



Effective Health Care

Tonsillectomy for Recurrent Infection and Sleep Disordered Breathing Nomination Summary Document

Results of Topic Selection Process & Next Steps

- *Tonsillectomy for Recurrent Infection and Sleep Disordered Breathing* will go forward for refinement as a systematic review. The scope of this topic, including populations, interventions, comparators, and outcomes, will be further developed in the refinement phase.
- When key questions have been drafted, they will be posted on the AHRQ Web site and open for public comment. To sign up for notification when this and other Effective Health Care (EHC) Program topics are posted for public comment, please go to <http://effectivehealthcare.ahrq.gov/index.cfm/join-the-email-list1/>.

Topic Description

Nominator(s): Organization

Nomination Summary: The nominator asserts that there is clinical uncertainty regarding indications for tonsillectomy in children as well as the prescription of perioperative antibiotics for children undergoing tonsillectomy. The nomination notes recurrent throat infections and sleep disordered breathing (SDB) as the two most common indications for tonsillectomy.

Key Question #1: What is the comparative effectiveness of tonsillectomy in children with recurrent throat infections?

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Population(s): Children, ages 1 to 18, who experience recurrent throat infections (at least 7 episodes in the past year, at least 5 episodes per year for 2 years, or at least 3 episodes per year for 3 years)

Intervention(s): Tonsillectomy

Comparator(s): Prophylactic antibiotic treatment or no intervention

Outcome(s): Number of throat infections, complications of infection, or complications of surgery

Key Question #2: What is the comparative effectiveness of tonsillectomy in children with sleep disordered breathing (SDB)?

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Population(s): Children, ages 1 to 18, with SDB

Intervention(s): Tonsillectomy

Comparator(s): Continuous positive airway pressure (CPAP) or no intervention

Outcome(s): Improvement in sleep, improved quality of life (QoL), or surgical complications

Key Question #3: What is the effectiveness of administering or prescribing perioperative antibiotics for children undergoing tonsillectomy?

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Population(s): Children, ages 1 to 18, who undergo tonsillectomy

Intervention(s): Perioperative antibiotic treatment

Comparator(s): Other perioperative interventions, no intervention

Outcome(s): Reduction of postoperative infection and/or pain, other complications, or extended hospital stay

**Key Questions
from Nominator:**

1. What are the appropriate indications for tonsillectomy? Recurrent infections (how many)? SDB?
2. Should clinicians administer or prescribe perioperative antibiotics to children undergoing tonsillectomy?

In consultation with our clinical reviewer, the scope of this topic from the original nominator question to examine the comparative effectiveness of tonsillectomy in recurrent throat infections, the comparative effectiveness of tonsillectomy in SDB and the comparative effectiveness of prescribing perioperative antibiotics for children undergoing tonsillectomies.

Considerations

- The topic meets all EHC Program selection criteria. (For more information, see <http://effectivehealthcare.ahrq.gov/index.cfm/submit-a-suggestion-for-research/how-are-research-topics-chosen/>.)
- Tonsillectomy is the third most common ambulatory surgical procedure performed on children in the US, with more than 530,000 annual surgeries constituting greater than 15% of procedures in children under age 15. The two most common indications for tonsillectomy in children are recurrent throat infections and sleep disordered breathing (SDB). These conditions result in lowered quality of life, lack of sleep, and high direct and indirect costs for patients and providers.
- Clinical uncertainty for the recommendation of tonsillectomy in children with recurrent throat infection stems from the varied measures for severity of infection. It is unclear whether the use of tonsillectomy for children with mild or moderate recurrent infections is as effective as its use in children who are severely affected. Our literature search found a greater amount of evidence supporting the effectiveness of tonsillectomy to reduce SDB and improve the quality of life of children with SDB.
- Evidence has shown some reduction in morbidities associated with tonsillectomy through the use of perioperative topical antibiotics. However, the adverse effects that may arise may create some clinical uncertainty in the use of systemic antibiotics.
- We identified a clinical practice guideline published in 2011 by the American Academy of Otolaryngology-Head and Neck Surgery Foundation (AAO-HNSF) that addresses the scope of the nomination.
- We identified several systematic reviews published since the end of the literature search date for the AAO-HNSF guideline that addressed portions of the scope of this nomination. These reviews did not address the entire nomination scope. We also identified additional studies relevant to the key questions of this nomination.

- An updated systematic review that covers the scope of this nomination would be useful to the nominator and could inform an update of a clinical practice guideline by the AAO-HNSF.