# Do we choose Different Weight Loss Procedures in Adolescents versus Adults? National Database Analysis

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## Background

- Weight loss surgery is increasingly prevalent in pediatric populations with the recent updated pediatric obesity management guidelines, particularly in patients with class II obesity or greater [1].
- We hypothesize that although the ASMBS has similar surgical recommendations for adult and pediatric bariatric populations, the choice of primary surgery may be skewed in the pediatric population

## Study Design

- The MBSAQIP was reviewed from 2015-2020, for patients under ≤18 (Peds) and those 19-30 years old (Adult).
- Data collected regarding
  - Demographics, BMI, procedure type and comorbidities including diabetes, OSA, Gerd, hyperlipidemia, and hypertension requiring multiple medications were analyzed.
- Only primary sleeves and gastric bypasses (GBP) were included.
- Data analyzed using Chi square through STATA was used to compare the different variables by the adult and pediatric age groups. P values were < .05.

## Results

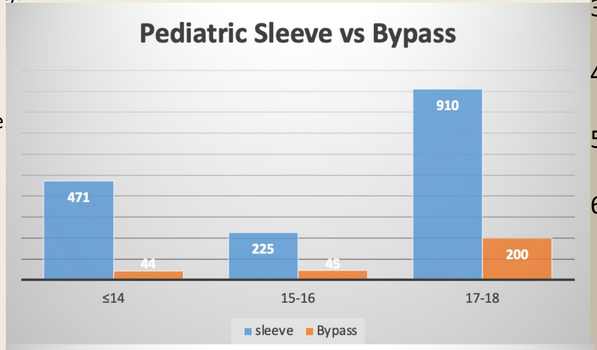
- The peds group had 1895 pts (74% female vs 26% male, mean age was 17) versus 93,111 Adults (86.5% female vs 13.5% male, mean age was 26.0) in the same time period.
- 84.8% Peds underwent a sleeve gastrectomy versus 75.7% Adults
- 15.2% Peds had RGB vs 24.3% Adults
- Comorbidities including hypertension, diabetes, OSA and hyperlipemia were observed. One notable finding was hypertension requiring ≥3 medications was greater in the pediatric group (28.2% versus 16.8% Adult).
- Mean BMIs were similar in both groups peds vs adult (47 vs 41).
- If a peds patient was < 14 year old, 91.5 % had a sleeve.
- Those 17-18 year old had a decrease incidence of a sleeve to 83%.
- As the adults aged, there was a trend toward more bypasses per percentage

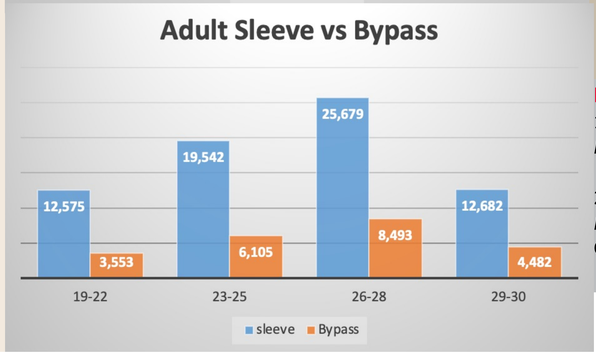
### Pediatric

| Comorbidities Percentage | <14 | 15-16 | 17-18 |
|---|---|---|---|
| GERD | 9.60% | 13.68% | 11.95% |
| Insulin Dependent Diabetes | 1.32% | 2.46% | 1.79% |
| Non-insulin Dependent Diabetes | 14.66% | 12.97% | 15.09% |
| HTN requiring > 3 Meds | 1.32% | 29.47% | 41.13% |
| Sleep Apnea | 23.31% | 24.91% | 19.20% |
| Hyperlipidemia | 2.07% | 2.11% | 2.05% |

### Adult

| Comorbidities Percentage | 19-22 | 23-25 | 26-28 | 29-30 |
|---|---|---|---|---|
| GERD | 13.88% | 17.10% | 19.45% | 21.46% |
| Insulin Dependent Diabetes | 1.14% | 1.42% | 1.93% | 2.13% |
| Non-insulin Dependent Diabetes | 8.38% | 8.15% | 9.00% | 10.11% |
| HTN requiring > 3 Meds | 15.71% | 15.74% | 14.96% | 25.25% |
| Sleep Apnea | 13.96% | 16.40% | 18.88% | 20.88% |
| Hyperlipidemia | 2.10% | 2.49% | 3.33% | 4.37% |




## Conclusions

1. Pediatric patients are more likely to get a sleeve gastrectomy than young adults, especially if under the age of 14 years old
2. Hypertension that is difficult to control is greater in the pediatric population than the adult.
3. As adults' approach 30 there is a higher percentage that get a gastric bypass than younger cohorts.
4. Patients 17-18 year old more closely follow the trends seen in adults.
5. BMIs were similar amongst both groups for consideration of bariatric operations
6. Patients within the 26-28 year old group had the highest incidence of bariatric operations

## References

1. Shapiro, W.L., et al., *Prevalence of Adolescents Meeting Criteria for Metabolic and Bariatric Surgery.* Pediatrics, 2024. **153**(3).

2. Doyle, W.N., et al., *Anti-obesity Medication Use for Adolescent Metabolic and Bariatric Surgery Patients: A Systematic Literature Review.* Cureus, 2023. **15**(12): p. e50905.

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