Surveillance of healthcare associated infection: Staphylococcus aureus bloodstream infection NBPDS

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# Surveillance of healthcare associated infection: Staphylococcus aureus bloodstream infection NBPDS

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| Identifying and definitional attributes |
| Metadata item type: | Data Set Specification |
| METEOR identifier: | 752224 |
| Registration status: | [Health](https://meteor.aihw.gov.au/RegistrationAuthority/12), Standard 09/12/2022 |
| 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 bloodstream infection (SABSI)**](https://meteor.aihw.gov.au/content/751480) 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 SABSI in Australian hospitals.**Case Definition – Healthcare associated *Staphylococcus aureus* bloodstream infection (SABSI)**A patient-episode of *Staphylococcus aureus* bloodstream infection (SABSI) is a positive blood culture for *Staphylococcus aureus* (S. 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 a subsequent episode is recorded. **A SABSI is healthcare-associated if Criterion A1 or A2, or Criterion B1, B2, B3 or B4 are met.**  **CRITERION A:** The patient’s first Staphylococcus aureus positive blood culture was collected:A1. > 48 hours after admission, with no documented evidence that infection was present (including incubating) on admissionORA2. < 48 hours after discharge. **OR** **CRITERION B:** The patient’s first positive Staphylococcus aureus blood culture was collected ≤ 48 hours after admission and one or more of the following key clinical criteria is met:B1. SABSI is a complication of the presence of an indwelling medical deviceB2. SABSI occurs within 30 days of a surgical procedure where the SABSI is related to the surgical site, or 90 days for deep incisional/organ space infections related to a surgically implanted deviceB3. SABSI was diagnosed within 48 hours of a related invasive instrumentation or incisionB4. SABSI is associated with neutropenia\* contributed to by cytotoxic therapy and is unrelated to the presence of an indwelling medical device. If neither Criterion A1 or A2, nor Criterion B1, B2, B3 or B4 are met, then the SABSI is considered to be community-acquired for the purposes of surveillance. \*Neutropenia is defined as at least two separate calendar days with values of absolute neutrophil count (ANC) or total white blood cells count (WBC) <500 cells/mm3 (<0.5 X 109/L) on or within a seven-day time period which includes the date the positive blood specimen was collected (Day 1), the three calendar days before and the three calendar days after. |

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| Collection and usage attributes |
| Statistical unit: | Episodes of infection [*Staphylococcus aureus* bloodstream infection (SABSI)] |
| Guide for use: | 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.This NBPDS collects data at 2 levels:1. At the individual level, with data elements to be collected for each patient episode;
2. At the aggregate level, with data elements used for calculation of SABSI rates.

The data elements to be collected at each level are specified in the table below:

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| --- | --- |
|  **Data elements to be collected for each patient episode** | **Data elements used for calculation of SABSI rates** |
| Person identifier | Patient days |
| Family name | Patient episodes of healthcare associated SABSI |
| Given name(s) |   |
| Indigenous status |   |
| Date of birth |   |
| Sex |   |
| Gender |   |
| 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 SABSI clinical criteria |   |
| Staphylococcus aureus bloodstream infection status |   |
| SABSI methicillin susceptibility |   |
| Antibiotic susceptibility (MRSA isolate) |   |
| Antibiotic susceptibility indicator (MRSA isolate) |   |
| Establishment number |   |

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| Comments: | 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 |
| Submitting organisation: | Australian Commission on Safety and Quality in Health Care |
| Origin: | ACSQHC Healthcare Associated Infection Advisory Committee's Technical Working Group |
| Reference documents: | ACSQHC (Australian Commission on Safety and Quality in Health Care) 2021. Implementation Guide for the Surveillance of Staphylococcus aureus bloodstream infection. Sydney: ACSQHC, viewed 10 February 2022 <https://www.safetyandquality.gov.au/publications-and-resources/resource-library/implementation-guide-surveillance-staphylococcus-aureus-bloodstream-infection> |
| Relational attributes |
| Related metadata references: | Supersedes [Surveillance of healthcare associated infection: Staphylococcus aureus bacteraemia NBPDS](https://meteor.aihw.gov.au/content/391133)       [Health](https://meteor.aihw.gov.au/RegistrationAuthority/12), Superseded 09/12/2022See also [Healthcare-associated infections NBEDS 2021–](https://meteor.aihw.gov.au/content/751510)       [Health](https://meteor.aihw.gov.au/RegistrationAuthority/12), Standard 10/06/2022See also [Healthcare-associated infections NBEDS 2025–](https://meteor.aihw.gov.au/content/792055)       [Health](https://meteor.aihw.gov.au/RegistrationAuthority/12), Recorded 26/04/2024 |

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| Metadata items in this Data Set Specification  |
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| --- | --- | --- | --- |
| Seq No. | Metadata item | Obligation | Max occurs |
| 1 | [Person—person identifier, XXXXXX[X(14)]](https://meteor.aihw.gov.au/content/290046) | Optional | 1 |
| 2 | [Person—family name, text X[X(39)]](https://meteor.aihw.gov.au/content/613331) | Optional | 1 |
| 3 | [Person—given name, text X[X(39)]](https://meteor.aihw.gov.au/content/613340) | Optional | 1 |
| 4 | [Person—Indigenous status, code N](https://meteor.aihw.gov.au/content/602543) | Optional | 1 |
| 5 | [Person—date of birth, DDMMYYYY](https://meteor.aihw.gov.au/content/287007) | Optional | 1 |
| 6 | [Person—sex, code X](https://meteor.aihw.gov.au/content/741686) | Optional | 1 |
| 7 | [Person—gender, code X](https://meteor.aihw.gov.au/content/741842) | Optional | 1 |
| 8 | [Person (address)—address line, text X[X(179)]](https://meteor.aihw.gov.au/content/286620) | Optional | 1 |
| 9 | [Address—suburb/town/locality name, text X[X(45)]](https://meteor.aihw.gov.au/content/429889) | Optional | 1 |
| 10 | [Person—Australian state/territory identifier, code N](https://meteor.aihw.gov.au/content/720078) | Optional | 1 |
| 11 | [Address—Australian postcode, code (Postcode datafile) NNNN](https://meteor.aihw.gov.au/content/611398) | Optional | 1 |
| 12 | [Episode of admitted patient care—admission date, DDMMYYYY](https://meteor.aihw.gov.au/content/695137) | Optional | 1 |
| 13 | [Episode of admitted patient care—separation date, DDMMYYYY](https://meteor.aihw.gov.au/content/270025) | Optional | 1 |
| 14 | [Establishment—ward/clinical area name, text X[X(39)]](https://meteor.aihw.gov.au/content/389201) | Optional | 1 |
| 15 | [Person—specimen collection date, DDMMYYYY](https://meteor.aihw.gov.au/content/428420) | Optional | 1 |
| 16 | [Person—specimen collection time, hhmm](https://meteor.aihw.gov.au/content/754348) | Optional | 1 |
| 17 | [Laboratory—organisation identifier, text X[X(39)]](https://meteor.aihw.gov.au/content/390779) | Optional | 1 |
| 18 | [Laboratory—specimen identifier, text X[X(39)]](https://meteor.aihw.gov.au/content/428518) | Optional | 1 |
| 19 | [Laboratory—result identifier, text X[X(39)]](https://meteor.aihw.gov.au/content/428639) | Optional | 1 |
| 20 | [Patient episode of Staphylococcus aureus bloodstream infection—most probable origin, healthcare associated clinical criteria code N](https://meteor.aihw.gov.au/content/752242)***Conditional obligation:***Conditional on there being at least one patient episode reported for [Establishment—number of patient episodes of healthcare associated Staphylococcus aureus bloodstream infection, total episodes N[NNNN]](https://meteor.aihw.gov.au/content/752302) | Conditional | 1 |
| 21 | [Patient episode of Staphylococcus aureus bloodstream infection—infection setting, origin code N](https://meteor.aihw.gov.au/content/752253)***Conditional obligation:***Conditional on there being at least one patient episode reported for [Patient episode of Staphylococcus aureus bloodstream infection—most probable origin, clinical criteria code N](https://meteor.aihw.gov.au/content/752242) | Conditional | 1 |
| 22 | [Patient episode of Staphylococcus aureus bloodstream infection—Staphylococcus aureus methicillin susceptibility indicator, yes/no code N](https://meteor.aihw.gov.au/content/752267)***Conditional obligation:***Conditional on there being at least one patient episode reported for [Establishment—number of patient episodes of healthcare associated Staphylococcus aureus bloodstream infection, total episodes N[NNNN]](https://meteor.aihw.gov.au/content/752302) | Conditional | 1 |
| 23 | [Methicillin-resistant Staphylococcus aureus isolate—antibiotic susceptibility indicator, yes/no code N](https://meteor.aihw.gov.au/content/752295)***Conditional obligation:***Required where [Patient episode of Staphylococcus aureus bloodstream infection—Staphylococcus aureus methicillin susceptibility indicator, yes/no code N](https://meteor.aihw.gov.au/content/752267) is reported as CODE 2 No | Conditional | 1 |
| 24 | [Methicillin-resistant Staphylococcus aureus isolate—antibiotic susceptibility, text X[X(39)]](https://meteor.aihw.gov.au/content/752282)***Conditional obligation:***Required where [Methicillin-resistant Staphylococcus aureus isolate—antibiotic susceptibility indicator, yes/no code N](https://meteor.aihw.gov.au/content/752295) is reported as CODE 1 Yes | Conditional | 99 |
| 25 | [Establishment—number of patient days, total N[N(7)]](https://meteor.aihw.gov.au/content/270045) | Mandatory | 1 |
| 26 | [Establishment—number of patient episodes of healthcare-associated staphylococcus aureus bloodstream infection, total episodes N[NNNN]](https://meteor.aihw.gov.au/content/752302) | Mandatory | 1 |
| 27 | [Establishment—organisation identifier (state/territory), NNNNN](https://meteor.aihw.gov.au/content/269975) | Mandatory | 1 |

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