

IN BRIEF A Summary of the Evidence

Recognition and Diagnosis of Sepsis in Adults: A Review

Key Messages

Evidence-based guidelines on the recognition and diagnosis of sepsis recommend that:

- clinicians and staff be well-versed in the clinical signs of sepsis
- early diagnosis of sepsis be detected through a variety of assessments, including temperature, heart rate, respiratory rate, blood pressure, level of consciousness, oxygen saturation, blood cultures; urine, cerebrospinal fluid, wounds, respiratory secretions, or other body fluids that may be the source of the infection; lactate; urea; electrolytes; C-reactive protein; full blood count; and kidney and liver function tests
- patients with suspected sepsis be assessed for factors that may increase the risk of sepsis, and be risk-stratified
- relevant imaging studies be completed to confirm the potential source of the infection (with the exception of one guideline that recommended against performing a chest X-ray unless clinically indicated).

Context

Sepsis is a condition stemming from the body's response to a severe infection. The body's immune response to the infection triggers widespread inflammation and can cause fever, chills, rapid heart rate, and potentially hypotensive shock. Without early treatment, sepsis can lead to tissue damage, organ failure, and death. Sepsis is a growing health concern in Canada, with more than 30,000 people hospitalized due to sepsis and related complications. It has a mortality rate of 30% and is responsible for more than 9,000 deaths each year. Yet despite the significant risk of medical complications and death, fewer than 58% of

patients with sepsis receive appropriate initial therapy. Sepsis creates a significant burden on health system resources: on average, patients with sepsis are hospitalized for nine additional days compared to patients without sepsis.

Technology

Patients are more likely to survive sepsis if it is detected early and treated quickly – research suggests that early intervention is the key to reducing mortality. There are several laboratory and imaging tests that can be used to help determine if a patient has sepsis, the appropriate treatment, and the need for critical care. Detecting sepsis requires multiple assessments, as the signs and symptoms of sepsis can be similar to other underlying conditions and few tests exist that are specific to sepsis.

Issue

A review of the evidence-based guidelines for the recognition and detection of sepsis in adults will help inform decisions regarding the treatment of adult patients with suspected sepsis.

Methods

A limited literature search was conducted of key resources, and titles and abstracts of the retrieved publications were reviewed. Full-text publications were evaluated for final article selection according to predetermined selection criteria (population, intervention, comparator, outcomes, and study designs).

Results

The literature search identified 379 peer-reviewed citations and 59 grey literature citations. Of these, 12 potentially relevant guidelines were selected for full-text review, and six evidence-based guidelines met the criteria for inclusion in this review.

Read more about CADTH and its review of evidence-based guidelines for the recognition and diagnosis of sepsis in adults at:



<https://www.cadth.ca/recognition-and-diagnosis-sepsis-adults-review-evidence-based-guidelines-0>.

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CADTH receives funding from Canada's federal, provincial, and territorial governments, with the exception of Quebec.

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January 2017