Non-admitted patient care data collections: Data Quality Statements

This appendix includes data quality summaries and additional detailed information relevant to interpretation of the information in this report:

Complete data quality statements for the National Non-admitted Patient Care (aggregate) Database (NNAPC(agg)D) and the National Non-admitted Patient (episode-level) Database (NNAP(el)D) are available online at <meteor.aihw.gov.au>.

National Non-admitted Patient Care (aggregate) Database

The NNAPC(agg)D is based on data provided for the:

- Non-admitted patient care National Minimum Data Set (NAPC NMDS, METeOR identifier 672666)
- Non-admitted patient care local hospital network National Best Endeavours Data Set (NAPCLHN NBEDS, METeOR identifier 687903).

It holds aggregated clinic-level data on the type of outpatient clinic, counts of individual and group service events and group sessions and the funding source for the service events.

The reference period for this data set is 2018–19. The data set includes records for non-admitted patient service events provided between 1 July 2018 and 30 June 2019.

Non-admitted patient care NMDS

For 2018–19, the scope of the NAPC NMDS was non-admitted patient service events provided by public hospitals. It also included public hospital services that were funded through the jurisdictional health authority or Local Hospital Network.

Due to changes in the scope and coverage of the NNAPC(agg)D between 2014–15 and 2018–19, time series are not presented. For more information see Table A1.

Non-admitted patient care Local Hospital Network aggregate NBEDS 2018–19

For 2018–19, the scope of the NAPCLHN NBEDS (METeOR identifier 687903) is non-admitted patient service events provided by:

- local hospital networks (LHNs)
- other public hospital services that are managed by a state or territory health authority and are included in the *General list of in-scope public hospital services*, developed under the *National Health Reform Agreement* (2011).

Summary of key issues

- For 2018–19, the NNAPC(agg)D included data for most public hospitals that provided non-admitted patient care in Australia. In addition, non-admitted patient care information based on data provided for the NAPCLHN NBEDS was reported for:

  - the state health authority, 15 LHNs and 1 other service in New South Wales
  - the state health authorities in Victoria and Queensland
  - the state health authority and 5 private hospitals in Western Australia that provide non-admitted patient services for public patients
  - the state health authority and 6 LHNs in South Australia.
- The NNAPC(agg)D data have limitations. For example, there is variation in admission practices (AIHW 2017) between states and territories and there is variation in the types of services provided for non-admitted patients in a hospital setting.

For 2018–19:

- Victoria did not collect information for *Diagnostic services* that could not be linked to services provided at another clinic. All diagnostic services for non-admitted patients that could be linked to a service provided at another clinic were reported as part of the service event provided in that clinic (medical consultation, procedural or allied health and/or clinical nurse specialist intervention clinic). Therefore, the national counts of service events for *Diagnostic services* are likely to be underestimated.
- Queensland did not report any non-admitted patient service events with a funding source of *Medicare Benefits Scheme*. MBS-funded non-admitted patient activity for doctors practising right of private practice were not included in the data provided to the NNAPC(agg)D, as these patients are not considered by Queensland to be patients of the hospital.
- Western Australia did not report specialist mental health service events for the 2018–19 NAPC NMDS and the NAPCLHN NBEDS for the clinics: 20.45 *Psychiatry*, 20.50 *Psychogeriatric*, 40.34 *Specialist mental health* and 40.37 *Psychogeriatric*. Western Australia was also not able to provide data for the clinics: 30.07 *Mammography screening*, 30.02 *Magnetic resonance imaging*, and 30.06 *Positron emission tomography*. Therefore, national counts of service events for these clinics are likely to be underestimated.

Differences in scope between 2013–14 and 2018–19

Between 2013–14 and 2014–15, the scope of the NAPC NMDS changed—from a focus on activity-based funded hospitals to all public hospitals. This change in scope resulted in increases in the number of hospitals and other services reporting for the NNAPC(agg)D between 2013–14 and 2014–15.

For 2014–15 to 2018–19, information was also provided for non-admitted patient service events at the LHN-level, at state/territory health authority-level, for other public hospital services and by some private hospitals providing public patient non-admitted patient services under contract.

Table A1 illustrates how changes to the data over time make it difficult to compare the data provided for the NNAPC(agg)D between 2013–14 and 2018–19.

Table A1: Number of hospitals and other services reporting service events (aggregate data), 2014–15 to 2018–19

	2013-14	2014-15	2015-16[a]	2016-17	2017-18	2018-19
Non-admitted patient service events	26,710,182	34,911,563	33,439,723	36,672,013	38,937,235	39,014,521
Public hospitals reporting[b]	8	610	604	602	601	602
Other services reporting[b]	350	41	19	31	29	28

(a) The Australian Capital Territory did not provide data for 2015–16.

(b) This is the count of reporting units at LHN-level, state/territory health authority level, other public hospital services and private hospitals providing non-admitted services for public patients.

Note: See appendixes A and B for notes on data limitations and methods.

Source: NNAPC (agg)D.

National Non-admitted Patient (episode-level) Database

The NNAP(el)D is based on the Non-admitted patient National Best Endeavours Data Set (NAP NBEDS, METeOR identifier 687903).

It holds episode-level data including selected patient characteristics; the type of outpatient clinic; whether the episode was an individual or a group service event; the source of the request for service; the service delivery setting; the service delivery mode, the type of care provided, whether the service involved care from multiple health-care providers and the funding source for the service event.

The reference period for this data set is 2018–19. The data set includes records for non-admitted patient service events provided between 1 July 2018 and 30 June 2019.

In 2018–19, the scope of the NAP NBEDS was defined as non-admitted patient service events in:

- public hospitals
- Local Hospital Networks
- other public hospital services that are managed by a state or territory health authority and are included in the General list of in-scope public hospital services, which have been developed under the National Health Reform Agreement (2011) (Table A2).

For the NNAP(el)D, a record is included for each service event, not for each patient, so patients who receive more than one non-admitted patient service event in the year have more than one record in the NNAP(el)D.

Summary of key issues

- For 2018–19, episode-level non-admitted patient service events data reported to the NNAP(el)D was estimated as 74% of the non-admitted patient service events provided for the NNAPC(agg)D. The proportion varied among jurisdictions, ranging from 64% for New South Wales to 100% for the Australian Capital Territory, the Northern Territory and Tasmania.
- The NNAP(el)D data have limitations, for example, there is variation among states and territories in admission practices (AIHW 2017) and also in the types of services provided for non-admitted patients in a hospital setting.
- the sex of the patient was not reported for 0.16% of service event (46,000) records.

- the patient's date of birth was not reported for 7,000 service events (0.02%) and therefore the age of the patient could not be determined.
- the Indigenous status of the patient was not reported for 3% of service events (0.9 million). In addition, the quality of the data reported for Indigenous status in non-admitted patient settings has not been formally assessed, so caution should be used when interpreting these data.
- the patient's area of usual residence was not reported for 2% of service events, and therefore, the patient's remoteness area and socioeconomic status group could not be determined for those records.
- Service request source was not reported for 15.0 million service events.

Fluctuating coverage between 2013–14 and 2018–19

Before 2015–16, the scope of the NAP NBEDS was defined as non-admitted patient service events in activity-based funded hospitals only. Between 2014–15 and 2015–16, the scope of the NAP NBEDS changed to include public hospitals and other services that were not activity-based funded.

Table A2 illustrates the changes in coverage for the data provided for the NNAP(el)D between 2013–14 and 2018–19. Therefore, changes in the numbers of service events reported between 2013–14 and 2018–19 should be treated with caution.

Table A2: Number of public hospitals and other services reporting non-admitted patient service events (episode-level data), 2013–14 to 2018–19

	2013–14[(a)]	2014-15[(b)]	2015-16	2016-17	2017-18	2018-19
Non-admitted patient service events	11,790,224	19,916,492	15,285,999	25,918,439	28,219,012	29,023,866
Public hospitals reporting	183	316	291	492	511	520
Other services reporting[(d)]	1	6	1	18	10	10
Proportion of service events reported at episode-level (%)	44	57	46	71	72	74

(a) Victoria, Queensland and South Australia did not report data for the NNAP(el)D in 2013–14.

(b) Victoria, did not report data for the NNAP(el)D in 2014–15.

(c) Victoria, Queensland and the Australian Capital Territory did not report data for the NNAP(el)D in 2015–16.

(d) This is the count of reporting units at LHN-level, state/territory health authority level, other public hospital services and private hospitals providing non-admitted services for public patients.

Note: See appendixes A and B for notes on data limitations and methods.

Source: NNAP(el)D.

Other factors affecting the interpretation of non-admitted patient care data

Changes to the collection of non-admitted patient care over time mean that these data are not comparable over time.

Before 2013–14, information on non-admitted patient care was reported using different clinic categories and counting units.

Time series information between 2013–14 and 2018–19 is also not presented due to changes that affect the interpretation of these data, including:

- the scope of the NAPC NMDS
- the scope of the NAP NBEDS

- the coverage the NAPCLHN NBEDS and the NAP NBEDS
- the definitions and counting rules for non-admitted patient care.

Differences in definitions of non-admitted patient care

For the NAPC NMDS, the NAPCLHN NBEDS and the NAP NBEDS, a non-admitted patient service event that involves multiple health professionals (and related diagnostic services) within the same clinic is counted as one service event. If a patient attends more than one clinic on the same day, then each attendance is counted as a separate service event.

In AIHW reports for the 2012–13 financial year and earlier, non-admitted patient occasions of service were counted as the number of services provided to a patient in each functional unit of a health service establishment. Each diagnostic test or simultaneous set of related diagnostic tests for a patient were counted as a separate occasion of service.

Therefore, the data presented for non-admitted patient service events in this report are not comparable with data reported for non-admitted patient occasions of service in reports for the 2012–13 reference year and earlier periods.

In addition, the activity of the clinic 40.01 *Aboriginal and Torres Strait Islander people's health clinic* (which was in-scope for 2013–14 and 2014–15) was out-of-scope for 2015–16 onwards.

Differences in counting rules for non-admitted patient care

In 2013–14 and 2014–15, for the NAPC NMDS, the NAPCLHN NBEDS and the NAP DSS/NBEDS, each session of renal dialysis, total parenteral and enteral nutrition, and ventilation performed by the patient in their own home was counted as a non-admitted patient service event.

After 2015–16, the counting rules for some home-delivered non-admitted patient services changed to 'temporal care bundling'. Temporal care bundling means that all non-admitted patient sessions performed per month are 'bundled' and counted as one non-admitted patient service event per patient per calendar month regardless of the number of sessions (IHPA 2016).

This resulted in a marked decrease in reporting of non-admitted patient services events in total, and for *Procedural clinics*, and for the following Tier 2 clinics:

- 10.15 *Renal dialysis–haemodialysis–home delivered*
- 10.16 *Renal dialysis–peritoneal dialysis–home delivered*
- 10.17 *Total parenteral nutrition–home delivered*
- 10.18 *Enteral nutrition–home delivered*
- 10.19 *Ventilation–home delivered.*

Information no longer collected

Between 1993–94 and 2013–14, the AIHW reported aggregated non-admitted patient occasions of service data from the National Public Hospital Establishments Database (NPHED), which covered a wider range of non-admitted patient care than is collected for the NNAPC(agg)D and NNAP(el)D. Since 2014–15, information is no longer available for:

- *Emergency* occasions of service provided by hospitals that do not have a designated emergency department.

  Information on emergency presentations provided by hospitals that have a designated emergency department are reported on the AIHW website.

- *Pharmacy* occasions of service
- most *Pathology* and *Radiology and organ imaging services* occasions of service—as these are considered 'related diagnostic services' connected with other service events and are not reported separately for the NNAPC(agg)D and NNAP(el)D
- most occasions of service for *Community health services*—although some community health services are in scope for the NNAPC(agg)D and NNAP(el)D.

Technical information

This appendix covers:

- definitions and classifications used
- presentation of data in this report.

Definitions and classifications

If not otherwise indicated, data elements were defined according to the definitions available online for the:

- Non-admitted patient care hospital aggregate NMDS 2018–19 at <meteor.aihw.gov.au/content/index.phtml/itemId/672666>
- Non-admitted patient care Local Hospital Network aggregate NBEDS 2018–19 at <meteor.aihw.gov.au/content/index.phtml/itemId/680985>
- Non-admitted patient NBEDS 2018–19 at <meteor.aihw.gov.au/content/index.phtml/itemId/687903>.

Hospital peer groups

In some tables, hospitals have been presented using the AIHW's hospital peer group classification:

- *Principal referral* hospitals provide a very broad range of services and have very large patient volumes. Most include an intensive care unit, a cardiac surgery unit, a neurosurgery unit, an infectious diseases unit and a 24-hour emergency department.
- *Women's and children's* hospitals provide specialised treatment for women and/or children.
- *Public acute group A* hospitals provide a wide range of services (but narrower than the *Principal referral* group) to a large number of patients and are usually situated in metropolitan centres or inner regional areas. Most have an intensive care unit and a 24-hour emergency department and a range of specialist units.
- *Public acute group B* hospitals provide a narrower range of services than the *Principal referral* and *Public acute group A* hospitals. They have a range of specialist units, potentially including obstetrics, paediatrics, psychiatric and oncology units.
- *Other* public hospitals include a range of different types of hospitals that are generally smaller than the *Public acute group B* hospitals. This group may include small and very small hospitals providing acute care, hospitals specialising in subacute and non-acute care, psychiatric hospitals and outpatient hospitals.

For more information about public hospital peer groups, see *Australian hospital peer groups* (AIHW 2015a).

Geographical classifications

Data on geographical location are collected on the area of usual residence of patients in the NNAP(el)D. These data are specified in the NBEDS as state or territory of residence and by Statistical Area Level 2 (SA2), which is a small area unit within the Australian Bureau of Statistics (ABS) Australian Statistical Geography Standard (ASGS).

Remoteness areas

The patient's area of usual residence can be used to derive its remoteness category.

Remoteness categories divide Australia into areas depending on distances from population centres, using the Australian Bureau of Statistics (ABS) Australian Statistical Geography Standard (ASGS) Remoteness Structure 2016 (ABS 2016).

The ABS's ASGS Remoteness Structure 2016 categorises geographical areas in Australia into remoteness areas, described in detail on the ABS website <www.abs.gov.au>.

The classification is as follows:

- *Major cities*—for example, Sydney, Melbourne, Brisbane, Adelaide, Perth, Canberra and Newcastle
- *Inner regional*—for example, Hobart, Launceston, Wagga Wagga, Bendigo and Murray Bridge
- *Outer regional*—for example, Darwin, Moree, Mildura, Cairns, Charters Towers, Whyalla and Albany
- *Remote*—for example, Port Lincoln, Esperance, Queenstown and Alice Springs
- *Very remote*—for example, Mount Isa, Cobar, Coober Pedy, Port Hedland and Tennant Creek.

Reporting data on area of usual residence of the patient

Area of usual residence was provided as SA1 or SA2 for the NNAP(el)D.

The AIHW mapped the provided SA2 codes to remoteness area categories based on the ABS's ASGS Remoteness Structure 2016. These mappings were undertaken on a probabilistic basis as necessary, using ABS correspondence information describing the distribution of the population by remoteness areas and SA2s. Because of the probabilistic nature of this mapping, the SA2 and remoteness area data for individual records may not be accurate; however, the overall distribution of records by geographical areas is considered useful.

Socioeconomic status

Data on socioeconomic status groups are defined using the ABS's Socio-Economic Indexes for Areas 2016 (SEIFA 2016) (ABS 2018).

The SEIFA 2016 data are generated by the ABS using a combination of 2016 Census data, including income; education; health problems/disability; access to internet; occupation/unemployment; wealth and living conditions; dwellings without motor vehicles; rent paid; mortgage repayments; and dwelling size. Composite scores are averaged across all people living in areas and defined for areas based on the Census collection districts.

The SEIFAs are described in detail on the ABS website <www.abs.gov.au>.

The SEIFA Index of Relative Disadvantage (IRD) is one of the ABS's SEIFA indexes. The relative disadvantage scores indicate the collective socioeconomic status of the people living in an area, with reference to the situation and standards applying in the wider community at a given point in time. A relatively disadvantaged area is likely to have a high proportion of relatively disadvantaged people. However, such an area is also likely to contain people who are not disadvantaged, as well as people who are relatively advantaged.

Counts of non-admitted patient service events by socioeconomic status were generated by the AIHW using the IRD scores for the SA2 of usual residence of the patient reported for each service event. The '1—Lowest' group represents the areas containing the 20% of the

national population with the most disadvantage, and the '5—Highest' group represents the areas containing the 20% of the national population with the least disadvantage. These SES groups do not necessarily represent 20% of the population in each jurisdiction.

Presentation of data

Data are presented by the state or territory of the hospital, not by the state or territory of usual residence of the patient. The exceptions to this occur in the presentation of data in Tables S2.4 and S2.5 (available to download from the Info & Downloads section of the MyHospitals area of the AIHW website) which present data at a national level based on the place of usual residence of the patient. The totals in tables include data only for those states and territories for which data were available, as indicated in the tables.

Throughout the publication, percentages may not add up to 100.0 because of rounding. Percentages printed as 0.0 or 0 generally indicate a zero. The symbol '<0.1' denotes less than 0.05 but greater than 0.

Suppression of data

The AIHW operates under a strict privacy regime which has its basis in Section 29 of the *Australian Institute of Health and Welfare Act 1987* (AIHW Act). Section 29 requires that confidentiality of data relating to persons (living and deceased) and organisations be maintained. The Privacy Act governs confidentiality of information about living individuals.

The AIHW is committed to reporting that maximises the value of information released for users while being statistically reliable and meeting legislative requirements described above.

The abbreviation 'n.p.' is used in tables to denote the suppression of data. Data (cells) in tables may be suppressed to maintain the privacy or confidentiality of a person or organisation, or because a proportion or other measure is related to a small number of events and may therefore not be reliable.

Data may also be suppressed to avoid attribute disclosure. Where necessary, other cells in the table may also be suppressed to prevent calculation of the confidential information. Unless otherwise noted, the totals in these tables include the suppressed information.

References

AIHW 2017. Variation in hospital admission policies and practices: Australian hospital statistics. Health services series no. 79. Cat. no. HSE 193. Canberra: AIHW.