

Sepsis

Clinical Care Standard

The *Sepsis Clinical Care Standard* aims to ensure that a patient presenting with signs and symptoms of sepsis is recognised early and receives coordinated, best-practice care so that the risk of death or ongoing morbidity is reduced.

The *Sepsis Clinical Care Standard* contains seven quality statements that describe the health care that should be provided to patients of all ages presenting with signs and symptoms of sepsis. It also addresses the care that should be provided in hospital and after discharge, including survivorship.

It includes a set of indicators to support healthcare services to monitor how well they are implementing the care recommended in this clinical care standard and to support local quality improvement activities.

This information sheet describes what the quality statements mean for healthcare services and lists the indicators.

The definitions required to collect and calculate indicator data are specified online at meteor.aihw.gov.au/content/index.phtml/itemId/755589.

Monitoring the implementation of this clinical care standard can help healthcare services to achieve actions within the [*National Safety and Quality Health Service \(NSQHS\) Standards*](#).

1 Could it be sepsis?

A diagnosis of sepsis is considered in any patient with an acute illness or clinical deterioration that may be due to infection. A clinical support tool that includes assessment of vital signs and lactate is used to help recognise sepsis early and escalate care when required.

For acute facilities, ensure that the implementation of protocols to support early recognition and escalation of care for sepsis is consistent with the NSQHS Standards, including actions from:

- Preventing and Controlling Infections Standard (Actions 3.18 and 3.19)
- Recognising and Responding to Acute Deterioration Standard (Actions 8.01 and 8.06)
- Comprehensive Care Standard (Action 5.10).

For primary and community healthcare services, including general practice, ensure that the implementation of triage protocols is consistent with the Primary and Community Healthcare Standards, including the 'Recognising and responding to serious deterioration and minimising harm' criterion from the Clinical Safety Standard.

Formalise and implement locally agreed clinical support tools to assist in structured screening and assessment for sepsis. The tools should include:

- Initial assessment and monitoring of vital signs
- Lactate measurement (in acute facilities)
- Other relevant observations and the clinical criteria for further evaluation to enable prompt recognition of sepsis.

In most cases, the relevant state or territory health department will have developed these for widespread implementation.

Implement protocols for using these tools, which should include:

- Regular education for all relevant staff in using the protocols and the criteria for sepsis recognition and management
- Universal and direct access to the clinical decision support tools
- Routine review of the use of the tools and measures, and evaluation of their effectiveness for detecting sepsis.

Support clinicians with accessing regular and ongoing training in sepsis recognition and management.

Provide access to point-of-care lactate testing and guidelines for its appropriate use in settings where sepsis may occur.

Consider embedding alert systems in electronic healthcare records, if system capacity allows.

EQUITY AND CULTURAL SAFETY FOR HEALTHCARE SERVICES

Ensure that systems are in place so that patients can be assessed and cared for in a way that is free from racism, bias and assumption.

Educate and train staff in cultural awareness and cultural safety regularly.

Systemic barriers to presentation and taking a medical history may include language differences, communication issues, being from a vulnerable community (such as people with disabilities or people without housing) and a lack of cultural safety.

The incidence of sepsis is higher in Aboriginal and Torres Strait Islander peoples than in the non-Indigenous population. Address barriers to healthcare access by using Aboriginal and Torres Strait Islander health workers and liaison officers and interpreters who can help patients to navigate the service and their treatment options.

Indicator for local monitoring

Indicator 1a: Proportion of patients with suspected sepsis who had blood lactate levels taken as a part of screening for sepsis.

2 Time-critical management

Sepsis is a time-critical medical emergency. Assessment and treatment of a patient with suspected sepsis are started urgently according to a locally approved clinical pathway, and their response to treatment is monitored and reviewed. The patient is reviewed by a clinician experienced in recognising and managing sepsis, and is escalated to a higher level of care when required.

In any setting where sepsis may occur, ensure that there is a policy or guideline for sepsis care that reflects the time-critical nature of treatment and provides parameters for evidence-based practice.

Ensure that there is a locally approved sepsis clinical pathway appropriate to the healthcare setting that includes the essential elements in Box 1. In most cases, this will be a pathway that has been developed at the statewide or territory-wide level.

Policies, procedures and guidelines should support the delivery of care described in the locally approved sepsis clinical pathway regarding:

- Ensuring that there are multidisciplinary clinical governance processes, including oversight by a governing body. These processes should include: endorsement, implementation and ongoing use of the locally approved sepsis pathway, to assess adherence to the pathway and evaluate its outcomes. Outcomes may include its effectiveness and the impact on antimicrobial prescribing
- Providing timely access to the appropriate diagnostics, medicines and treatments that are required for implementation of the pathway
- Ensuring that all clinicians initiating and following the pathway complete competency-based training on how to use it
- Ensuring that processes and resource allocation allow timely escalation to an appropriate clinician with experience in recognising and managing sepsis available 24 hours a day, seven days a week. This may require
 - local action to identify the most relevant clinician(s) to contact, either through telehealth or in consultation with clinicians in an acute facility
 - clear communication on the roles and responsibilities of team members when escalating care
- Supporting multidisciplinary collaboration and teamwork between critical care, medical, surgical and paediatric teams to optimise the timely management of patients

- Supporting and evaluating appropriate documentation within the pathway, and that this documentation forms part of the healthcare record. This includes documentation of the final diagnosis (whether it is sepsis or an alternative diagnosis) and considers the patient's age and cultural needs
- Outlining the roles and responsibilities of lead clinicians
- Evaluating adherence to the pathway and its performance, including assessment of family and patient experience.

Ensure that rapid response systems are in place for deteriorating patients, including those with suspected sepsis. Ensure that patients have access to a clinician with expertise in sepsis who should be involved in their care during the first 48 hours and beyond.

Ensure that care escalation processes are accessible via both patient and clinician-led pathways, and that these are communicated to clinicians and monitored to ensure that they are adhered to. Ensure that information for consumers on how to escalate care is widely available, so that patients, carers and families can easily escalate care independently from clinicians.

Tertiary hospitals and referral centres should know which hospitals refer to their service, and be able to respond promptly when being consulted about, or accepting transfers of, patients with suspected or probable sepsis. Ensure that systems are in place so that healthcare services, including primary care services, can communicate in an organised way that reflects the patient's care needs and escalation time frames.

Ensure that policies and protocols allow for appropriate time-critical treatment to start before or during transfer if transport to an acute care hospital is expected to take more than 60 minutes (such as in remote areas).

Indicators for local monitoring

Indicator 2a: Evidence of a locally approved sepsis clinical pathway. The pathway should include:

- Criteria to support clinical decision-making to enable recognition of sepsis
- Triggers and time frames for escalation to a clinician experienced in recognising and managing sepsis, higher levels of care or other healthcare services
- Guidance on appropriate interventions and the timing of their use
- Time frames for clinical review, including review of investigation results, response to treatment and the antimicrobial plan
- Prompts to consider the patient's age, cultural needs, goals of care and advance care plans
- Prompts to consider alternative diagnoses.

Indicator 2b: Evidence of local arrangements that support the delivery of care described in the local sepsis clinical pathway. The local arrangements should specify the:

- Multidisciplinary clinical governance processes for the pathway
- Process to ensure access to the appropriate diagnostics, medicines, and treatments required to implement the pathway
- Process to enable escalation to a clinician experienced in recognising and managing sepsis 24 hours a day, seven days a week
- Documentation requirements within the pathway and the patient's healthcare record, including documentation of their final diagnosis
- Process to ensure that clinicians using the pathway complete competency-based training on its use
- Process to assess adherence to the pathway and its performance, including assessment of patient experience.

Indicator 2c: Proportion of patients with sepsis who were treated according to the locally approved sepsis clinical pathway.

Box 1: Essential elements of a sepsis clinical pathway

Clinical pathways are designed to assist clinical judgement using the best available clinical evidence. Sepsis clinical pathways should include:

- Criteria to support clinical decision-making to enable recognition of sepsis, including
 - a clinical decision support tool with parameter thresholds for vital signs and blood lactate measurement
 - guidance on recognising clinically significant organ dysfunction that warrants starting time-sensitive interventions, such as fluid resuscitation, administration of appropriate antimicrobials, and timely surgical source control when required
- Triggers and time frames for escalation of care. This includes
 - methods to communicate with a clinician who has experience in recognising and managing sepsis
 - processes to enable escalation to an appropriate clinician with experience in sepsis 24 hours a day, seven days a week
 - escalation to higher levels of care
 - the ability for emergency transfer of patients to or from other health services
 - a way for the appropriate investigations and treatments to start before transfer
- Guidance on the availability of appropriate interventions and timing of their use, including diagnostics, medicines and treatments
- Guidance on the appropriate use of
 - fluids and other time-critical treatment(s)
 - blood culture(s)
 - antimicrobial therapy
 - source control for the suspected infection
- Time frames for clinical review, which includes appropriate monitoring and review of investigation results, the patient's response to treatment and the antimicrobial plan
- Ways to consider the patient's age, cultural needs, goals of care and advance care plans in decision-making
- Consideration of alternative diagnoses.

3 Management of antimicrobial therapy

A patient with suspected sepsis has blood cultures taken immediately, ensuring that this does not delay the administration of appropriate antimicrobial therapy. When signs of infection-related organ dysfunction are present, appropriate antimicrobials are started within 60 minutes. Antimicrobial therapy is managed in line with the *Antimicrobial Stewardship Clinical Care Standard*, including a review within 48 hours from the first dose.

Ensure that patients with suspected sepsis will be assigned an adequate triage category when presenting to a hospital emergency department to allow timely antimicrobial administration.

Ensure that systems and resources are in place for the appropriate collection of blood cultures. Ensure prompt communication of critical test results, including positive blood cultures, from laboratories directly to the clinician to inform timely antimicrobial treatment decisions. Establish clear referral procedures to allow access to infectious diseases and microbiology consultation. Embedding alert systems and flags in local clinical information systems may be a viable option.

Ensure that systems are in place to allow prompt administration of appropriate antimicrobials for the treatment of sepsis, in any location where people with sepsis may present for acute treatment. Review antimicrobial formularies regularly to ensure that they support best-practice prescribing. Ensure 24-hour access to antimicrobials that are required urgently as part of the sepsis clinical pathway.

Evaluate antimicrobial use and prescribing in line with the NSQHS Preventing and Controlling Infections Standard Actions 3.18 and 3.19. Ensure that effective antimicrobial stewardship systems are in place to ensure that appropriate antimicrobial treatment and that service provision aligns with the Antimicrobial Stewardship Clinical Care Standard (Box 2).

Support multidisciplinary collaboration between critical care, medical and surgical teams to optimise the timely management of patients.

Box 2: Align sepsis management with the Antimicrobial Stewardship Clinical Care Standard

Sepsis management should align with the *Antimicrobial Stewardship Clinical Care Standard*, including:

- Prescribing in line with the current *Therapeutic Guidelines* or evidence-based, locally endorsed guidelines and the antimicrobial formulary. Ensure that the empiric and ongoing antimicrobial treatment are appropriate for the suspected site and nature of the infection, local antimicrobial resistance patterns, and age and weight of the patient. This includes the antimicrobial agent, dose, route and frequency of administration
- Appropriate sampling for microbiology testing and review, including testing for the suspected source of the infection and prompt review to ensure that the results inform ongoing antimicrobial therapy
- Documenting the antimicrobial and the intended duration or review plan in the patient's healthcare record
- Reviewing therapy 24–48 hours after the first dose, including reviewing the need for ongoing antimicrobial use, microbial spectrum of activity, dose, frequency and route of administration and adjusting these accordingly.

Indicators for local monitoring

Indicator 3a: Proportion of patients with sepsis who had blood cultures taken before starting antimicrobials.

Indicator 3b: Proportion of patients with signs and symptoms of infection-related organ dysfunction who started their first dose of an empirical antimicrobial within 60 minutes of recognition.

Measurement of this indicator requires time of recognition and treatment to be collected. If these data are not currently available, consider using alternative indicators.

4 Multidisciplinary coordination of care in hospital

Sepsis is a complex, multisystem disease requiring a multidisciplinary approach to treatment. A patient with sepsis has their treatment in hospital coordinated by a clinician with expertise in managing patients with sepsis.

Provide a policy and system framework that nominates and enables a central clinician to coordinate multidisciplinary care in collaboration with the patient with sepsis, or their family or carer, in line with the NSQHS Comprehensive Care Standard Action 5.05. Define the roles and responsibilities of each clinician working in the team.

Optimise communication between services, and ensure that there are processes in place to enable routine, structured collaboration between all clinicians. Support multidisciplinary meetings where there is an opportunity for all stakeholders to discuss care, as this provides a basis for shared care. This may mean providing logistical support for meetings or communication systems that allow multiple clinicians to communicate in a timely and effective way.



A different coordinator may be nominated for long-term management in the community; this is usually the patient's general practitioner. Ensure that adequate communication processes are in place (see Quality statement 6 – Transitions of care and clinical communication and Quality statement 7 – Care after hospital and survivorship).

EQUITY AND CULTURAL SAFETY FOR HEALTHCARE SERVICES

Ensure that clinicians have received cultural safety training, and that Aboriginal and Torres Strait Islander health workers and liaison officers, translators, social workers and others who can assist in the social aspects of care are involved whenever cultural differences may be a barrier to the patient's experience of care.

Indicator for local monitoring

Indicator 4a: Evidence of local arrangements to support multidisciplinary care coordination and clinical communication for patients with sepsis. The local arrangements should specify the:

- Process to nominate a clinician experienced in sepsis management to coordinate the multidisciplinary care for each patient with sepsis while they are in hospital
- Roles and responsibilities of each clinician working in the multidisciplinary team, including their responsibilities at transitions of care
- Information that must be documented in the patient's comprehensive care plan and healthcare records
- Process to ensure that the patient's care plan is shared with the patient, their carer and family where appropriate, and the relevant clinical team(s) or general practitioner at each transition of care
- Services available to support effective, culturally safe, communication and transitions of care
- Process to assess adherence to the local arrangements.

5 Patient and carer education and information

A patient, their family or carer is informed about sepsis from the time that it is suspected in a way that they can understand. Information includes the expected treatment and potential health effects of sepsis. Information is provided verbally and in writing.

Ensure that there are resources and processes in place to provide patients, their families and carers with information on:

- Sepsis diagnosis, treatment and management
- Accessing services
- Health care that may be required after discharge.

Ensure that clinicians have access to interpreters and written information in multiple languages, based on patient demographics. Resources should be co-designed with consumers, including culturally and linguistically diverse communities.

Ensure that clinicians undergo sepsis education training.

EQUITY AND CULTURAL SAFETY FOR HEALTHCARE SERVICES

Ensure that clinicians undergo cultural safety training.

Indicator for local monitoring

Indicator 5a: Proportion of patients with sepsis who reported they were kept informed as much as they wanted about their treatment and care.

6 Transitions of care and clinical coordination

A patient with known or suspected sepsis has a documented clinical handover at transitions of care. This includes the provisional sepsis diagnosis, comorbidities, and the management plan for medicines and medical conditions. This information is provided to the patient, their family and carer as appropriate.

Ensure that systems and supports are in place for clinicians to develop a comprehensive care plan with patients and that this is used during transitions of care. This documentation includes:

- The suspected or probable sepsis diagnosis
- The management plan, including infection control requirements
- Any underlying or additional diagnoses and medicines
- The contact details of the care coordinator.

Documentation needs to be accessible to all relevant clinicians and the patient, and should be captured in clinical information systems. Define the roles and responsibilities of clinicians involved in transitions of care, including a responsibility to complete and communicate discharge summaries. Where local clinical information systems allow, upload information into the patient's My Health Record.

If the patient is transferred from a larger to a smaller hospital, the referring hospital should ensure that the smaller hospital has appropriate resources to manage the patient, including access to appropriate antimicrobials.

Ensure that clinicians maintain accurate and complete healthcare records (including discharge summaries and death certificates), consistent with the NSQHS Communicating for Safety Standard Actions 6.07, 6.08, and 6.11, and Primary and Community Healthcare Standards Action 1.11. Evaluate the effectiveness of the clinical communication process, in line with the NSQHS Communicating for Safety Standard Action 6.02.

Ensure that clinicians communicate infection control precautions to patients and their carers to ensure consistency with the NSQHS Preventing and Controlling Infections Standard Actions 3.07 and 3.09, or the Primary and Community Healthcare Clinical Safety Standard 'Communicating for safety' criterion.

EQUITY AND CULTURAL SAFETY FOR HEALTHCARE SERVICES

Ensure that services are in place to enable effective communication with patients, taking into account their culture and location of care.

Aboriginal and Torres Strait Islander people who have completed acute treatment away from their community or Country may need structured support to ensure that they safely return to their place of residence. Establish appropriate networks – for example, with local Aboriginal medical services. Ensure adequate supports for patients who have been transferred from remote locations.

Indicators for local monitoring

See **Indicator 4a**.

Indicator 6a: Proportion of patients with sepsis who had a diagnosis of sepsis recorded in their discharge summary.

7 Care after hospital and survivorship

A patient who has survived sepsis receives individualised follow-up care to optimise functional outcomes, minimise recurrence, reduce rehospitalisation and manage the ongoing health effects of sepsis. This requires structured, holistic and coordinated post-discharge care and education that involves the patient, their family, carer, general practitioner and other clinicians.

Support and information are provided to the family or carer of a patient who has died from sepsis.

Ensure that processes are in place to support patients, families and carers after hospital discharge for acute management of sepsis. This can include rehabilitation, access to emotional and social wellbeing supports, and allied health care. Consider using a centralised computer system to coordinate the patient's post-acute care.

Before discharge, a patient should be referred to their general practitioner (GP), who can coordinate their care after hospital discharge. The GP, and any other clinician to whom the patient is referred should be provided with:

- A comprehensive plan on follow-up requirements to optimise functional outcomes, minimise recurrence, reduce rehospitalisation and manage the ongoing health effects of sepsis
- Details of the hospital clinician with expertise in managing sepsis or care coordinator to support the transition of care and facilitate communication between the community and hospital care providers
- Education materials about sepsis and patient care needs.

Discharge summaries should include all the relevant information as described in Quality statement 6 – Transitions of care and clinical documentation and the NSQHS Communicating for Safety Standard Action 6.11.

Healthcare services discharging patients on antimicrobial therapy should have systems in place to ensure that the patient can continue antimicrobial therapy post-discharge and address potential barriers to access, including cost. In some cases, antimicrobials may need to be supplied to the patient.

Review the death of any patient due to sepsis in the absence of a pre-existing life-limiting condition, or where death was unexpected. Offer the family an explanation, information and discussion in line with the principles of open disclosure. This may involve a follow-up appointment at a later date and referral to bereavement care and support services as required. Ensure that all sepsis deaths are documented in a risk management system, reviewed, and reported to and monitored by a governing body (such as a patient safety or deteriorating patient committee, or similar) to identify opportunities for continued improvement.

EQUITY AND CULTURAL SAFETY FOR HEALTHCARE SERVICES

Ensure that services are in place to support patients after discharge, such as access to Aboriginal medical services, Aboriginal and Torres Strait Islander health workers and liaison officers.

Ensure that information provided to patients is provided in a way that the patient understands and is culturally safe.

Indicator for local monitoring

Indicator 7a: Proportion of patients with sepsis who had an unplanned readmission to any hospital within 30 days of discharge.

Indicator 8a (overall): Proportion of patients with sepsis who died during their admitted patient episode of care.

Questions?



Find out more about the *Sepsis Clinical Care Standard* and other resources. Scan the QR code or use the link safetyandquality.gov.au/sepsis-ccs.

The Australian Commission on Safety and Quality in Health Care has produced this clinical care standard to support the delivery of appropriate care for a defined condition. The clinical care standard is based on the best evidence available at the time of development. Healthcare professionals are advised to use clinical discretion and consideration of the circumstances of the individual patient, in consultation with the patient and/or their carer or guardian, when applying information contained within the clinical care standard. Consumers should use the information in the clinical care standard as a guide to inform discussions with their healthcare professional about the applicability of the clinical care standard to their individual condition.