

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

Roxanne McMurray, DNP, CRNA, APRN  
University of Minnesota

We have a void in current airway tools that can effectively open the airway under deep sedation. The McMurray Enhanced Airway (MEA) is uniquely designed to fill this void and reduce adverse effects.

**Introduction:** Respiratory adverse outcomes from inadequate ventilation and oxygenation are the most reported monitored anesthesia care (MAC) closed claims. There is a growing need for an airway device that can sufficiently open the obstructed airway and improve patient outcomes. The purpose of this pilot survey study was to evaluate a new airway device's clinical performance in patients with airway obstruction.

**Literature Review:** Deep sedation use is increasing, due to decreased operating/recovery room time and less physiologic disruption for patients. Maintaining a spontaneous breathing airway in a sedated patient is challenging, especially with obese, obstructive sleep apneic, or elderly patients who are at higher risk for upper airway obstruction. Existing airway devices have shortcomings and reveal adverse effects.

**Developmental Design or Methodology:** This proof of concept survey study was granted IRB exemption. Anesthesia providers from 14 different surgery locations throughout the United States were instructed on MEA use and trialed the airway in adult patients experiencing an upper airway obstructive under deep sedation/MAC. Anesthesia providers then completed 78 surveys consisting of 6 questions on MEA performance and provider satisfaction.

**Proof of Concept/Results:** Data were analyzed utilizing descriptive statistics. The MEA decreased airway obstruction and eliminated the need for chin lift or jaw thrust maneuvers in 100% of the patients. Ninety-one percent agreed that the MEA was easy to place and 95% were very satisfied with the new airway for deep sedation. When asked if the new MEA device would improve airway management practice and patient outcomes, 92% indicated yes. Ninety-four percent stated they would recommend the MEA for deep MAC airway obstruction and respiratory compromise.

**Discussions and Conclusions:** This pilot survey demonstrates that the MEA is performing as expected and initial users are satisfied. The MEA diameter and flexibility eases placement while MEA length displaces redundant pharyngeal tissue and frees providers' hands to tend to other tasks. The MEA fills a void in airway management and may reduce airway 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.