

A STUDY TO EVALUATE THE COMPETENCY OF ICU PERSONNEL IN OXYGEN THERAPY

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Abstract

PURPOSE: Although life-sustaining, inappropriately administered oxygen therapy may result in untoward patient outcomes. Potential complications associated with oxygen therapy include:- Absorption atelectasis- Hypoventilation- Retrolental fibroplasia- Pulmonary Oxygen Toxicity. The purpose of this study was to assess the knowledge of oxygen therapy and delivery modalities among ICU personnel in a University Hospital setting.

METHODS: North Shore University Hospital is an academic tertiary care center in a 15 hospital system. There are 750 acute care beds and 17 bed medical intensive care unit (MICU). There are 1200 admissions per year to the MICU and the average initial APACHE 3 score for the MICU is 74.A 13-question survey was developed by the Director of Respiratory Therapy and reviewed by the Medical Director of Critical Care and the Chairman of Medicine to assess two areas of knowledge: Basic Oxygen therapy considerations and artificial airway care. Each item was a multiple choice question with one correct response. The survey was administered to 73 subjects. They included 25 respiratory therapists, 30 registered nurses, and 18 medical residents.

RESULTS: Frequency and percentages were calculated for nominal data. Ranges, means, and medians were calculated for scores of oxygen therapy knowledge.

CONCLUSION: The benefit assessment of oxygen therapy or any therapeutic modality on clinical outcomes presumes that the care provider possesses the skills and knowledge to optimally utilize the equipment and simultaneously minimize the potential complications. The results of our study are disturbing as the application of oxygen therapy and airway care are fundamental to overall ICU care and error in the planning or application can lead to increased morbidity and mortality. The main limitation of this study relates to its small sample size. In spite of this limitation, the magnitude of the difference and the consistency of the findings provide confidence that these may be truly representative of practice in this area.

CLINICAL IMPLICATIONS: There are differences in the fund of knowledge surrounding oxygen therapy among ICU personnel. These differences could have a significant impact on the quality and safety of patient care.

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