

**WEIGHT LOSS AND RESOLUTION OF OBESITY CO-MORBIDITIES VARY BY HEALTH INSURANCE STATUS AFTER LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS (LRYGB): AN ANALYSIS OF 73,604 BOLD DATABASE PATIENTS**

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Background: Post-operative weight/weight loss and resolution of obesity co-morbidities following LRYGB are known. However, clinical differences in post-LRYGB outcomes according to the health insurance each patient carries are not well-investigated. Since subscribers to Medicaid, Medicare, Private insurance, or are Self-Pay may derive from different age, ethnic, and socio-economic populations, it is likely that their responses to LRYGB may vary also. Knowing differential responses to LRYGB for patient sub-groups characterized by health insurance status could help optimize post-bariatric surgery outcomes. The objective of this study was to identify health insurance-related variations in weight loss and resolution of obesity co-morbidities after LRYGB.

Methods: Data from 73,604 Surgical Review Corporation BOLD database patients who underwent LRYGB was analyzed retrospectively by the type of health insurance to which each patient subscribed: Medicaid (n=3,305), Medicare (n=8,643), Private insurance (n=60,163), Self-Pay (n=1493). Weight, BMI, hypertension, angina, obstructive sleep apnea (OSA), diabetes, obesity hypoventilation syndrome (OHS), asthma, abdominal hernia, cholelithiasis, GERD, liver disease, dyslipidemia, musculoskeletal pain, pulmonary hypertension and gout and were recorded at 2, 6, 12, 18, 24, and 36 months post-operatively. Statistics were done by generalized linear regression models with binomial link function including treatment, baseline values, insurance status and the interaction in the model.

Results: At 18 and 24 months, Medicaid liver disease increased to 10% and 11%, respectively, while it declined in the other groups (p<0.05). Further Results at 12 months included:

**OUTCOME RESULTS 12 MONTHS AFTER LAPAROSCOPIC ROUX-EN-Y GASTRIC BYPASS**

<b>Variable</b>	<b>Medicaid (n=1080)</b>	<b>Medicare (n=1671)</b>	<b>Private (n=19493)</b>	<b>Self-Pay (n=417)</b>	<b>p-value</b>
Weight (kg)	90+-22	92+-24	86+-19	88+-21	p<0.0001
BMI	33+-7	33+-7	31+-6	31+-6	P<0.0001

Hypertension (%)	38.88	49.73	31.91	24.7	P<0.001
Angina (%)	2.98	4.25	1.55	1.2	P<0.001
OSA (%)	35.16	35.91	24.26	19.18	P<0.0001
Diabetes(%)	18.79	26.03	13.9	9.35	P<0.0001
OHS (%)	4.09	3.05	1.05	0.48	P<0.01
Asthma (%)	27.35	19.33	12.88	8.63	P<0.0001
Abdominal Hernia (%)	7.72	7.3	5.08	3.12	p<0.05
Cholelithiasis (%)	33.49	30.4	22.62	15.11	P<0.0001
GERD (%)	37.12	34.95	23.76	14.87	P<0.0001
Liver disease (%)	7.44	8.08	6.69	3.84	P<0.01
Dyslipidemia (%)	29.3	38.48	25.91	16.79	P<0.0001
Musculoskeletal Pain (%)	40.84	45.66	28.77	18.71	P<0.0001
Gout (%)	3.81	5.27	2.52	2.64	P<0.001

Conclusions: Responses to LYRGB vary by insurance carrier-defined populations. Medicare weight loss and resolution of hypertension, angina, OSA, diabetes, gout, dyslipidemia, musculoskeletal pain, and liver disease were least. Medicaid OSA equaled Medicare, and OHS, asthma, abdominal hernia, cholelithiasis, and GERD persisted at the highest levels. After 12 months, Medicaid liver disease increased. Self-Pay had the greatest weight loss, lowest BMI, and best resolution of hypertension, diabetes, angina, OSA, OHS, asthma, abdominal hernia, GERD, liver disease, cholelithiasis, dyslipidemia, and musculoskeletal pain. Private resolved pulmonary hypertension most, and otherwise performed intermediate between Medicaid/Medicare and Self-Pay. This differential insurance knowledge may improve bariatric outcomes.