than half of the tested strains (52.1%) were resistant to carbapenems, but all non–*A. baumannii* strains were susceptible. The highest resistance to carbapenems was among strains from pneumonia cases in ICUs (58.3%) and resistance among all strains isolated from ICU was 50%. However, even higher resistance was noted among SSTI strains from non-ICUs (61.7%). **Conclusions:** Increasingly, more than *A. baumannii*, other species among *Acinetobacter* strains are isolated from patients hospitalized in Polish hospitals. To assess the significance of non–*A. baumannii* spp in clinical settings, precise species identification is needed. Therefore, the diagnostic methods used must be improved. Carbapenem-resistant *A. baumannii* infections are the biggest problem in pneumonia patients in ICUs and in SSTI patients in other hospital departments. Carbapenem resistance occurs in a very high percentage of *A. baumannii* strains; among non–*A. baumannii* strains it is not yet a therapeutic problem.

Funding: None
Disclosures: None
Doi:10.1017/ice.2020.977

Presentation Type:
Poster Presentation

Prevalence and Incidence of *Clostridioides difficile* Colonization Among a Cohort of Transplant Patients

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Background: Allogeneic bone marrow transplant (BMT) as well as liver, heart, and lung transplant patients have high reported incidence rates of *Clostridioides difficile* infection (CDI). The prevalence and incidence of asymptomatic colonization with *Clostridioides difficile* (ACCD) in this group is not known. **Methods:** ACCD was defined as the presence of *C. difficile* on screening cultures without positive clinical testing for CDI ±1 week from the date of sampling. Patients undergoing BMT as well as liver, heart, and lung transplants at MUSC between October 2017 and October 2019 were cultured for *C. difficile* at admission for transplant then once weekly during inpatient admissions and at each outpatient follow-up for 90 days after transplantation. Testing for CDI occurred at the discretion of treating physicians and was done by PCR. Transient ACCD was defined as a positive culture from samples collected <7 days apart, and persistent ACCD was defined as having 2 or more positive cultures collected a minimum of 7 days apart. **Results:** The baseline prevalences of ACCD were 1 of 5 (20%), 0 of 2 (0%), 1 of 40 (3%), and 2 of 16(13%) for lung, heart, liver and BMT patients, respectively. Of 63 patients, 3 had a pretransplant history of CDI, 2 of whom had baseline ACCD. Incident ACCD occurred in 23 of 63 patients (37%) (Table 1). Overall, ACCD was observed in 30 of 63 patients (48%). Of the 30 patients with ACCD, 14 displayed persistent asymptomatic colonization, whereas 16 displayed transient asymptomatic colonization. Also, 5 patients in the cohort were diagnosed with CDI after transplantation, of whom 3 had ACCD prior to or following CDI. **Conclusions:** The baseline prevalence of *C. difficile* colonization in transplant patients (6.3%) was not substantially greater than those observed in recent studies of hospitalized inpatients, but the incidence of new colonization events (37%) was high in this patient population with numerous pretransplant risk factors for CDI.

Funding: None
Disclosures: None
Doi:10.1017/ice.2020.978

Table. Baseline and incident asymptomatic colonization with *C. difficile* (ACCD) in a cohort of lung, heart, liver, and allogeneic bone marrow transplant patients at MUSC 2017-2019.

Transplant type	Lung (n=5)	Heart (n=2)	Liver (n=40)	BMT (n=16)	Total (n=63)
Pre-transplant CDI	0	0	3	0	3
Baseline (prevalent) ACCD	1	0	4	2	7
Incident ACCD	1	1	18	3	23
Persistent ACCD	2	0	9	3	14
Transient ACCD	0	1	13	2	16
Post-transplant CDI	3	0	1	1	5

Presentation Type:
Poster Presentation

Prevalence of Drug-Resistant *Mycobacterium tuberculosis* in the Veterans Health Administration (VHA)

Gina Oda, Department of Veterans Affairs; Cynthia Lucero-Obusan, Department of Veterans Affairs; Patricia Schirmer, Department of Veterans Affairs; Mark Holodniy, Department of Veterans Affairs

Background: In 2018, the CDC reported that isoniazid (INH)-resistant and multidrug-resistant *Mycobacterium tuberculosis* (MDR-TB, ie, resistant to at least INH and rifampin) represented

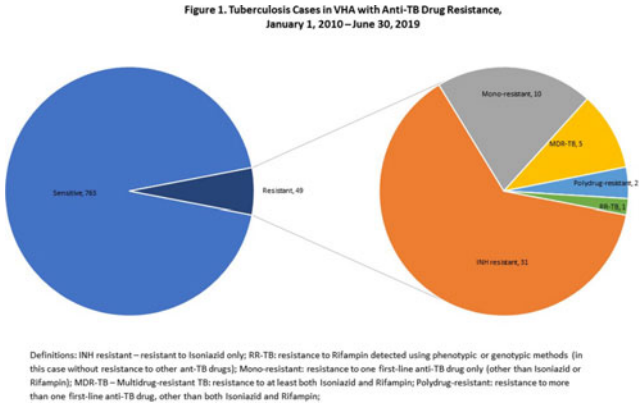

Fig. 1.

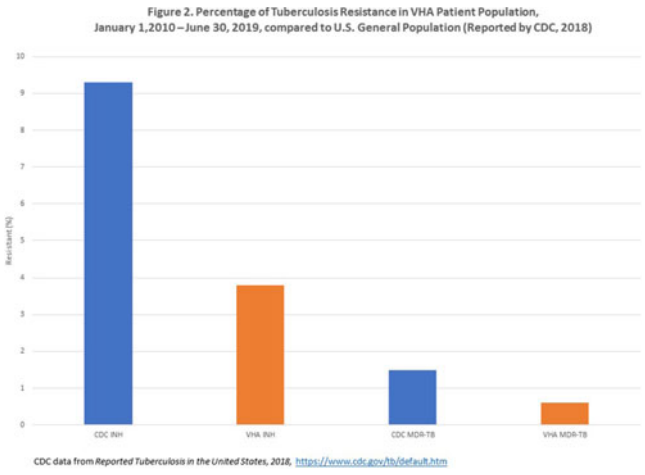

Fig. 2.

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Table 1. Characteristics of Veterans with drug-resistant vs. susceptible TB, N = 812

Characteristic	Resistant (%) n = 49	Susceptible (%) n = 763	P value
Gender:			
• Female	0	21 (2.8)	0.24
• Male	49 (100)	742 (97.2)	0.24
Age groups (years):			
• < 24	1 (2)	15 (2)	0.97
• 25 - 44	0	38 (5)	0.11
• 45 - 64	30 (61.2)	413 (54.1)	0.33
• 65 - 84	13 (26.6)	239 (31.3)	0.48
• ≥ 85	5 (10.2)	58 (7.6)	0.51
Race/Ethnicity:			
• AI/AN	0	6 (0.8)	0.54
• Asian	4 (8.2)	42 (5.5)	0.45
• Black	16 (32.7)	292 (38.3)	0.43
• Multi-racial	1 (2)	3 (0.4)	0.11
• NH/OPI	0	10 (1.3)	0.42
• White	18 (36.7)	289 (37.9)	0.87
• Hispanic/Latino	5 (10.2)	65 (8.5)	0.68
• Unknown	5 (10.2)	56 (7.3)	0.46
Location of Birth:			
• United States	42 (85.7)	662 (86.8)	0.83
• Asia/Pacific Islands	5 (10.2)	48 (6.3)	0.28
• US Territories	1 (2)	23 (3)	0.70
• Latin America/Caribbean	0	16 (2.1)	0.31
• Europe	1 (2)	3 (0.4)	0.11
• Africa	0	4 (0.5)	0.61
• Unknown	0	7 (0.9)	0.50
Pulmonary vs. extrapulmonary TB:			
• Pulmonary	36 (73.5)	652 (85.5)	0.02
• Extrapulmonary	13 (26.5)	111 (14.5)	0.02
Death:			
• Died within 30 days of TB diagnosis	3 (6.1)	39 (5.1)	.75
• Died within 60 days of TB diagnosis	3 (6.1)	67 (8.8)	.52
• Died within 90 days of TB diagnosis	5 (10.2)	81 (10.6)	.92
Hospitalization:			
• Hospitalized	29 (59)	478 (63)	.62
• ICU stay	7 (14.3)	94 (12.3)	.40

Abbreviations: A/AN, American Indian/Alaskan Native; NH/OPI, Native Hawaiian/Other Pacific Islander

9.3% and 1.5% of TB cases, respectively, in the United States. **Objective:** We analyzed the prevalence of drug-resistant TB within the Veterans Health Administration (VHA) to determine factors associated with hospitalization. **Method:** Patients were identified using Council of State and Territorial Epidemiologists case definition for laboratory-confirmed TB by querying VHA data sources from January 1, 2010, to June 30, 2019. Susceptibility results were included for isolates from all body sites. Using a 2-proportion z test, we compared the following demographic factors for susceptible versus drug-resistant TB: age, gender, race/ethnicity, location of residence and birth. We also assessed the following clinical and hospitalization factors: pulmonary versus extrapulmonary disease, latent TB infection (LTBI) screening and treatment, length of stay (LOS), intensive care unit (ICU) stay, and death. **Results:** In total, 878 patients had lab-confirmed TB, and 812 (92%) had electronic drug-susceptibility results available. Of 812 patients, 49 (6%) showed anti-TB drug resistance (Fig. 1), which was less than that reported nationally by the CDC (Fig. 2). No patients had extensively drug-resistant TB. Only 18 of 49 patients (37%) with resistant TB had LTBI screening ≥3 months prior to diagnosis. Among 6 patients with LTBI, 3 (50%) received treatment. Patient state of residence was the only demographic factor associated with resistant TB. Arizona, Iowa, Massachusetts, Montana, Nevada, South Dakota, and Utah were significantly associated with drug-resistant TB cases ($P < .05$); however, overall numbers of VHA TB cases in these states were low. Patients with resistant TB were more likely to have extrapulmonary TB (13 of 49, 26.5%) than patients with susceptible TB (111 of 763, 14.5%; $P < .05$) (Table 1). Mortality at 30 and 90 days for resistant versus susceptible TB cases did not differ significantly: 6.1% versus 5.1% at 30 days ($P = .75$) and 10.2% versus 10.6% at 90 days ($P = 0.92$), respectively. The proportion of drug-resistant TB cases hospitalized did not differ from susceptible

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cases (59% vs 63%), respectively ($P = .62$) nor did the proportion with ICU stay (14.3% vs 12.3%), respectively ($P = .40$). Median LOS for drug-resistant TB cases and susceptible cases were similar: 5 days (range, 0–303 versus 4 days (range, 0–111), respectively. **Conclusions:** Rates of drug-resistant TB are lower in the VHA than in the general US population. However, improvement is needed in LTBI screening and treatment rates. Little has been published on drug resistance in extrapulmonary TB; however, our findings should alert clinicians to the possibility of resistance in these challenging infections.

Funding: None
Disclosures: None
Doi:10.1017/ice.2020.979

Presentation Type:
Poster Presentation

Prevalence, Distribution, and Antibiotic Susceptibilities of Nosocomial Infections at a Tertiary Hospital in Port Harcourt, Nigeria

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Background: Previously, many infections could be treated effectively based on the clinician's past clinical experience. The development of resistance to essentially all of the antimicrobial agents currently in use in clinical practice has made this scenario more of the exception than the norm. Selecting an appropriate antimicrobial agent has become increasingly more challenging; the clinician has to navigate through the variety of available agents in the face of increasing antimicrobial resistance. The diagnostic laboratory now plays very important role in clinical practice. To ensure safe and effective empirical treatment, a surveillance study of the susceptibility pattern of common pathogens and appropriate use of antibiotics is imperative. **Objective:** We report on the prevalence, distribution, and antibiotic susceptibility patterns of nosocomial pathogens isolated at the University of Port Harcourt Teaching Hospital (UPTH) and the effectiveness of the antibiotics commonly prescribed at the hospital in treating these infections. **Methods:** A retrospective cross-sectional study of specimens received at the microbiology laboratory was conducted over a 6-month period, from October 2015 to March 2016, using urine, blood, and semen specimens. In total, 5,160 samples received and analyzed at the laboratory within the study period were assessed. **Results:** Of the 5,160 specimens analyzed, 881(17.07%) were positive for bacteria: 691(78.43%) from urine, 86 (9.76%) from blood, and 104 (11. 81%) from semen. *Escherichia coli* (35.74%), *Klebsiella pneumoniae* (52.33%), and *Staphylococcus aureus* (65.4%) were the most frequently isolated pathogens from urine, blood, and semen, respectively. Widespread multidrug resistance was observed among the organisms. *Klebsiella pneumoniae*, *S. aureus*, and *E. coli* isolated from urine were resistant to amoxicillin/clavulanate, cefuroxime, ceftazidime, ciprofloxacin, ampicillin, gentamycin, and ceftriaxone. A review of the pattern of prescribing antibiotics revealed that in the emergency unit, ceftriaxone (34.09%) and metronidazole (30.09%) were most frequently prescribed, whereas in the general outpatient department, metronidazole (19.09%), amoxicillin (16.61%), amoxicillin/clavulanate (9.39%), and ofloxacin (9.39%) were often prescribed. *S. aureus* was susceptible to only ceftriaxone, whereas *K. pneumoniae* and *E. coli* were susceptible only to ofloxacin. **Conclusions:** Most of the isolated pathogens were not susceptible to the frequently prescribed antibiotics. Empirical prescribing of antibiotics without current epidemiological data of pathogens in the hospital can only further exacerbate the problem of antimicrobial resistance. The need for periodic epidemiological surveillance and rational use of antibiotics anchored on a good antibiotic stewardship program is therefore strongly recommended.

Funding: None
Disclosures: None
Doi:10.1017/ice.2020.980

Presentation Type:
Poster Presentation

Preventing Transmission of Vaccine-Associated Viral Infections from a Patient With Severe Combined Immune Deficiency

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Background: The transmissibility of vaccine-strain viruses from immunocompromised patients, such as those with severe combined immune deficiency (SCID) is unknown. The infection control management of a patient diagnosed with SCID and infected with vaccine-strain varicella zoster virus (VZV) and measles virus is described below. A previously healthy, full-term boy was vaccinated at 14 months with measles mumps rubella varicella (MMR) vaccine. He had received prior vaccinations, including rotavirus, without adverse effects. During the 6 weeks after vaccination, the patient developed signs and symptoms clinically consistent with chicken pox and measles. An immune work-up revealed SCID. **Methods:** The Alberta Health Services (AHS) SCID protocol was followed to manage the patient upon admission at 17 months of age. Multiple meetings with various stakeholders were held to ensure appropriate precautions were followed to minimize the risk of pathogen transmission. **Results:** The patient was placed on airborne and contact precautions in a negative-pressure room. The pressure differential of the room to the corridor was continually monitored and displayed at the entry to the room. Staff known to be immune to VZV or measles were not required to wear an N95 respirator. All intrahospital movement of the patient was coordinated with the respective care teams and departments, including infection prevention and control, facilities maintenance and engineering, respiratory therapy, and diagnostic imaging. A mask was placed on the patient when movement outside the room was required. VZV testing was positive for the Oka/vaccine strain on all samples tested (ie, nasopharyngeal, skin, blood, and cerebrospinal fluid). Nasopharyngeal swabs and blood were PCR positive for measles genotype A/vaccine strain virus. Both viruses were persistently positive in spite of treatment with acyclovir, valganciclovir, varicella zoster immune globulin, and intravenous immune globulin. **Conclusions:** There is currently no documented transmission of measles vaccine-strain virus, and transmission of VZV vaccine-strain virus is rare. According to the AHS SCID protocol, the use of airborne and contact precautions for a patient identified with measles and/or VZV supersedes the use of a positive-pressure room for patients identified with SCID. Newborn screening for SCID was

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