National Healthcare Agreement: PI 22-Healthcare associated infections, 2015

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National Healthcare Agreement: PI 22-Healthcare associated infections, 2015

Identifying and definitional attributes

Metadata item type:	Indicator
Indicator type:	Progress measure
Short name:	PI 22-Healthcare-associated infections, 2015
METEOR identifier:	559022
Registration status:	Health, Superseded 08/07/2016
Description:	*Staphylococcus aureus* bacteraemia (SAB) associated with acute care public hospitals (excluding cases associated with private hospitals and non-hospital care).
Indicator set:	National Healthcare Agreement (2015) Health, Superseded 08/07/2016
Outcome area:	Hospital and Related Care Health, Standard 07/07/2010 National Health Performance Authority (retired), Retired 01/07/2016
Data quality statement:	National Healthcare Agreement: PI 22-Healthcare associated infections, 2015 QS Health, Superseded 08/07/2016

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 (NMDS). All types of public hospitals are included, both those focusing on acute care, and those focusing on non-acute or subacute care, including psychiatric, rehabilitation and palliative care.

Unqualified newborns are included in the indicator. Hospital boarders and posthumous organ procurement are excluded from the indicator.

A patient-episode of 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 48 hours or less after admission and one or more of the following key clinical criteria was met for the patient-episode of SAB:

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. An invasive instrumentation or incision related to the SAB was performed within 48 hours
4. SAB is associated with neutropenia ($<1 \times 10^9$) contributed to by cytotoxic therapy

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 one 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 on day 5), then this would be considered a second patient-episode of SAB.

Denominator: includes unqualified newborns, excludes posthumous organ procurement and hospital boarders.

See Establishment—number of patient days, total N[N(7)] for the definition of patient days. Also included in the denominator are patient days for unqualified newborns, which are not covered in the linked definition. Patient days for unqualified newborns must be reported in addition to patient days as defined in the link.

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

Presented as:

- a number, and
- 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:

Numerator

10,000 x (Numerator ÷ Denominator).

Numerator:	Number of SAB patient episodes (as defined above) associated with acute care public hospitals.

Numerator data elements:

┌─ **Data Element / Data Set** ─────────────────────────────────┐

Data Element

Person—*Staphyloccocus aureus* bacteraemia episode indicator

Data Source

State/territory infection surveillance data

Guide for use

Data source type: Administrative by-product data

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┌─ **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

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Denominator:	Number of patient days for public acute care hospitals under surveillance (i.e. only for hospitals included in the surveillance arrangements).
	Include unqualified newborns, exclude posthumous organ procurement and hospital boarders.

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—*Staphyloccocus 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 (updated for resupplied data), 2013–14—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 2015 National Healthcare Agreement (NHA) performance reporting: 2013–14.

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 per cent 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 a state or territory.

Some states operate 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 SAB 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 are included. Patient days for 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 cases 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 comparability of rates.

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

Note that patient episodes of SAB are just one type of healthcare associated infection. Hence, this performance indicator is not a complete measure of healthcare associated infections for the outcome area of Hospital and Related Care.

Representational attributes

Representation class:	Rate
Data type:	Real
Unit of measure:	Episode
Format:	NN[N]

Indicator conceptual framework

| **Framework and dimensions:** | [Safety](#) |

Data source attributes

Data sources:

<table>
<tr><td colspan="2">Data Source</td></tr>
<tr><td colspan="2">State/territory admitted patient data</td></tr>
<tr><td colspan="2">Frequency</td></tr>
<tr><td colspan="2">Annual</td></tr>
<tr><td colspan="2">Data custodian</td></tr>
<tr><td colspan="2">State/territory health authorities</td></tr>
</table>

<table>
<tr><td colspan="2">Data Source</td></tr>
<tr><td colspan="2">State/territory infection surveillance data</td></tr>
<tr><td colspan="2">Frequency</td></tr>
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<tr><td colspan="2">Data custodian</td></tr>
<tr><td colspan="2">State/territory health authorities</td></tr>
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Accountability attributes

Reporting requirements:	National Healthcare Agreement
Organisation responsible for providing data:	Australian Institute of Health and Welfare
Benchmark:	[National Healthcare Agreement: PB g-Better health: the rate of *Staphylococcuss aureus* (including MRSA) bacteraemia is no more than 2.0 per cent per 10,000 occupied bed days for acute care public hospitals by 2011-12 in each state and territory, 2015](#)
Further data development / collection required:	Specification: Substantial work required, the measure requires significant work to be undertaken.

Relational attributes

Related metadata references:

Supersedes National Healthcare Agreement: PI 22-Healthcare associated infections, 2014
    Health, Superseded 14/01/2015

Has been superseded by National Healthcare Agreement: PI 22–Healthcare associated infections: Staphylococcus aureus bacteraemia, 2016
    Health, Superseded 04/08/2016

See also National Healthcare Agreement: PB g-Better health: 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, 2015
    Health, Superseded 08/07/2016

See also National Healthcare Agreement: PI 23-Unplanned hospital readmission rates, 2015
    Health, Superseded 08/07/2016