

INTRODUCTION

The rate of anesthetic-related mortality has decreased over the past few decades due to significant advancements in the care and delivery of anesthesia. Despite such improvements, anesthesia is still not risk-free and can contribute to major adverse outcomes. Currently at our university pediatric hospital we have established a system in which an “Anesthesia STAT” (AS) overhead page is announced for an emergency in the perioperative area in order to rapidly gather anesthesia-trained personnel. We conducted a quality improvement study to describe the patient profile, case characteristics, and outcomes related to our AS events to identify possible contributing factors and associations with these events.

METHODS

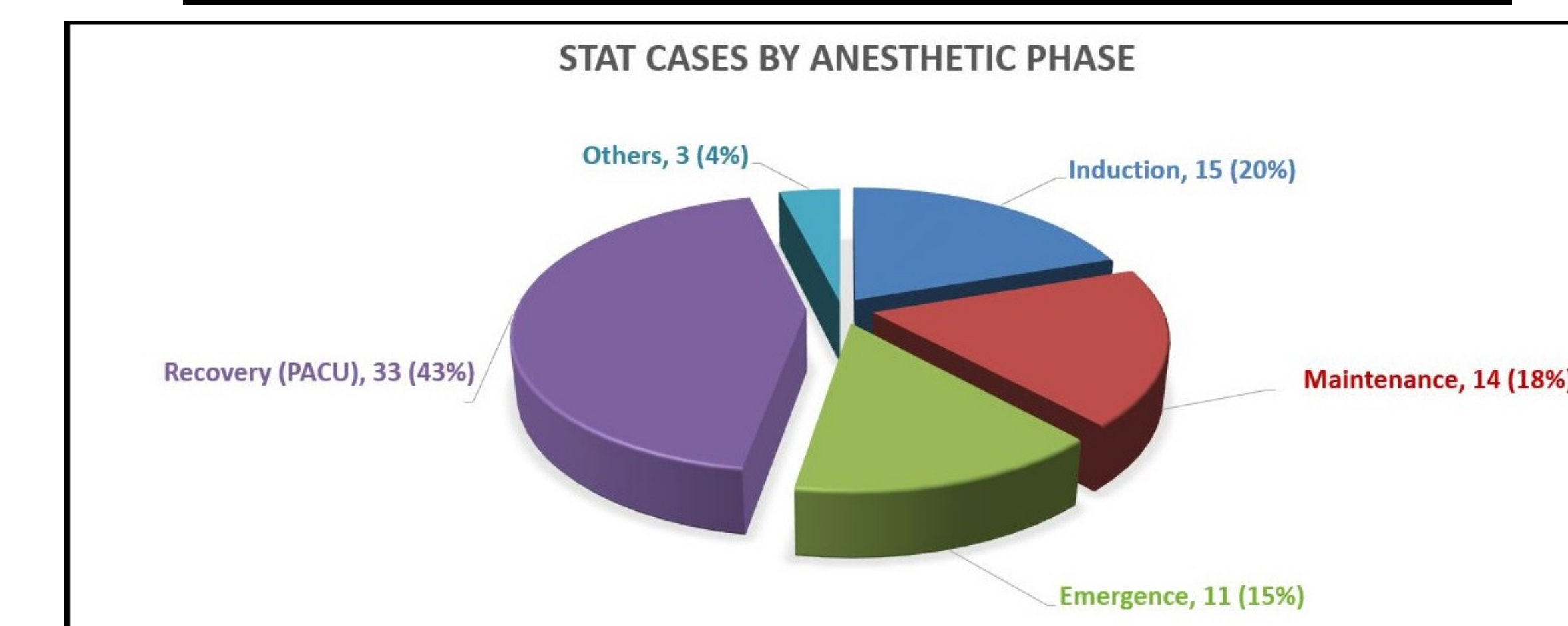
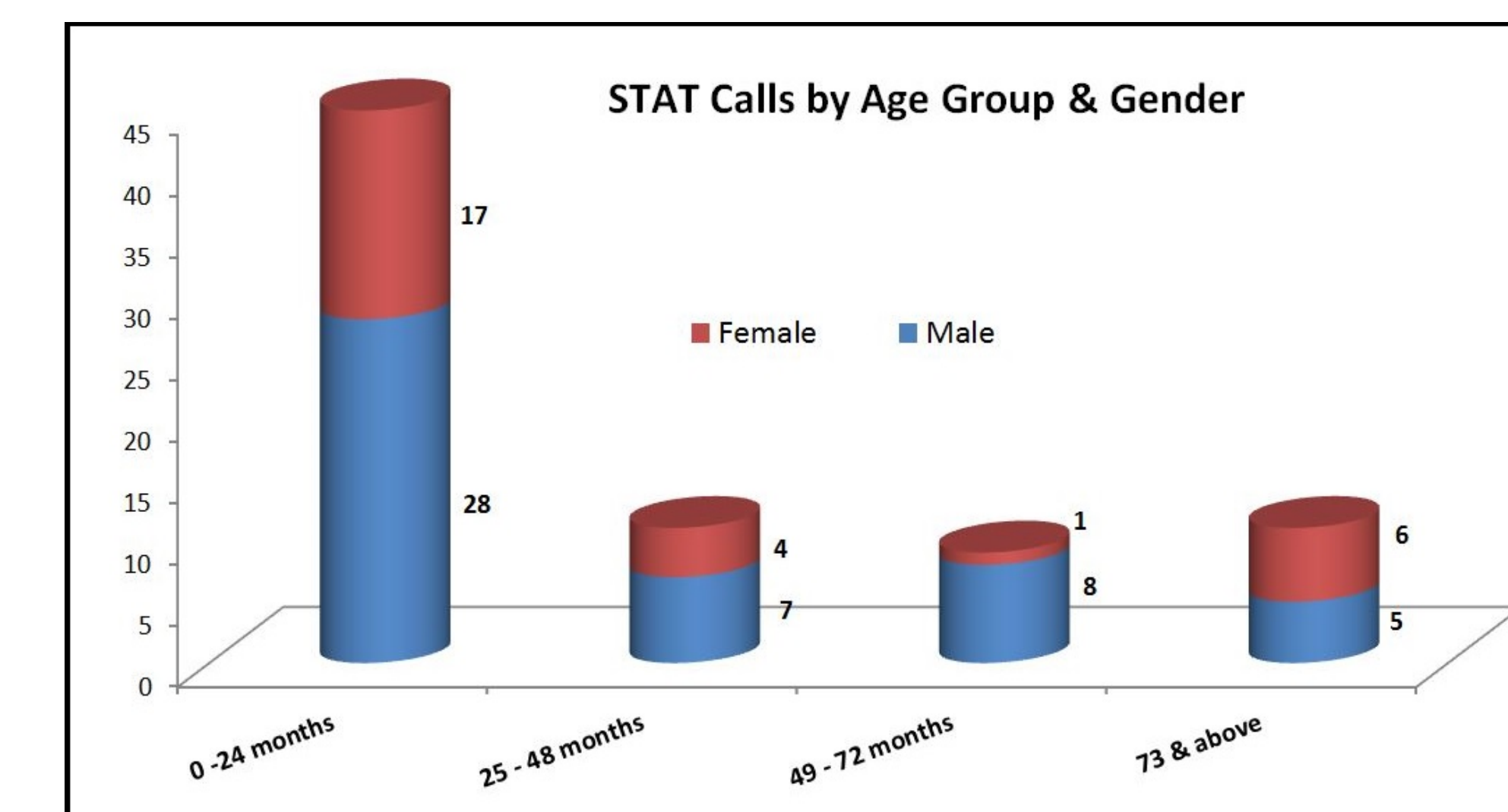
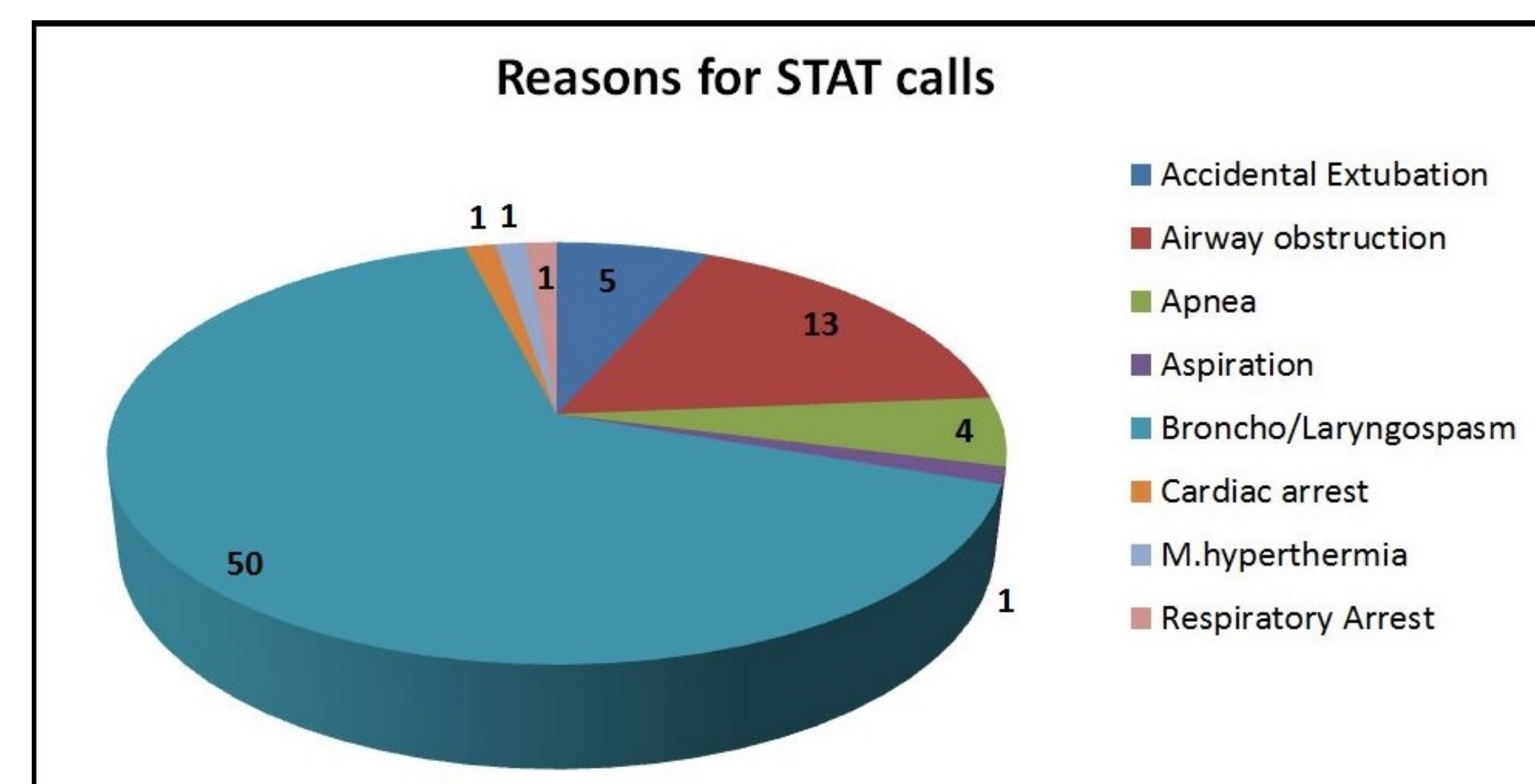
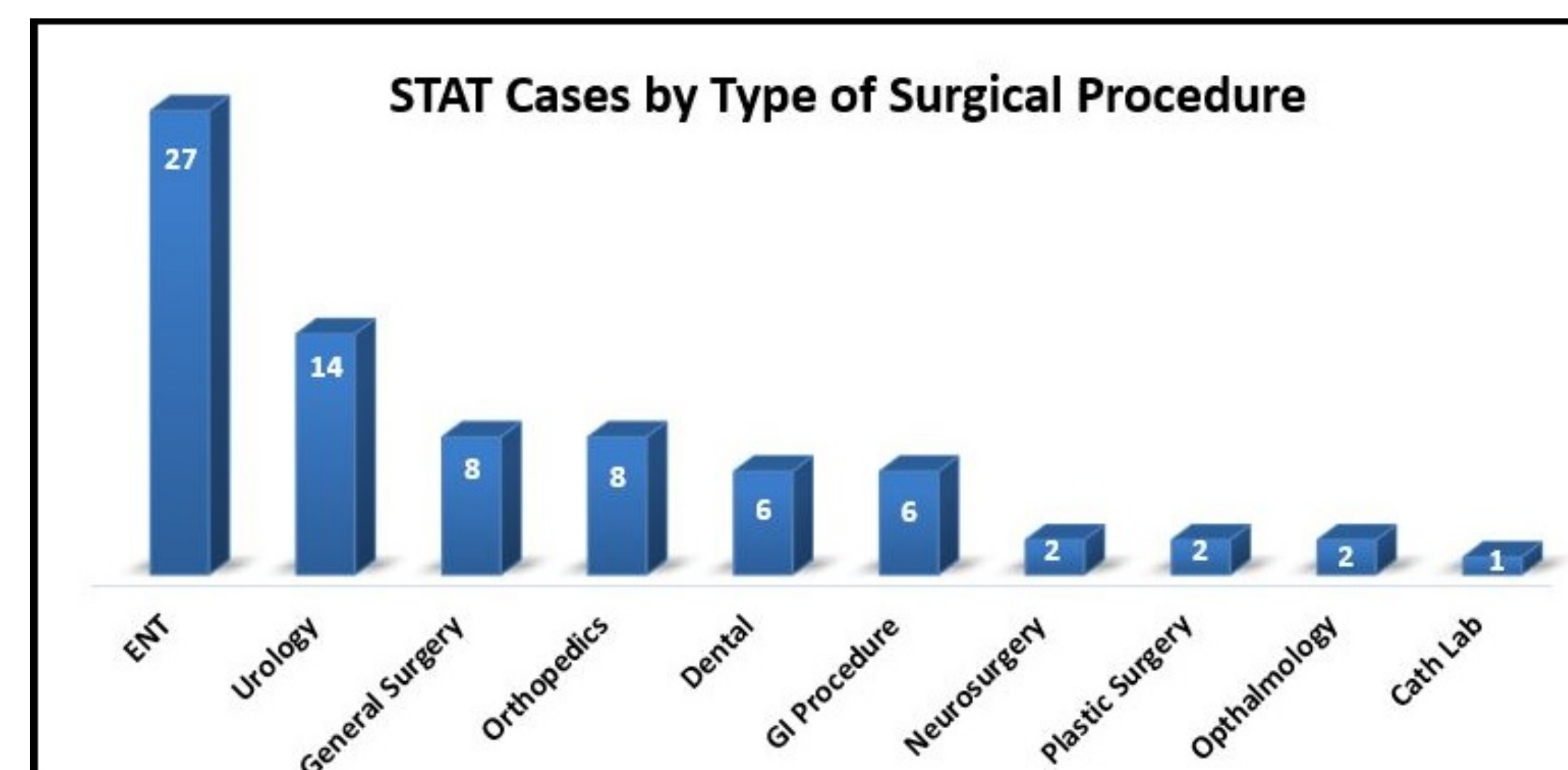
The study was conducted over a two-year period (January 2016-January 2018) at the University of Oklahoma Children’s Hospital, the only pediatric hospital in the state. The study was designed as a prospective study but we collected data retrospectively after each AS event. Whenever an AS page was announced overhead the following data points were recorded: surgical procedure type, anesthetic type, location of event, patient demographics, ASA status, phase of anesthetic, experience level of the anesthesia provider, intervention, outcome, and patient disposition.

RESULTS

Here we report the preliminary results from the first year of the study. A total of 80 AS events occurred out of 10,361 OR cases between January 2016 and January 2017. An incidence rate of 0.77%. We are missing data for 4 cases therefore only 76 cases were analyzed.

RESULTS (CONTINUED)

Of our cases, 28 patients (36.8%) were females and 48 (63.2%) were males. The average age of patients was 38.8 months (SD 48.7). The distribution of cases by race is largely in accordance to our state population profile according to 2013 Oklahoma census, except for the Asian population being less. The most common type of surgical procedure was ENT surgery (35.5%). The majority of patients were ASA-2 (56.5%) followed by ASA-3 (25%). The majority of calls were initiated due to respiratory events with laryngospasm or bronchospasm being most common (65.8%). The majority of the anesthesia providers’ level of experience was less than 5 years. The most common location was the PACU (43.4%). For the events that did occur in the OR, the most common phase of anesthetic was at induction (19.7%) followed by extubation (18.4%). The predominant outcome was increased PACU observation (34.2%).



DISCUSSION

Our results are similar to that of the Children’s Hospital of Philadelphia and further support current literature. Notably, higher ASA was not associated with increased AS events, which may be because providers already have higher vigilance when caring for higher risk patients. Another reason may be because the majority of case types are outpatient surgery procedures. Increased vigilance should be allocated to the PACU recovery area as that is where the majority of the events occur.

CONCLUSION

ENT surgery types, decreased age, PACU location, and decreased staff experience were associated with increased risk of AS events.

REFERENCES

- Bainbridge D, Martin J, Arango M, Cheng D; EPiCOR Group. Peri-operative Clinical Outcomes Research Group: Perioperative and anaesthetic-related mortality in developed and developing countries: A systematic review and meta-analysis. *Lancet*. 2012; 380:1075-81.
- Schleelein LE, Vincent AM, Jawad AF, et al. . Pediatric perioperative adverse events requiring rapid response: a retrospective case-control study. *Paediatr Anaesth*. 2016; 26(7):734-31.