|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Table S2. Outcome predictors for idiopathic Normal Pressure Hydrocephalus with procedure type as a predictor. | S2A: Length of Stay | | S2B: Non-home Discharge | | S2C: Complications | | S2D: Mortality | | |
| *Procedure Type* | Percent Change per Unit Change++ | P Value | OR for unit change | P Value | OR for unit  change | P Value | OR for unit  change | | P Value |
| ETV | 123.5%  (109.1—138.9%) | <.001\*\* | 1.21  (0.79 – 1.85) | .38 | 1.64  (0.997 – 2.70) | .052 | 4.24  (1.14 – 15.63) | | .03\*\* |
| VPS | Reference | | | | | | | | |
|  |  | | | | | | | | |
| Continuous Variables | Percent Change per Unit Change++ | P Value | OR for unit change | P Value | OR for unit change | P Value | OR for unit change | | P Value |
| Age | 0.3%  (0.2 – 0.5%) | <0 .001\*\* | 1.05  (1.04 – 1.06) | < .001\*\* | 0.99  (0.98 – 1.00) | .10 | 1.00  (0.95 – 1.06) | | .94 |
| Comorbidity Score | 7.0 %  (5.9 – 8.0%) | <.001\*\* | 1.34  (1.26 – 1.42) | <.001\*\* | 1.26  (1.16 – 1.36) | <.001\*\* | 1.74  (1.33 – 2.28) | | <.001\*\* |
| Year | 0.8%  (-0.9 – 2.5%) | .37 | 1.02  (0.92 – 1.13) | .73 | 0.90  (0.79 – 1.02) | .11 | 0.76  (0.46 – 1.27) | | .29 |
| Hospital Caseload | -0.2%  (-0.4 – 0.1%) | .27 | 1.00  (0.99 – 1.02) | .85 | 1.00  (0.99 – 1.01) | .99 | 0.92  (0.82 – 1.04) | | .16 |
|  | | | | | | | | | |
| Categorical Variables | Change | P Value | OR | P Value | OR | P Value | OR | | P Value |
|  |  |  |  |  |  |  | | | |
| Male | 1.9%  (-0.8 – 4.7%) | .16 | 0.87  (0.73 – 1.03) | .11 | 0.76  (0.60 – 0.96) | .02\*\* | N/A | | N/A |
| Female | Reference | | | | | | | | |
|  | | | | | | | | | |
| White | -8.0%  (-16.9 – 1.9%) | .11 | N/A | N/A | N/A | N/A | N/A | | N/A |
| Black | 10.6%  (-2.6 – 25.6%) | .12 | N/A | N/A | N/A | N/A | N/A | | N/A |
| Hispanic | -4.3%  (-15.3 – 8.1%) | .48 | N/A | N/A | N/A | N/A | N/A | | N/A |
| Asian or Pacific Islander | -2.8%  (-17.4 – 14.4%) | .74 | N/A | N/A | N/A | N/A | N/A | | N/A |
| Native American | -6.1%  (-25.2 – 18.0%) | .59 | N/A | N/A | N/A | N/A | N/A | | N/A |
| Other | Reference | | | | | | | | |
|  | | | | | | | | | |
| Private Insurance | -12.6%  (-20.8 – -3.4%) | .008\*\* | N/A | N/A | N/A | N/A | N/A | N/A | |
| Medicaid without Private insurance | -7.8%  (-18.0 – 3.7%) | 0.17 | N/A | N/A | N/A | N/A | N/A | N/A | |
| Medicare without Private insurance or Medicaid | -12.0%  (-20.3 – -2.8%) | .01\*\* | N/A | N/A | N/A | N/A | N/A | N/A | |
| Other | Reference | | | | | | | | |
|  | | | | | | | | | |
| Midwestern Hospital | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| Southern Hospital | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| Northeastern Hospital | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| Western Hospital | Reference | | | | | | | | |
|  | | | | | | | | | |
| Non-Teaching Hospital | -3.4%  (-7.2 – 0.5%) | .09 | 0.95  (0.72 – 1.24) | .65 | 1.15  (0.84 – 1.58) | .33 | 1.43  (0.41 – 5.03) | .53 | |
| Teaching Hospital | Reference | | | | | | | | |
|  | | | | | | | | | |
| Any Complications | 45.0%  (39.1 – 51.1%) | <.001\*\* | 3.60  (2.73 – 4.72) | <.001\*\* | N/A | N/A | 6.17  (2.18 – 17.54) | <.001\*\* | |
| No Complications | Reference | | | | | | | | |
|  | | | | | | | | | |
| Patient Residential ZIP Codes in 1st Income Quartile (Lowest) | 1.6%  (-2.7 – 6.0%) | .47 | 1.05  (0.81 - 1.37 | .71 | 1.14  (0.82 – 1.58) | .43 | N/A | N/A | |
| Patient Residential ZIP Codes in 2nd Income Quartile | 0.3%  (-3.5 – 4.3%) | .87 | 1.00  (0.79 – 1.27) | .98 | 0.91  (0.66 – 1.25) | .57 | N/A | N/A | |
| Patient Residential ZIP Codes in 3rd Income Quartile | -3.9%  (-7.6 – -0.1%) | .04\*\* | 0.90  (0.71 –1.15 | .42 | 0.73  (0.52 – 1.03) | .08 | N/A | N/A | |
| Patient Residential ZIP Codes in 4th Income Quartile | Reference | | | | | | | | |
|  | | | | | | | | | |
| Small Hospital | -8.3%  (-15.1 – -0.9%) | .03\*\* | N/A | N/A | N/A | N/A | N/A | N/A | |
| Medium Hospital | 3.1%  (-1.7 – 8.1%) | .22 | N/A | N/A | N/A | N/A | N/A | N/A | |
| Large Hospital | Reference | | | | | | | | |

ETV – Endoscopic Third Ventriculostomy; VPS – Ventriculoperitoneal Shunt Surgery; OR – Odds Ratio; ZIP – Zone Improvement Plan; N/A – Not Applicable

\*\*Denotes a statistically significant relationship, alpha level .05.

++ The parameter estimate provided for each fixed effect in SAS utilizing SAS Procedure PROC MIXED with the dependent variable set as the log-transformation of length of stay was transformed into change for unit change where change for unit change = (exp(parameter estimate) – 1) x 100 %.