

CADTH RAPID RESPONSE REPORT: SUMMARY OF ABSTRACTS

# Sterile Techniques for Patients Undergoing Tracheostomy: Clinical Effectiveness and Guidelines

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## Research Questions

1. What is the clinical effectiveness of a sterile technique for tracheostomy care?
2. What are the evidence-based guidelines regarding the use of a sterile technique for tracheostomy care?
3. What are the evidence-based guidelines regarding the use of a clean technique for tracheostomy?

## Key Findings

No relevant literature was identified regarding the clinical effectiveness of a sterile technique for tracheostomy care. Additionally, no evidence-based guidelines were identified regarding sterile or clean technique for tracheostomy.

## Methods

A limited literature search was conducted by an information specialist on key resources including PubMed CINAHL via OVID, 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 tracheostomy/tracheotomy and cleaning methods via sterile or clean technique. No search 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, 2014 and September 16, 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.

**Table 1: Selection Criteria**

<b>Population</b>	Adults undergoing tracheostomy (i.e., opening in the neck in order to place a tube into a person's windpipe to allow air into the lungs)
<b>Intervention</b>	Q1-2: Sterile technique for tracheostomy care (i.e., a set of specific practices and procedures performed to make equipment and areas free from all microorganisms and to maintain that sterility; referred to as aseptic) (e.g., changing of wound dressings or type of wound dressings, sterile gloves) Q3: Clean technique for tracheostomy care (i.e., less rigorous approach to cleaning equipment and does not require a sterile environment)
<b>Comparator</b>	Q1: Clean technique for tracheostomy care Q2-3: Not applicable
<b>Outcomes</b>	Q1: Clinical effectiveness (e.g., hospital-acquired infections [HAIs], pulmonary infections) Q2-3: Guidelines
<b>Study Designs</b>	Health technology assessments, systematic reviews, meta-analyses, randomized control trials, non-randomized studies, 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.

No relevant literature was identified regarding the clinical effectiveness of a sterile technique for tracheostomy care. Additionally, no evidence-based guidelines were identified regarding sterile or clean technique for tracheostomy.

An additional reference of potential interest is provided in the appendix.

## Overall Summary of Findings

No relevant literature was identified regarding the clinical effectiveness of a sterile technique for tracheostomy care. Additionally, no evidence-based guidelines were identified regarding sterile or clean technique for tracheostomy, therefore, no summary can be provided.

## References Summarized

### Health Technology Assessments

No literature identified.

### Systematic Reviews and Meta-analyses

No literature identified.

### Randomized Controlled Trials

No literature identified.

## Non-Randomized Studies

No literature identified.

## Guidelines and Recommendations

No literature identified.

## Appendix — Further Information

### Guidelines and Recommendations

#### *Sterile Technique and Clean Technique Checklist*

1. Doyle GR, McCutcheon JA. Clinical procedures for safer patient care: tracheostomies (*New Open Textbook*). Burnaby (BC): British Columbia Institute of Technology (BCIT); 2015 Nov.  
<https://opentextbc.ca/clinicalskills/chapter/10-6-tracheostomies/>  
See: Section 10.5 - Checklist 82: Tracheal Suctioning and Checklist 83: Cleaning an Inner Tracheal Cannula  
|Accessed 2019 Sep 19.