**Supplement 2:** Characteristics of the full study cohort (n=48,523) and the coarsened exact matched cohort (n=9,877)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Full Cohort** | | | **Coarsened Exact Matched Cohort** | | |
|  |  |  |  |  |  |  |
|  | **No Peripheral Nerve Block (n=18146)** | **Peripheral Nerve Block (n=30377)** | **Absolute Standardized Difference** | **No Peripheral Nerve Block (n=4454)** | **Peripheral Nerve Block**  **(n=5423)** | **Absolute Standardized Difference** |
|  | **n (%)\*** | **n (%)\*** |  | **n (%)\*** | **n (%)\*** |  |
| *Preoperative opioid use\*\**  Naive  Exposed  Tolerant | 13541 (74.6)  2,457 (13.5)  2,148 (11.8) | 23324 (76.8)  3,860 (12.7)  3,193 (10.5) | 2.6  1.7  3.2 | 4230 (95.0)  224 (5.0)  0 | 5150 (95.0)  273 (5.0)  0 | 0  0  0 |
| *Preoperative drug use*  Benzodiazepine   Tetrahydrocannabinol | 1470 (8.1)  49 (0.3) | 2441 (8.0)  99 (0.3) | 0.3  0 | 14 (0.3)  0 | 17 (0.3)  0 | 0  0 |
| Demographics  Age, mean (SD)  Female  Rural  Neighborhood income  1  2  3  4  5 | 51.3 (14.5)  6052 (33.4)  3445 (19.0)  2962 (16.4)  3426 (18.9)  3687 (20.4)  3973 (22.0)  4050 (22.4) | 52.8 (14.3)  10601 (34.9)  3844 (12.7)  4586 (15.1)  5460 (18.0)  6241 (20.6)  6748 (22.3)  7284 (24.0) | 10.4  1.0  11.8  2.4  1.5  0.3  0.4  2.0 | 44.9 (14.7)  848 (19.0)  191 ()  537 (12.1)  657 (14.8)  599 (13.4)  1284 (28.8)  1377 (30.9) | 45.5 (14.6)  1032 (19.0)  233 ()  646 (11.9)  805 (14.8)  732 (13.5)  1472 (27.1)  1768 (32.6) | 4.1  0  0  4.2  2.4  1.3  3.2  3.0 |
| Anesthesia Type  General anesthesia (vs sedation) | 17,790 (98.0) | 26,582 (87.5) | 35.4 | 4427 (99.4) | 5390 (99.4) | 0 |
| Surgery type  Total/partial arthroplasty  Arthroscopic surgery\*\*\*  Open shoulder surgery\*\*\*  Other shoulder repair | 101 (0.6)  4,111 (22.7)  13,655 (75.3)  279 (1.5) | 233 (0.8)  6,148 (20.2)  23,872 (78.6)  124 (0.4) | 2.4  3.5  4.2  11.1 | 0  331 (7.4)  4123 (92.6)  0 | 0  403 (7.4)  5020 (92.6)  0 | 0  0  0  0 |
| Year of Surgery  2012  2013  2014  2015  2016  2017 | 2496 (7.3)  3235 (17.8)  3279 (18.1)  3192 (17.6)  3035 (16.7)  2909 (16.0) | 3454 (11.4)  5075 (16.7)  5174 (17.0)  5369 (17.7)  5506 (18.1)  5799 (19.1) | 11.23  1.9  1.9  0.2  2.4  5.3 | 558 (12.5)  857 (19.2)  840 (18.9)  746 (16.7)  764 (17.1)  689 (15.5) | 680 (12.5)  1043 (19.2)  1023 (18.9)  908 (16.7)  930 (17.1)  839 (15.5) | 0  0  0  0  0  0 |
| *Healthcare resource use*  Hospitalization last year  ED visit in the last year  Resource Utility Band  0  1  2  3  4  5 | 991 (5.5)  8482 (46.7)  25 (0.1)  301 (1.7)  1957 (10.8)  11978 (66.0)  2863 (15.8)  1022 (5.6) | 1438 (4.7)  12155 (40.0)  4 (0.0)  383 (1.3)  2770 (9.1)  20164 (66.4)  5312 (17.5))  1744 (5.7) | 3.3  1.8  4.5  3.2  4.4  0.3  3.1  0.4 | 4  1274  0  113 (2.5)  741 (16.6)  3353 (75.3)  212 (4.8)  36 (0.8) | 5  1551  0  128 (2.3)  911 (16.8)  4082 (75.2)  258 (4.8)  43 (0.8) | 0  0  0  1.2  0.4  0.1  0  0 |
| *Comorbidities*  ASA score, < 3  Cerebrovascular disease  Chronic Renal disease  Dialysis  Dementia  Primary malignancy  Metastatic solid tumor  Peripheral vascular disease  History of Peptic Ulcer dx  Liver Disease  Rheumatologic disease  Hemiplegia or paraplegia  Atrial arrhythmia  History of VTE  History of heart failure  History of hypertension  History of diabetes mellitus  COPD  Asthma  Myocardial Infarction  Cardiac valvular disease  Disease of pulmonary circ.  Coagulopathy  Obesity  Weight loss  Blood loss anemia  Deficiency anemia  Alcohol Abuse  Drug Abuse  Psychosis  Depression  Frailty | 12118 (66.8)  55 (0.3)  29 (0.2)  13 (0.1)  0  121 (0.7)  13 (0.1)  27 (0.1)  23 (0.1  31 (0.2)  26 (0.1)  17 (0.1)  70 (0.4)  12 (0.1)  246 (1.4)  6063 (33.4)  2640 (14.5)  2292 (12.6)  3357 (18.5)  309 (1.7)  21 (0.1)  21 (0.1)  24 (0.1)  124 (0.7)  10 (0.1)  125 (0.7)  6 (0.0)  98 (0.5)  33 (0.2)  4 (0.0)  58 (0.3)  247 (1.4) | 19073 (62.8)  87 (0.3)  29 (0.2)  16 (0.1)  0  145 (0.5)  22 (0.1)  64 (0.2)  39 (0.1)  31 (0.1)  38 (0.1)  11 (0)  123 (0.4)  18 (0.1)  404 (1.3)  10966 (36.1)  4644 (15.3)  3744 (12.3)  5497 (18.1)  558 (1.8)  38 (0.1)  45 (0.1)  28 (0.1)  204 (0.7)  4 (0.0)  194 (0.6)  16 (0.0)  100 (0.3)  37 (0.1)  8 (0.0)  110 (0.4)  367 (1.2) | 2.5  0.3  1.8  0.8  2.5  0.0  1.5  0.0  1.9  0.5  2.3  0.3  0.3  0.2  1.7  1.5  0.7  0.7  1.0  0.3  0.9  1.2  0.1  2.3  0.6  0.9  3.2  1.5  0.3  0.7  1.3 | 3983 (89.4)  0  0  0  0  0  0  0  0  0  0  0  0  0  1 (0)  630 (14.1)  105 (2.5)  40 (0.9)  352 (7.9)  0  0  0  0  0.81  0  0  0  0  0  0  0  0 | 4849 (89.4)  0  0  0  0  0  0  0  0  0  0  0  0  0  1 (0)  767 (14.1)  128 (2.4)  49 (0.9)  429 (7.9)  0  0  0  0  1  0  0  0  0  0  0  0  0 | 0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0 |
|  |  |  |  |  |  |  |

\*unless otherwise specified.

\*\*modified O-NET criteria (opioid naïve, exposed or tolerant)

ASA: American Society of Anesthesiologists; SD: standard deviation