HOB resulted in additional \$24,586 to cost of care and 6.3 days to the LOS; 2. Rate of HOB in MP cancer was 2-7-fold higher and 57% to 4-fold higher in transplant patients compared to the reference group, depending on LOS. There were no statistically significant differences in the risk of HOB between solid tumor cancer and the reference; 3. AMR pathogen rates were higher in cancer patients than patients without cancer for most pathogen groups, including vancomycin-resistant enterococci (IRR 1.95), extendedspectrum beta-lactamase (ESBL) producers (IRR, 1.48), carbapenem-nonsusceptible Enterobacterales (IRR, 1.46) and multidrug-resistant Pseudomonas aeruginosa (IRR, 1.31). The percentage of nonsusceptible isolates in most pathogen groups was lower in patients with cancer versus without cancer except for ESBL producers among Enterobacterales and vancomycin resistance among enterococci, which were higher in cancer patients. Conclusion: Certain vulnerable patient populations were found to be at greater risk of HOB including those with SSI, MP cancer and transplant patients. The higher incidence of AMR in cancer patients further complicates management of high-risk infections.

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Presentation Type:

Poster Presentation

Subject Category: Infections in Immunocompromised Patients

Evaluation of Daily Surveillance Blood Cultures During Continuous Renal Replacement Therapy in a Diverse Immunocompromised Population

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Background: Immunocompromised patients in the ICU are at high risk of infection. Continuous renal replacement therapy (CRRT) masks fevers. At an institution where one blood culture is routinely obtained daily during CRRT, we evaluated the incidence of positive blood cultures during CRRT. **Methods:** All patients admitted to the NIH Clinical Center receiving CRRT from September 2016 to March 2023 were identified. Charts were abstracted for baseline covariates, laboratory values, microbiology, CRRT days, antimicrobial administration, and mortality. Results: A total of 111 patients received CRRT. Ninety-seven (87.4%) had at least one blood culture drawn. Mean age was 43.3 ± 15.8 years and 39 (35.1%) were female. Seventy-four (66.7%) had an underlying malignancy, 36 (32.4%) were neutropenic on CRRT initiation, 32 (28.8%) were post-hematopoietic cell transplant and 9 (8.1%) were post-CAR-T cell therapy. Median CRRT duration was 7 days (IQR 3-16.5). There were 41 separate positive blood culture events, each possibly representing a blood stream infection (BSI), in 27 (24.3%) patients. The most common organism was coagulase-negative Staphylococcus (CoNS) (n=14) followed by Enterococcus faecium (n=8), Candida spp (n=6), and Pseudomonas aeruginosa (n=5). Of 11 cases only growing CoNS, 5 (45.5%) had repeat same-day cultures, but only two grew the same organism. Median time to first positive culture was 13 days (IQR 8-18.5). Fourteen cases (34.1%) were not on matched empiric antimicrobial therapy, of which 4 (28.6%) grew only CoNS. The average number of blood cultures per CRRT day was 1.2. Total number of CRRT days per possible BSI was 34 days, with 98 days for one possible BSI not on matched empiric therapy, and 138 days for a non-CoNS BSI not on matched empiric therapy. Forty-nine (44.1%) patients survived their ICU stay. Of these, 33 (67.3%) continued to have surveillance cultures drawn after CRRT cessation with 16 (32.7%) continuing after ICU discharge. Median days of surveillance cultures after CRRT cessation was 7 days (IQR 5-10). Conclusion: While the total proportion of positive cultures not on matched empiric therapy was high at 34.1%, the total number of CRRT days for one non-covered positive culture was high at 98 days. These numbers go down to 24.4% and up to 138, respectively, if CoNS-only cultures are excluded. Routine daily blood cultures may detect a small number of unexpected BSIs in patients whose fever response is masked while on

CRRT. However, it is a low yield practice that could benefit from a more targeted approach.

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Subject Category: Long Term Care

Willing and Readiness of LTCF's to Admit and Manage CRE Patients – a Multi-Center Study

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Background: Carbapenem-Resistant Enterobacterales (CRE's) are an imminent and growing threat to our healthcare system, especially those in Long Term Care Facilities (LTCF). Most patients with CRE in the US are diagnosed in hospitals but often discharged to LTCF's. But how willing and prepared are LTCF's to take and effectively manage CRE patients? We conducted a multi-center survey of 200 LTCF's across 4 states (CT, CA, PA, TX) to assess their willingness to admit and preparedness to manage CRE patients. Objective/methods: A questionnaire was sent to 200 consenting facilities asking about willingness and readiness to manage a CRE patient. We excluded LTAC's and SNFv which tend to have more exposure to CRE and thus more open to accept CRE patients. Readiness was measured by capacity built around CDC recommendations for CRE management and prevention in LTCF. Survey results were analyzed using SAS inc. Results: Of the 200 surveys sent, 168 were completed and returned. Eighteen (18) were excluded for incompleteness or unclear responses. Of the 150 facilities included in the analysis, only 18 (12%) said they have had experience managing a CRE resident and 41(27%) said they would accept CRE patients. Most common reasons for unwillingness to accept CRE patients were lack of private rooms, fear of causing an outbreak and not being prepared to handle such cases. As for readiness to handle CRE patients 71(47%) said they had a CRE policy, 45 (30%) had contingent plans for how to effectively isolate CRE patients, 60 (40%) said they had isolation signage for CRE, 38 (25%) had cleaning and disinfection supplies for CRE, 21 (14%) had contingent plans for surveillance testing if that were needed. A majority 145 (97%) were aware to both notify public health if they have a case and to use an inter-facility form when transferring the patient to another facility. Conclusion: Our study, though small in size, highlights how unwilling and unprepared a lot of LTCF's are to take on CRE patients. We also highlight some of the barriers and gaps in preparedness that can be addressed to build the capacity of LTCF's to take in and manage CRE residents effectively.

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Subject Category: Long Term Care

Candida auris and MRSA Shedding During Caregiving versus Rest in Nursing Homes

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Background: Candida auris and methicillin-resistant Staphylococcus aureus (MRSA) are prevalent in nursing homes, and both are known to shed profusely from the skin. We evaluated the degree of differential shedding during caregiving activities versus at rest in nursing home residents. **Methods:** Residents at two nursing homes were screened for C. auris and MRSA using nares, axilla/groin, and peri-rectal swabs. Carriers of C. auris, some of whom also carried MRSA, were evaluated for proximal shed around their bed during rest and caregiving activities using chromogenic settle plates. Morning caregiving activities (e.g. hygiene care, linen/clothing change) were noted to generally take 12 minutes. For rest, settle plates were