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Introduction

- ❑ Unanticipated admission following ambulatory peds surgery ~2%
- ❑ Leads to negative consequences to family and system
- ❑ OSA occurs in 8% of peds patients
- ❑ Increases risk of resp events, but does it increase risk of unanticipated admission?

Objective: To determine if pediatric OSA (*not SDB*) increases the risk of unanticipated admissions following non-ENT ambulatory surgery.

Methods

- ❑ The Pediatric Health Information System (PHIS) database
- ❑ Children <18y non-ENT ambulatory surgery from 2010-2022 who experienced an unanticipated admission
- ❑ Primary outcome was unanticipated admission, defined as length of stay \geq 24hr
- ❑ Logistic regression analysis, comparing children with and without OSA (defined using ICD-9/10 Codes)
- ❑ Also, trend of OSA prevalence in ambulatory surgery patients over study period

Results

- ❑ 855,832 patients had non-ENT ambulatory surgery; 4.6% had unanticipated admission
- ❑ 0.7% of the study population had OSA
- ❑ Unanticipated admission rates varied between children with (9.4%) and without (5.0%) OSA
- ❑ **Children with OSA had a two times greater odds of unanticipated admission (aOR 2.14, 95%CI 1.95-2.36, P<0.001)**
- ❑ Prevalence of OSA in the study population rose from 0.4% to 1.7% from 2010-22

Discussion

- ❑ Procedure, patient age, and ASA typically guide pre-anesthetic disposition planning
- ❑ However, we demonstrate that OSA is an important risk for unanticipated admission in the ambulatory setting
- ❑ Despite this, the prevalence of children with OSA scheduled for ambulatory surgery has been increasing in the past decade, emphasizing the importance of patient selection

Pediatric OSA is a risk for unanticipated admission following non-ENT ambulatory surgery.

OSA should be considered in disposition planning for ambulatory procedures.

| | Same day hospital admission n/N (%) | Crude OR(95%CI) | Multivariable OR(95%CI) | P-value |
|--------------------------------|--|--------------------|----------------------------|---------|
| Obstructive Sleep Apnea | | | | |
| No | 38828/849473(5.0) | Reference | Reference | |
| Yes | 599/6359(9.4) | 2.17(1.99—2.36) | 2.14(1.95—2.36) | <0.001 |

Figure 1. Associations of obstructive sleep apnea with same day hospital admission in children undergoing non-ENT procedures, PHIS 2010-2022
Adjusted analyses were controlled for include male sex, race, age, insurance status, census region, and the presence of key preoperative comorbidities: cardiovascular, gastrointestinal, hematologic/immunologic, malignancy, metabolic, and renal/urologic. **Abbreviations:** OR, odds ratio; CI: confidence intervals

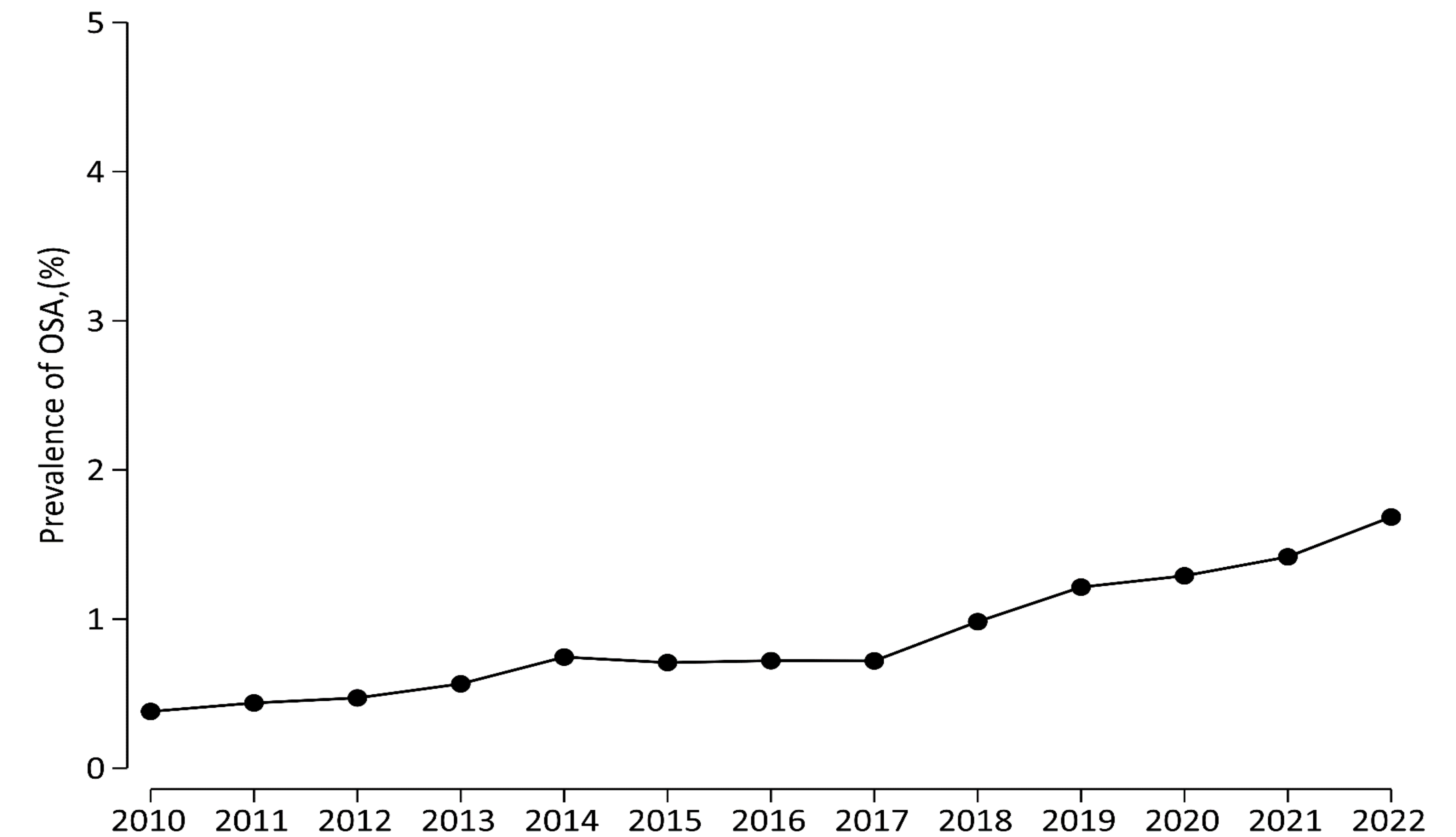


Figure 2. Trend of OSA prevalence in ambulatory non-ENT pediatric surgery patients, PHIS 2010-2022