

# Surveillance of healthcare associated infection: Staphylococcus aureus bacteraemia NBPDS

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# Surveillance of healthcare associated infection: *Staphylococcus aureus* bacteraemia NBPDS

## Identifying and definitional attributes

**Metadata item type:** Data Set Specification

**METEOR identifier:** 391133

**Registration status:** [HealthL](#), Standard 15/11/2012

**DSS type:** Data Set Specification (DSS)

**Scope:** The purpose of this National best practice data set (NBPDS) is to support a comprehensive surveillance program of healthcare associated infections (HAI). HAIs are those infections that are not present or incubating at the time of admission to a healthcare program or facility, develop within a healthcare organisation or are produced by micro-organisms acquired during admission.

This NBPDS is intended to support *Staphylococcus aureus* bacteraemia (SAB) surveillance in Australian hospitals. It is designed for the purposes of HAI surveillance, not diagnosis. The value of surveillance as part of a hospital infection control program is supported by high-grade international and national evidence.

This NBPDS supports development of local forms and systems for surveillance of HAIs and associated data collection. This NBPDS applies to patient episodes of SAB in Australian hospitals.

### **Case Definition – Healthcare associated *Staphylococcus aureus* bacteraemia (SAB)**

A patient-episode of *Staphylococcus aureus* bacteraemia (SAB) is 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 culture, after which an additional episode is recorded.

A SAB will be considered to be a healthcare-associated event if:

EITHER

- CRITERION A. The patient's first SAB positive blood culture was collected more than 48 hours after hospital admission or less than 48 hours after discharge.

OR

- CRITERION B. The patient's first positive SAB blood culture was collected less than or equal to 48 hours after hospital 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, 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 (Neutrophils: less than  $1 \times 10^9/L$ ) contributed to by cytotoxic therapy

In order for jurisdictions and private hospital ownership groups to accurately report and monitor Healthcare Associated Infections, the data elements listed should be collected at hospital level for each patient-episode of *Staphylococcus aureus* bacteraemia. HAI patient episode data elements for SAB, by short name

Data elements to be collected for each patient episode	Data elements used for calculation of SAB rates
Person identifier	Patient days
Family name	Patient episodes of healthcare associated SAB
Given name(s)	
Indigenous status	
Date of birth	
Sex	
Address line (person)	
Suburb/town/locality name (person)	
Australian state/territory identifier	
Australian postcode (address)	
Admission date	
Separation date	
Ward/clinical area	
Specimen collection date	
Specimen collection time	
Laboratory number	
Specimen identifier	
Laboratory result identifier	
Healthcare associated SAB clinical criteria	
Staphylococcus aureus bacteraemia status	
SAB methicillin susceptibility	
Antibiotic susceptibility (MRSA isolate)	
Antibiotic susceptibility indicator (MRSA isolate)	
Establishment number	

## Collection and usage attributes

<b>Statistical unit:</b>	Episodes of infection ( <i>Staphylococcus aureus</i> bacteraemia (SAB))
<b>Guide for use:</b>	Surveillance data should be used to identify local problem areas and implement appropriate policy and clinical interventions to improve the quality of care, not for external benchmarking. Effective surveillance systems provide the impetus for change and make it possible to evaluate the effectiveness of interventions. An effective surveillance system is one that provides timely and reliable information to hospital managers and clinicians to effectively manage HAI.
<b>Comments:</b>	Surveillance is an important tool to reduce HAI. The purpose of collecting, analysing, and then acting on reliable surveillance data is to improve quality and patient safety within a service or facility or jurisdiction.

## Source and reference attributes

<b>Submitting organisation:</b>	Australian Commission on Safety and Quality in Health Care (ACSQHC)
<b>Origin:</b>	ACSQHC Healthcare Associated Infection Advisory Committee's Technical Working Group

## Relational attributes

Related metadata references:

See also [Healthcare-associated infections NBEDS 2016-2021 Health!](#), Standard 25/01/2018

## Metadata items in this Data Set Specification

Seq No.	Metadata item	Obligation	Max occurs
1	<a href="#">Person—person identifier, XXXXXX[X(14)]</a>	Optional	1
2	<a href="#">Person (name)—family name, text X[X(39)]</a>	Optional	1
3	<a href="#">Person (name)—given name, text X[X(39)]</a>	Optional	1
4	<a href="#">Person—Indigenous status, code N</a>	Optional	1
5	<a href="#">Person—date of birth, DDMMYYYY</a>	Optional	1
6	<a href="#">Person—sex, code N</a>	Optional	1
7	<a href="#">Person (address)—address line, text X[X(179)]</a>	Optional	1
8	<a href="#">Address—suburb/town/locality name, text X[X(45)]</a>	Optional	1
9	<a href="#">Person—Australian state/territory identifier, code N</a>	Optional	1
10	<a href="#">Address—Australian postcode, Australian postcode code (Postcode datafile) {NNNN}</a>	Optional	1
11	<a href="#">Episode of admitted patient care—admission date, DDMMYYYY</a>	Optional	1
12	<a href="#">Episode of admitted patient care—separation date, DDMMYYYY</a>	Optional	1
13	<a href="#">Establishment—ward/clinical area name, text X[X(39)]</a>	Optional	1
14	<a href="#">Person—specimen collection date, DDMMYYYY</a>	Optional	1
15	<a href="#">Person—specimen collection time, hhmm</a>	Optional	1
16	<a href="#">Laboratory—organisation identifier, text X[X(39)]</a>	Optional	1
17	<a href="#">Laboratory—specimen identifier, text X[X(39)]</a>	Optional	1
18	<a href="#">Laboratory—result identifier, text X[X(39)]</a>	Optional	1
19	<a href="#">Patient episode of Staphylococcus aureus bacteraemia—most probable healthcare associated Staphylococcus aureus bacteraemia clinical criteria, code N</a>	Optional	1
20	<a href="#">Patient episode of Staphylococcus aureus bacteraemia—Staphylococcus aureus bacteraemia status, code N</a>	Conditional	1
21	<a href="#">Patient episode of Staphylococcus aureus bacteraemia—Staphylococcus aureus methicillin susceptibility indicator, yes/no code N</a>	Conditional	1
22	<a href="#">Methicillin-resistant Staphylococcus aureus isolate—antibiotic susceptibility, text X[X(39)]</a>	Conditional	8
	<b>Conditional obligation:</b>		
	Required for MRSA isolates only, where the <i>Staphylococcus aureus</i> is resistant to methicillin.		
23	<a href="#">Methicillin-resistant Staphylococcus aureus isolate—antibiotic susceptibility indicator, yes/no code N</a>	Conditional	8
24	<a href="#">Establishment—number of patient days, total N[N(7)]</a>	Mandatory	1
25	<a href="#">Establishment—number of patient episodes of healthcare associated Staphylococcus aureus bacteraemia, total episodes N[NNNN]</a>	Mandatory	1
26	<a href="#">Establishment—organisation identifier (state/territory), NNNNN</a>	Mandatory	1