THE IMPACT OF BARIATRIC SURGERY ON HEALTH OUTCOMES AND PHARMACOLOGICAL TREATMENT AMONG OBESE PATIENTS IN AN EMPLOYED POPULATION

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OBJECTIVE: To identify the impact and persistence of bariatric surgery on health outcomes and pharmacological treatments among obese patients. METHODS: A comprehensive analysis of 4322 patients with a diagnostic of obesity (ICD-9-CM = 278) and a CPT code of bariatric surgery (43,842, 43,843, 43,846, 43,847, S2085) was conducted using US administrative claims data covering 5.0 million lives. The 30 most frequent 3 digit ICD-9-CM codes prior to surgery were analyzed along with corresponding pharmacological treatments. Diagnostics and pharmacological treatment were then compared in the 90 days preceding the surgery and eight 90 day post-surgery periods (days 30–120 to days 660–750). Frequency counts pre- and post surgery were performed using 3 digit ICD-9-CM codes for diagnostics and AHFS (American Hospital Formulary Service) therapeutic classes and compared using chi-squared tests. RESULTS: Cardiovascular disease, diabetes, respiratory disease (and asthma in particular), joint and muscle disease, and psychiatric disorders prevalence fell monotonically over the two year period observed (mean age = 43.2, 16.4% male). Two years following surgery, cardiovascular disease prevalence decreased from 40.4% to 5.7%, diabetes mellitus from 18.6% to 3.1%, respiratory disease from 45.0% to 3.2% with asthma dropping from 6.7% to under 1%, diseases of the joints and muscles from 24.7% to 7.4%, and psychiatric disorders from 12.1% to 3.7%. Anemia diagnoses increased from 4.1% to 8.9% after 210 days, but decreased back to 3.6% after 750 days. Treatment frequency with insulin and oral antidiabetics decreased from 4.4% to 0.5% and from 16.0% to 1.8%, respectively. Treatment frequency for cardiovascular diseases (ACE inhibitors, calcium channel blockers, diuretics, beta blockers, and other hypotensives) fell from 42.1% to 10.1%. Hypolipidemic use also dropped from 12.6% to 1.9%. All differences between pre- and post surgery proportions are statistically significant (P = 0.05). CONCLUSION: Bariatric surgery is associated with significant improvements in health outcomes and reduced pharmacological utilization for major disease categories.