

THE KNOWN OBSTRUCTIVE SLEEP APNEA (OSA) PATIENT IN THE PERI-OPERATIVE SETTING

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Identification of the problem – Overview: A review of Highland Hospital Standards of Care revealed a need for an in-depth investigation in the peri-operative care of the obstructive sleep apnea (OSA) patient.

EP Question/Purpose: The purpose of this investigation was to determine the safest peri-operative care practices for the OSA patient and update hospital policy accordingly. Investigators were interested in time frame of CPAP set up, use of oxygen bleed in, and the responsibility of Respiratory Therapy.

Methods/Evidence: The literature review keywords included: “obstructive sleep apnea,” “perioperative,” “Non-invasive positive pressure ventilation (NIPPV),” “CPAP,” “BiPAP,” and “bleed in.” Studies written in English and published after 1/1/2010 were reviewed. Based on the literature, a new Standard of Care was developed by an inter-departmental task force. Information was presented via a hospital “Grand Rounds” presentation.

Significance of Findings/Outcomes: The ramifications of obstructive sleep apnea (OSA) in the peri-operative setting are serious. OSA arises from a mechanical problem, a closing of the airway. There are many risk factors associated with OSA, as well as a list of symptoms used to identify this condition. There are several co-morbidities linked with OSA. These include significant cardiac, respiratory, metabolic, and neurologic conditions. The team members caring for known OSA patients in the peri-operative setting need to be knowledgeable regarding the dangers associated with this patient population and proactive in encouraging these patients to use their NIPPV during their entire post-operative stay.

Implications for perianesthesia nurses and future research: This evidence based project suggests that known OSA patients should wear their home CPAP machine as soon as is feasible after surgery. Pre-operative polysomnography results are to be made available to providers before the day of surgery. Anesthesiologists are expected to place appropriate OSA orders prior to arrival to the PACU. Respiratory Therapy ensures home CPAP machines are in good working order prior to arrival to the PACU. Surgical and anesthesia providers are to collaborate if more than 4 liters of O₂ bleed in is required to maintain oxygen saturation. Compliance with the new policy is being assessed through ongoing chart audits. Future endeavors include development of a plan to transport patients on battery-powered CPAP/BiPAP and a system for replacing ill-fitting masks.