**Supplemental Appendix**

Table S1. Pairwise Differences1 in Total and Monthly Facility-level CDI Rates and *C. difficile* Testing Rates, January 2019 – December 2020

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Total** | **Jan.** | **Feb.** | **Mar.** | **Apr.** | **May** | **Jun.** | **Jul.** | **Aug.** | **Sept.** | **Oct.** | **Nov.** | **Dec.** |
| **CO-CDI2 per 10,000 Discharges** |
| **20194** | 20.0 | 21.4 | 19.8 | 19.9 | 21.2 | 19.6 | 19.7 | 20.0 | 20.8 | 20.5 | 18.9 | 18.6 | 19.0 |
| **20204** | 15.8 | 18.9 | 18.6 | 17.9 | 14.7 | 14.4 | 15.4 | 15.0 | 14.5 | 15.5 | 15.7 | 14.9 | 13.0 |
| **Q1 difference5** | -14.4 | -12.0 | -11.2 | -15.0 | -20.7 | -13.9 | -13.6 | -15.4 | -17.4 | -15.5 | -12.5 | -12.8 | -14.2 |
| **Median difference5** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Q3 difference5** | 3.2 | 7.4 | 8.1 | 7.5 | 1.2 | 2.0 | 2.9 | 2.2 | 0.9 | 2.6 | 4.3 | 4.3 | 0.9 |
| **P-value6** | <.0001 | 0.0431 | 0.1673 | 0.0094 | <.0001 | <.0001 | <.0001 | <.0001 | <.0001 | <.0001 | 0.0029 | 0.0007 | <.0001 |
| **HO-CDI3 per 10,000 PD** |
| **20194** | 3.3 | 3.7 | 3.7 | 3.5 | 3.4 | 3.5 | 3.1 | 3.3 | 3.2 | 3.0 | 3.0 | 3.1 | 3.3 |
| **20204** | 3.2 | 3.1 | 3.2 | 3.1 | 3.1 | 3.2 | 3.1 | 3.3 | 3.0 | 3.2 | 3.3 | 3.0 | 3.1 |
| **Q1 difference5** | -1.1 | -1.4 | -1.7 | -1.6 | -1.5 | -1.8 | -0.9 | -1.1 | -0.9 | -0.5 | -0.2 | -1.3 | -0.8 |
| **Median difference5** | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Q3 difference5** | 0.6 | 0.1 | 0.1 | 0.7 | 0.7 | 0.5 | 0.8 | 0.5 | 0.9 | 0.6 | 1.3 | 0.6 | 0.3 |
| **P-value6** | 0.0163 | 0.0227 | 0.0252 | 0.0891 | 0.3577 | 0.0353 | 0.9817 | 0.6205 | 0.9373 | 0.4371 | 0.0786 | 0.3654 | 0.9811 |
| ***C. difficile* Tests Obtained on Hospital Day < 4 per 10,000 Discharges** |
| **20194** | 239.6 | 248.6 | 247.9 | 252.6 | 253.1 | 245.6 | 237.3 | 240.8 | 236.5 | 234.2 | 228.2 | 222.1 | 228.4 |
| **20204** | 214.8 | 232.0 | 228.0 | 228.5 | 212.3 | 212.9 | 208.7 | 214.2 | 212.5 | 211.7 | 208.1 | 209.5 | 195.4 |
| **Q1 difference5** | -89.7 | -85.2 | -85.9 | -93.5 | -115.1 | -88.8 | -91.4 | -86.8 | -98.0 | -87.6 | -81.9 | -74.1 | -94.2 |
| **Median difference5** | -13.6 | -11.7 | -10.2 | -12.5 | -25.5 | -16.9 | -17.3 | -12.9 | -11.6 | -8.8 | -11.0 | -4.9 | -23.5 |
| **Q3 difference5** | 40.6 | 41.3 | 42.5 | 45.0 | 39.0 | 37.2 | 31.0 | 37.3 | 39.4 | 48.1 | 48.5 | 47.7 | 28.2 |
| **P-value6** | <.0001 | <.0001 | 0.0001 | <.0001 | <.0001 | <.0001 | <.0001 | <.0001 | <.0001 | <.0001 | <.0001 | 0.0006 | <.0001 |
| ***C. difficile* Tests Obtained on Hospital Day ≥ 4 per 10,000 Discharges** |
| **20194** | 119.4 | 137.3 | 134.2 | 129.6 | 126.6 | 117.7 | 112.9 | 116.9 | 110.4 | 109.9 | 111.5 | 112.3 | 113.4 |
| **20204** | 122.8 | 118.4 | 119.4 | 127.3 | 136.1 | 125.5 | 119.2 | 120.5 | 117.1 | 118.7 | 119.9 | 122.6 | 133.1 |
| **Q1 difference5** | -29.9 | -53.8 | -44.3 | -40.5 | -22.8 | -30.4 | -27.4 | -29.9 | -22.6 | -22.1 | -24.5 | -21.7 | -19.9 |
| **Median difference5** | 0.0 | -6.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.9 |
| **Q3 difference5** | 38.6 | 14.6 | 22.4 | 37.0 | 55.0 | 41.2 | 37.7 | 38.5 | 42.6 | 36.5 | 43.5 | 46.0 | 55.1 |
| **P-value6** | <.0001 | <.0001 | 0.0011 | 0.2218 | <.0001 | 0.2592 | 0.0327 | 0.2080 | 0.0002 | 0.0026 | 0.0011 | 0.0005 | <.0001 |
| 1Difference=2020 rate–2019 rate.2Inpatients diagnosed with CO-CDI were defined as those with an ICD-10-CM diagnosis code of A04.71 or A04.72 in the primary diagnostic position and inpatient treatment with metronidazole (parenteral or oral), fidaxomicin, or vancomycin (oral) initiated during the hospitalization.3Inpatients diagnosed with HO-CDI were defined as those with an A04.71 or A04.72 ICD-10-CM diagnosis code in any secondary diagnostic position and inpatient treatment with metronidazole (parenteral or oral), fidaxomicin, or vancomycin (oral) initiated after admission on hospital day 4 or later.4Pooled overall rate and pooled monthly rates. 5Facility-level differences in rates.6P-value associated with median difference. |

Table S2.Differences1 in Total and Monthly Facility-level CO-CDI and HO-CDI Percent Positivity, January 2019 – December 2020

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Total** | **Jan.** | **Feb.** | **Mar.** | **Apr.** | **May** | **Jun.** | **Jul.** | **Aug.** | **Sept.** | **Oct.** | **Nov.** | **Dec.** |
| **Percent Positive Tests Obtained on Hospital Day <4** |
| 2019 Total Tests | 182,908 | 16,282 | 14,819 | 16,632 | 15,906 | 16,026 | 14,699 | 15,383 | 15,367 | 14,466 | 14,875 | 13,781 | 14,672 |
| 2020 Total Tests | 149,498 | 15,397 | 13,957 | 13,307 | 9,626 | 11,139 | 11,805 | 12,969 | 12,623 | 12,337 | 12,659 | 11,960 | 11,719 |
| 2019 Pooled Rates | 8.3 | 8.6 | 8.0 | 7.9 | 8.4 | 8.0 | 8.3 | 8.3 | 8.8 | 8.7 | 8.3 | 8.4 | 8.3 |
| 2020 Pooled Rates | 7.4 | 8.1 | 8.1 | 7.9 | 6.9 | 6.8 | 7.4 | 7.0 | 6.8 | 7.3 | 7.6 | 7.1 | 6.7 |
| Q1 Difference | -6.7 | -5.5 | -5.4 | -5.9 | -9.1 | -6.6 | -6.1 | -6.3 | -7.2 | -8.3 | -6.6 | -7.1 | -7.5 |
| Median Difference | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Q3 Difference | 3.8 | 5.0 | 5.0 | 5.6 | 3.1 | 2.5 | 3.4 | 3.2 | 2.1 | 3.4 | 4.2 | 4.0 | 3.4 |
| P-value | <.0001 | 0.6577 | 0.9114 | 0.8034 | <.0001 | 0.0013 | 0.0109 | 0.0015 | <.0001 | <.0001 | 0.0464 | 0.0055 | 0.0003 |
| **Percent Positive Tests Obtained on Hospital Day ≥4** |
| 2019 Total Tests | 91,133 | 8,994 | 8,022 | 8,533 | 7,953 | 7,684 | 6,994 | 7,468 | 7,176 | 6,790 | 7,270 | 6,967 | 7,282 |
| 2020 Total Tests | 85,494 | 7,855 | 7,307 | 7,414 | 6,168 | 6,569 | 6,739 | 7,293 | 6,954 | 6,918 | 7,296 | 6,998 | 7,983 |
| 2019 Pooled Rates | 12.3 | 12.3 | 12.3 | 12.1 | 12.0 | 13.1 | 12.0 | 12.6 | 12.5 | 11.9 | 11.9 | 12.0 | 13.0 |
| 2020 Pooled Rates | 11.9 | 12.2 | 12.3 | 11.3 | 10.9 | 11.6 | 11.7 | 12.5 | 12.0 | 12.3 | 12.9 | 11.5 | 11.8 |
| Q1 Difference | -8.3 | -6.6 | -9.7 | -9.3 | -9.9 | -10.0 | -8.3 | -10.8 | -9.5 | -6.1 | -6.2 | -11.1 | -6.6 |
| Median Difference | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Q3 Difference | 8.1 | 6.6 | 6.7 | 8.3 | 5.5 | 7.1 | 7.7 | 8.3 | 9.3 | 9.1 | 10.0 | 8.3 | 7.5 |
| P-value | 0.3156 | 0.9496 | 0.1580 | 0.8522 | 0.0641 | 0.0411 | 0.4980 | 0.4358 | 0.7220 | 0.2907 | 0.0289 | 0.2520 | 0.3493 |
| 1Difference=2020 rate–2019 rate. |

Figure S1. Observed vs. Predicted CO-CDI Rates, January 2019 – December 2020



1Baseline monthly trend: 0.99 (p=0.0036).

2Level change around March 2020: 0.97 (p=0.5021).

3Trend change: 0.99 (p=0.0433).

4Monthly trend after March 2020: 0.98 (p=0.0015).

599% confidence bands for modeled CO-CDI rates.

Figure S2. Observed vs. Predicted HO-CDI Rates, January 2019 – December 2020



1Baseline monthly trend: 0.99 (p<.0001).

2Level change around March 2020: 1.11 (p=0.0314).

3Trend change: 1.01 (p=0.2509).

4Monthly trend after March 2020: 0.99 (p=0.2851).

599% confidence bands for modeled HO-CDI rates.