**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) | 2.61.73.2 | 4230 (95.0)224 (5.0)0 | 5150 (95.0)273 (5.0)0 | 000 |
| *Preoperative drug use* Benzodiazepine  Tetrahydrocannabinol | 1470 (8.1)49 (0.3) | 2441 (8.0)99 (0.3) | 0.30 | 14 (0.3)0 | 17 (0.3)0 | 00 |
| 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) | 10.41.011.82.41.50.30.42.0 | 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) | 4.1004.22.41.33.23.0 |
| 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) | 2.43.54.211.1 | 0331 (7.4)4123 (92.6)0 | 0403 (7.4)5020 (92.6)0 | 0000 |
| 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) | 11.231.91.90.22.45.3 | 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) | 000000 |
| *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) | 3.31.84.53.24.40.33.10.4 | 412740113 (2.5)741 (16.6)3353 (75.3)212 (4.8)36 (0.8) | 5 15510128 (2.3)911 (16.8)4082 (75.2)258 (4.8)43 (0.8) | 0001.20.40.100 |
| *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 (0.131 (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)0145 (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) | 2.50.31.80.82.50.01.50.01.90.52.30.30.30.21.71.50.70.71.00.30.91.20.12.30.60.93.21.50.30.71.3 | 3983 (89.4)00000000000001 (0)630 (14.1)105 (2.5)40 (0.9)352 (7.9)00000.8100000000 | 4849 (89.4)00000000000001 (0)767 (14.1)128 (2.4)49 (0.9)429 (7.9)0000100000000 | 00000000000000000000000000000000 |
|  |  |  |  |  |  |  |

\*unless otherwise specified.

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

ASA: American Society of Anesthesiologists; SD: standard deviation