

National Staphylococcus aureus Bacteraemia Data Collection, 2022-23: Quality Statement

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Identifying and definitional attributes

Metadata item type:	Data Quality Statement
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Data quality

Data quality statement summary:

Summary of key issues

- Due to the pandemic response requirements, the Australian Commission on Safety and Quality in Health Care (ACSQHC) issued guidance for the various exemption determinations for each state and territory with regards to data collection for infection surveillance. More details on the guidance can be accessed [on the ACSQHC website](#).
- Private hospitals supply data voluntarily to the National *Staphylococcus aureus* Bacteraemia Data Collection (NSABDC), and a low proportion of private hospitals report data. Coverage of the private sector is therefore incomplete and reported data is not fully representative of the sector. Comparisons between the public and private sector, therefore, may be unreliable.
- The New South Wales Department of Health provided the number of occupied bed days for New South Wales public hospitals, rather than the number of patient days under surveillance. Counts of occupied bed days are likely to be different from counts of days of patient care, and therefore limiting comparability of New South Wales public hospital data to equivalent data from other jurisdictions.
- ACT Health reported the data that was available. With the implementation of the Digital Health Record in early November 2022, processes for the collection and collation of health service data were still under development.

Description

The NSABDC includes counts of healthcare associated cases of *Staphylococcus aureus* bloodstream infections (SABSI) for each public hospital covered by SABSI surveillance arrangements, and for private hospitals that choose to provide data. The data for public hospitals are collected under hospital infection control arrangements by state and territory health authorities. The data include the counts of patient days under surveillance.

Data on the numbers of methicillin-resistant *Staphylococcus aureus* (MRSA) and methicillin-sensitive *Staphylococcus aureus* (MSSA) cases for public hospitals are reported separately at a hospital and state or territory level. The NSABDC uses the ACSQHC definition of SAB which defines a case (patient episode) as a positive blood culture for *Staphylococcus aureus*. For surveillance purposes, only the first isolated case per patient is counted, unless at least 14 days has passed without a positive blood culture, after which an additional episode may be recorded. To qualify as a healthcare-associated case, one or more additional criteria must be met – see the ACSQHC's [sabsi_surveillance_guide_-_june_2021.pdf](#).

Institutional environment: The Australian Institute of Health and Welfare (AIHW) is an independent corporate Commonwealth entity under the [Australian Institute of Health and Welfare Act 1987](#) (AIHW Act), governed by a [management board](#) and accountable to the Australian Parliament through the Health portfolio.

The AIHW is a nationally recognised information management agency. Its purpose is to create authoritative and accessible information and statistics that inform decisions and improve the health and welfare of all Australians.

Compliance with the confidentiality requirements in the AIHW Act, the Privacy Principles in the [Privacy Act 1988 \(Cth\)](#) and AIHW's data governance arrangements ensures that the AIHW is well positioned to release information for public benefit while protecting the identity of individuals and organisations.

For further information see the [AIHW website](#), which includes details about the AIHW's [governance](#) and our [role and strategic goals](#).

Timeliness: Data for the NSABDC are reported annually and include data for each financial year between 1 July and 30 June the following year. The reference period for this data set is 2022–23.

State and territory health departments and private hospitals provide the data to the AIHW by November each year. The Productivity Commission publishes the data for the public hospitals in the Report of Government Services in February of the following year.

Accessibility: The AIHW publishes data from the NSABDC annually on the [AIHW website](#).

Interpretability: Information on the definitions used for the NSABDC, including patient days, admitted patient, non-admitted patient and care type, are available on the AIHW's online metadata repository ([METEOR](#)). Definitions to support national monitoring of SABS infection can be found in the [Healthcare-associated infections NBEDS 2021–](#).

Relevance:

Data from the NSABDC are used for the Australian Health Performance Framework reporting of healthcare-associated SABSI.

Data were previously used for the:

- [National Healthcare Agreement performance indicator 22: Healthcare associated infections: Staphylococcus aureus bacteraemia, 2022](#)
- [National Healthcare Agreement Performance Benchmark G –Better health services: the rate of Staphylococcus aureus \(including MRSA\) bacteraemia is no more than 1.0 per 10,000 occupied bed days for acute care public hospitals by 2020–21 in each state and territory, 2022.](#)

From 1 July 2020, the agreed national benchmark is no more than 1.0 case of healthcare-associated SABSI per 10,000 days of patient care for public hospitals in each state/territory. Prior to this, the benchmark was 2.0 cases.

Each jurisdiction only reports cases associated with health care in their jurisdiction where healthcare services for those cases were provided.

There may be SABSI cases identified by a hospital which did not originate in that hospital. These cases are reported for the originating hospital, not the identifying hospital.

The purpose of SABSI surveillance is to identify the proportion of these infections associated with healthcare delivery. While most SABSI cases will be diagnosed during a patient's admission, some may be detected after admission. For indicator calculations, non-admitted patient episodes are included in the numerator, whereas in the denominator the count of patient days excludes non-admitted patient episodes. The amount of hospital activity reflected in patient days varies among jurisdictions and over time because of variation in admission practices.

AIHW publishes SABSI data by hospital peer group, based on the AIHW Australian hospital peer group classification, as follows:

- major hospitals
- large hospitals
- medium hospitals
- children's hospitals and combined women's and children's hospitals
- unpeered hospitals –specialised hospitals, sub and non-acute hospitals, small hospitals and clinics.

Some SABSI cases may be excluded due to the inherent difficulties in attributing the location of the infection. However, it is likely that the number of SABSI cases misclassified would be small.

The data have not been adjusted for differences in casemix among the states and territories or among hospital peer groups. 'Casemix' refers to the range and types of patients treated by a hospital or other health services. Patient comorbidities and procedures performed may be SABSI risk factors.

For some states and territories there is less than 100 per cent coverage of public hospitals as surveillance arrangements may not be in place in all wards or all hospitals.

Private hospitals supply data voluntarily to the NSABDC, and a low proportion of private hospitals report data. Coverage of the private sector is therefore incomplete and reported data is not fully representative of the sector. Comparisons between the public and private sector, therefore, may be unreliable.

Accuracy:

States and territories and private hospitals are primarily responsible for the quality of the data they provide. However, the AIHW undertakes validations on receipt of data. Data are checked for valid values, logical consistency and historical consistency. Potential errors are queried, and corrections and resubmissions may be made by the data provider in response to these edit queries. The AIHW does not adjust data to account for possible data errors or missing or incorrect values, except as stated above.

Processes and capacity to validate a patient episode of SABSI may vary between states and territories, and arrangements for the collection of data by hospitals. The reporting to state and territory health authorities may also vary. National and jurisdictional manuals for surveillance information should be referred to for details on case finding and definition application.

Coverage

The ACSQHC issued guidance for the various exemption determinations for each state and territory with regards to data collection for infection surveillance. The guidance can be accessed on the [ACSQHC website](#).

Noting that not all public hospitals/wards have SABSI surveillance arrangement in place, coverage of public hospitals within the collection is very high. In 2022–23 coverage ranged among states and territories from 97% to 100%, with an average of 99% nationally. This is an increase from 96% to 100% coverage among states and territories in 2020–21. In 2014–15 coverage ranged among states and territories from 94% to 100%.

For 2019–20, South Australia omitted hospitals that had no surveillance indicator for the calculation of the coverage rate. This omission has been corrected since 2020–21.

For private hospitals, the percentage of hospitals participating in the collection varies each year. In 2022–23, 150 private hospitals (23% of all private hospitals) participated in the NSABDC. Of the 23% that participated in the 2022–23 collection, coverage was 100%. Participation of private hospitals in the NSABDC varied in the years prior: 89 private hospitals (14%) participated in 2016–17, 160 (24%) in 2017–18, 183 (28%) in 2018–19, 183 (28%) in 2019–20, 130 (20%) in 2020–21, and 148 (23%) in 2021–22.

From 2019–20 onwards, the number of private hospitals has been sourced from the Australian Government Department of Health. For data from 2016–17 and before, the number of private hospitals was calculated using the Australian Bureau of Statistics (ABS) National Private Health Establishment Collection. As this collection ceased after 2016–17, there may have been an over-estimation of the percentage of private hospitals participating in the collection in 2017–18 and 2018–19 data.

The New South Wales Department of Health reports occupied bed days for New South Wales public hospitals, rather than patient days, for calculation of the performance indicator denominator. The comparability of New South Wales public hospital performance indicator data to that for other jurisdictions is therefore limited (but only by the small extent that counts of occupied bed days would be expected to differ from counts of patient days). New South Wales performance indicator data are included in the Australian performance indicator data because it is expected that at the national level the use of occupied bed days, rather than patient days, for New South Wales is unlikely to create a marked difference in the Australian performance indicator data.

Coherence: The NSABDC data were first reported in the 2010 COAG Reform Council National Agreement: Baseline performance report for 2008–09 (CRC 2010). Since then, further work has been undertaken on data development, including the definition of an episode of SABSI and the definition of the number of patient days under SABSI surveillance.

In 2021, the ACSQHC advised of updates to the definition of a SABSI case, which included clarifications on infections present or incubating upon admission, the inclusion of deep incisional/organ space surgical site infections related to surgically implanted devices within 90 days, and the clarification of infection classification associated with neutropenia and cytotoxic therapy.

In 2016, the definition was revised to exclude unqualified newborns of patient days under SABSI surveillance, and to update the neutropenia criterion, as advised by the ACSQHC.

The change to the neutropenia criterion is not considered to have materially affected the comparability of counts of SABSI cases for 2015–16 and subsequent years, with counts from previous years.

In Queensland, data for public hospitals for 2010–11 are not comparable to later years (and not comparable across jurisdictions for 2010–11) as the 2010–11 data only include patients aged 14 years and over, whereas the data for 2011–12 and later years include patients of all ages.

Due to the changes in the denominator of the performance indicator specification, data published in 2017 and subsequent years for the reporting years 2010–11 to 2015–16 are not comparable with data previously published in:

- the Council of Australian Governments (COAG) Reform Council publications
- the AIHW series 'Staphylococcus aureus bacteraemia in Australian public hospitals: Australian hospital statistics'
- the annual Report on Government Services produced by the Steering Committee for the Review of Government Service Provision.

Aggregated results for private hospitals should not be compared over time due to:

- the proportion of private hospitals participating in the NSABDC
- the changes in terms of which private hospitals participate in which collection years
- data on the numbers of MRSA and MSSA cases for public hospitals have been reported separately at a hospital and state or territory level since 2016–17 and were reported at a state and territory level from 2010–11 to 2015–16.

Data products

Implementation start date: 01/12/2017

Source and reference attributes

Submitting organisation: Australian Institute of Health and Welfare

Steward: [Australian Institute of Health and Welfare](#)

Reference documents: CRC (COAG Reform Council) 2010. National Healthcare Agreement: Baseline performance report for 2008–09. Sydney: COAG Reform Council.

ACSQHC (Australian Commission on Safety and Quality in Health Care) (2021) [Implementation Guide for Surveillance of Staphylococcus aureus Bacteraemia | Australian Commission on Safety and Quality in Health Care](#)

Relational attributes

**Related metadata
references:**

Supersedes [National Staphylococcus aureus Bacteraemia Data Collection, 2021-22; Quality Statement](#)

[AIHW Data Quality Statements](#), Superseded 16/05/2024

See also [Australian Health Performance Framework: PI 2.2.2–Healthcare-associated Staphylococcus aureus bloodstream infections, 2021](#)

[Health](#), Standard 11/07/2023

See also [National Healthcare Agreement: PI 22–Healthcare associated infections: Staphylococcus aureus bacteraemia, 2022](#)

[Health](#), Standard 24/09/2021