

# Prevalence of Obesity in Children Presenting For Ambulatory Surgery in an Urban Children's Hospital.

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## Introduction

The incidence of obesity in children, defined by the National Health and Nutrition Examination Survey as a body mass index (BMI) greater than 95<sup>th</sup> percentile for age, has risen to 17.1% in the general population (1). Increasing numbers of obese children are presenting for anesthesia and surgery. It is unclear if this increase merely reflects the prevalence in the community or is due to an increase in obesity related co-morbidities requiring surgical intervention e.g. tonsillectomy and adenoidectomy for obstructive sleep apnea.

## Methods

Following approval by the Institutional Review Board, this observational study was performed to determine the prevalence of obesity (BMI > 95<sup>th</sup> percentile) in children presenting for same day surgery. Inpatients and patients unable to stand for height measurement were excluded. Patient demographics, height, weight, calculated BMI and types of surgical procedures were recorded. The prevalence of obesity, and distribution by age and ethnicity were compared to regional data (2). The percentage of obese patients requiring a particular procedure was also compared to the relative frequency of that procedure in our operating room database.

## Results

1565 of the day-surgery patients evaluated at our urban children's hospital over a three month period had complete data for analysis. Of these, 314(19.9%) had a BMI > 95<sup>th</sup> percentile and were considered obese, while 222(14%) were overweight (BMI 85-94<sup>th</sup> percentile). The mean age of the obese patients was  $9.1 \pm 4.2$  years, and the male: female ratio was 1.3:1. The prevalence of obesity by ethnicity was 26.2% in Hispanics, 15.1% in Caucasians, 20.7% in African-Americans, 11.7% in Asians and 10.7% in the multiracial/unclassified group. Thirty-four percent of obese patients presented for otolaryngologic procedures with the most common procedure being tonsillectomy and adenoidectomy. The next major category was general surgery procedures which accounted for 19% of the cases. The incidence of ENT procedures was similar to the frequency of ENT procedures in our operating room database.

## Discussion

The overall incidence of obesity in our study population, (19.9%) was similar to the regional population estimate of 18.8 - 25.6% in children within this age range. However, the ethnic distribution observed is discordant with the population values. This may merely reflect our patient demographics and patient access to healthcare. No particular surgical procedure in this cohort could be attributed to obesity related co-morbidities. In summary, the prevalence of obesity amongst our day surgery patients parallels that of the general population and does not appear to reflect an increase in obesity related co-morbidities requiring surgery.

## REFERENCES

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