**Supplementary Figure 1.** Inclusion and exclusion flow diagram for hospital-onset bloodstream infections (HOBSIs) and central line-associated bloodstream infections (CLABSIs) from 1 January 2017 to 31 December 2021.

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**Supplementary Figure 2.** Scatterplots of hospital-onset bloodstream infections (HOBSIs) and central line-associated bloodstream infections (CLABSIs) rates by hospital. Gray areas denote COVID-19 pandemic period (April 2020 to December 2021).**

**Supplemental Table 1.** Model coefficients and 95% confidence intervals for exclusively time-dependent models across three representative model types: a negative binomial generalized linear model (GLM), generalized estimating equations (GEE) with exchangeable or first-order autoregressive (AR-1) covariance structures, and generalized linear mixed models (GLMM) with random intercept and slope per hospital.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Model | Time | COVID | COVID\*Time |
| HOBSI per 1,000 Patient Days | GLM (Negative Binomial) | 1.006 (1.002, 1.009) | - | - |
|  | GEE, Exchangeable | 1.007 (1.0004, 1.0129) (p=.04) | - | - |
|  | GEE, AR-1 | 1.006 (1.0004, 1.0115) (p=.03) | - | - |
|  | GLMM, random intercept & random slope\* | 1.006 (1.001, 1.012) | - | - |
| CLABSI per 1,000 Central Line Days | GLM (Negative Binomial) | 0.997 (0.992, 1.002) | - | - |
|  | GEE, Exchangeable | 0.999 (0.992, 1.007) | - | - |
|  | GEE, AR-1 | 0.999 (0.991, 1.006) | - | - |
|  | GLMM, random intercept and slope\* | 0.997 (0.992, 1.002) | - | - |

\*Model used in manuscript

**Supplementary Table 2.** Likelihood ratio tests comparing regression models. No statistical significance was noted between models that included COVID-19 variables (including a time-trended post-pandemic variable, “COVIDtime”) and models that were only time-dependent. Our analysis included two distinct periods: a pre-pandemic period denoted as 1 January 2017 through 31 March 2020 and a pandemic period denoted as 1 April 2020 through 31 December 2021. Coefficients referred to a pre-pandemic slope of incidence rate (“time” in the table below), a COVID-19 related incidence rate ratio at the onset of the pandemic (“COVID” in the table below), and a new slope of incidence rate after the pandemic ("COVID\*Time").

|  |  |  |  |
| --- | --- | --- | --- |
|  | Hospital-Onset Bloodstream Infections (HOBSIs) |  | Central Line-Associated Bloodstream Infections (CLABSIs) |
|  | Per 1,000 Patient Days | Per 1,000 Central Line Days |  | Per 1,000 Patient Days | Per 1,000 Central Line Days |
| **Likelihood Ratio Tests** |   |   |   |   |   |
| Model: β1\*Time | Reference | Reference |   | Reference | Reference |
| Model: β1\*Time + β2\*COVID | p=0.13 | N/A |   | p=0.48 | p=0.61 |
| Model: β1\*Time + β2\*(COVIDtime)  | p=0.34 | N/A |  | p=0.72 | p=0.34 |
| Model: β1\*Time + β2\*COVID + β3\*(COVIDtime) | p=0.30 | N/A |   | p=0.54 | p=0.31 |

**Supplemental Table 3.** Model coefficients (including COVID-19 related variables) and 95% confidence intervals across three representative model types: a negative binomial generalized linear model (GLM), generalized estimating equations (GEE) with exchangeable or first-order autoregressive (AR-1) covariance structures, and generalized linear mixed models (GLMM) with random intercept and slope per hospital. Our analysis included two distinct periods: a pre-pandemic period denoted as 1 January 2017 through 31 March 2020 and a pandemic period denoted as 1 April 2020 through 31 December 2021. Coefficients referred to a pre-pandemic slope of incidence rate (“time” in the table below), a COVID-19 related incidence rate ratio at the onset of the pandemic (“COVID” in the table below), and a new slope of incidence rate after the pandemic ("COVID\*Time"). No coefficients reached statistical significance.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Model | Time | COVID | COVID\*Time |
| HOBSI per 1,000 Patient Days | GLM (Negative Binomial) | 1.002 (0.996, 1.010) | 1.139 (0.869, 1.492) | 0.999 (0.981, 1.018) |
|  | GEE, Exchangeable | 1.004 (0.995, 1.013) | 1.148 (0.934, 1.411) | 0.997 (0.971, 1.023) |
|  | GEE, AR-1 | 1.005 (0.996, 1.014) | 1.056 (0.898, 1.242) | 1.000 (0.980, 1.020) |
|  | GLMM, random intercept & random slope | 1.002 (0.998, 1.007) | 1.113 (0.932, 1.330) | 1.003 (0.991, 1.015) |
| CLABSI per 1,000 Central Line Days | GLM (Negative Binomial) | 0.996 (0.987, 1.006) | 0.800 (0.540, 1.176) | 1.019 (0.992, 1.046) |
|  | GEE, Exchangeable | 1.001 (0.985, 1.014) | 0.770 (0.511, 1.277) | 1.014 (0.964, 1.065) |
|  | GEE, AR-1 | 0.999 (0.987, 1.012) | 0.808 (0.484, 1.351) | 1.013 (0.963, 1.066) |
|  | GLMM, random intercept & random slope | 0.996 (0.987, 1.005) | 0.796 (0.544, 1.164) | 1.019 (0.993, 1.046) |