

# **Pediatric Bariatric Surgery in United States Centers of Excellence in Bariatric Surgery (COEBS): Variation by Age, Gender, Health Insurance, and Procedure**

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**Introduction:** Data on pediatric bariatric patients at United States COEBS is evolving. Objective: Identify clinical variation in adolescents at US COEBS.

**Methods:** Retrospective data from 341 US COEBS adolescents analyzed using ANOVA and general linear model.

**Results:** Female (n=267)/male (n=74) pre-operative weight (125+-24/162+-35 kg), BMI (45+-8/53+-12), dyslipidemia (11%/22%), OSA (24%/41%), CPAP (9%/22%), medicated back pain (MBP) (12%/22%) and private insurance (81%/72%) (p<0.05). 6, 12 and 24-month post-operative OSA (16%/36%), (12%/34%) (p<0.01) and (4%/33%) (p<0.05). 6-month CPAP (7%/19%) and MBP (6%/15%) (p<0.05).

Pre-operative private insurance (n=270)/non-private (n=31), weight (130+-2/147+-5kg), BMI (46+-1/54+-2), diabetes (17%/42%) (p<0.001), OSA (28%/48%), depression (25%/42%), Caucasian (68%/45%), female (82%/94%) (p<0.05). BMI 6 and 24 months (39+-0.4/42+-1, 35+-4/27+-1) (p<0.05), 6 and 18-month diabetes (9%/29%, 5%/40%), 6-month OSA (18%/44%), CPAP (9%/21%) medicated asthma (MAS 9%/21%) (p<0.05).

By pre-operative age <16 (n=47)/>=16 (n=285), weight (122+-25/134+-31kg (p<0.01) varied. BMI (45+-8/47+-10, p=0.057), dyslipidemia (26%/11%), OSA (40%/26%), alcohol (3%/15%) and MBP (30%/11%) did not. 6-month post-operative MBP (18%/6%), 6/12-month alcohol (13%/3%)/(2%/22%), and 18-month dyslipidemia (25%/6%) (p<0.05) varied.

Baseline LRYGB/LAGB/SLEEVE weight (143+-3/125+-2/130+-4kg), BMI (50+-1/45+-1/47+-1), OSA (35/19/36), CPAP (19/6/11), MAS (28/8/18), back pain (35/28/18), MBP (19/11/4), depression (22/26/38), private insurance (73/83/76), Caucasian (56/75/60) varied (p<0.05). 6-Month OSA, depression (p<0.05) and 18-month asthma (p<0.01).

**Conclusions:** US COEBS adolescent males have increased weight, dyslipidemia, OSA, CPAP, and less private insurance. Private insurance weigh less with fewer comorbidities but have increased comorbidity resolution. Patients <16 years old weigh less and use less alcohol but have more comorbidities compared to >=16. LRYGB have increased weight/BMI/comorbidities versus LAGB/SLEEVE but resolve comorbidities equally.