Self-Report Measures, version 2.0 on the AMHOCN website.

The collection of routine outcome measures in everyday clinical practice is challenging and gaps in collection can occur. It is important to understand these challenges as they can impact on the volume of data that is available for reporting and introduce systematic biases. An important challenge in the design of the NOCC protocol has been to minimise the burden of collection. To this end, there are defined instances when the collection of measures is not required—for example, if the nature and severity of a consumer's mental health or other problems indicate that they should not be asked to complete consumer–report measure; or if an episode of mental health care is too brief to allow meaningful opportunity to show change at the time of discharge. In these instances, the collection occasion is excluded from the reporting of collection rates. Other challenges reflect the reality of everyday clinical practice—for example, when the consumer is not available to be offered the measure at the intended collection occasion, say, at discharge. In these instances, the collection occasion is included in reporting and will be reflected in the rates of collection.

Other data elements in the NOCC provide context for interpreting the information gathered using the clinical measures. These include defining attributes of collection occasions, for example mental health provider entity identifier, person identifier, age group, mental health service setting, reason for collection, collection occasion date and person-level socio-demographic characteristics. More information about NOCC data elements can be found in the National Outcomes and Casemix Collection: Technical specification of State and Territory reporting requirements, version: 2.02 on the AMHOCN website.

The statistical counting unit used to describe coverage of the NOCC is the consumer, a unique individual within a jurisdiction. The statistical counting unit used to describe NOCC volume is a collection occasion, a meaningful point during a period of contact between a consumer and a mental health service organisation within the reporting period. The statistical counting unit used to describe outcomes is an episode of mental health care, the period of contact between a consumer in a single setting within a mental health service organisation bounded by the 'first' and 'last' collection occasions within the reporting period.

NOCC data are reported annually, based on financial year. An individual consumer's measures are not linked across years. The NOCC does enable an individual consumer's clinical status and functioning to be described at different points of treatment within a single year. However, many consumers, due to the nature of their mental illness, receive care for longer periods and often across multiple settings and organisations. The

approach used to report outcomes from the NOCC separates consumers' care into segments—for example, inpatient versus ambulatory care—within a single year, rather than tracking outcomes across treatment settings and time.

Clinician-rated measures

HoNOS/HoNOS 65+ (Health of the Nation Outcome Scales for working age adults and older adults):

The focus of the HoNOS is on health status and severity of symptoms. It consists of 12 scales rated on one of five levels of severity (0 = no problem, 1–4 = minor problem to very severe problem) that cover problems that may be experienced by people with a significant mental illness. A rating of 2 or more on each scale indicates a clinically significant problem (Burgess et al.2009). A total score is obtained by summing the ratings on each individual scale (range 0–48). The HoNOS 65+ version consists of the same set of 12 scales and is scored in the same way. However, the accompanying glossary has been modified to better reflect the problems and symptoms encountered when assessing older persons (Burns et al. 1999; Wing et al. 1994; Wing et al. 1998).

HoNOSCA (Health of the Nation Outcome Scales for Children and Adolescents):

The HoNOSCA is modelled on the HoNOS and designed specifically for use in the assessment of child and adolescent consumer outcomes in mental health services. It comprises 15 scales assessing specific aspects of the youth's mental health (13 items), and environmental aspects related to lack of information or access to services (2 items). Each scale is rated on one of five levels of severity (0 = no problem, 1-4 = minor problem to very severe problem). A rating of 2 or more on each scale indicates a clinically significant problem (Burgess et al. 2009). A total score is obtained by summing the scores on the first 13 scales (range 0-52).

Consumer-rated measures

Adults and Older Persons

Kessler Psychological Distress Scale (K10)/K10 Plus (K10+):

The K10 is a self–report measure intended to yield a global measure of 'non-specific psychosocial distress' based on ten questions about the level of nervousness, agitation, psychological fatigue and depression in the relevant rating period. A total score for the 10 questions is generated by the sum of individual responses (1=None of the time, 2=A little of the time, 3=Some of the time, 4=Most of the time and 5=All of the time) (Kessler et al. 2002). The K10+ contains additional questions to assess functioning and related factors; there is no summary score for these items. The NOCC includes the K10LM (the

label 'LM' stands for Last Month) which uses the rating period of the previous four weeks, and the K10L3D (the label 'L3D' stands for Last 3 Days) which is designed for use in inpatient settings.

Behaviour and Symptom Identification Scale (BASIS-32):

BASIS-32 comprises 32 items that cover the major symptoms and functioning difficulties often experienced by people as a result of a mental illness, across five domains (relation to self and others, daily living and role functioning, depression and anxiety, impulsive and addictive behaviour, psychosis). All items are rated on a 5-point scale (from 0 for least difficulty to 4 for greatest difficulty). A total score is obtained by calculating the average ratings on 30 of the individual items (only one of items 2, 3, 4 is included in this calculation, range 0-4) (Eisen et al. 2000; Eisen et al. 1994).

Mental Health Inventory (MHI-38):

The MHI-38 was designed to measure general psychological distress and well-being in the general population, therefore includes positive aspects of well-being (such as cheerfulness, interest in and enjoyment of life) as well as negative aspects of mental health (e.g., anxiety and depression). The respondent rates on a scale the degree (frequency or intensity) to which they have experienced a particular symptom or state of mind in the past month using either a six-point scale (1-6) or a five-point scale (1-5). A Mental Health Index score is obtained by first reverse scoring some items so that higher scores indicate greater wellbeing and less psychological distress, then summing the ratings on the 38 individual items (range 38-226) (Veit and Ware 1983).

Children and adolescents

SDQ-YR (The Strengths and Difficulties Questionnaire Youth Report):

The SDQ is a brief behavioural screening measure. The NOCC includes self-report (the SDQ-YR for youth) for consumers aged 11–17 years. Each version includes 25 items on psychological attributes; additional items vary across versions. The reference period for the psychological attributes items is the last 6 months. These items are rated on 0-2 scale; some items are reverse scored so that a high score indicates greater difficulty. A Total Difficulties score is obtained by first calculating scores for four scales that each contain 5 of the 25 psychological attribute items (Emotional Symptoms Scale, the Conduct Scale, the Hyperactivity Scale, and the Peer Problem Scale), then summing those scale scores (range 0-40) (Goodman 1997).

Completion of measures

Children and adolescents (11–17 years)

In 2018–19, the clinician-rated Health of the Nation Outcome Scales for Children and Adolescents (HoNOSCA) was completed between 75.3% and 93.4% of collection occasions as expected according to the NOCC specifications.

The consumer-rated Strengths and Difficulties Questionnaire Youth Report (SDQ-YR) was completed at up to 64.4% of expected collection occasions. In acute inpatient settings, the proportions of collection occasions with completed consumer-rated measures were higher than for ambulatory settings at admission and discharge, however very few measures were completed in acute inpatient settings at review (fewer than 30 occasions) compared to admission and discharge. In ambulatory settings, the proportions were higher at admission and review than at discharge—with 12.6% of expected occasions at discharge (Figure NOCC.3).

One or more of the three casemix measures (mental health legal status, principal diagnosis and phase of care) were collected on at least 94.4% of expected collection occasions (Table NOCC.10).

Adults (18–64 years)

In 2018–19, the clinician-rated Health of the Nation Outcome Scales (HoNOS) was collected for consumers aged 18–64 years between 70.9% and 93.8% of collection occasions as expected according to the NOCC specifications.

The consumer-rated measure completed by consumers aged 18–64 is different depending on the state or territory in which they are receiving care. The Behaviour and Symptom Identification Scale (BASIS-32), Kessler Psychological Distress Scale (K10+), or Mental Health Inventory – 38 (MHI-38) were completed between 12.4% and 38.3% of expected occasions, depending on setting and collection occasion type. In acute inpatient settings, collection rates for the consumer-rated measure were higher at review than at admission and discharge. In ambulatory settings, collection rates for the clinician-rated and consumer-rated measures were lower at discharge than at admission or review (Figure NOCC.3).

One or more of the three casemix measures (mental health legal status, principal diagnosis and phase of care) were collected on at least 91.2% of expected collection occasions (Table NOCC.12).

Older persons (65 years and older)

In 2018–19, the clinician-rated Health of the Nation Outcome Scales 65+ (HoNOS 65+) was collected for consumers aged 65 years and older between 89.3% and 97.0% of expected collection occasions.

As for consumers aged 18–64, the consumer-rated measure completed by consumers aged 65 years and older is different depending on the state or territory in which they are receiving care. The Behaviour and Symptom Identification Scale (BASIS-32), Kessler Psychological Distress Scale (K10+), or Mental Health Inventory – 38 (MHI-38) were completed between 15.2% and 27.9% of expected occasions, depending on setting and collection occasion type. In ambulatory settings, collection rates for the clinician-rated and consumer-rated measures were higher at admission and review than at discharge (Figure NOCC.4).

One or more of the three casemix measures (mental health legal status, principal diagnosis and phase of care) were collected on at least 94.9% of expected collection occasions (Table NOCC.14).

Data validation

Data are supplied annually by all states and territories and are validated to ensure the data conform to the NOCC protocol under the NOCC Technical Specifications 'business rules'. Jurisdictional representatives respond to any issues before the data are accepted as the most reliable current data collection. This process may highlight issues with historical data. In such cases, historical data may be resupplied to ensure data are consistent. Only data that form valid sequences of collection occasions within non-overlapping episodes of mental health care are used for public reporting. Further information about the NOCC data set business rules can be found on the AMHOCN website.

Data quality over time

Data should be consistent across most jurisdictions and across years within most jurisdictions, with the following exceptions.

The Australian Capital Territory transitioned to a new information system in 2016–17. This has impacted the integrity of the unique counts of consumers that were supplied for the purposes of calculating NOCC coverage (more information can be found below in NOCC coverage). Therefore, coverage estimates for Australian Capital Territory in 2016–17 are not applicable.

New South Wales transitioned to new information systems in the 2015–16 and 2016–17 periods. This occurred along different timelines region by region. The change had an impact on the ability of staff to record data as they were trained and adjusted to the new systems.

The NOCC Technical Specifications were updated with effect from 2015–16 to include new data elements for country of birth, Aboriginal and Torres Strait Islander status, and consumers' area of usual residence. The latter, reported as Statistical Area Level (SA2) from the Australian Statistical Geography Standard, is used to derive socio-economic status and remoteness measures. Partial reporting of these measures (4 jurisdictions) commenced in 2015–16; full reporting commenced in 2016–17. These measures are reported only for years in which there was full reporting.

The NOCC Technical Specifications were further updated with effect from 2017–18 to include the new data element Phase of care. Two jurisdictions (Victoria and Northern Territory) have not commenced its collection. Phase of care is reported for all jurisdictions that collect it. The Australian Capital Territory does not reliably report principal type of admitted patient care program provided by specialised inpatient mental health services. In this publication, all Australian Capital Territory inpatient services are considered 'acute care'.

NOCC coverage

NOCC coverage is an indicator of the extent to which the NOCC protocol has been successfully implemented. It is derived by comparing the number of consumers with clinical ratings in the NOCC in a reporting period (the numerator) to the overall number of consumers reported as receiving clinical care from state and territory public mental health services in the same reporting period (the denominator).

The numerator is derived from the NOCC. For the purposes of coverage estimates, counts of consumers included in the NOCC are unique at the jurisdictional level within the reporting period. The denominator was sourced from aggregated data supplied by jurisdictions to the AIHW for the purposes of calculating MHS Key Performance Indicator 9 (KPI 9) *New client index*. General and specific caveats affecting the quality of these data are provided in the Key Performance Indicators for Australian Public Mental Health Services tables.

The consumer's age at each collection occasion may not align with the NOCC protocol in terms of the age group specific services received and the measures completed. This may occur, for example, when consumers aged less than 18 years receive 'adult services', or consumers aged 18–64 years receive 'older persons' services, etc. Over the 5-year period covered by this publication, approximately 2.1% of collection occasions did not align. For the purposes of this publication, this small percentage of collection occasions has been excluded, resulting in a small underestimate of coverage.

Matched pairs of collection occasions

In order to measure outcomes, the same measure must be collected on two collection occasions that form a logical sequence within an episode of mental health care within a single setting, for example at admission and subsequent review in an ambulatory setting, or at admission and subsequent discharge in an acute inpatient setting. These are called matched pairs. It is important to note that under the NOCC protocol, not all collection occasions are eligible to form matched pairs. Specifically, discharge ratings on the clinician- and consumer/carer-rated measures are not required for brief episodes of ambulatory care (14 days or less) or brief acute inpatient care (3 days or less) because this brief period does not provide a meaningful opportunity to measure change. In addition, discharge ratings on the clinician- and consumer/carer-rated measures are not required when the consumer is transferred to an inpatient or residential setting within the same organisation, because the measures will be collected upon admission to the new setting.

Box NOCC.2 shows the percentage of episodes with matched pairs of clinician-rated and consumer-rated measures in 2018–19, according to the age band relevant to each measure type. For the clinician-rated HoNOS family measures, the percentage of episodes with matched pairs was higher in completed acute inpatient and ongoing ambulatory episodes, than in completed ambulatory episodes. For the consumer-rated measures, the percentage of episodes with matched pairs of ratings was higher in

ongoing ambulatory episodes, than in completed acute inpatient and completed ambulatory episodes.

Box NOCC.2: Matched pairs of ratings on the clinician-rated and consumer-rated measures by episode type and age band, national, 2018–19

	Clinician-rated measures			Consumer-rated measures		
	Completed acute inpatient	Completed ambulatory	Ongoing ambulatory	Completed acute inpatient	Completed ambulatory	Ongoing ambulatory
Age band	**n (% of total)**	**n (% of total)**	**n (% of total)**	**n (% of total)**	**n (% of total)**	**n (% of total)**
11–17 years	1,871 (91.5%)	3,529 (73.9%)	5,204 (89.0%)	91 (4.9%)	323 (7.3%)	1,186 (21.7%)
18–64 years	25,609 (87.4%)	13,530 (70.6%)	25,050 (89.6%)	3,436 (12.5%)	1,069 (7.3%)	4,485 (19.8%)
65 years and over	2,774 (91.6%)	4,119 (88.1%)	4,544 (95.5%)	317 (11.2%)	287 (10.3%)	703 (21.6%)

Outcomes classification

Public reporting of the outcomes from the NOCC is based on an effect size methodology. Specifically, mental health outcomes—that is, the difference or 'change' between scores at the start and end of an episode of mental health care—were classified using Cohen's effect size metric (Cohen 1988) as 'significantly improved', 'no significant change' or 'significantly deteriorated'. The advantage of this method is that change values derived from the different consumer-rated measures are converted into standardised units so that they can be combined for national reporting. For each measure, a 'medium' effect size threshold was set at half a standard deviation of the score. This threshold was calculated from all admission collection occasions, separately for acute inpatient and ambulatory settings and for each outcome measure.

For episodes in which consumer outcomes were based on the HoNOS family of measures, this corresponded to an absolute threshold of change score of 4 in both acute inpatient and ambulatory settings. Outcomes were then classified as 'significant improvement' if the change score was 4 or more, 'no significant change' if the change score was between -3 and 3, and 'significant deterioration' if the change score was -4 or less.

For episodes in which consumer outcomes were based on the consumer-rated measures, the absolute thresholds were: a change score of 0.5 in acute inpatient settings and 0.6 in ambulatory settings for the BASIS-32; a change score of 6 in both acute inpatient and ambulatory settings for the K10; a change score of 19 in acute

inpatient settings and 20 in ambulatory settings for the MHI-38; and a change score of 4 in both acute inpatient and ambulatory settings for the SDQ-YR, SDQ-PC and SDQ-PY.

Use of confidence intervals

This publication makes use of confidence intervals to reflect some of the variability ('uncertainty') in estimates derived from the NOCC. It is acknowledged that there are different views on the appropriateness of using inferential statistics, such as confidence intervals, for population parameters (Redelings et al. 2012), noting that the NOCC is intended to comprise the complete population receiving care from public sector specialised mental health services. We adopted the approach used by Public Health England, which recommends that a confidence interval should be presented alongside a point estimate whenever an inference is being made from a set of observations to the underlying process or 'risk' that generated them (Eayres 2008; Redelings et al. 2012). In this publication, confidence intervals are shown in all figures and are included in the National Outcomes and Casemix Collection tables.

A confidence interval is a range of values that is used to quantify the random variability or fluctuations that can occur naturally, for example in the numbers of services used and of persons using services over time. Generally, confidence intervals describe how different an estimate could have been if the underlying conditions stayed the same but random variability had led to a different set of data (Eayres 2008).

A confidence interval does not quantify all variability inherent in a statistic. In the NOCC, a key source of variability is incomplete reporting. This can occur when a clinician does not collect a measure on a particular collection occasion as prescribed by the NOCC protocol, or when a consumer is not available to be offered a consumer-rated measure on a given collection occasion, for example at discharge where the consumer is 'lost to follow-up' and 'administratively' discharged. Other sources of non-random variability include systematic differences between jurisdictions in their implementation of the national protocol. For example, as noted earlier, although the national protocol was updated in 2017–18 to capture the data element Phase of care, two jurisdictions (Victoria and Northern Territory) have not commenced its collection. Systems are in place to encourage standardised data collection, and to check for patterns of non-random variability (see Data validation, above), however, some non-random variability is likely to remain (Kreisfeld and Harrison 2020).

The width of the confidence interval is determined by 3 factors. The first factor relates to the extent of variability in the phenomenon being measured. In this publication, almost all estimates derived from the NOCC are proportions, calculated by dividing the numerator by the denominator. The underlying distribution of a proportion is assumed to follow a binomial distribution, and the corresponding variability is taken into account in the calculation of the confidence intervals. Following the approach recommended by Public Health England (Public Health England 2018), the Wilson Score method was used to calculate the confidence intervals (Newcombe & Altman 2000; Wilson 1927). This method has the advantage of generating an interval when the numerator, and therefore

the proportion, is zero. Because the binomial distribution is non-normal, the resulting confidence intervals are asymmetrical. That is, the size of the margin of error between the lower 95% value and the estimate will not necessarily be equal to the size of the margin of error between the upper 95% value and the estimate.

The second factor is the 'level of confidence', the desired probability that the interval includes the true value. In reporting of public health measures, a 95% level of probability is commonly used, and means that we can be 95% confident that the true value lies within the interval. Confidence intervals can be used to test for statistical differences between estimates. If the 95% confidence intervals for two reported estimates do not overlap, then there is 95% confidence that the difference between them is statistically significant. This is considered a conservative method; it is not always the case that overlapping confidence intervals do not indicate a statistically significant difference (Public Health England 2018). More exact methods are available but have not been used in this publication.

The third factor is the population size from which the estimate is derived. Larger population sizes yield *more* precise estimates with *narrower* confidence intervals. In this publication, estimates are provided for groups that vary widely in clinical population size. For example, there is at least a 30-fold variation in the number of people receiving clinical care from specialised mental health services in the Northern Territory compared to New South Wales. Similarly, there is wide variation in the size of some population subgroups, for example between the number of Indigenous Australians receiving care compared to non-Indigenous Australians, between the number of people living in very remote locations compared to major cities, and between the number of people receiving care in residential services compared to ambulatory services. In the absence of information about the precision of the estimate, small differences between groups or small fluctuations for a group over time could be incorrectly interpreted as meaningful (AIHW: Kreisfeld and Harrison 2020; Redelings et al. 2012).

Minimum thresholds

A strategy to improve the quality of reporting is to set a minimum threshold of observations that must be met in order for an estimate to be reported. In this publication, estimates based on the statistical counting units of consumer and collection occasion, for example coverage and clinically significant problems, are not reported if there are less than 30 consumers/collection occasions in the *numerator*. Estimates based on the statistical counting unit of episode of mental health care, for example outcome classification, are not reported if there are less than 30 episodes in the *denominator*. This approach is consistent with other NOCC public reporting products (Web Decision Support Tool (wDST) and Reports Portal). Proportions (%) and other statistics based on denominators of less than 100 are usually not reliable and are not published.

Public reporting of the NOCC

Other NOCC public reporting products focus on the clinical utility of the collection, through the publication of 'normative' reference data for the clinical measures that assist clinicians and other users to better understand the outcomes and variability in the population under care. Online resources include a wDST, which allows users to compare an individual consumer's scores at a single point in time, or change in scores over time, against normative data from 'like' consumers around Australia. In addition, scores on clinician- and consumer-rated measures can be displayed side-by-side which facilitates engagement with the consumer/family around different perspectives on mental health status. A Reports Portal allows users to create tailored reports that provide different statistical summaries of the NOCC data, for example the change in scores on various measures across the course of given episodes. More granular reports can be created by selecting from a range of variables, for example age, measure (including item level), service setting, collection occasion, collection reason, jurisdiction, diagnosis, sex, legal status.

In the wDST and the Reports Portal, NOCC data are reported at national and state/territory levels.

Key concepts

Consumer outcomes in public sector specialised mental health services

Key Concept	Description
Age band	A more detailed classification of age than age group. For consumers aged less than 18 years, age bands (less than 4 years, 4–10 years and 11–17 years) correspond to the groups specified by the NOCC protocol as in-scope for different versions of the consumer-rated and carer-rated measures.
Age group	The age group to which the patient or client has been assigned for the purposes of the data collection protocol. Generally, *Adult* is defined as persons between the age of 18 and 64 years inclusive, an *Older person* is defined as persons aged 65 years and over and a *Child or adolescent* is defined as persons aged less than 18 years of age. In some circumstances a person may be legitimately assigned to a different age group to that in which they would be assigned on the basis of their actual age. For example, a person aged 60 years who was being cared for in an inpatient psychogeriatric unit may be assigned to the *Older person* age group.
Clinician-rated measure	Clinical measures are particular surveys or forms that are used to gather information about a person's clinical mental health status and functioning. Clinician-rated measures are completed by the clinician (mental health provider) about the consumer's mental health. The NOCC includes the Health of the Nation Outcome Scales for Children and Adolescents (HoNOSCA) for children and adolescents, the Health of the Nation Outcome Scales (HoNOS) for adults, and the Health of the Nation Outcome Scales 65+ (HoNOS 65+) for adults aged 65 years and older.
Collection occasion	An occasion during an episode of mental health care when the required dataset is to be collected in accordance with a standard protocol. Three collection occasion types within an episode of mental health care are identified: *Admission*, *Review*, and *Discharge*.
Comorbid problems	The following are comorbid problems that clinicians consider when rating the Other mental and behavioural problems scale of the HoNOS (for adults) and HoNOS 65+ (for older persons):

	A Phobias – including fear of leaving home, crowds, public places, travelling, social phobias and specific phobias. B Anxiety and panics. C Obsessional and compulsive problems. D Reactions to severely stressful events and traumas. E Dissociative ('conversion') problems. F Somatisation – persisting physical complaints in spite of full investigation and reassurance that no disease is present. G Problems with appetite, over- or under-eating. H Sleep problems. I Sexual problems. J Problems not specified elsewhere including expansive or elated mood.
Confidence interval	A statistical term describing a range (interval) of values used to describe the uncertainty around an estimate. Generally speaking, confidence intervals describe how different the estimate could have been if the underlying conditions stayed the same but variability in sampling (i.e. selecting a different sample from the population) had led to a different set of data. Confidence intervals are calculated with a stated probability—usually 95% level of confidence—that, if the assumptions inherent in the calculation of the interval hold, the true value lies within the interval.
Consumer-rated measure	Clinical measures are particular surveys or forms that are used to gather information about a person's clinical mental health status and functioning. Consumer-rated measures are completed by the consumer about their own mental health. The NOCC uses the Strengths and Difficulties Questionnaire Youth Report (SDQ-YR) for children and adolescents, and the Behaviour and Symptom Identification Scale (BASIS-32), Kessler Psychological Distress Scale (K10+), or Mental Health Inventory – 38 (MHI-38) for adults, depending on the state or territory in which the consumer receives mental health care.
Duration	The period of contact in an episode of mental health care. Duration is calculated as the number of days between collection occasions that form the start and end of the episode, including the episode start date.

Episode of mental health care	For the purposes of the NOCC, a period of more or less continuous contact between the consumer and a mental health service organisation within a single setting and for which there is both a 'Start' and an 'End' clinical rating within the reporting period. Two business rules apply to episodes: a) one episode at a time; and b) change of setting implies a change of episode.
Episode types	A classification of episodes of mental health care defined on the basis of the collection occasion at the 'Start' and 'End' of the episode and the setting in which treatment occurred. Three main episode types are reported in this publication: completed acute inpatient; completed ambulatory; and ongoing ambulatory.
Matched pair	A pair of collection occasions that form a valid sequence within an episode of mental health care, and for which the same measure was able to be rated on both collection occasions. A valid sequence is when collection occasions are logically ordered, for example an *Admission* collection occasion followed by a *Discharge* collection occasion. Conversely, an example of an invalid sequence is a *Review* collection occasion followed by an *Admission* collection occasion. NOCC ratings for an episode can be categorised according to their completion status as follows: No ratings, Baseline only, Follow-up only, and Matched pair.
Mental health legal status	Whether a person was provided care on an involuntary basis under the relevant state or territory mental health legislation, at some point during the period of care preceding the collection occasion.
NOCC coverage	The extent to which consumers included in the NOCC protocol are representative of the population receiving clinical care from public sector specialised mental health services. Coverage is derived by comparing the number of persons with at least one valid NOCC measure to the overall number of persons reported as receiving clinical care from public sector specialised mental health services.
NOCC protocol	The minimum requirement for the collection of the NOCC measures. Together, the three concepts of collection occasion (*Admission*, *Review*, *Discharge*), service setting (*Inpatient*, *Residential*, *Ambulatory*) and the consumers' age group (*Children and adolescents*, *Adults*, *Older persons*) determine what measures to collect and when to collect them.
Outcome	A change in health status that can be attributed to specific health care investments or interventions (CIHI 2021).

Outcome classification	A classification of the extent of change between the clinical ratings at the 'Start' and 'End' of an episode of mental health care. Classification is based on statistical testing using Cohen's effect size metric (Cohen, 1988). The categories are *Significant improvement*, *No significant change*, and *Significant deterioration*. A 'medium' effect size of 0.5 is used to assign change scores to one of the 3 outcome categories. A medium effect size is equivalent to an individual change score of at least one half (0.5) of a standard deviation. Individual episodes are classified as: 'significant improvement' if the effect size index is greater than or equal to positive 0.5; 'significant deterioration' if the effect size index is less than or equal to negative 0.5; or 'no significant change' if the index is greater than negative 0.5 and less than positive 0.5.
Period of care	The period bound by one collection occasion and another, and immediately preceding the current collection occasion.
Phase of care	A casemix measure completed by the clinician (mental health provider). A prospective judgement of the treating teams' primary goal of care over the forthcoming period of care. It comprises a single item requiring selection of one of five categories: *acute*, *functional gain*, *intensive extended*, *consolidating gain* and *assessment only* (Eagar et al. 2013; Independent Hospital Pricing Authority 2016).
Principal diagnosis	The diagnosis established after study to be chiefly responsible for occasioning the patient or client's care during the period of care preceding the collection occasion. The principal diagnosis must be a valid code from the International Statistical Classification of Diseases and Related Health Problems, 10th Revision, Australian Modification (ICD-10-AM) (11th Edition).
Public sector specialised mental health services	Publicly funded or managed services with a primary function to provide treatment, rehabilitation or community health support targeted towards people with a mental disorder or psychiatric disability. These activities are delivered from a service or facility that is readily identifiable as both specialised and serving a mental health care function.
Service setting	The setting in which the episode of mental health care takes place. The categories are as follows. *Inpatient:* overnight care provided in public psychiatric hospitals and designated psychiatric units in public acute hospitals

	Residential: overnight care provided in residential units staffed on a 24-hour basis by health professionals with specialist mental health qualifications or training and established in a community setting which provides specialised treatment, rehabilitation or care for people affected by a mental illness or psychiatric disability *Ambulatory:* non-admitted, non-residential services provided by health professionals with specialist mental health qualifications or training.

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