

COMPARING THE USE OF AN iPad™ TO ORAL VERSED TO REDUCE PEDIATRIC PERIOPERATIVE ANXIETY

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Problem and Significance:



Children experience anxiety before outpatient surgical procedures when separated from parents and at mask induction.

This anxiety can lead to problems of fear and distress beyond the immediate postoperative period.



Versed is commonly used to treat preoperative anxiety in our institution.

Undesirable side effects may occur with Versed, such as prolonged sedation, agitation and emergence delirium.

Research question:

In children (4-12 years) undergoing outpatient surgery, is distraction using an iPad™ effective in reducing preoperative anxiety when compared with oral Versed?



Methods:

Design:

Single-blinded prospective comparative study with randomized assignment, into one of two groups:

- iPad™ group (interventional) n=51
- Oral Versed group (control) n=51

Sample:

102 children, ages 4-12, undergoing outpatient surgical procedures lasting 1½ hours or less.

Setting:

- Cook Children's Medical Center, a 430-bed pediatric hospital performing over 15,000 outpatient surgeries for fiscal year 2016.
- Study conducted in two locations: Dodson Surgery Center and Main Surgical Services.
- Research team members included bedside nurses, nurse managers, child life specialists and anesthesiologists.

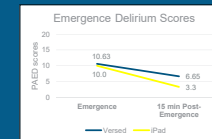
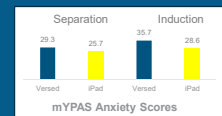
Outcome Measures:

- mYPAS {
 - Anxiety scores observed at baseline, parent separation and mask induction using the Modified Yale Preoperative Anxiety Scale
- PAED {
 - Emergence Delirium scores observed upon awakening and 15 minutes later using the Pediatric Anesthesia Emergence Delirium scale
- Time {
 - Time from Post-Anesthesia Care Unit (PACU) arrival to awakening and to discharge home

Results:

Preoperative Anxiety

iPad™ group demonstrated significantly decreased preoperative anxiety at times of separation and induction compared to Versed group (p<0.001)



Emergence Delirium

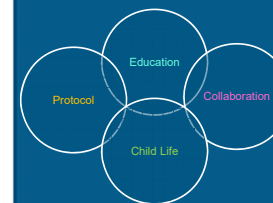
iPad™ group had significantly lower scores on PAED scale 15 minutes post-emergence (p=0.014)

Time

iPad™ group woke earlier (p=0.007), arrived to Phase II earlier and were discharged **25 minutes earlier** (p=0.001) compared to Versed group

| Time Outcomes | Versed | iPad |
|--------------------------|---------|--------|
| PACU Arrival - Emergence | 24 min | 19 min |
| PACU Arrival - Phase 2 | 40 min | 33 min |
| PACU Arrival - DC Home | 124 min | 99 min |

Implications for Nursing:



After completion of the study we encountered resistance to change. Continued persistence from research team and recommendations from our Family Advisory Council led to implementation of these study results into our practice.