

COMPARING THE USE OF IPAD™ DISTRACTION VERSUS ORAL VERSED TO REDUCE PEDIATRIC PREOPERATIVE ANXIETY

Primary Investigators: Terri Pearcy RN BSN CPN, Barbara Stewart RN MSN CPN

Cook Children's Medical Center, Fort Worth, Texas

Co-Investigator: Rebecca Severnak RN

Introduction: Children experience anxiety before outpatient surgical procedures at parental separation and mask induction. Most common treatment for preoperative anxiety is administration of benzodiazepines, usually oral Versed, with undesirable side effects of prolonged sedation and emergence delirium.

Identification of the problem: Two significant problems emerged: (1) preoperative anxiety is a common problem in pediatric patients, and (2) use of interactive distraction has not been thoroughly investigated for its effectiveness to minimize pediatric preoperative anxiety.

Purpose of the Study: The research question was: In children (4-12 years) undergoing outpatient surgery, is distraction using iPad™ effective in reducing preoperative anxiety (at parental separation and mask induction) when compared with oral Versed? Purpose was to replicate Seiden et al. (2014) study to increase evidence for use of distraction in pediatric perioperative patients.

Methodology: Single-blinded prospective comparative study design was used with randomized assignment to experimental iPad group (n=51; mean age 6.8 years, 51% male) and control oral Versed group (n=51; mean age 6.9 years, 65% male). Outcome measures included: (1) Modified Yale Preoperative Anxiety Scale at 3 time points, (2) Pediatric Anesthesia Emergence Delirium Scale at two time points, (3) parent's perception of child's anxiety at two time points (4) parent satisfaction with child separation, and (5) times from Post-Anesthesia Care Unit (PACU) arrival to awakening and to discharge.

Results: Preoperative anxiety scores were statistically lower for iPad group at separation and induction ($p < 0.001$). Emergence delirium scores, 15-minutes post-awakening, were statistically lower for iPad group ($p = 0.014$). Experimental group demonstrated significantly less PACU arrival time to awakening times ($p = 0.007$) and time to discharge ($p = 0.001$).

Discussion: iPad™ distraction was more effective in reducing pediatric preoperative anxiety in pediatric outpatient surgery patients, 4 to 12 years old, decreasing scores of emergence delirium, and shortening length of stay in PACU.

Conclusion: This study added to existing body of knowledge in effectiveness of distraction in reducing pediatric preoperative anxiety compared to oral Versed.

Implications for perianesthesia nurses and future research: Results supported change in practice for perianesthesia nurses related to use of distraction to reduce pediatric preoperative anxiety and decrease overall use of benzodiazepines.