INTRODUCTION
Midazolam is the most commonly used premedication to alleviate anxiety in patients undergoing surgery. Recently, increased reports of paradoxical reactions to midazolam have been emerging. These reactions are characterized by agitation, worsening anxiety, restlessness and aggressive behavior. Pediatric patients experiencing emergence delirium (ED)/emergence agitation (EA) may be disoriented, combative, and inconsolable and may exhibit non-purposeful movements. EA/ED may require treatment and can subsequently prolong Post-Anesthetic Care Unit (PACU) stay. Authors hypothesize that midazolam might be associated with increased risk for emergence delirium/agitation and therefore longer length of stay in the PACU for pediatric patients undergoing ear tube placement under Sevoflurane anesthesia.

METHODS
After IRB approval was obtained, a prospective cohort study was conducted. Patients who met the inclusion criteria who were scheduled to undergo bilateral ear tube placement were included in the study. All subjects had Sevoflurane mask anesthesia. Since we are examining all cases within a specific time frame (January to March 2016), no sample size determination or powered calculation was performed. The authors intended to collect data on 500 subjects at the end of the study. Their Pediatric Anesthesia Emergence Delirium Scores (PAED) and Length of Stay (LOS) in PACU were collected.

Subjects were divided into two groups:
- The Midazolam (M) group included those patients that received PO midazolam as a premedication.
- The Control (C) group included those patients that did not receive PO midazolam.

PAED scores and Length of Stay were compared between the two groups.

Inclusion Criteria:
- Ear Tube Placement (with no other procedures performed)
- 1-10 years old
- ASA 1-2
- No Developmental Delay or Behavioral Impairment

RESULTS
The study consisted of 90 subjects. There were 74 in the C group and 20 in the M group. Mean age and weight were 36.3 ± 33.2 months and 15.2 ± 9.2 kg in the C group, and 44.7 ± 31.5 months and 16.6 ± 9.3 kg in the M group (p=0.31 and 0.54 respectively). ASA and gender were not different in both groups (p=0.99 and p=0.07 respectively).

PAED scores were not different in both groups (p=0.60) while PACU LOS was significantly different (P<0.001), with M group staying longer in the RR.

DISCUSSION
- This preliminary study only included 90 subjects. The authors intend to include 500 subject at the time of the project's completion..
- The only statistically significant finding in this preliminary data is the longer LOS in PACU in the M group. This is not because of emergence delirium because the PAED scores were not different between groups C and M. This may be due to the sedative effect of midazolam.
- Based on this preliminary data (limited number of patients), this study showed no difference between the two groups.

REFERENCES