Supplement 5-Sensitivity Analysis

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Predictive Factors | OUTCOME = Increased OMEs (Mean Postop> Mean Preop) | | | |
|
|  |  | OR | 95%CI | p-value |
| Day 1-3 pain score  <=4 | >4 | 0.85 | 0.8-0.91 | <0.001 |
| DISCHARGE PRESCRIPTIONS |  |  |  |  |
| >30 days supply | <30 days | 1.25 | 1.16-1.35 | <0.001 |
| >30 mg/day | <30mg/day | 1.68 | 1.55-1.81 | <0.001 |
|  |  |  |  |  |
| PREOPERATIVE FACTORS |  |  |  |  |
|  |  |  |  |  |
| DEMOGRAPHICS |  |  |  |  |
| Age |  |  |  |  |
| 60-70 | <=60 | 0.86 | 0.8-0.92 | <0.001 |
| >70 |  | 0.77 | 0.7-0.85 | <0.001 |
| Gender |  |  |  |  |
| male | female | 0.95 | 0.85-1.06 | 0.378 |
| Race |  |  |  |  |
| Black | white/other | 1.11 | 1.02-1.2 | 0.015 |
| Hispanic |  | 1.01 | 0.89-1.15 | 0.843 |
| BMI |  |  |  |  |
| 35-40 | <=35 | 0.98 | 0.91-1.06 | 0.598 |
| >40 |  | 0.97 | 0.86-1.1 | 0.637 |
| COMORBIDITIES (Type) |  |  |  |  |
| Chronic pulmonary | No comorbidities | 1.00 | 0.93-1.09 | 0.933 |
| Liver disease |  | 1.01 | 0.89-1.14 | 0.904 |
| Arthritis |  | 0.91 | 0.76-1.09 | 0.294 |
| Tobacco |  | 1.10 | 1.02-1.19 | 0.015 |
| Alcohol |  | 0.99 | 0.9-1.11 | 0.923 |
| Substance Abuse |  | 0.99 | 0.87-1.12 | 0.823 |
| Anxiety |  | 0.98 | 0.89-1.08 | 0.723 |
| Depression |  | 1.09 | 1.02-1.18 | 0.018 |
| Back pain |  | 1.10 | 1.02-1.18 | 0.009 |
| COMORBIDITIES (Number) |  |  |  |  |
| 3-5 | <=2 | 1.04 | 0.97-1.12 | 0.296 |
| >5 | <=2 | 1.09 | 0.98-1.22 | 0.094 |
| Pain |  |  |  |  |
| Preoperative Pain |  |  |  |  |
| 5-7 | 1-4 | 1.21 | 1.13-1.29 | <0.001 |
| 8-10 |  | 1.27 | 1.17-1.39 | <0.001 |
| Pain Clinic visit |  |  |  |  |
| Yes | No | 1.01 | 0.9-1.14 | 0.851 |
| Opioid Initiation, Dose, and Type |  |  |  |  |
| Late Start | Low Preoperative Dose | 1.36 | 1.25-1.48 | <0.001 |
| Preoperative Opioid >15 |  | 0.18 | 0.16-0.19 | <0.001 |
| Preoperative Tramadol |  |  |  |  |
| Yes | No | 1.05 | 0.95-1.17 | 0.361 |
| INHOSPITAL FACTORS |  |  |  |  |
| General Anesthesia |  |  |  |  |
| Yes | No | 0.96 | 0.89-1.04 | 0.3 |
| Nerve block |  |  |  |  |
| Yes | No | 0.90 | 0.82-0.99 | 0.027 |
| PCA |  |  |  |  |
| Yes | No | 1.05 | 0.95-1.16 | 0.378 |
|  |  |  |  |  |
| Meq <25 dispensed days 1-3 | >25Meq | 1.03 | 0.97-1.09 | 0.401 |
| Hospital stay >6 days | <=6 days | 1.13 | 1.05-1.22 | 0.002 |
|  |  |  |  |  |
| GEOGRAPHIC FACTORS (WHERE) |  |  |  |  |
| Region |  |  |  |  |
| Midwest | Pacific | 0.98 | 0.88-1.08 | 0.663 |
| Southeast |  | 1.01 | 0.91-1.12 | 0.819 |
| Central |  | 0.90 | 0.81-1 | 0.054 |
| Northeast |  | 0.95 | 0.84-1.08 | 0.457 |
|  |  |  |  |  |
| TEMPORAL FACTORS (WHEN) |  |  |  |  |
| Year of Operation |  | 0.91 | 0.85-0.98 | 0.01 |
| 2012-13 | 2010-11 | 0.91 | 0.85-0.98 | 0.01 |
| 2014-15 |  | 0.70 | 0.65-0.75 | <0.001 |
|  |  |  |  |  |
| PROCEDURAL VOLUME |  |  |  |  |
| Hospital Volume |  |  |  |  |
| low | mid | 0.88 | 0.82-0.95 | 0.001 |
| high |  | 0.93 | 0.86-1 | 0.054 |
| Surgical Volume |  |  |  |  |
| low | mid | 0.97 | 0.9-1.04 | 0.418 |
| high |  | 1.02 | 0.95-1.1 | 0.578 |
| Hospital Volume |  |  |  |  |
| low | mid | 0.88 | 0.82-0.95 | 0.001 |
| high |  | 0.93 | 0.86-1 | 0.054 |
| Surgical Volume |  |  |  |  |
| low | mid | 0.97 | 0.9-1.04 | 0.418 |
| high |  | 1.02 | 0.95-1.1 | 0.578 |