

## **Use of Full Face Mask with CPAP on Medical/Surgical/ Telemetry Units for Patients with Obstructive Sleep Apnea**

Steve Donnelly, RRT/NPS  
Stanford Hospital and Clinics  
sdonnelly@stanfordmed.org

**Purpose:** The question guiding this evidenced-based practice project was to determine factors to safely care for patients on chronic full face mask (FFM) with continuous positive airway pressure machine (CPAP) on medical, surgical and telemetry units for non-respiratory related stays. The population are patients with known obstructive sleep apnea (OSA), with established use of a CPAP machine and full face mask at home.

**Background:** Patients using home CPAP undergo extensive fitting process and self- management. Until recently, ALL patients using a FFM were admitted to an ICU during elective hospitalizations, resulting in patient anxiety, lower patient satisfaction, and increased cost of hospitalization. The rationale was that post operative patients are at risk for aspiration, and FFM use might increase those risks. However, at other facilities, patients on CPAP with FFM are safely on non-ICU units if the patients were screened for risk factors. There is no research about the risks of aspiration in these patients on medical units, but ICU studies show that FFM can be safely used with a variety of diagnoses (Gay, 2009, Hill, 2004). A committee of nurses, respiratory care providers and physicians developed a new hospital policy which provided an algorithm to identify patients with risk factors who need ICU care when using the FFM, and patients meeting criteria for care on medical, surgical and telemetry units.

**Methods:** A survey of the University Hospital Consortium (UHC) related to use of full face mask policies was completed, with 16 responses. Education was designed to teach registered nurses (RNs) on a telemetry unit about the new policies and procedures and the algorithm to evaluate use of a full face mask on the unit. They were given a post-test to measure understanding of the program.

**Results:** Results from the UHC survey showed that 12 hospitals (75%) permit the use of full face mask with CPAP on medical, surgical and telemetry units. Eight hospitals (50%) have written inclusion and exclusion criteria for use of face mask on the units. None of the hospitals reported adverse effects as a result of using full face mask on non-ICU units. The teaching program for nurses was completed over a three night period. The teaching took 15 minutes and 23 nurses participated. Nineteen RNs returned the post-test. Four RNs scored 100%, 12 RNs scored 80% and 3 RNs scored 60%. Some limitations of this EBP project were the small number of nurses involved in the training and the lack of CPAP patients during the project.

**Discussion and Conclusion:** The current algorithm for selecting CPAP patients using FFM is more conservative than practices at most UHC hospitals. Patients are carefully screened by the respiratory care provider, RN, and physician if there are any safety concerns. Results demonstrate a need to revise the education program, and continue teaching about the use of full face mask CPAP on the units. Future plans will be to revise the teaching program, and complete the training with both RNs and respiratory care providers.

### **References:**

Gay, PC (2009). Complications of noninvasive ventilation in acute care. *Respiratory Care*, 54, 246-257.  
Hill, NS (2004). Noninvasive ventilation for COPD. *Respiratory Care*, 49, 72-87.