

Decreasing Emergence Delirium through Implementation of Dexmedetomidine with Pediatric Post-Surgical Patients

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Background Information: Emergence delirium (ED) is a dissociative state of consciousness with non-purposeful agitation and inconsolability during emergence from anesthesia. ED can happen to anyone, but children are at highest risk. Studies show that 30-50% of children less than 10 years old will experience ED. ED can cause harm to the patient and staff, increase staffing demands, and cause prolonged behavior changes such as: sleep disturbances, anxiety, and poor attention. In a community hospital post anesthesia care unit (PACU), the average ED score for children undergoing anesthesia was 10.0. A review of the literature showed that Precedex (dexmedetomidine) for pediatric surgeries can significantly reduce the rates of ED, as well as decrease the use of analgesics by up to 71%, reduce post-op nausea, and decrease shivering. Dexmedetomidine was not being used in this perianesthesia area to prevent ED.

Objectives of Project: The purpose of this project was to decrease ED in pediatric patients aged 1-8 years through the administration of intravenous (IV) dexmedetomidine intraoperatively.

Process of Implementation: An American Society of PeriAnesthesia Nurses (ASPAN) member and an anesthesiologist collaborated to implement IV dexmedetomidine as a prevention strategy for ED. The ASPAN member hosted a journal club and provided staff education to nurses in the PACU area on dexmedetomidine, ED in pediatric patients, and the PAED scale.

Statement of Successful Practice: By comparing the PAED scales in patients that received dexmedetomidine to those that did not, it was found that receiving dexmedetomidine reduced the occurrence of ED in patients from a pre-intervention PAED score of 10 to a post-intervention score of 3.5. PAED scores in the post-intervention group ranged from 0 to 12. Overall, the patients given IV dexmedetomidine prior to emergence showed a 41% lower score for emergence delirium.

Implications for Advancing the Practice of Perianesthesia Nursing: The literature supports that reduction in ED can reduce the risk of injury to patient and staff, decrease parental anxiety, decrease post-operative nausea, and reduce narcotic use. By collaborating with inter-professional partners and successfully implementing this evidence-based practice, ED was decreased, and patient care was improved.