**Appendix Table 1: Measure of Occupancy Terms Defined**

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| **Term** | **Definition** |
| Hospital length of stay | Number of days a patient was in the hospital from admission day to discharge day (or death) |
| Daily census | Number of patients hospitalized in each hospital on a given census day |
| Maximum daily census | The largest inpatient count recorded for a hospital within the 121-day window (+/- 60 days) around each census day; this value was used as a representation of each hospital’s bed capacity.  |
| Raw hospital-specific occupancy | Daily census divided by the Maximum daily census |
| Relative occupancy | The percentile of the Raw hospital-specific occupancy within the 121-day window. For example, if a day was exactly at the median level of occupancy within the 121-day period, the relative occupancy would be 0.5; similarly, if a day were the minimum or maximum, the Relative occupancy would be 0 or 1, respectively |
| Admission day occupancy (percentile) | The patient-level relative occupancy on the day of a patient’s admission.  |
| Average occupancy (percentile) | The patient-level mean Relative occupancy during the course of a patient’s hospitalization  |
| Average percent occupied | The summary mean of Daily census divided by Maximum census in each 121-day window for each facility. This value, which captures the average across the whole study period, is used to distinguish chronically crowded vs. not crowded facilities. |

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| **Appendix Table 2: Patient Demographics and Hospital Characteristics** |
| ***Patient Characteristic*** | ***CDI*** | ***No CDI*** | ***P-Value*** |
| **Age (years), n (%)** |  |  |  |
|  **65-69** | 227 (11.1) | 70,261 (12.6) | 0.036 |
|  **70-74** | 289 (14.1) | 82,676 (14.8) |  |
|  **75-79** | 407 (19.9) | 98,920 (17.8) |  |
|  **80-84** | 410 (20.0) | 115,014(20.7) |  |
|  **85+** | 712(34.8) | 189,913 (34.1) |  |
| **Female, n (%)** | 1,099 (53.7) | 291,712 (52.4) | 0.223 |
| **Race/Ethnicity, n (%)** |  |  |  |
| **Non-Hispanic White** | 1,323 (64.7) | 364,536 (65.5) | 0.645 |
| **Non-Hispanic Black** | 128 (6.3) | 36,769 (6.6) |  |
| **Non-Hispanic Asian** | 195 (9.5) | 48,368 (8.7) |  |
| **Hispanic** | 332 (16.2) | 89,950 (16.2) |  |
| **Other/Unknown** | 67 (3.3) | 17,161 (3.1) |  |
| **Year of discharge (n, %)** |  |  |  |
|  **2008** | 435 (21.3 | 116,040 (20.8) | 0.611 |
|  **2009** | 427 (20.9) | 111,379 (20.0) |  |
|  **2010** | 424 (20.7) | 113,578 (20.4) |  |
|  **2011** | 385 (18.8) | 111,258 (20.0) |  |
|  **2012** | 374 (18.3) | 104,529 (18.8) |  |
| **Admission day (n, %)** |  |  |  |
|  **Sunday** | 280 (13.7) | 71,195 (12.8) | 0.723 |
|  **Monday** | 307 (15.0) | 88,589 (15.9) |  |
|  **Tuesday** | 305 (14.9) | 83,816 (15.1) |  |
|  **Wednesday** | 285 (13.9) | 80,467 (14.5) |  |
|  **Thursday** | 291 (14.2) | 80,116 (14.4) |  |
|  **Friday** | 300 (14.7) | 81,583 (14.7) |  |
|  **Saturday** | 276 (13.5) | 71,018 (12.8) |  |
| **Charlson index, mean (SD)** | 3.69 (2.16) | 3.05 (2.06) | <.0001 |
| **Occupancy at Admission percentile, mean (SD)** | 0.52 (0.28) | 0.54 (0.28) | 0.001 |
| **Average Occupancy over Stay percentile, mean (SD)** | 0.53 (0.14) | 0.54 (0.21) | 0.001 |
| **Percentage of Families Below FPL, n (%)**  |  |  |  |
|  **< 25th Percentile** | 398 (19.5) | 101,499 (18.2) | 0.305 |
|  **<25-75th Percentile** | 1,201 (58.8) | 329,359 (59.2) |  |
|  **>75th Percentile** | 445 (21.8) | 125,750 (22.6) |  |
| **Median household income, n (%)**  |  |  |  |
|  **< 25th Percentile** | 345 (16.9) | 101,387 (18.2) | 0.003 |
|  **<25-75th Percentile** | 1,125 (55.0) | 316,688 (56.9) |  |
|  **>75th Percentile** | 574 (28.1) | 138,225 (24.8) |  |
| **Percentage of Age 25+ without High School Diploma, n (%)**  |  |  |  |
|  **< 25th Percentile** | 396 (19.4) | 103,327 (18.6) | 0.491 |
|  **<25-75th Percentile** | 1,110 (54.3) | 301,491 (54.2) |  |
|  **>75th Percentile** | 538 (26.3) | 151,872 (27.3) | 0 |
| ***Hospital Characteristics*** | ***CDI*** | ***No CDI*** | ***P-Value*** |
| **Hospital Type, n (%)** |  |  |  |
|  **City/County** | 17 (0.8) | 9,902 (1.8) | <.0001 |
|  **District** | 105 (5.1) | 43,413 (7.8) |  |
|  **Investor** | 376 (18.4) | 92,936 (16.7) |  |
|  **Non-Profit** | 1,547 (75.6) | 410,538(73.7) |  |
| **Teaching Hospital, n (%)** | 217 (10.6) | 49,177 (8.8) | 0.004 |
| **Rural, n (%)** | 47 (2.3) | 30,203 (5.4) | <.0001 |
| **Hospital Size, n (%)**  |   |  |  |
|  **0-94 Beds** | 57 (2.8) | 33,725 (6.1) | <.0001 |
|  **95-169 Beds** | 199 (9.7) | 75,036 (13.5) |  |
|  **170-269 Beds** | 471 (23.0) | 133,462 (24.0) |  |
|  **270-379 Beds** | 518 (25.3) | 120,048 (21.6) |  |
|  **380-499 Beds** | 467 (22.8) | 122,083 (21.9) |  |
|  **500+ Beds** | 333 (16.3) | 72,430 (13.0) |  |

Note: For descriptive analysis in Table 2 we used Chi-square for categorical variables and t-test for continuous variables.