with CLABSIs, most of the patients (n = 70) had only 1 pathogen isolated, 14 patients had 2 pathogens, and 3 patients had 3 pathogens, bringing the total number of bacteria cultured to 117. *Candida* spp and *Enterococcus* spp were the most frequently isolated pathogens at 19% and 13%, respectively (Fig. 1). There was no statistically significant difference between the pre–COVID-19 and intra–COVID-19 periods for *Candida* spp (rate ratio, 1.391; 95% CI, 0.5477–3.533; *P* = .48) or *Enterococcus* spp (rate ratio, 2.385; 95% CI, 0.8365–6.798; *P* = .09). **Conclusions:** The COVID-19 pandemic did not seem to have an impact on the local epidemiology at Baystate Medical Center in terms of CLABSI rates or type of pathogens causing infections, but the sample size taken into consideration may not have been powerful enough to detect statistical significance.

Note. This project was carried out as part of Dr Satta's MPH requirements at UMass.

Disclosures: None

Presentation Type:
Poster Presentation - Poster Presentation
Subject Category: CLABSI
Evaluating racial disparities in central-line–associated bloodstream infections for Tennessee hospitals, 2018–2021
Simone Godwin; Erika Kirtz and Christopher Wilson

Background: Central-line–associated bloodstream infections (CLABSIs) significantly burden the US population and healthcare system. Reporting facilities in Tennessee consistently omit race and ethnicity data in the NHSN despite having the option to enter. Racial and ethnic disparities are well documented across many health outcomes, including patient safety. CLABSIs were compared among 3 racial groups to better understand the impact of race on CLABSI incidence in Tennessee. **Methods:** CLABSI data from NHSN were linked with records from the TN Hospital Discharge Data System (HDDS) for 2018–2021. A multivariable linear regression model was used to determine relative risk (RR) between racial groups for contracting a CLABSI after controlling for confounding variables including Charlson comorbidity index (CCI) and social vulnerability index (SVI) scores. Statistical significance was set at *P* < .05. Data linkage and statistical analyses were performed in SAS version 9.4 software. **Results:** In Tennessee between 2018 and 2021, 342 (17.2%) of the 1,980 CLABSI events had race documented, and no ethnicity variables exist in the NHSN. The data linkage process yielded a 72% match (1,426 CLABSIs). The remaining 28% were excluded from the analysis. Per 1,000 central-line days (CL days) for all races, white patients had the highest CLABSI rate (17.5), followed by Black patients (1.36), and Native American or Alaskan Native patients (0.68). Per 1,000 admissions by race, Black patients had a higher CLABSI rate (1.26) than Native American/ Alaskan Native patients (0.85) and white patients (0.75). The risk of contracting a CLABSI was 79% higher in Black patients than in white patients (RR, 1.79; 95% CI, 1.55–2.07; *P* < .0001) when controlling for CCI, age group, and SVI. **Conclusions:** These results suggest that racial disparities between Black and white patients are present in Tennessee hospitals regarding CLABSIs. Although most CLABSI events were linked to HDDS patients, there were limitations in the ability to match all cases and calculate CL days by race. This study highlights the need for complete race and ethnicity data in the NHSN. Further studies should examine infection types at the regional and facility levels to target interventions for reducing HAI inequities in Tennessee.

Disclosures: None

Presentation Type:
Poster Presentation - Poster Presentation
Subject Category: CLABSI
Epidemiology of central-line–associated bloodstream infection mortality in Canadian NICUs before and after 2017

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Background: The Canadian Nosocomial Infection Surveillance Program (CNISP) observed increased mortality among neonatal intensive care unit (NICU) patients with central-line–associated bloodstream infection (CLABSI) starting in 2017. In this study, we compared NICU patients with CLABSIs before and after 2017, and quantified the impact of epidemiological factors on 30-day survival. **Methods:** We included 1,276 NICU patients from 8–16 participating CNISP hospitals from the pre-2017 period (2009–2016) and the post-2017 period (2017–2022) using standardized definitions and questionnaires. We used Cox regression modeling to assess the impact of age at date of positive culture, sex, birthweight, CLABSI microorganism, region of the country, and surveillance period (before 2017 vs after 2017) on time to 30-day all-cause mortality from date of positive culture. Gestational age was not available for this analysis. We reported model outputs as hazard ratios with 95% CIs. **Results:** In total, 769 (60%) NICU CLABSIs were reported in the pre-2017 period and 507 (40%) in the post-2017 period. The 30-day all-cause mortality rate was 8% (n = 100 of 1,276) overall, and significantly higher after 2017 (12%, n = 61 of 507) than before 2017 (5%, n = 39 of 769) (*P* < .001). During the post-2017 period, cases were significantly younger: 16 days (IQR, 9–33) versus 21 days (IQR, 11–49) (*P* = .002). Median days from ICU admission to infection were shorter: 14 (IQR, 8–31) versus 19 (IQR, 10–41) (*P* < .001). More gram-negative CLABSIs were identified (29% vs 24%; *P* = .040) and fewer gram-positive CLABSIs were identified (64% vs 72%; *P* = .006) compared to the pre-2017 period. Mortality was higher in CLABSIs caused by gram-negative bacteria (15%, n = 50 of 328) than gram-positive bacteria (4.4%, n = 39 of 877) (*P* < .001), and mortality was higher in neonates with birthweight <1,000 g (11%, n = 71 of 673) compared to those weighing ≥1,000 g (5%, n = 28 of 560) (*P* < .001). Adjusting for all other factors, survival modeling indicated that NICU CLABSIs identified in the post-2017 period had 2.12 (95% CI, 1.23–3.66) times the hazard ratio of 30-day all-cause mortality compared to those before 2017 (*P* < .006). Those identified with a gram-positive bacterium had a 0.28 hazard ratio (95% CI, 0.12–0.65) of 30-day mortality compared to those with a gram-negative bacterium or fungus (*P* = .003). In the fully adjusted model, age, sex, and birthweight were not significantly associated with NICU CLABSI survival. **Conclusions:** NICU patients with CLABSIs had significantly higher all-cause mortality between 2017–2022 compared to 2009–2016, and those who acquired gram-positive–associated CLABSIs had improved survival compared to other organisms. Further work is needed to identify and understand factors driving the increased mortality among NICU CLABSI patients from 2017–2022.

Disclosures: None

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Poster Presentation - Poster Presentation
Subject Category: CLABSI
Examining CLABSI rates by central-line type
Lauren DiBiase; Shelley Summerlin-Long; Lisa Stancill; Emily Sickbert-Bennett Vavalle; Lisa Teal and David Weber

Background: Central-line–associated bloodstream infections (CLABSIs) are linked to increased morbidity and mortality, longer hospital stays, and significantly higher healthcare costs. Infection prevention guidelines recommend line placement in specific insertion locations over others because of the relative risk of infection. The purpose of this study was to assess CLABSI rates by line type to determine whether some central lines had a lower risk of infection and should be recommended over others given