

Endotracheal tubes and LMAs

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Overview

Endotracheal tubes (ETT) are disposable tubes that are inserted into the trachea to administer oxygen and anesthetic gases to the lungs.¹ They are available in various lengths, diameters, and can be cuffed or un-cuffed to meet the needs of various patient populations (e.g. neonatal, pediatric, and adult.)¹ Laryngeal Mask Airways (LMA), also referred to as supraglottic airways, consist of a tube with an inflatable cuff/mask used to maintain an open airway and cover the supraglottic area.² They are also available in sizes neonatal to adult and have features like the ability to intubate through the LMA, an integrated bite block, and channels for gastric suctioning, as examples.²

Actions for Consideration

Partner: Identify anesthesiologists, emergency room physicians, hospitalists, certified registered nurse anesthetists (CRNA), perioperative nurses, respiratory therapists, and the appropriate clinical and non-clinical value analysis team members.

Connect: Identify all ETT and LMAs currently in use to ensure all specialty products are addressed. Understanding potential physician and CRNA preferences and specialty needs will be helpful. Data including usage and cost will help inform management of these products. Identify evidence related to specific products. Consider providing samples to those team members identified, to allow for review and familiarity with product.

Communicate: When making a product change, ensure communication and discussion with end users, including clinical providers, to develop a common goal. Discuss product attributes, pricing, and potential to streamline products and develop strategies to manage use. Robust data sharing will not only enhance discussions, but may lead to actionable conversations between peers.

HealthTrust Resources: Access the [Clinical Knowledge Insights Library](#) to find other relevant documents and toolkits with actionable information. Examples for this product include resources on product conversion, value analysis, and conversion complexity matrix.³ Network on [HealthTrust Huddle](#), our member community that shares ideas and seeks guidance from colleagues.⁴

Physician Advisor Insight

A panel of anesthesiologists within our HealthTrust Physician Advisor Network offered the following insight with regard to ETT and LMAs⁵:

Endotracheal Tubes

- There is little variance in product quality among suppliers.
- Important standard features include a portfolio of sizes (neonate to adult), cuff size and volume, pliability
- Access to specialty tubes needed, including laser, and double lumen or bronchial blocker tubes.
- Largely viewed as a commodity item.

LMAs

- Ease of placement, ability to form a good seal, and variety of sizes (neonate – adult) are all important considerations when selecting an LMA.
- Engaging end users in product selection will be helpful.
- Education and in-servicing would be helpful when making a product change.

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Professional Society Statements and Clinical Practice Guidelines

There are no guidelines specific to what type of endotracheal tubes should be used in intubation. Societal guidelines relating to the practice of intubation in difficult airways are included below:

- The 2022 American Society of Anesthesiologists Practice Guidelines for Management of the Difficult Airway can be found [here](#).⁶
- Difficult Airway Society guidelines for awake tracheal intubation (ATI) in adults, can be found [here](#).⁷

FDA Approval

Endotracheal tubes and LMAs are approved via the FDA 510k pathway. Individual approvals may be found [here](#) by searching supplier or product name.⁸

Summary

There is no clinical evidence or clinical societal statement guidance dictating ETT and LMA choice. Engagement of appropriate end users when determining product selection and identifying specialty needs is helpful. While there are limited differences between suppliers within the ETT category, LMAs may require additional discussion. In reviewing this category, consider the breadth of product line to meet facility and clinician need.

References

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