Pediatric Post-Operative Emergencies in Ambulatory Surgery

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Introduction: Postoperative pediatric emergencies present unique challenges in ambulatory surgery centers, particularly as pediatric surgical volumes increase. Following a staff survey, pediatric emergencies—including laryngospasm, emergence delirium, asthma, bronchospasm, and croup—were identified as the leading source of discomfort and knowledge gaps among nursing staff. Addressing this need for enhanced preparedness is essential to promote safe patient outcomes and staff confidence.

Identification of the Problem: Following a staff survey, pediatric emergencies were identified as the leading source of discomfort and knowledge gaps among nursing staff. Addressing this need for enhanced preparedness is essential to promote safe patient outcomes and staff confidence.

EPB Question/Purpose: Does introducing game-based learning, as an adjunct to traditional learning methods, increase knowledge retention, early recognition, and emergency management in staff caring for postoperative pediatric patients in ambulatory surgery centers and decrease the need for immediate transfers? Databases utilized include PubMed & CINAHL

Methods/Evidence: The purpose of this evidence-based practice project is to evaluate the effectiveness of gamebased learning, used in conjunction with traditional education, on knowledge retention, early recognition, and management of pediatric emergencies. Databases utilized include PubMed and CINAHL Staff completed three quizzes focused on high-risk scenarios: laryngospasm, emergence delirium, and respiratory emergencies (asthma, bronchospasm, and croup). Each quiz was administered at baseline, three months, six months, and nine months to assess retention of knowledge over time. Prior to quiz administration, staff participated in an educational session that included a PowerPoint presentation and multiple game-based learning strategies. Examples included scavenger hunts, crosswords, a “headbands” style game, and Jeopardy. Lastly, nurses were timed four different times to pull Racemic Epi from the Pyxis, reconstitute, and administer via nebulizer with the goal being to perform the task faster with each attempt.

Significance of Findings/Outcomes: Expected outcomes include sustained or improved quiz performance, increased staff confidence in recognizing and managing pediatric emergencies, and a reduction in the need for immediate transfers. Findings from this project have the potential to support the integration of game-based learning as a valuable adjunct to traditional education methods within ambulatory surgery centers.

Implications for perianesthesia nurses and future research: Broader implications include enhanced preparedness, improved patient safety, and the establishment of innovative, engaging strategies for continuing nursing education.