

[NM-340] The Development of an Interprofessional Pediatric Airway Management Curriculum for Perioperative Nurses Using Kern's Six Step Approach

Park C, Palmerton A, Mehta A, Marquez J, Caruso T
Lucile Packard Children's Hospital at Stanford , Stanford , CA, USA

In 1999 the Institute of Medicine published the report "To Err is Human." In addition to highlighting the fact that nearly 100,000 deaths each year were due in part to medical errors, it made recommendations to increase patient safety. One recommendation was for enhanced teamwork between interprofessional teams, including the formation of interdisciplinary team training programs. We have designed an interprofessional curriculum between anesthesiologists and post anesthetic care unit (PACU) nurses using David Kern's Six Step approach to curriculum development.

Step 1: Problem Identification

Anesthetic incidents in the PACU comprise 7% of all malpractice claims in the ASA closed claim database and account for a greater proportion of all lawsuits due to death (58 vs. 36%) (1). Difficult airway closed claims data revealed complications occurred postoperatively in 5% of cases (2). In the pediatric population, the risk of an airway event leading to hypoxemia is nearly double that of adults. While studies indicate practitioners trained in pediatric anesthesia decrease hypoxemic events compared to those who do not regularly care for children, not all hospitals have an anesthesiologist dedicated to the PACU. Additionally, PACU nurses receive variable education on pediatric airway management. The aim of this curriculum is to provide formal education on pediatric airway management to PACU nurses.

Step 2: Needs Assessment

PACU nurse surveys and direct observation suggest a wide range of airway management skills. In consultation with PACU nurse managers, we developed a curriculum consisting of lectures and practical airway training.

Step 3: Goals

The goal is to increase PACU nurse knowledge and ability to manage the airway of a recovering pediatric patient by providing lectures and hands on training.

Step 4: Educational Strategies

To achieve these aims, the education will center on targeted lectures by pediatric anesthesiologists and practical training in bag mask ventilation (BMV) and placement of oral airways on patients at induction and emergence of anesthesia in the operating room. The annual PACU symposium will provide simulation opportunities to maintain knowledge and skills to prevent decay.

Step 5: Implementation

The program will be piloted in January 2014 with PACU nurse volunteers, ultimately expanding to automatic enrollment of all newly hired PACU nurses. Full implementation will occur by January 2015, whereby any PACU nurses who have not enrolled for the course will be required to complete the training.

Step 6: Evaluation

Individual airway knowledge exams will be administered prior to and after completion of the curriculum. Instructors will use standardized checklists to assess competency in proper BMV and oral airway placement and provide individual feedback to participating nurses. Data will be collected and analyzed for statistical significance. Feedback elicited from nurses and instructors will identify curricular strengths, weaknesses, and areas for improvement.

References

1. Zeitlin G. Recovery room mishaps in the ASA Closed Claims Study. ASA Newsletter 1989;53:28-30.
 2. Peterson GH, Domino KB, Caplan RA et al. Management of the difficult airway: a closed claims analysis. Anesthesiology 2005; 103: 33-39.
-