Recognition and Diagnosis of Sepsis in Adults: Evidence-Based Guidelines
Recognition and Diagnosis of Sepsis in Adults

Authors: Charlotte Wells, Lory Picheca


Acknowledgments:

Disclaimer: The information in this document is intended to help Canadian health care decision-makers, health care professionals, health systems leaders, and policy-makers make well-informed decisions and thereby improve the quality of health care services. While patients and others may access this document, the information in this document should not be substituted for professional medical advice or as a substitute for the application of clinical judgment in respect of the care of a particular patient or other professional judgment in any decision-making process.

CADTH is not responsible for any errors, omissions, injury, loss, or damage arising from or relating to the use (or misuse) of any information, statements, or conclusions contained in or implied by the contents of this document or any of the source materials.

This document may contain links to third-party websites. CADTH does not have control over the content of such sites. Use of third-party sites is governed by the third-party website owners’ own terms and conditions set out for such sites. CADTH does not make any guarantee with respect to any information contained on such third-party sites and CADTH is not responsible for any injury, loss, or damage suffered as a result of using such third-party sites.

Subject to the aforementioned limitations, the views expressed herein are those of CADTH and do not necessarily represent the views of Canada’s federal, provincial, or territorial governments or any third party supplier of information.

This document is prepared and intended for use in the context of the Canadian health care system. The use of this document outside of Canada is done at the user’s own risk.

This disclaimer and any questions or matters of any nature arising from or relating to the content or use (or misuse) of this document will be governed by and interpreted in accordance with the laws of the Province of Ontario and the laws of Canada applicable therein, and all proceedings shall be subject to the exclusive jurisdiction of the courts of the Province of Ontario, Canada.

The copyright and other intellectual property rights in this document are owned by CADTH and its licensors. These rights are protected by the Canadian Copyright Act and other national and international laws and agreements. Users are permitted to make copies of this document for non-commercial purposes only, provided it is not modified when reproduced and appropriate credit is given to CADTH and its licensors.

About CADTH: CADTH is an independent, not-for-profit organization responsible for providing Canada’s health care decision-makers with objective evidence to help make informed decisions about the optimal use of drugs, medical devices, diagnostics, and procedures in our health care system.
Research Question
What are the evidence-based guidelines regarding the use of tests or procedures for the recognition and diagnosis of sepsis in adults with suspected sepsis?

Key Findings
One evidence-based guideline was identified regarding the use of tests or procedures for the recognition and diagnosis of sepsis in adults with suspected sepsis.

Methods
A limited literature search was conducted on key resources including PubMed, The Cochrane Library, Canadian and major international health technology agencies, as well as a focused Internet search. Methodological filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses and guidelines. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between December 8, 2016 and January 18, 2018. Internet links were provided, where available.

Selection Criteria
One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

Table 1: Selection Criteria

<table>
<thead>
<tr>
<th>Population</th>
<th>Adults with suspected sepsis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interventions</td>
<td>Diagnostic tests or processes for the recognition and detection of sepsis (e.g., blood culture, urine culture, CBC, inflammatory markers, imaging technology)</td>
</tr>
<tr>
<td>Comparator</td>
<td>No comparator</td>
</tr>
<tr>
<td>Outcomes</td>
<td>Evidence-based guidelines</td>
</tr>
<tr>
<td>Study Designs</td>
<td>Health technology assessments, systematic reviews, meta-analyses, evidence-based guidelines</td>
</tr>
</tbody>
</table>
Results

Rapid Response reports are organized so that the higher quality evidence is presented first. Normally, health technology assessment reports, systematic reviews, and meta-analyses are presented first; however, the aforementioned evidence types are presented in the appendix in reports where guidelines are primarily sought.

One evidence-based guideline was identified regarding the use of tests or procedures for the recognition and diagnosis of sepsis in adults with suspected sepsis.

Additional references of potential interest are provided in the appendix.

Overall Summary of Findings

One evidence-based guideline, an update of 2012 guidelines published by the Surviving Sepsis Campaign (SSC), was identified regarding the use of tests or procedures for the recognition and diagnosis of sepsis in adults with suspected sepsis. Resuscitation and treatment of sepsis should begin immediately. For the diagnosis of sepsis, the SSC recommends that if clinical examination does not lead to diagnosis, further hemodynamic assessment (such as assessing cardiac function) should be performed to determine the type of shock. Routine microbiologic cultures (with two sets of blood culture [aerobic and anaerobic]) should be performed for the diagnosis of sepsis prior to anti-microbial therapy if this does not delay the start of microbial therapy. The SSC also recommends that a specific anatomic diagnosis requiring emergent source control be made as soon as possible.

References Summarized

Guidelines and Recommendations

Appendix — Further Information

Previous CADTH Reports


Systematic Reviews and Meta-analyses


Clinical Practice Guidelines – Uncertain Methodology


Quality Standards


Review Articles


Additional References
