**Appendix I.** Results from multilevel models where the main effect is percent hospital-level use (in quartiles [Q1-4]; compared to hospitals that do not use neuraxial anesthesia) as opposed to volume of hospital-level use of neuraxial anesthesia; ORs for binary outcome variables, for continuous outcomes exponentiated coefficients from the log model depicting % change compared to reference.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **KNEE** | | | **HIP** | | |
|  | **OR** | **95% CI** | | **OR** | **95% CI** | |
| **Oral Morphine Equivalents\*\*** | | | |  |  |  |
| **Q1** | 0.78 | -13.17 | 16.96 | 2.13 | -12.54 | 19.26 |
| **Q2** | -5.17 | -18.38 | 10.17 | 14.71 | -3.24 | 35.97 |
| **Q3** | -2.21 | -15.91 | 13.72 | -8.19 | -22.17 | 8.30 |
| **Q4** | -6.53 | -19.70 | 8.79 | -5.56 | -20.07 | 11.59 |
| **Length of Hospital Stay\*\*** | | |  |  |  |  |
| **Q1** | 2.71 | -2.72 | 8.44 | -1.39 | -7.23 | 4.82 |
| **Q2** | 2.39 | -3.05 | 8.13 | -0.06 | -6.54 | 6.87 |
| **Q3** | 0.48 | -4.90 | 6.16 | -3.28 | -9.37 | 3.23 |
| **Q4** | -0.10 | -5.48 | 5.59 | -1.88 | -8.12 | 4.79 |
| **Cost of Hospitalization\*\*** | | |  |  |  |  |
| **Q1** | -8.76\* | -16.26 | -0.58 | -10.34\* | -18.20 | -1.72 |
| **Q2** | -9.65\* | -17.11 | -1.51 | -9.06\* | -17.78 | 0.58 |
| **Q3** | -11.58\* | -18.96 | -3.54 | -14.38\* | -22.36 | -5.58 |
| **Q4** | -11.40\* | -18.83 | -3.29 | -12.36\* | -20.60 | -3.24 |
| **Respiratory Complications** | | |  |  |  |  |
| **Q1** | 1.06 | 0.84 | 1.35 | 1.06 | 0.79 | 1.43 |
| **Q2** | 1.11 | 0.86 | 1.41 | 1.09 | 0.79 | 1.50 |
| **Q3** | 1.20 | 0.94 | 1.52 | 0.97 | 0.70 | 1.33 |
| **Q4** | 1.15 | 0.90 | 1.47 | 0.98 | 0.71 | 1.35 |
| **Cardiac Complications** | | |  |  |  |  |
| **Q1** | 0.77\* | 0.60 | 0.99 | 0.79 | 0.60 | 1.04 |
| **Q2** | 0.85 | 0.65 | 1.10 | 0.93 | 0.70 | 1.25 |
| **Q3** | 0.87 | 0.67 | 1.12 | 0.70\* | 0.52 | 0.95 |
| **Q4** | 0.79 | 0.61 | 1.02 | 0.82 | 0.61 | 1.09 |
| **Blood Transfusion Need** | | |  |  |  |  |
| **Q1** | 0.79 | 0.50 | 1.27 | 0.80 | 0.48 | 1.32 |
| **Q2** | 0.86 | 0.53 | 1.38 | 0.81 | 0.46 | 1.41 |
| **Q3** | 0.83 | 0.51 | 1.33 | 0.79 | 0.46 | 1.37 |
| **Q4** | 0.72 | 0.45 | 1.17 | 0.56\* | 0.32 | 0.97 |
| **Intensive Care Unit Admission** | | | |  |  |  |
| **Q1** | 1.06 | 0.70 | 1.60 | 0.81 | 0.52 | 1.26 |
| **Q2** | 0.98 | 0.64 | 1.49 | 0.75 | 0.46 | 1.22 |
| **Q3** | 0.84 | 0.55 | 1.29 | 0.82 | 0.51 | 1.31 |
| **Q4** | 1.05 | 0.69 | 1.60 | 0.93 | 0.58 | 1.49 |

\*P<0.05 \*\*% change

Models adjusted for age, sex, race, insurance type, hospital annual procedure volume, hospital teaching status, hospital location, hospital bed size, year of procedure, general anesthesia use, PCA use, intravenous acetaminophen, NSAIDs, Cyclooxygenase-2 Inhibitors, Ketamine, Pregabalin/Gabapentin, peripheral nerve block use, Deyo-Charlson comorbidity index, history of substance use/abuse, pain conditions, psychiatric comorbidities, sleep apnea, obesity