

# **National Healthcare Agreement: PB g–Better health services: the rate of Staphylococcus aureus (including MRSA) bacteraemia is no more than 2.0 per 10,000 occupied bed days for acute care public hospitals by 2011–12 in each state and territory, 2018**

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# National Healthcare Agreement: PB g–Better health services: the rate of *Staphylococcus aureus* (including MRSA) bacteraemia is no more than 2.0 per 10,000 occupied bed days for acute care public hospitals by 2011–12 in each state and territory, 2018

## Identifying and definitional attributes

<b>Metadata item type:</b>	Indicator
<b>Indicator type:</b>	Indicator
<b>Short name:</b>	PB g–The rate of <i>Staphylococcus aureus</i> (including MRSA) bacteraemia is no more than 2.0 per 10,000 occupied bed days for acute care public hospitals by 2011–12 in each state and territory, 2018
<b>METEOR identifier:</b>	658536
<b>Registration status:</b>	<a href="#">Health</a> , Superseded 19/06/2019
<b>Description:</b>	The rate of <i>Staphylococcus aureus</i> (including methicillin-resistant <i>Staphylococcus aureus</i> (MRSA)) bacteraemia is no more than 2.0 per 10,000 patient days for acute care public hospitals by 2011–12 in each state and territory.
<b>Indicator set:</b>	<a href="#">National Healthcare Agreement (2018)</a> <a href="#">Health</a> , Superseded 16/06/2019
<b>Outcome area:</b>	<a href="#">Hospital and Related Care</a> <a href="#">Health</a> , Standard 07/07/2010 <a href="#">National Health Performance Authority (retired)</a> , Retired 01/07/2016

## Collection and usage attributes

**Computation description:** Acute care public hospitals are defined as all public hospitals including those hospitals defined as public psychiatric hospitals in the Public Hospital Establishments National Minimum Data Set. All types of public hospitals are included, both those focusing on acute care, and those focusing on non-acute or sub-acute care, including psychiatric, rehabilitation and palliative care.

Unqualified newborns, hospital boarders and posthumous organ procurement are excluded from the indicator.

A patient-episode of *Staphylococcus aureus* bacteraemia (SAB) is defined as a positive blood culture for *Staphylococcus aureus*. For surveillance purposes, only the first isolate per patient is counted, unless at least 14 days has passed without a positive blood culture, after which an additional episode is recorded.

A *Staphylococcus aureus* bacteraemia will be considered to be healthcare-associated if: the first positive blood culture is collected more than 48 hours after hospital admission or less than 48 hours after discharge, OR, if the first positive blood culture is collected less than or equal to 48 hours after admission to hospital and the patient-episode of SAB meets at least one of the following:

1. SAB is a complication of the presence of an indwelling medical device (e.g. intravascular line, haemodialysis vascular access, cerebrospinal fluid (CSF) shunt, urinary catheter)
2. SAB occurs within 30 days of a surgical procedure where the SAB is related to the surgical site
3. SAB was diagnosed within 48 hours of a related invasive instrumentation or incision
4. SAB is associated with neutropenia contributed to by cytotoxic therapy. Neutropenia is defined as at least two separate calendar days with values of absolute neutrophil count (ANC) or total white blood cell count (WBC)  $<500$  cells/mm<sup>3</sup> ( $0.5 \times 10^9$  / L) on or within a 7-day time period which includes the date the positive blood specimen was collected (day 1), the 3 calendar days before and the 3 calendar days after.

Exclusions:

Cases where a known previous positive test has been obtained within the last 14 days are excluded. For example: if a patient has SAB in which 4 sets of blood cultures are positive over the initial 3 days of the patient's admission only 1 episode of SAB is recorded. If the same patient had a further set of positive blood cultures on day 6 of the same admission, these would not be counted again, but would be considered part of the initial patient-episode.

Note: If the same patient had a further positive blood culture 20 days after admission (i.e. greater than 14 days after their last positive blood culture on day 5), then this would be considered a second patient-episode of SAB.

See [Establishment—number of patient days, total N\[N\(7\)\]](#) for the definition of patient days.

Analysis by state and territory is based on location of the hospital.

Presented as a number per 10,000 patient days.

Coverage: Denominator ÷ Number of patient days for all public hospitals in the state or territory.

Any variation from the specifications by jurisdictions will be footnoted and described in the data quality statement.

**Computation:** 10,000 patient days × (Numerator ÷ Denominator)

**Numerator:** SAB patient episodes (as defined in the Computation description) associated with acute care public hospitals.

**Numerator data elements:**

**Data Element / Data Set**

**Data Element**

Person—*Staphylococcus aureus* bacteraemia episode indicator

**Data Source**

[State/territory infection surveillance data](#)

**Guide for use**

Data source type: Administrative by-product data

**Data Element / Data Set**

**Data Element**

Person—person identifier

**Data Source**

[State/territory infection surveillance data](#)

**Guide for use**

Data source type: Administrative by-product data

**Denominator:**

Number of patient days for public acute care hospitals under surveillance (i.e. only for hospitals included in the surveillance arrangements).

**Denominator data elements:**

**Data Element / Data Set**

**Data Element**

Episode of admitted patient care—admission date

**Data Source**

[State/territory admitted patient data](#)

**Guide for use**

Data source type: Administrative by-product data

**Data Element / Data Set**

**Data Element**

Episode of admitted patient care—separation date

**Data Source**

[State/territory admitted patient data](#)

**Guide for use**

Data source type: Administrative by-product data

**Data Element / Data Set**

**Data Element**

Establishment—*Staphylococcus aureus* bacteraemia surveillance indicator

**Data Source**

[State/territory admitted patient data](#)

**Guide for use**

Data source type: Administrative by-product data

**Data Element / Data Set**

**Data Element**

Establishment—organisation identifier (Australian)

**Data Source**

[State/territory admitted patient data](#)

**Guide for use**

Data source type: Administrative by-product data

**Disaggregation:**

2010–11, 2011–12, 2012–13, 2013–14, 2014–15, 2015–16 (updated for resupplied data), 2016–17—State and territory, by:

- Methicillin-resistant *Staphylococcus aureus* (MRSA)/Methicillin-sensitive *Staphylococcus aureus* (MSSA)

Some disaggregation may result in numbers too small for publication.

**Disaggregation data elements:**

**Data Element / Data Set**

**Data Element**

Establishment—Australian state/territory identifier

**Data Source**

[State/territory infection surveillance data](#)

**Guide for use**

Data source type: Administrative by-product data

**Data Element / Data Set**

**Data Element**

Methicillin-resistant *Staphylococcus aureus* (MRSA)/Methicillin-sensitive *Staphylococcus aureus* (MSSA) indicator

**Data Source**

[State/territory infection surveillance data](#)

**Guide for use**

Data source type: Administrative by-product data

**Comments:**

Most recent data available for 2018 National Healthcare Agreement performance reporting: 2016–17.

Baseline: 2009–10.

The number of SAB patient episodes associated with acute public hospitals under surveillance includes SAB patient episodes associated with all public hospitals, and the number of patient days for public acute care hospitals under surveillance includes the number of patient days for all public hospitals under surveillance.

For some states and territories there is less than 100% coverage of hospitals. This may impact on the reported rate. For those jurisdictions with incomplete coverage of acute care public hospitals (in the numerator), only patient days for those hospitals that contribute data are included (in the denominator). Specifically, if a hospital was not included in the SAB surveillance arrangements for part of the year, then the patient days for that part of the year are excluded. If part of the hospital was not included in the SAB surveillance arrangements (e.g. children's wards, psychiatric wards), then patient days for that part of the hospital are excluded. Patient days for 'non-acute' hospitals (such as rehabilitation and psychiatric hospitals) are included if the hospital was included in the SAB surveillance arrangements, but not otherwise. However, all these patient days are included in the coverage rate denominator measure of total number of patient days for all public hospitals in the state or territory.

Some states operated a 'signal surveillance' arrangement for smaller hospitals whereby the hospital notifies the appropriate authority if a SAB case is identified, but the hospital is not considered to have formal SAB surveillance as per larger hospitals. Where this arrangement is in place, these hospitals should be included as part of the indicator. That is, SAB patient episodes and patient days should be included as 'under surveillance'.

Only episodes associated with acute public hospital care in each jurisdiction should be counted. If a case is associated with care provided in another jurisdiction (cross border flows) then it is reported, where known, by the jurisdiction where the care associated with the SAB occurred.

There may be patient episodes of SAB identified by a hospital which did not originate in the identifying hospital (as determined by the definition of a patient episode of SAB), but in another public hospital. If the originating hospital is under surveillance, then the patient episode of SAB should be attributed to the originating hospital and should be included as part of the indicator. If the originating hospital is

not under SAB surveillance, then the patient episode is unable to be included in the indicator.

Patient episodes associated with care provided by private hospitals and non-hospital health care are excluded.

Patient days for unqualified newborns, hospital boarders and posthumous organ procurement are excluded.

Almost all patient episodes of SAB will be diagnosed when the patient is an admitted patient. However, the intention is that patient episodes are reported whether they were associated with admitted patient care or non-admitted patient care in public acute care hospitals.

Where there is significant variation, for example non-coverage of cases diagnosed less than 48 hours after admission, in the data collection arrangements it will affect the calculation of values across states and territories.

Variation in admission practices across jurisdictions will influence the denominator for this indicator, impacting on the comparability of rates.

Jurisdictional manuals should be referred to for full details of definitions used in infection control surveillance.

Note that the definition of a healthcare-associated SAB was revised by the Australian Commission on Safety and Quality in Health Care in 2016. In particular, the clinical criterion for SAB associated with neutropenia was revised. Data for 2010–11, 2011–12, 2012–13, 2013–14 and 2014–15 are provided according to the previous neutropenia criterion:

- SAB is associated with neutropenia ( $<1 \times 10^9$ ) contributed to by cytotoxic therapy

Data for 2015–16 and 2016–17 are provided according to the new neutropenia criterion:

- SAB is associated with neutropenia contributed to by cytotoxic therapy. Neutropenia is defined as at least 2 separate calendar days with values of absolute neutrophil count (ANC) or total white blood cell count (WBC)  $<500 \text{ cell/mm}^3$  ( $0.5 \times 10^9/\text{L}$ ) on or within a 7-day time period which includes the date the positive blood specimen was collected (Day 1), the 3 calendar days before and the 3 calendar days after.

## Representational attributes

<b>Representation class:</b>	Rate
<b>Data type:</b>	Real
<b>Unit of measure:</b>	Episode
<b>Format:</b>	N[NN].N

## Data source attributes

**Data sources:****Data Source**

[State/territory admitted patient data](#)

**Frequency**

Annual

**Data custodian**

State/territory health authorities

**Data Source**

[State/territory infection surveillance data](#)

**Frequency**

Annual

**Data custodian**

State/territory health authorities

## Accountability attributes

**Reporting requirements:** National Healthcare Agreement

**Organisation responsible for providing data:** Australian Institute of Health and Welfare

**Benchmark:** National Healthcare Agreement Performance Benchmark:

The rate of *Staphylococcus aureus* (including methicillin-resistant *Staphylococcus aureus* (MRSA)) bacteraemia is no more than 2.0 per 10,000 patient days for acute care public hospitals by 2011–12 in each state and territory.

Refer: [http://www.federalfinancialrelations.gov.au/content/npa/health/\\_archive/healthcare\\_national-agreement.pdf](http://www.federalfinancialrelations.gov.au/content/npa/health/_archive/healthcare_national-agreement.pdf)

**Further data development / collection required:** Specification: Final, the measure meets the intention of the indicator.

## Relational attributes

**Related metadata references:**

Supersedes [National Healthcare Agreement: PB g–Better health services: the rate of \*Staphylococcus aureus\* \(including MRSA\) bacteraemia is no more than 2.0 per 10,000 occupied bed days for acute care public hospitals by 2011–12 in each state and territory, 2017](#)

[Health](#), Superseded 30/01/2018

Has been superseded by [National Healthcare Agreement: PB g–Better health services: the rate of \*Staphylococcus aureus\* \(including MRSA\) bacteraemia is no more than 2.0 per 10,000 occupied bed days for acute care public hospitals by 2011–12 in each state and territory, 2019](#)

[Health](#), Superseded 13/03/2020

See also [National Healthcare Agreement: PI 22–Healthcare associated infections: \*Staphylococcus aureus\* bacteraemia, 2018](#)

[Health](#), Superseded 19/06/2019