Topic Brief: Subglottic Secretion Drainage

Date: 02/13/2022
Nomination Number: 1016

Purpose: This document summarizes the information addressing a nomination submitted on June 15, 2022, through the Effective Health Care Website. This information was used to inform the Evidence-based Practice Center (EPC) Program decisions about whether to produce an evidence report on the topic, and if so, what type of evidence report would be most suitable.

Issue: The nominator requests that a randomized controlled trial be done to validate subglottic secretion drainage (SSD) as a standard method of care for ventilator-associated pneumonia (VAP) prevention due to a lack of evidence. Specifically, the nominator is interested in their product, a specific suctioning device, called SIMEX, compared to current suction methods.

Findings: The EPC program develops evidence reviews of published research studies and does not conduct clinical trials. Therefore, the program will not develop an evidence product for this topic.

Background

Ventilator-associated pneumonia (VAP) is a pulmonary infection that develops while a patient is on a ventilator, which is a machine that delivers oxygen to the patient through a tube placed in a patient's mouth, nose, or neck.[1] Significant risk for VAP are microaspirations and intubation. The most common treatment for VAP is antibiotic therapy.[2]

The extended benefits of SSD for preventing VAP are currently being studied, but subglottic secretion suctioning is associated with reduced risk of VAP.[3] A 2020 meta-analysis from Europe (which was published with corrections in 2022) found an association between SSD and lower incidence of VAP; however, estimates for mortality revealed a non-significant trend for patients randomized to SSD treatment.[4, 5] Other interventions considered to reduce VAP that are supported by some evidence, but not strong evidence, are endotracheal tubes with secretion drainage ports, saline installation with secretion and endotracheal cuffs with constant pressure. Limiting duration of intubation to the least amount of time is also recommended so these considerations are not required.[6]

The nominators represent the manufacturers of the SIMEX device, intended to aspirate subglottic secretions and prevent VAP. They are interested in research that they can use to advocate for their product with clinicians and payers.

Assessment Methods

We assessed nomination for priority for a systematic review or other AHRQ EHC report with a hierarchical process using established selection criteria. Assessment of each criteria determined the need to evaluate the next one.

1. Determine the *appropriateness* of the nominated topic for inclusion in the EHC program.
2. Establish the overall *importance* of a potential topic as representing a health or healthcare issue in the United States.
3. Determine the *desirability of new evidence review* by examining whether a new systematic review or other AHRQ product would be duplicative.
4. Assess the *potential impact* a new systematic review or other AHRQ product.
5. Assess whether the *current state of the evidence* allows for a systematic review or other AHRQ product (feasibility).
6. Determine the *potential value* of a new systematic review or other AHRQ product.

Other resources
We identified a meeting abstract describing a single site RCT of SIMEX.[7]

References

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