Sepsis clinical care standard indicators: 3a-Proportion of patients with sepsis who had blood cultures taken prior to starting antimicrobials

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# Sepsis clinical care standard indicators: 3a-Proportion of patients with sepsis who had blood cultures taken prior to starting antimicrobials

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| Identifying and definitional attributes | |
| Metadata item type: | Indicator |
| Indicator type: | Indicator |
| Short name: | 3a-Proportion of patients with sepsis who had blood cultures taken prior to starting antimicrobials |
| METEOR identifier: | 755644 |
| Registration status: | [Australian Commission on Safety and Quality in Health Care](https://meteor.aihw.gov.au/RegistrationAuthority/18), Standard 30/06/2022 |
| Description: | The proportion of patients with sepsis who had blood cultures taken prior to starting antimicrobials. |
| Rationale: | Antimicrobial therapy is managed in line with the Antimicrobial Stewardship Clinical Care Standard.  Blood cultures for microbiology testing should be taken for patients with suspected sepsis before starting antimicrobial therapy, when this will not delay urgent treatment. This ensures that treatment can be specific for the infecting organism, and that the most appropriate narrow-spectrum antimicrobial is used. |
| Indicator set: | [Clinical care standard indicators: Sepsis](https://meteor.aihw.gov.au/content/755589)  [Australian Commission on Safety and Quality in Health Care](https://meteor.aihw.gov.au/RegistrationAuthority/18), Standard 30/06/2022 |

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| Collection and usage attributes | |
| Computation description: | The numerator and denominator include patients admitted to hospital and non-admitted patients treated in the emergency department.  For the numerator and the denominator, patients with sepsis can be identified using the [ICD codes provided on the ACSQHCs website](https://www.safetyandquality.gov.au/sepsis-codes) or through other prospective or retrospective methods.  Measurement of the numerator and denominator requires confirmation that the patient had sepsis and was administered antimicrobials during their hospitalisation. Exclude patients administered antimicrobials prior to being hospitalised.  Measurement of the numerator requires documentation of timestamps in the patient medical record to determine when antimicrobials are administered in relation to the taking of blood cultures.  For the numerator, the appropriate number of blood cultures to be taken prior to administration of antimicrobials is:   * At least two sets of blood cultures for adult and maternal care patients * At least one set of blood cultures for neonatal and other paediatric care patients.   Only those patients in the denominator where the appropriate number of blood cultures were taken before the patient was administered antimicrobials are valid for inclusion in the numerator.  Presented as a percentage. |
| Computation: | (Numerator ÷ Denominator) x 100​ |
| Numerator: | Number of patients in the denominator who had the appropriate number of blood cultures taken prior to administration of antimicrobials. |
| Denominator: | Number of patients with sepsis who were administered antimicrobials during their hospitalisation. |
| Comments: | This indicator is based on existing indicators in use in Australia. For example, the indicator included in the Sepsis Measurement Framework established by the Clinical Excellence Commission ‘Percentage of patients who have blood cultures prior to commencement of IV antibiotics’ (Clinical Excellence Commission, 2021). |
| Representational attributes | |
| Representation class: | Percentage |
| Data type: | Real |
| Unit of measure: | Service event |
| Format: | N[NN] |
| Accountability attributes | |
| Reporting requirements: | Not applicable. |
| Organisation responsible for providing data: | Not applicable. |
| Accountability: | These indicators are for local quality improvement. Monitoring the implementation of the Sepsis Clinical Care Standard (ACSQHC, 2022) will assist in meeting some of the requirements of the National Safety and Quality Health Service Standards (ACSQHC, 2021). |
| Other issues caveats: | Applicable settings: Public and private hospitals. |
| Source and reference attributes | |
| Submitting organisation: | Australian Commission on Safety and Quality in Health Care |
| Reference documents: | Australian Commission on Safety and Quality in Health Care. Antimicrobial Stewardship Clinical Care Standard. Sydney: ACSQHC; 2020.  Clinical Excellence Commission (AU). Sepsis Measurement Framework 2021 May [cited 2021 June]. Available from: <https://www.cec.health.nsw.gov.au/__data/assets/pdf_file/0009/647451/Sepsis-Measurement-Framework.pdf> |