Screening Triage Tools and Management Algorithms for Adult Sepsis Patients: Clinical Utility and Guidelines
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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.

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Research Questions
1. What is the clinical utility of screening triage tools and/or management algorithms in adult patients in the emergency department with suspected sepsis?
2. What is the clinical utility of screening triage tools and/or management algorithms in adult inpatients with suspected sepsis?
3. What are the evidence-based guidelines regarding the use of screening triage tools and/or management algorithms in adult inpatients with suspected sepsis?

Key Findings
One health technology assessment, six systematic reviews (two with meta-analyses), one randomized controlled trial, and 11 non-randomized controlled studies were identified regarding the clinical utility of screening triage tools and management algorithms in adult patients with suspected sepsis. Six evidence-based guidelines were identified regarding the use of screening triage tools and management algorithms in adult patients with suspected sepsis.

Methods
A limited literature search was conducted by an information specialist on key resources including Medline, the Cochrane Library, the University of York Centre for Reviews and Dissemination (CRD) databases, the websites of Canadian and major international health technology agencies, as well as a focused Internet search. The search strategy was comprised of both controlled vocabulary, such as the National Library of Medicine’s MeSH (Medical Subject Headings), and keywords. The main search concepts were sepsis diagnosis/treatment and hospitalized adult patients. No filters were applied to limit the search results for research questions 1 and 2. A methodological filter was applied to limit retrieval to clinical practice guidelines for question 3. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2014 and August 7, 2019. Internet links were provided, where available.

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

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<th>Table 1: Selection Criteria</th>
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| **Population** | Q1: Adult patients presenting in the emergency department with suspected sepsis  
Q2-3: Adult inpatients with suspected sepsis |
| **Intervention** | Q1-3: Screening triage tools and/or management algorithms |
| **Comparator** | No screening tools and/or algorithm management |
Outcomes Q1-2: Clinical utility (i.e., patient management [e.g., time to treatment], patient direct outcomes [e.g., sepsis-related mortality, length of hospital stay, readmission])
Q3: Guidelines

Study Designs Health technology assessments, systematic reviews, meta-analyses, randomized-controlled trials, non-randomized studies, and evidence-based guidelines

Results

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials, non-randomized studies, and evidence-based guidelines.

One health technology assessment, one randomized controlled trial, and nine non-randomized controlled studies were identified regarding the clinical utility of screening triage tools and management algorithms in adult patients in the emergency department with suspected sepsis. Three systematic reviews and two non-randomized controlled studies were identified regarding the clinical utility of screening triage tools and management algorithms in adult inpatients with suspected sepsis. Six evidence-based guidelines were identified regarding the use of screening triage tools and management algorithms in adult inpatients with suspected sepsis.

Additional references of potential interest are provided in the appendix.

Health Technology Assessments


Systematic Reviews and Meta-analyses


Randomized Controlled Trials


Non-Randomized Studies


PubMed: PM28514322

PubMed: PM28071865

PubMed: PM28276800

PubMed: PM27147126

PubMed: PM26573784

PubMed: PM26251506

Guidelines and Recommendations

PubMed: PM30097460

PubMed: PM29767636

*Recommendations Not Specified in Abstract*

PubMed: PM28098591
All Settings

   See: “Initial assessment”, “Management”

   See: Managing infection

Appendix — Further Information

Previous CADTH Reports


Non-Randomized Studies

Alternative Setting


Review Articles
