Supplemental Table 1. Results from multivariable logistic regression models for each indicated outcome. Odds ratios and log transformed fold-difference comparing patients with beta-lactam allergy vs. those without are shown, after adjustment for patient age, sex, race, public insurance, hospital location, primary diagnosis (as defined by service line), and presence of any comorbidities.

|  |  |  |  |
| --- | --- | --- | --- |
| Outcome | Beta-Lactam Allergy | Cephalosporin Allergy | Penicillin Allergy |
|  | Odds Ratio (95% CI) | Odds Ratio (95% CI) | Odds Ratio (95% CI) |
| Receipt of Broader-Spectrum Agents | 2.40 (2.12, 2.73) | 7.62 (5.59, 10.41) | 0.99 (0.95 - 1.04) |
| At least 3 days of Broader-Spectrum Agents | 1.60 (1.38, 1.87) | 2.64 (1.88, 3.71) | 0.99 (0.93 - 1.05) |
| Receipt of Fluoroquinolones | 2.58 (1.77, 3.78) | 3.45 (1.75, 6.81) | 1.18 (1.05 - 1.33) |
| Receipt of Clindamycin | 3.10 (2.63, 3.66) | 8.45 (5.72, 12.49) | 0.90 (0.69, 1.17) |
| Receipt of Carbapenems | 2.20 (1.62, 2.99) | 4.32 (2.26, 8.27) | 0.98 (0.93 - 1.03) |
| Receipt of Macrolides | 1.41 (1.12, 1.77) | 1.58 (0.93, 2.66) | 0.92 (0.71, 1.18) |
| Receipt of Vancomycin | 1.06 (0.84, 1.33) | 2.29 (1.37, 3.84) | 1.40 (1.10, 1.79) |
| 30 Day Readmission | 0.96 (0.76, 1.22) | 1.04 (0.92 - 1.17) | 2.60 (2.17, 3.11) |
|  |  |  |  |
|  | Fold Change (95%CI) | Fold Change (95%CI) | Fold Change (95%CI) |
| Antibiotic Cost | 1.23 (1.10 - 1.38) | 1.57 (1.21 - 2.05) | 2.52 (1.62, 3.91) |
| Total Hospital Cost | 0.99 (0.93 - 1.04) | 1.00 (0.90 - 1.11) | 1.52 (1.29, 1.80) |
| Total Antibiotic Days | 1.00 (0.96 - 1.04) | 1.02 (0.93 - 1.13) | 2.04 (1.78, 2.34) |
| Length Of Stay | 0.98 (0.94 - 1.03) | 1.20 (0.74, 1.92) | 2.17 (1.54, 3.04) |

Supplemental Table 2. Results from multivariable regression models for each indicated outcome, limited to patients hospitalized at PCH. Odds ratios and log transformed fold-difference comparing patients with beta-lactam allergy vs. those without are shown, after adjustment for patient age, sex, race, public insurance, hospital location, primary diagnosis (as defined by service line), and presence of any comorbidities.

|  |  |  |  |
| --- | --- | --- | --- |
| Outcome | Beta-Lactam Allergy | Cephalosporin Allergy | Penicillin Allergy |
|  | Odds Ratio (95% CI) | Odds Ratio (95% CI) | Odds Ratio (95% CI) |
| Receipt of Broader-Spectrum Agents | 2.59 (2.22, 3.02) | 9.97 (6.83, 14.55) | 1.89 (1.59, 2.25) |
| 30 Day Readmission | 1.01 (0.77, 1.32) | 1.26 (0.74, 2.14) | 0.92 (0.67, 1.27) |
|  |  |  |  |
|  | Fold Change (95%CI) | Fold Change (95%CI) | Fold Change (95%CI) |
| Length Of Stay | 0.99 (0.94 - 1.05) | 1.04 (0.92 - 1.18) | 0.98 (0.92 - 1.04) |
| Antibiotic Cost | 1.35 (1.18 - 1.54) | 1.97 (1.44 - 2.69) | 1.22 (1.05 - 1.42) |