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Acknowledgments:

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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.
Research Question
What is the clinical effectiveness of nebulized hypertonic saline for respiratory diseases in adults and children?

Key Findings
Three systematic reviews (one with a meta-analysis), 10 randomized controlled trials, and two non-randomized studies were identified regarding the clinical effectiveness of nebulized hypertonic saline for respiratory diseases in adults and children.

Methods
A limited literature search was conducted on key resources including PubMed, The Cochrane Library, University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. No filters were applied to limit the retrieval by study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2012 and October 22, 2017.

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

<table>
<thead>
<tr>
<th>Table 1: Selection Criteria</th>
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<tr>
<td><strong>Population</strong></td>
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<td><strong>Intervention</strong></td>
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<tr>
<td><strong>Comparators</strong></td>
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<td><strong>Outcomes</strong></td>
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<tr>
<td><strong>Study Designs</strong></td>
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</table>
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 and non-randomized studies.

Three systematic reviews (one with a meta-analysis), 10 randomized controlled trials, and two non-randomized studies were identified regarding the clinical effectiveness of nebulized hypertonic saline for respiratory diseases in adults and children. No relevant health technology assessments were identified.

Additional references of potential interest are provided in the appendix.

Health Technology Assessments

No literature identified.

Systematic Reviews and Meta-analyses

Bronchiolitis


Randomized Controlled Trials

Bronchiolitis


Mechanically Ventilated


Non-Randomized Studies

Bronchiolitis

Appendix — Further Information

Systematic Reviews and Meta-Analyses

Nebulized Not Specified


Alternative Outcomes - Cystic Fibrosis


Randomized Controlled Trials

Prevention


Nebulized Not Specified – Cystic Fibrosis


Nebulized Not Specified – Primary Ciliary Dyskinesia


Alternative Comparator

Bronchiolitis


Chronic Rhinosinusitis


Non-Randomized Studies – Nebulized Not Specified

Asthma


Cystic Fibrosis


Bronchiolitis