

Implementation of Pediatric Emergence Delirium (PAED) Scale

Primary Investigators: Hasima Hajdini DNP MHCOE BSN RN CPN

St. Louis Children's Hospital, Saint Louis, Missouri

Co-Investigators: Tamara Otey DNP RN, Christofer Guelbert DNP RN,

Benjamin Sanofky MD MSED, Julie Spencer DNP RN

Introduction: Pediatric Emergence Delirium (ED) is a state of acute brain dysfunction manifested by disturbance of consciousness and changes in cognition. During emergence delirium, children cannot receive, process, store, or recall any information. This state usually occurs postoperatively due to sedation.

Identification of the problem: The theories of ED origins in children are many, and hypotheses point toward postoperative pain, pharmacokinetics, and anesthetics as causative agents. The presence of ED is documented in children of all ages but is more frequent in children aged three to ten years. Unrecognized and not adequately treated ED is associated with a prolonged hospital stay and higher costs for families and institutions.

EBP Question/Purpose: Emergence delirium in children is often underrecognized but can represent a serious complication and extend hospitalization. Children with emergence delirium are at risk of harming themselves by injuring the surgical site, dislodging IVs, airway tubes, falling, or refusing care. Emergence ED is associated with posttraumatic stress disorder in the pediatric population. In the best interest of this population, pediatric nurses must recognize and intervene to prevent and initiate treatment of emergence delirium in hospitalized children. Delayed treatment can cause worsening clinical status. The best method of managing pediatric ED is early recognition by anesthesia or nursing personnel.

PICO question. In PACU nurses (P), does the implementation of nursing education (I) on the use of the Pediatric Anesthesia Emergent Delirium (PAED) scale (C), as opposed to the Face, Legs, Activity, Cry, Consolability (FLACC) Scale, reduce the time required to evaluate and treat emergence delirium in pediatric patients three to ten years of age, and lead to improved nursing satisfaction and confidence (O) within three months (T)?

Databases utilized. Search engines used were PubMed, CINAHL (Cumulative Index for Nursing and Allied Health Literature), The Cochrane Library, Elsevier, and Physiotherapy Evidence Database.

Methods/Evidence: This project was a method of teaching nurses to use the PAED scale as a "Gold Standard" for ED evaluation and treatment, implementing the scale as a standard practice. For this project, an evaluating tool was developed, reliability, validity and applicability were determined by three specialists in their fields of practice. Education was provided in the simulation lab, for PACU nursing staff and pre-and post-test was administered and evaluated.

Significance of Findings/Outcomes: The project's goal was educating PACU nurses in recognizing and managing pediatric ED with implementation of the PAED scale as more reliable than the current practice. The PAED scale assisted PACU nurses to quickly evaluate patients, recognize signs of ED initiate treatment, and prevent unwanted side effects of ED. Standard use of the PAED scale in PACU will provide safer and more efficient patient care.

Implications for perianesthesia nurses and future research: Implementation of this DNP project used the examples of the best Evidence-Based Practice that is currently existing intending to provide the best possible care for our patients. Children are not small adults; their bodies are much smaller and have no reserves to compensate for hypoxia, tachycardia, or any other situation that the adult body would handle much easier. Evaluating children is more difficult due to their age, developmental level, and post-operative situation. The existence of the PAED scale is important and with the implementation of the scale, nursing education, and change of work standards, we are hoping to prevent behavioral changes and all other unwanted side effects that can be caused by untreated ED.