

## Supplementary Online Content

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**eTable 1.** Coding Definitions

**eTable 2.** Coding Definitions For Fracture Categories

**eTable 3.** Descriptive Characteristics of Bariatric Surgery–Eligible Patients and Patients Who Underwent Roux-en-Y Gastric Bypass or Sleeve Gastrectomy

This supplementary material has been provided by the authors to give readers additional information about their work.

**eTable 1. Coding Definitions**

<b>Category</b>	<b>ICD-9 Codes, (CPT Codes)</b>
<b>Osteoporosis</b>	<i>73300, 73301, 73302, 73303, 73309</i>
<b>Hypertension</b>	<i>4010, 4011, 4019</i>
<b>Smoking Status</b>	<i>3051, V1582</i>
<b>Obstructive Sleep Apnea</b>	<i>32723</i>
<b>Hyperlipidemia</b>	<i>272.0, 272.1, 272.2, 272.3</i>
<b>Osteoarthritis</b>	<i>71500, 71510, 71509, 71516, 71530, 71531, 71590, 71504</i>
<b>Type 2 Diabetes</b>	<i>25000, 25002, 25010, 25012, 25020, 25022, 25030, 25032, 25040, 25050, 25042, 25052, 25060, 25062, 25070, 25072, 25080, 25082, 25090, 25092</i>
<b>NAFLD</b>	<i>5715</i>
<b>BMI &gt;35</b>	<i>V8535, V8536, V8537, V8538, V8539, V8541, V8542, V8543, V8544, V8545, 27801</i>
<b>Postmenopausal Status</b>	<i>6279, 6278, 25631, 6272, 6273, V074, V4981</i>
<b>Sleeve Gastrectomy</b>	<i>4382, (43775)</i>
<b>Roux-en-Y Gastric Bypass</b>	<i>4438, 4439, (43644, 43645, 43846, 43847)</i>

**eTable 2.** Coding Definitions For Fracture Categories

<b>Fracture</b>	<b>ICD-9 Code</b>
Humerus	<i>812.00, ICD-9-D-81201, ICD-9-D-81202, ICD-9-D-81203, ICD-9-D-81209, ICD-9-D-8121, ICD-9-D-81210, ICD-9-D-81211, ICD-9-D-81212, ICD-9-D-81213, ICD-9-D-81219, ICD-9-D-8122, ICD-9-D-81220, ICD-9-D-81221, ICD-9-D-81230, ICD-9-D-81231, ICD-9-D-8124, ICD-9-D-81240, ICD-9-D-81241, ICD-9-D-81242, ICD-9-D-81243, ICD-9-D-81244, ICD-9-D-81249, ICD-9-D-81250, ICD-9-D-81251, ICD-9-D-81252, ICD-9-D-81253, ICD-9-D-81254, ICD-9-D-81259, ICD-9-D-73311</i>
Radius or Ulnar	<i>ICD-9-D-73312, ICD-9-D-81300, ICD-9-D-81301, ICD-9-D-81302, ICD-9-D-81303, ICD-9-D-81304, ICD-9-D-81305, ICD-9-D-81306, ICD-9-D-81307, ICD-9-D-81308</i>
Pelvic	<i>ICD-9-D-73398, ICD-9-D-8080, ICD-9-D-8081, ICD-9-D-8082, ICD-9-D-8083, ICD-9-D-80841, ICD-9-D-80842, ICD-9-D-80843, ICD-9-D-80844, ICD-9-D-80849, ICD-9-D-80851, ICD-9-D-80852, ICD-9-D-80853, ICD-9-D-80854, ICD-9-D-80859, ICD-9-D-8088, ICD-9-D-8089</i>
Hip	<i>ICD-9-D-73314, ICD-9-D-73396, ICD-9-D-82000, ICD-9-D-82001, ICD-9-D-82002, ICD-9-D-82003, ICD-9-D-82009, ICD-9-D-82010, ICD-9-D-82011, ICD-9-D-82012, ICD-9-D-82013, ICD-9-D-82019, ICD-9-D-82020, ICD-9-D-82021, ICD-9-D-82022, ICD-9-D-82030, ICD-9-D-82031, ICD-9-D-82032, ICD-9-D-8208, ICD-9-D-8209</i>
Vertebral	<i>ICD-9-D-8052, ICD-9-D-8054, ICD-9-D-8058, ICD-9-D-73313</i>

**eTable 3.** Descriptive Characteristics of Bariatric Surgery–Eligible Patients and Patients Who Underwent Roux-en-Y Gastric Bypass or Sleeve Gastrectomy

Parameters	Total (N=2,276,861)	Bariatric Surgery- Eligible Patients (N=2,188,008)	Roux-en-Y Gastric Bypass (N=71,783)	Sleeve Gastrectomy (N=17,070)	p-Value
<b>Age</b>					<.001 <sup>a</sup>
64 and under, n (%)	965,845 (42.4)	899,878 (41.1)	54,308 (75.7)	11,659 (68.3)	
65-69, n (%)	613,060 (26.9)	594,866 (27.2)	13,812 (19.2)	4,382 (25.7)	
70-74, n (%)	337,852 (14.8)	333,916 (15.3)	3,027 (4.2)	909 (5.3)	
75-79, n (%)	199,847 (8.8)	199,190 (9.1)	542 (0.8)	115 (0.7)	
80-84, n (%)	104,213 (4.6)	104,136 (4.8)	77 (0.1)	-	
85 and over, n (%)	56,039 (2.5)	56,022 (2.6)	17 (0.02)	-	
<b>Sex</b>					<.001 <sup>a</sup>
Male, n (%)	799,056 (35.1)	777,521 (35.5)	17,161 (23.9)	4,374 (25.6)	
Female, n (%)	1,477,805 (64.9)	1,410,487 (64.5)	54,622 (76.1)	12,696 (74.4)	
<b>Comorbidities</b>					
DM (II), n (%)	982,336 (43.1)	938,136 (42.9)	36,107 (50.3)	8,093 (47.4)	<.001 <sup>a</sup>
NAFLD, n (%)	27,731 (1.2)	26,539 (1.2)	957 (1.3)	235 (1.4)	.003 <sup>a</sup>
Osteoarthritis, n (%)	472,497 (20.8)	448,567 (20.5)	19,370 (27.0)	4,560 (26.7)	<.001 <sup>a</sup>
Hypertension, n (%)	1,482,607 (65.1)	1,421,105 (64.9)	49,293 (68.7)	12,209 (71.5)	<.001 <sup>a</sup>
Smoking Status, n (%)	552,334 (24.3)	528,219 (24.1)	18,702 (26.1)	5,413 (31.7)	<.001 <sup>a</sup>
Hyperlipidemia, n (%)	1,133,070 (49.8)	1,084,805 (49.6)	38,549 (53.7)	9,716 (56.9)	<.001 <sup>a</sup>
Osteoporosis, n (%)	138,157 (6.1)	133,623 (6.1)	3,739 (5.2)	795 (4.7)	<.001 <sup>a</sup>
OSA, n (%)	440,826 (19.4)	406,588 (18.6)	26,429 (36.8)	7,809 (45.7)	<.001 <sup>a</sup>
<sup>a</sup> Significant Values ( $p < 0.008$ )					