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| Supplementary Table S1. *Predictors of Multiple SSTI Recurrences* |
|   | ≤1 Recurrence n (%) | >1 Recurrence n (%) | OR (95% CI) |
| **Total** | **186,952** | **10,419** | **197,371** |
| Age |  |  |  |
|  <18 | 9,321 (5.0%) | 398 (3.8%) | reference |
|  18-44 | 63,625 (34.0%) | 4,873 (46.8%) | 1.41 (1.26-1.57)\* |
|  45-64 | 75,422 (40.3%) | 4,282 (41.1%) | 1.09 (0.97-1.22) |
|  >64 | 38,584 (20.6%) | 866 (8.3%) | 0.55 (0.48-0.63)\* |
| Gender |   |   |   |
|  Male | 106,137 (56.8%) | 5,820 (55.9%) | reference |
|  Female | 80,815 (43.2%) | 4,599 (44.1%) | 1.11 (1.07-1.16)\* |
| Race |  |  |  |
|  White | 112,318 (60.1%) | 6,579 (63.1%) | reference |
|  Black | 16,310 (8.7%) | 909 (8.7%) | 0.81 (0.75-0.87)\* |
|  Hispanic | 49,067 (26.2%) | 2,567 (24.6%) | 0.84 (0.80-0.88)\* |
|  Asian or Pacific Islander | 5,318 (2.8%) | 106 (1.0%) | 0.56 (0.46-0.68)\* |
|  Native American | 405 (0.2%) | 52 (0.5%) | 1.41 (1.05-1.90)\* |
|  Other | 3,534 (1.9%) | 206 (2.0%) | 0.87 (0.75-1.01) |
| Insurance Type |   |   |   |
|  Private Insurance | 50,880 (27.2%) | 1,958 (18.8%) | reference |
|  Medicare | 41,838 (22.4%) | 3,152 (30.3%) | 1.15 (1.07-1.23)\* |
|  Medicaid | 46,672 (25.0%) | 1,550 (14.9%) | 0.63 (0.59-0.68)\* |
|  Self-Pay | 28,840 (15.4%) | 2,508 (24.1%) | 1.16 (1.07-1.25)\* |
|  Other | 18,722 (10.0%) | 1,251 (12.0%) | 1.19 (1.10-1.30)\* |
| Median Household Income Quartile |  |  |  |
|  First (poorest) | 61,928 (33.1%) | 4,013 (38.5%) | reference |
|  Second | 50,186 (26.8%) | 2,888 (27.7%) | 0.98 (0.93-1.03) |
|  Third | 42,737 (22.9%) | 2,104 (20.2%) | 0.93 (0.88-0.98)\* |
|  Fourth (wealthiest) | 32,101 (17.2%) | 1,414 (13.6%) | 0.99 (0.92-1.06) |
| Disposition |   |   |   |
|  Routine | 161,106 (86.2%) | 9,532 (91.5%) | reference |
|  Home Health Care | 20,529 (11.0%) | 507 (4.9%) | 1.01 (0.92-1.12) |
|  Against Medical Advice | 5,053 (2.7%) | 372 (3.6%) | 1.18 (1.06-1.32)\* |
|  Discharge Alive, Destination  Unknown | 264 (0.1%) | 8 (0.1%) | 1.08 (0.53-2.19) |
| Region |  |  |  |
|  South | 104,783 (56.0%) | 5,316 (51.0%) | reference |
|  North | 82,169 (44.0%) | 5,103 (49.0%) | 1.02 (0.97-1.07) |
| Degree of Urbanization |   |   |   |
|  Large Metropolitan Areas | 134,410 (71.9%) | 6,708 (64.4%) | reference |
|  Small Metropolitan Areas | 46,057 (24.6%) | 3,212 (30.8%) | 1.14 (1.08-1.20)\* |
|  Micropolitan Areas | 4,900 (2.6%) | 412 (4.0%) | 1.17 (1.04-1.31)\* |
|  Not Metropolitan or Micropolitan  Area | 1,585 (0.8%) | 87 (0.8%) | 0.93 (0.75-1.17) |
| Year |  |  |  |
|  2006 | 36,321 (19.4%) | 2,141 (20.5%) | reference |
|  2007 | 36,041 (19.3%) | 2,000 (19.2%) | 0.96 (0.90-1.02) |
|  2008 | 37,500 (20.1%) | 2,015 (19.3%) | 0.95 (0.89-1.01) |
|  2009 | 37,662 (20.1%) | 2,103 (20.2%) | 1.00 (0.94-1.07) |
|  2010 | 39,428 (21.1%) | 2,160 (20.7%) | 1.01 (0.95-1.07) |
| Admitted |   |   |   |
|  No | 71,404 (38.2%) | 7,041 (67.6%) | reference |
|  Yes | 115,548 (61.8%) | 3,378 (32.4%) | 0.31 (0.29-0.32)\* |
| Comorbidities (all binary) |  |  |  |
|  AIDS | 1,274 (0.7%) | 70 (0.7%) | 0.72 (0.56-0.92)\* |
|  Abuse (Alcohol, Drug, Liver  Disease) | 25,398 (13.6%) | 1,918 (18.4%) | 1.43 (1.37-1.49)\* |
|  Cancer (Breast, Lymph, Solid  Tumor) | 10,825 (5.8%) | 250 (2.4%) | 0.74 (0.66-0.83)\* |
|  Chronic Pulmonary Disorder | 19,616 (10.5%) | 868 (8.3%) | 1.06 (0.98-1.14) |
|  Diabetes | 50,012 (26.8%) | 1,981 (19.0%) | 0.81 (0.77-0.85)\* |
|  Obesity | 21,270 (11.4%) | 866 (8.3%) | 1.38 (1.27-1.49)\* |
|  Peripheral Vascular Disorder | 6,138 (3.3%) | 148 (1.4%) | 0.94 (0.79-1.11) |
| Procedures |   |   |   |
|  Antibiotic Injection | 3,033 (1.6%) | 99 (1.0%) | 1.15 (0.94-1.41) |
|  Incision/Drain & Aspiration | 45,276 (24.2%) | 2,956 (28.4%) | 1.15 (1.10-1.20)\* |
| Charlson Score (mean) | 2.42 | 2.60 | 1.07 (1.07, 1.08)\* |
| \* Significant at the 0.05 level |  |  |  |

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| Supplementary Table S2. *Predictors of SSTI Recurrence among Admitted Patients* |
|  |  |  |  |
|  | No Recurrence n (%) | >1 Recurrent Abscess n (%) | OR (95% CI) |
| **Total** | **106,281** | **12,645** | **118,926** |
| Age |  |  |  |
|  <18 | 5,363 (5.0%) | 404 (3.2%) | reference |
|  18-44 | 30,462 (28.7%) | 4,218 (33.4%) | 1.53 (1.36-1.70)\* |
|  45-64 | 42,703 (40.2%) | 5,743 (45.4%) | 1.29 (1.15-1.44)\* |
|  >64 | 27,753 (26.1%) | 2,280 (18.0%) | 0.76 (0.67-0.86)\* |
| Gender |   |   |   |
|  Male | 60,127 (56.6%) | 6,956 (55.0%) | reference |
|  Female | 46,154 (43.4%) | 5,689 (45.0%) | 1.14 (1.09-1.18)\* |
| Race |  |  |  |
|  White | 63,505 (59.8%) | 7,855 (62.1%) | reference |
|  Black | 8,804 (8.3%) | 1,132 (9.0%) | 0.83 (0.77-0.89)\* |
|  Hispanic | 28,185 (26.5%) | 3,257 (25.8%) | 0.83 (0.79-0.87)\* |
|  Asian or Pacific Islander | 3,958 (3.7%) | 224 (1.8%) | 0.54 (0.47-0.62)\* |
|  Native American | 131 (0.1%) | 20 (0.2%) | 1.00 (0.62-1.61) |
|  Other | 1,698 (1.6%) | 157 (1.2%) | 0.75 (0.63-0.89)\* |
| Insurance Type |   |   |   |
|  Private Insurance | 33,119 (31.2%) | 3,567 (28.2%) | reference |
|  Medicare | 21,448 (20.2%) | 3,458 (27.3%) | 1.15 (1.08-1.22)\* |
|  Medicaid | 28,845 (27.1%) | 2,198 (17.4%) | 0.62 (0.58-0.66)\* |
|  Self-Pay | 11,318 (10.6%) | 1,636 (12.9%) | 1.07 (0.99-1.16) |
|  Other | 11,551 (10.9%) | 1,786 (14.1%) | 1.17 (1.08-1.26)\* |
| Median Household Income Quartile |  |  |  |
|  First (poorest) | 33,282 (31.3%) | 4,476 (35.4%) | reference |
|  Second | 27,814 (26.2%) | 3,449 (27.3%) | 0.99 (0.94-1.04) |
|  Third | 25,045 (23.6%) | 2,740 (21.7%) | 0.93 (0.88-0.98)\* |
|  Fourth (wealthiest) | 20,140 (18.9%) | 1,980 (15.7%) | 0.91 (0.86-0.97)\* |
| Disposition |   |   |   |
|  Routine | 84,251 (79.3%) | 9,809 (77.6%) | reference |
|  Home Health Care | 18,757 (17.6%) | 2,196 (17.4%) | 1.08 (1.03-1.14)\* |
|  Against Medical Advice | 3,027 (2.8%) | 614 (4.9%) | 1.30 (1.18-1.42)\* |
|  Discharge Alive, Destination  Unknown | 246 (0.2%) | 26 (0.2%) | 0.85 (0.56-1.28) |
| Region |  |  |  |
|  South | 62,168 (58.5%) | 7,110 (56.2%) | reference |
|  North | 44,113 (41.5%) | 5,535 (43.8%) | 1.08 (1.03-1.13)\* |
| Degree of Urbanization |   |   |   |
|  Large Metropolitan Areas | 79,819 (75.1%) | 9,300 (73.5%) | reference |
|  Small Metropolitan Areas | 23,604 (22.2%) | 3,004 (23.8%) | 0.94 (0.90-0.99)\* |
|  Micropolitan Areas | 2,056 (1.9%) | 258 (2.0%) | 0.87 (0.75-1.00)\* |
|  Not Metropolitan or Micropolitan  Area | 802 (0.8%) | 83 (0.7%) | 0.81 (0.64-1.02) |
| Year |  |  |  |
|  2006 | 20,551 (19.3%) | 2,465 (19.5%) | reference |
|  2007 | 20,261 (19.1%) | 2,394 (18.9%) | 1.00 (0.94-1.06) |
|  2008 | 21,052 (19.8%) | 2,439 (19.3%) | 1.01 (0.95-1.07) |
|  2009 | 21,378 (20.1%) | 2,535 (20.0%) | 1.03 (0.97-1.09) |
|  2010 | 23,039 (21.7%) | 2,812 (22.2%) | 1.06 (1.00-1.13)\* |
| Comorbidities (all binary) |   |   |   |
|  AIDS | 917 (0.9%) | 152 (1.2%) | 0.63 (0.53-0.76)\* |
|  Abuse (Alcohol, Drug, Liver  Disease) | 18,242 (17.2%) | 3,748 (29.6%) | 1.31 (1.27-1.36)\* |
|  Cancer (Breast, Lymph, Solid  Tumor) | 9,044 (8.5%) | 925 (7.3%) | 0.82 (0.77-0.87)\* |
|  Chronic Pulmonary Disorder | 15,267 (14.4%) | 2,130 (16.8%) | 1.00 (0.95-1.05) |
|  Diabetes | 35,006 (32.9%) | 4,353 (34.4%) | 0.89 (0.86-0.93)\* |
|  Obesity | 18,069 (17.0%) | 2,694 (21.3%) | 1.31 (1.25-1.38)\* |
|  Peripheral Vascular Disorder | 5,219 (4.9%) | 631 (5.0%) | 1.01 (0.92-1.10) |
| Procedures |  |  |  |
|  Antibiotic Injection | 2,789 (2.6%) | 341 (2.7%) | 1.06 (0.94-1.19) |
|  Incision/Drain & Aspiration | 25,662 (24.1%) | 3,231 (25.6%) | 1.04 (0.99-1.09) |
| Charlson Score | 2.49 | 3.28 | 1.10 (1.10, 1.11)\* |
| \* Significant at the 0.05 level |  |  |  |

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| Supplementary Table S3. *Predictors of SSTI Recurrence among Non-Admitted Patients* |
|  |  |  |  |
|   | No Recurrence n (%) | >1 Recurrent Abscess n (%) | OR (95% CI) |
| **Total** | **58,992** | **19,453** | **78,445** |
| Age |  |  |  |
|  <18 | 3,149 (5.3%) | 803 (4.1%) | reference |
|  18-44 | 24,953 (42.3%) | 8,865 (45.6%) | 1.29 (1.18-1.40)\* |
|  45-64 | 23,398 (39.7%) | 7,860 (40.4%) | 1.16 (1.06-1.26)\* |
|  >64 | 7,492 (12.7%) | 1,925 (9.9%) | 0.86 (0.77-0.95)\* |
| Gender |   |   |   |
|  Male | 34,001 (57.6%) | 10,873 (55.9%) | reference |
|  Female | 24,991 (42.4%) | 8,580 (44.1%) | 1.09 (1.06-1.13)\* |
| Race |  |  |  |
|  White | 35,681 (60.5%) | 11,856 (60.9%) | reference |
|  Black | 5,455 (9.2%) | 1,828 (9.4%) | 0.90 (0.85-0.96)\* |
|  Hispanic | 15,180 (25.7%) | 5,012 (25.8%) | 0.95 (0.92-0.99)\* |
|  Asian or Pacific Islander | 1,030 (1.7%) | 212 (1.1%) | 0.70 (0.60-0.81)\* |
|  Native American | 217 (0.4%) | 89 (0.5%) | 1.16 (0.91-1.50) |
|  Other | 1,429 (2.4%) | 456 (2.3%) | 0.96 (0.86-1.07) |
| Insurance Type |   |   |   |
|  Private Insurance | 12,270 (20.8%) | 3,882 (20.0%) | reference |
|  Medicare | 14,559 (24.7%) | 5,525 (28.4%) | 1.06 (1.00-1.12) |
|  Medicaid | 13,914 (23.6%) | 3,265 (16.8%) | 0.71 (0.66-0.75)\* |
|  Self-Pay | 13,350 (22.6%) | 5,044 (25.9%) | 1.07 (1.01-1.14)\* |
|  Other | 4,899 (8.3%) | 1,737 (8.9%) | 1.02 (0.95-1.10) |
| Median Household Income Quartile |  |  |  |
|  First (poorest) | 20,734 (35.1%) | 7,449 (38.3%) | reference |
|  Second | 16,396 (27.8%) | 5,415 (27.8%) | 0.95 (0.91-0.99)\* |
|  Third | 13,052 (22.1%) | 4,004 (20.6%) | 0.90 (0.86-0.95)\* |
|  Fourth (wealthiest) | 8,810 (14.9%) | 2,585 (13.3%) | 0.92 (0.87-0.97)\* |
| Disposition |   |   |   |
|  Routine | 57,610 (97.7%) | 18,968 (97.5%) | reference |
|  Home Health Care | 59 (0.1%) | 24 (0.1%) | 1.42 (0.88-2.29) |
|  Against Medical Advice | 1,323 (2.2%) | 461 (2.4%) | 1.00 (0.89-1.11) |
|  Discharge Alive, Destination  Unknown | - | - | - |
| Region |  |  |  |
|  South | 30,801 (52.2%) | 10,020 (51.5%) | reference |
|  North | 28,191 (47.8%) | 9,433 (48.5%) | 1.01 (0.98-1.05) |
| Degree of Urbanization |   |   |   |
|  Large Metropolitan Areas | 39,254 (66.5%) | 12,745 (65.5%) | reference |
|  Small Metropolitan Areas | 16,892 (28.6%) | 5,769 (29.7%) | 0.99 (0.95-1.03) |
|  Micropolitan Areas | 2,223 (3.8%) | 775 (4.0%) | 0.97 (0.89-1.07) |
|  Not Metropolitan or Micropolitan  Area | 623 (1.1%) | 164 (0.8%) | 0.78 (0.65-0.93)\* |
| Year |  |  |  |
|  2006 | 11,517 (19.5%) | 3,929 (20.2%) | reference |
|  2007 | 11,672 (19.8%) | 3,714 (19.1%) | 0.94 (0.90-0.99)\* |
|  2008 | 12,101 (20.5%) | 3,923 (20.2%) | 0.97 (0.92-1.02) |
|  2009 | 11,920 (20.2%) | 3,932 (20.2%) | 0.99 (0.94-1.04) |
|  2010 | 11,782 (20.0%) | 3,955 (20.3%) | 1.01 (0.96-1.06) |
| Comorbidities (all binary) |   |   |   |
|  AIDS | 184 (0.3%) | 91 (0.5%) | 1.11 (0.85-1.43) |
|  Abuse (Alcohol, Drug, Liver  Disease) | 3,577 (6.1%) | 1,749 (9.0%) | 1.30 (1.24-1.38)\* |
|  Cancer (Breast, Lymph, Solid  Tumor) | 857 (1.5%) | 249 (1.3%) | 0.90 (0.79-1.03) |
|  Chronic Pulmonary Disorder | 2,271 (3.8%) | 816 (4.2%) | 1.02 (0.94-1.11) |
|  Diabetes | 9,510 (16.1%) | 3,124 (16.1%) | 0.92 (0.88-0.97)\* |
|  Obesity | 1,019 (1.7%) | 354 (1.8%) | 1.09 (0.96-1.23) |
|  Peripheral Vascular Disorder | 338 (0.6%) | 98 (0.5%) | 0.97 (0.77-1.21) |
| Procedures |  |  |  |
|  Antibiotic Injection | 2 (0.0%) | 0 (0.0%) | - |
|  Incision/Drain & Aspiration | 14,081 (23.9%) | 5,258 (27.0%) | 1.15 (1.11-1.19)\* |
| Charlson Score | 2.15 | 2.44 | 1.05 (1.04, 1.06)\* |
| \* Significant at the 0.05 level |  |  |  |