

Pre-Operative Risk of Medical Complications Varies by Health Insurance Carrier in Moderately Obese Women: Medicaid v Medicare v Private v Self-Pay



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Background: Greater than 40% of American women obese. Every surgical practice must manage these medically challenging patients. Clinical variation by health insurance status in mixed sex bariatric surgery populations is reported. However, investigating moderately obese female surgical patients by insurance status is unknown

Methods: Pre-operative data on 53,292 female patients from the Surgical Review Corporation's BOLD database about to undergo adjustable gastric banding procedure was examined by insurance carrier. Data analyzed included age, weight, BMI, and 34 obesity-related medical conditions.

	Medicaid	Medicare	Private Insurance	Self-pay	p-value
Age	42.49	57.45	44.33	43.02	<0.0001
Weight (kg)	124.5	120.2	119.3	118.6	<0.0001
BMI	46.67	45.59	44.43	43.6	<0.0001
AfrAmer	19.74%	12.13%	12.69%	4.53%	<0.0001
Caucasian	60.09%	75.07%	73.5%	85.26%	<0.0001
Other	6.77%	8.19%	7.38%	4.59%	<0.0001
Asian	0.14%	0.12%	0.21%	0.24%	<0.0001
Hispanic	13.26%	4.49%	5.38%	6.22%	<0.0001

BMI = Body Mass Index, AfrAmer = African American

	Medicaid	Medicare	Private Insurance	Self-pay	p-value
Angina	3.21	4	1.67	1.51	<0.0001
Asthma	25.94	22.43	15.74	12.65	<0.0001
CHF	2.85	4.98	0.82	0.48	<0.0001
History of DVT/PE	3.71	4.64	2.11	1.47	<0.0001
HTN	55.38	72.59	51.01	40.56	<0.0001
Ischemic HD	4.35	9.07	2.41	1.61	<0.0001
OHS	1.92	3.73	1.28	0.86	<0.0001
OSA	43.55	44.61	33.98	25.06	<0.0001
PHTN	3.92	4.64	3.53	2.02	<0.0001
PVD	1.92	2.29	0.68	0.24	<0.0001

CHF = Congestive Heart Failure; DVT = Deep Venous Thrombosis; PE = Pulmonary Embolism; HTN = Hypertension; HD = Heart Disease; LE = Lower Extremity; OSA = Obstructive Sleep Apnea; OHS = Obesity Hypoventilation Syndrome; PHTN = Pulmonary Hypertension; PVD = Peripheral Vascular Disease

	Medicaid	Medicare	Private Insurance	Self-pay	p-value
DM	33.86	45.28	24.85	19.4	<0.0001
Dyslipidemia	38.28	53.35	36.29	32.05	<0.0001
Gout	7.13	5.04	1.93	0.82	<0.0001
Menstrual Irregularities	27.94	34.83	25.75	20.12	<0.0001
PCOS	4.85	1.92	6.26	6.21	<0.0001
Pseudotumor Cerebri	2.42	1.62	1.46	1.1	0.007

DM = Diabetes Mellitus; PCOS = Polycystic Ovarian Syndrome

	Medicaid	Medicare	Private Insurance	Self-pay	p-value
Abdominal Hernia	6.41	6.32	3.9	3.19	<0.0001
Abdominal Panniculus	9.41	5.99	4.69	3.77	<0.0001
Cholelithiasis	26.09	29.76	19.33	15.63	<0.0001
GERD	51.67	50.6	43.85	39.9	<0.0001
Liver Disease	5.27	4.98	4.24	2.43	<0.0001
Stress Urinary Incontinence	30.93	33.21	25.27	23.86	<0.0001

GERD = Gastroesophageal Reflux Disease

	Medicaid	Medicare	Private Insurance	Self-pay	p-value
Back Pain	58.95	55.91	45.46	39.56	<0.0001
Fibromyalgia	6.34	9.47	2.86	2.23	<0.0001
Impaired Functional Status	6.06	7.97	1.32	0.75	<0.0001
Lower Extremity Edema	30.36	35.59	22.69	18.85	<0.0001
Musculoskeletal Pain	45.12	53.74	38.76	33.49	<0.0001

	Medicaid	Medicare	Private Insurance	Self-pay	p-value
Alcohol Use	17.53	19.37	32.63	32.09	<0.0001
Depression	46.9	43.63	33.3	34.38	<0.0001
Mental Health Diagnosis	20.67	16.07	9.36	8.6	<0.0001
Psychological Impairment	27.51	23.04	14.18	13.58	<0.0001
Substance Abuse	0.5	0.4	0.31	0.38	0.5237
Tobacco Use	8.91	6.02	5.93	6.17	<0.0001
Unemployment	47.26	71.46	9.73	9.05	<0.0001

Conclusions: There is significant discordance in the pre-operative clinical characteristics of moderately obese women when stratified by insurance status. Asthma, abdominal-hepatobiliary conditions, and psychological/behavioral issues predominate among Medicaid females. Medicare insured obese women suffer most from cardiopulmonary illnesses, diabetes and dyslipidemia, cholelithiasis, and somatic disabilities. Females with private insurance consume the most alcohol, smoke the least, have the lowest rates of depression, and have no increased incidence of serious weight related medical problems. Self-Pay obese patients appear to be the healthiest insurance group. Mechanisms underlying these findings are not clear. This advance knowledge should be considered in surgery on women with moderate obesity.