Results. A total of 1562 HCW’s participated in the training: 804 doctors, 445 nurses and 313 support staff in 26 training sessions. Majority of the participants (85%) did not receive any formal training earlier on infection control and often provided incorrect responses on basic IPC during interactive session. None of the hospitals had an IPC committee. After the training, we found a significant increase from 0% at baseline to 24% (<0.001) in hand hygiene including 43% (<0.001) and 45% (<0.001) in mask and gloves use respectively. All respondents (n=84) from the qualitative assessment, reported the training as highly effective which reinforce their learning in action in the hospitals. Participants from all three groups urged to arrange refresher training more frequently and in small groups to uphold the practices.

Conclusion. This pilot program demonstrated HCWs lack basic IPC principals and tailored IPC training sessions can significantly improve HCWs IPC practice. Formation of active IPC committee could enable arranging periodic refresher and in-service training updates for HCWs with the reallocation of resources to adopt regular IPC practices.

Disclosures. All Authors: No reported disclosures

867. The Scope of a Weekly Infection Control Team Rounding in an Acute-care Teaching Hospital
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Objective. To identify the scope of weekly infection control (IC) team rounding (ICTR) among acute-care hospitals and the potential for improving IC practice.

Methods. A single-center retrospective study was conducted from January 1, 2018 to December 31, 2018, reviewing all ICR performed at a 734-bed academic hospital in Republic of Korea. ICRs were conducted on weekdays, and the participating team consisted of infection prevention personnel and four infectious disease physicians. The scope of ICR was defined as all observations, interventions, and recommendations made during weekly ICR. The primary outcome was the number of observations, interventions, and recommendations made during weekly ICR.

Results. A total of 1562 HCW participated in the training: 804 doctors, 445 nurses and 313 support staff in 26 training sessions. Majority of the participants (85%) did not receive any formal training earlier on infection control and often provided incorrect responses on basic IPC during interactive session. None of the hospitals had an IPC committee. After the training, we found a significant increase from 0% at baseline to 24% (<0.001) in hand hygiene including 43% (<0.001) and 45% (<0.001) in mask and gloves use respectively. All respondents (n=84) from the qualitative assessment, reported the training as highly effective which reinforce their learning in action in the hospitals. Participants from all three groups urged to arrange refresher training more frequently and in small groups to uphold the practices.

Conclusion. This pilot program demonstrated HCWs lack basic IPC principals and tailored IPC training sessions can significantly improve HCWs IPC practice. Formation of active IPC committee could enable arranging periodic refresher and in-service training updates for HCWs with the reallocation of resources to adopt regular IPC practices.

Disclosures. All Authors: No reported disclosures

868. Investigations of Healthcare-Associated Elizabethkingia Infections – United States, 2013-2019
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Objective. Elizabethkingia (EK) are non-motile gram-negative rods found in soil and water and are an emerging cause of healthcare-associated infections (HAIs). We describe Centers for Disease Control and Prevention (CDC) consultations for healthcare-associated EK infections and outbreaks.

Methods. CDC maintains records of consultations with state or local health departments related to HAI outbreaks and infection control breaches. We reviewed consultations involving EK species as the primary pathogen of concern from January 1, 2013 to December 31, 2019 and summarized data on healthcare settings, infection types, laboratory analysis, and control measures.

Results. We identified 9 consultations among 8 states involving 73 patient infections. Long-term acute-care hospitals (LTACHs) accounted for 4 consultations and 32 (43%) infections, and skilled nursing facilities with ventilated patients (VSNFs) accounted for 2 consultations and 31 (42%) infections. Other settings included an acute care hospital, an assisted living facility, and an outpatient ear, nose, and throat clinic. Culture sites included the respiratory tract (n=7 consultations), blood (n=4), and sinus tract (n=1), and E. anophelis was the most commonly identified species. Six consultations utilized whole genome sequencing (WGS); 4 identified closely related isolates from different patients and 2 also identified closely related environmental and patient isolates.

Conclusion. EK is an important emerging pathogen that causes HAI outbreaks, particularly among chronically ventilated patients. LTACHs and VSNFs accounted for the majority of EK consultations and patient infections. Robust water management plans and infection control practices to minimize patient exposure to contaminated water can help prevent EK infections in these settings.

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869. Outbreak of Vancomycin Resistant Enterococcus faecium (VREF) in a Hematology Unit Identified Through Whole Genome Sequencing
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Objective. To describe an outbreak of Vancomycin Resistant Enterococcus faecium (VREF) in a Hematology Unit. Whole Genome Sequencing (WGS) was performed to investigate source of VREF and compare isolates:

Methods. A total of 1562 HCW participated in the training: 804 doctors, 445 nurses and 313 support staff in 26 training sessions. Majority of the participants (85%) did not receive any formal training earlier on infection control and often provided incorrect responses on basic IPC during interactive session. None of the hospitals had an IPC committee. After the training, we found a significant increase from 0% at baseline to 24% (<0.001) in hand hygiene including 43% (<0.001) and 45% (<0.001) in mask and gloves use respectively. All respondents (n=84) from the qualitative assessment, reported the training as highly effective which reinforce their learning in action in the hospitals. Participants from all three groups urged to arrange refresher training more frequently and in small groups to uphold the practices.

Conclusion. This pilot program demonstrated HCWs lack basic IPC principals and tailored IPC training sessions can significantly improve HCWs IPC practice. Formation of active IPC committee could enable arranging periodic refresher and in-service training updates for HCWs with the reallocation of resources to adopt regular IPC practices.

Disclosures. All Authors: No reported disclosures
Session: P-41. HAI: Outbreaks

**Background.** VREfm is a major cause of Hospital Acquired Infection in the United States. We analyzed all the VREfm infections that occurred in our institution between 2018 and 2019 using Whole Genome Sequencing (WGS) to understand epidemiological relationship between previously unidentified clusters. In this study we describe a cluster in our hematology oncology unit.

**Methods.** A total of 109 discrete VREfm isolates from 66 patients were analyzed. VREfm isolates used in this study were identified from positive blood and urine cultures. Genomic deoxyribonucleic acid (DNA) was extracted from pure cultures. The purity and integrity of extracted DNA were determined using appropriate assays. Library construction and sequencing were conducted and Multi Locus Sequence Typing (MLST) obtained (image 1). Phylogenomic tree was plotted using the Interactive Tree of Life (image 2).

**Results.** Total of 7 clusters were identified. Here we describe one cluster (image 3) with the highest genetic similarity which showed maximum difference of 5 Single Nucleotide Polymorphisms (zero between patient 1 and 2, image 4). The cluster is composed of 24 clinical strains of VREfm from 6 patients, over a 9 month time period (Image 5). All patients had hematologic malignancies; 4/6 patients had received recent chemotherapy and 5/6 patients were neutropenic. 4 patients were admitted in a single unit (labelled E7), 1 patient was on a sister unit (labelled F7); and 1 patient was in the cancer infusion center. All patients had central venous access placed by radiology at the time of diagnosis of infection and had visited our outpatient infusion center multiple times during this time frame.

**Conclusion.** The prolonged period in our cluster argues in favor of an environmental niche in the hospital unit. We are unable to elucidate pattern of transmission in a cluster of infections without knowing patient colonization of VREfm; because we...
are likely looking at the tip of the iceberg when analyzing infected cases. It is difficult to ascribe causality to any one of these new exposures without concomitant surveillance cultures of environment and personnel. Retrospective WGS is of limited value in infection control. We now have three generation sequencing with the MinION device to do real time sequencing with which we also validated some of our samples.

**Disclosures.** Atul Kohari, MD, Ansun Biopharma (Consultant)

870. **Mycobacterium chimaera Outbreak: Infection Control and Clinical Experiences in Edmonton, Alberta**

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Session: P-41. HAI: Outbreaks

**Background.** Mycobacterium chimaera is responsible for a global outbreak due to contaminated heater-cooler units (HCUs) used in cardiothoracic surgery and has been associated with high mortality. Optimal treatment is not known. The objectives of this study were to describe the Infection Control strategies utilized by the University of Alberta hospital and Mazankowski Heart Institute (MAZ) prior to availability of new HCUs, and outline the clinical course of locally acquired *M. chimaera* infection. The aims were to investigate the risk of *M. chimaera* infection. Any MAZ patient with *M. chimaera* isolated at an anatomic site with a history of cardiothoracic surgery from 2012-present were identified. Charts were reviewed for patient and infection characteristics.

All manufacturers’ instructions for HCU cleaning-disinfection were followed. The MAZ was compliant with CDC recommendations for directing HCU venti-

lation exhaust away from the surgical field and to the use of filtered water. *M. chimaera* was isolated in 3/8 local HCU. After decontamination procedure, 1 HCU grew *M. chimaera* but cleared after a second attempt. Smoke studies demonstrated aerosolization of HCU exhaust in October 2016 therefore the laminar air curtains were manipulated for increased flow in October and November 2016. By June 2017, HCU were retro-fit-

ed and in late 2017 all pre-2014 Sorin HCUs were replaced.

10 patients have been diagnosed with *M. chimaera* infection post-cardiothoracic surgery performed at MAZ. Nonoccurred after manipulation of laminar air curtain. Mean patient age at time of cardiothoracic surgery was 62.3 years and 6 were male. All had implantation of prosthetic material. The most common culture-positive sites were blood in 9/10, urine in 5/10 and prosthetic material or surgical site in 3/10. 6/10 had died due to infection and mean life expectancy of those deceased from first positive culture is 123 days. An additional survivor has been transitioned to comfort care and lost to follow-up.

**Conclusion.** *M. chimaera* post cardiothoracic surgery has been challenging from an infection control perspective but the risk appears to have been mitigated through manipulation of the laminar air curtain. Locally, *M. chimaera* has been associated with significant (60%) mortality.

**Disclosures.** All Authors: No reported disclosures

871. **Assessment of the Wide-resistant Pseudomonas aeruginosa Outbreak at a University Hospital in Brazil: Have We Lost This War?!**

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Session: P-41. HAI: Outbreaks

**Background.** Resistance profile analysis in *Pseudomonas aeruginosa* isolates is extremely important to prevent its transmission and to detect outbreaks. Broadly re-

sistant strains (BR) have a high mortality rate in invasive infections. By analyzing the clinical and microbiological characteristics of these infections, one can define more effective actions in a nosocomial outbreak setting in a university hospital in Brazil.

**Methods.** From January to September 2019, 13 patients from the oncohematology services and intensive care unit (ICU) followed by the stewardship program of a public university hospital in Brazil had *Pseudomonas aeruginosa* (PA) BR infection. Resistant multidrug (MDR) was defined as resistant to three or more antimicrobial classes. Extensively resistant (XDR) was sensitive to a maximum of two antimicrobial classes. Resistant pandrug (PDR) has been defined as resistant to all antimicrobial classes.

**Results.** The 13 strains of PA were isolated from 84.6% (11/13) blood cultures and 14.5% (2/13) tracheal aspirates, being 76.9% (10/13) from the oncohematology unit and 23.1% (3/13) of the ICU. The resistance profile was 23.1% (3/13) strains PA XDR, 61.5% (8/13) PA XDR and 15.4% (2/13) strains resistant to all classes (PA PDR).

**Conclusion.** The investigation of the outbreak of *Pseudomonas aeruginosa* high-

lights the importance of infectious surveillance of this pathogen with this resistance profile, to better understand the causalties, minimize its damage and reduce potential recurrence of new outbreaks.

**Disclosures.** All Authors: No reported disclosures

872. **Burden of Influenza Outbreaks in Long-Term Care Facilities in Philadelphia, 2012-2020**

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Session: P-41. HAI: Outbreaks

**Background.** In the United States, influenza and other acute respiratory viruses contribute to a high burden of disease in long-term care facility (LTCF) residents. We aim to characterize the disease pattern and inter-seasonal variation of influenza outbreaks in LTCFs and identify institutional, environmental, and public health interventions associated with differences in outbreak outcomes and characteristics.

**Methods.** We conducted a retrospective, longitudinal study of influenza out-

breaks in LTCFs reported to the Philadelphia Department of Public Health (PDPhD) over eight consecutive seasons (November 2012 through March 2020). Characteristics of individual outbreaks, facilities, and infection control measures were reported in the PDPhD Influenza Outbreak database, while quality measures and other facility-level data were extracted from the CMS Nursing Home Compare (NHIC) database. Cases of influenza-like illness (ILI) in residents and staff were reported.

**Results.** 1196 influenza outbreaks were reported among 56 facilities, leading to 1196 cases of ILI, 227 influenza-related hospitalizations and 20 deaths. The median number of facility residents affected per outbreak was 4 (range, 0-2); and the resi-

dent attack rate (RAR) was 3.0% (3.0% vs 1.9%), variation coefficient (CV) (1.9% vs 4.2%), and relative attack rate (RAR) (1.9% vs 4.2%) were low. Nonturbulent vissal strain was associated with a lower total attack rates for surveillance (1.9% vs 4.3%, p=0.049), and vaccination policies of staff and/or residents (1.6% vs 2.7%, p=0.047).

**Conclusion.** Larger facility size was associated with an increased frequency of outbreaks. Public health measures may reduce the size and severity of influenza out-

breaks in LTCFs. These results emphasize the importance of consistent util-

ization of recommended infection prevention strategies.

**Disclosures.** All Authors: No reported disclosures

873. **Clusters of Postpartum Group A Streptococcus (GAS) Infections on a Labor and Delivery (L&D) Unit June-October 2019**

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Session: P-41. HAI: Outbreaks

**Background.** GAS can cause severe postpartum infections and may be transmitted from colonized healthcare workers (HCWs).

**Methods.** Two cases of GAS bacteremia following vaginal delivery were identified on the L&D unit June-July 2019 (Cluster 1), prompting a carrier-disseminator inves-

sion. Two additional cases were identified September-October 2019 (Cluster 2), followed by an additional 3 cases late October 2019, all of whom delivered on the same night (Cluster 3).

**Results.** During Cluster 1 a total of 43 HCWs were screened and HCW A was col-

onized from colonized healthcare workers (HCWs).

**Conclusion.** Larger facility size was associated with an increased frequency of outbreaks. Public health measures may reduce the size and severity of influenza out-

breaks in LTCFs. These results emphasize the importance of consistent util-

ization of recommended infection prevention strategies.

**Disclosures.** All Authors: No reported disclosures