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Poster Presentation - Poster Presentation
Subject Category: CLABSI
Impacts of Hospital Acquired Bloodstream Infections in Patients Undergoing Hemodialysis Through a Central Venous Catheter
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Background: Hospital acquired infections (HAI) are of interest given their resultant morbidity, mortality, and hospital utilization. Among HAIs, central line associated bloodstream infections result in the highest rates of mortality and additional costs. While all central venous catheters (CVC) carry risk for BSI, long-term catheter use is at increased risk. One population that utilize CVCs for extended durations are those undergoing hemodialysis. While data are available characterizing BSI impacts on outpatient hemodialysis patients, little data exist describing inpatients. The purpose of this study was to characterize the demographics, outcomes, and economics associated with the development of hospital acquired BSI (HA-BSI) in patients undergoing hemodialysis through a CVC (HD-CVC). **Methods:** All admissions of adult patients in the Premier Healthcare Database with hospital stays including HD-CVC with discharge dates during 2020-2022 were retrospectively evaluated. BSIs were identified by ICD-10 codes and blood culture collection dates. A BSI was deemed hospital acquired if the blood culture date was ≥3 calendar days after admission. Descriptive analyses were undertaken for HA-BSI patients including: baseline demographics, clinical characteristics, and outcomes. Length of stay (LOS), ICU utilization, and estimated costs were evaluated for HAI-BSI and non-BSI populations. **Results:** 166,394 admissions from 91,448 patients were identified. Of these, 5,722 patients (6.3%) had 5,842 admissions with a HA-BSI. These patients were 58.9% white, 28.3% black, 56.8% male, and 62.9% were aged ≥60years. Patients had considerable comorbidities at baseline with 88.9% having ≥2 Charlson comorbid conditions and 46.9% with ≥6. During the study period, all-cause mortality was 27.8% for HA-BSI patients with 85.5% of deaths occurring while inpatient. Median LOS for patients with HA-BSI was 25 days compared with 6 days for HD-CVC without BSI; patients with HA-BSI were also more likely to require the ICU (65.6% vs. 27.6%). The median ICU LOS was 12 days for HA-BSI versus 34 days for HD-CVC without BSI. Greater intensity of healthcare utilization was reflected in median costs of $402K for HA-BSI, compared with $43K for HD-CVC without BSI. Discussion: We described the characteristics of HD-CVC patients that developed HA-BSI. These patients had many comorbidities and relatively high rates of all-cause in-hospital mortality. Patients were likely to have long LOS, both in-hospital and within the ICU. Collectively, care of these patients was associated with considerable healthcare costs, particularly as compared with HD-CVC patients not developing a HA-BSI. Future studies should characterize risk factors and evaluate potential prevention strategies for this high-risk population.

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Activities and Role of certified Nurse in Infection Control in COVID-19 Cluster Response in Japan
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Background: Mie Prefecture in Japan established a Cluster Response Team within the Headquarters for COVID-19 and registered prefectural staff as well as certified Nurse in Infection Control (CNICs) and other experts, who were promptly dispatched to the site of the cluster and provided other support. However, the extent to which they were dispatched, what activities they performed, and what contributions they made have not been analyzed. **Method:** The Mie prefectural government officials who were responsible for coordinating the dispatch were interviewees regarding the cluster response situation from November 2020 to August 2022. In addition, a questionnaire survey was conducted with CNICs on the supporting side and facility managers on the receiving side regarding the activities and roles of CNICs. **Result:** Of the 275 cluster cases, cluster response teams were dispatched in 59 cases (64% to nursing facilities, 34% to medical institutions). Nineteen of the 46 CNICs registered in Mie Prefecture were dispatched. The number of days CNICs were dispatched ranged from 1 to 4 days, with 1 day being the most common (69.5%). The dispatch coordinators commented that the CNICs they requested were biased, but that they would have liked to request all CNICs to be dispatched. In a survey of CNICs, 36 of 46 (78.3%) responded to the survey. Support was provided for zoning (92%), PPE donning and doffing instruction (92%), infection control evaluation and instruction (85%), cleaning and disinfection services (54%), and training sessions (54%). The tasks that CNIC believed should be performed were generally consistent with the tasks that were actually performed. However, cleaning and disinfection tasks and nursing tasks that were not indicated as tasks to be performed were actually performed. In a questionnaire targeting recipients, 31 of 67 facilities (46.3%) responded to the survey. Respondents indicated that the dispatch of staff improved their knowledge of infection control measures (90.3%), reduced anxiety (87.1%), ensured thorough hand disinfection (61.3%), and standardized the PPE donning and doffing method (58.1%). Requests to the CNIC included regular on-site guidance, sharing and disseminating information, and holding training sessions. **Conclusion:** Administrative staff and infection control staff, mainly CNICs, paired up to provide effective cluster response. However, the uneven distribution of the dispatched CNICs and the unexpected tasks they had to perform indicated the need to re-establish a community-wide infection control system in preparation for the next pandemic.

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Viral Kinetics of SARS-CoV-2 in Nursing Home Residents and Staff
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