



# A Pilot Study of an Innovative Flexible Extended-Length Airway to Relief Upper Airway Obstruction: The McMurray Enhanced Airway (MEA)



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## Introduction

Deep sedation/monitored anesthesia care (MAC) is increasing in use:<sup>1-3</sup>

- Less physiologic disruption<sup>2</sup>
- Decreases operating room time<sup>2</sup>
- Decreases recovery room time<sup>2</sup>
- Decreases costs<sup>1</sup>

Maintaining a **spontaneous breathing airway has challenges:**

- Obese, obstructive sleep apneic, and elderly patients are at higher risk for upper airway complications and obstruction under sedation<sup>2-4</sup>
- Inadequate ventilation and oxygenation is the **major source of closed claims in MAC cases**<sup>5,6</sup>

## Current Practice

Existing airway management devices present shortcomings

- Prompting a rise in **off-label workarounds** including the use of nasal airways orally<sup>4</sup>
- **Adverse outcomes:**
  - Oral airway limitations
    - Stimulates coughing, gagging, swelling, and oral cavity/tooth damage<sup>7</sup>
    - Routinely requires **chin lift/jaw thrust**<sup>7</sup>
    - Can be **painful** for patients and providers<sup>4</sup>
    - **Occupies providers' hands**, making it difficult to perform other tasks<sup>4</sup>
  - Nasal airway limitations
    - Provokes epistaxis, tedious to place<sup>7</sup>
  - External devices: Impact on workflow - accessibility, additional supplies & setup

## Innovation: McMurray Enhanced Airway (MEA)

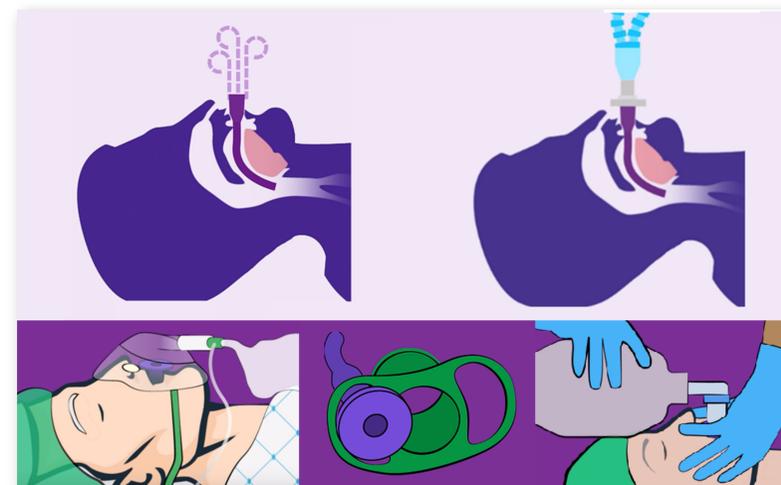
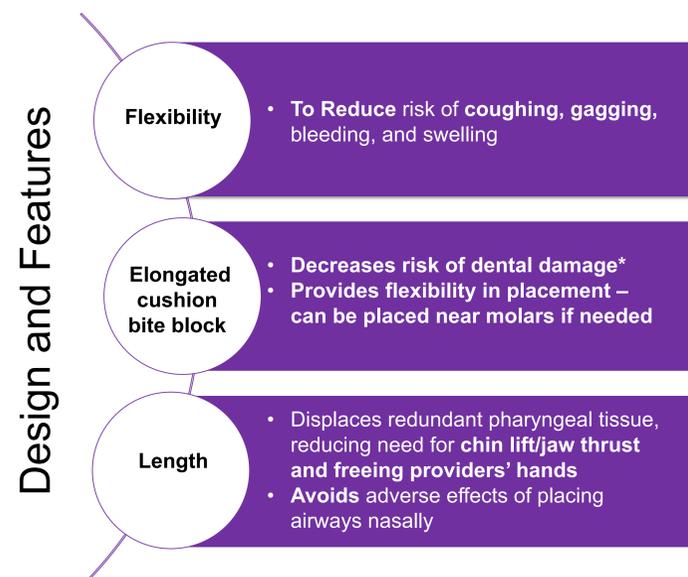
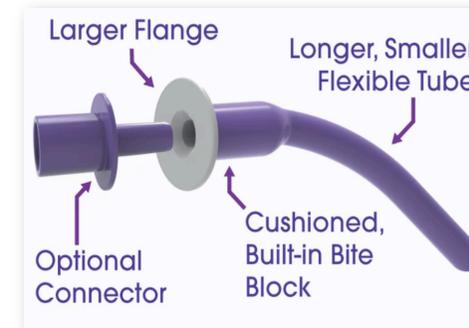
- Fills the void in current airway devices
- Developed out of need to **improve patient outcomes by improving ventilation**
  - **Reduces off-label airway workarounds**
  - **Decreases potential litigation**

## Study Purpose

- This pilot survey was conducted to evaluate the MEA's clinical performance in patients with upper airway obstruction

## Methods

- Surveys were collected at 14 surgical centers throughout the U.S.
- Anesthesia providers were instructed on MEA use and then trialed the MEA
- They answered six survey questions regarding MEA performance
- 78 surveys were completed
- This proof of concept survey study was granted IRB exemption and listed with ClinicalTrials.gov
- Inclusion Criteria: Adults experiencing upper airway obstructive under deep sedation
- Exclusion Criteria: Inappropriate MEA size for the patient



## Results

- 100% The MEA decreased airway obstruction
- 100% The MEA eliminated the need for chin lift or jaw thrust maneuver
- 91% The MEA was easy to place
- 95% Anesthesia providers were very satisfied with the MEA for deep sedation
- 92% The MEA would improve airway management practice & patient outcomes
- 94% Anesthesia providers would recommend the MEA for deep MAC airway obstruction & respiratory compromise

## Conclusions

- The MEA is performing as expected and initial **users are satisfied**
- MEA diameter and flexibility to make the MEA **easy to place**
- MEA length displaces redundant pharyngeal tissue and **free providers' hands to tend to other tasks**
- MEA **fills a gap in airway management and may reduce workarounds and litigation risk**
- As more patients undergo procedures with deep sedation, the **McMurray Enhanced Airway is a safe and efficient device to improve airway management**

## References

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