Training on Infection Control and Prevention with Healthcare workers (Nurses)

**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.

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**867. The Scope of a Weekly Infection Control Team Rounding in an Acute-care Teaching Hospital**

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**Session:** P-40; HA1: Occupational Infection Prevention

**Background.** Activities of infection control and prevention are diverse and complicated. Regular and well-organized inspection of infection control is essential element of infection control program. The aim of study was to identify strong points and limitations of weekly infection control rounding (ICTR) in an acute care hospital.

**Methods.** We conducted weekly ICTR to improve the compliance of infection control in the real field at a 734-bed academic hospital in Republic of Korea. The monitoring team consists of five infection prevention practitioners and four infectious diseases physicians. Total 85 practices of infection control and prevention belonging to the respective category among 9 categories were observed. The result of the rounding are categorized well maintained, improvement is needed, long-term support such as space or manpower is needed, not applicable and could not observed. We investigated retrospectively the functional coverage of a weekly ICTR from January to December 2018.

**Results.** During the study period, weekly ICTR were performed total 47 times in 37 departments. ICTR visited median 7 times [interquartile range (IQR) 6-7 times] per department. When visiting a department, ICTR observed median 16 practices (IQR 12-22). During the monitoring period, we could observe 7511 practices in total.

Of those results, Most of the practices (74.8%) were able to be monitored properly by ICTR, while some of the practices were not applicable (21.3%) or difficult to observe through ICTR (3.9%). Table 1. The most common practices among the difficult-to-observe group belong to strategies to prevent catheter-related or surgical site infection and pneumonia (13%, 68/538), safety infection practices (8%, 65/758), linen and laundry management (7%, 33/496), followed by strategies to prevent occupationally-acquired infection (6%, 37/578).

**Table 1.**

| Category of practices | Frequency (%) | Median (IQR) |
|-----------------------|---------------|--------------|
| Hand Hygiene          | 805 (51.8)    | 9 (5-16)     |
| Safety infection      | 864 (55.0)    | 9 (5-16)     |
| Infection             | 781 (47.5)    | 9 (5-16)     |
| Strategy to prevent occupationally-acquired infections | 768 (48.0) | 9 (5-16) |
| Practice to prevent catheter-related site infection | 451 (28.0) | 9 (5-16) |
| Disinfection, decontamination, and sterilization | 236 (14.6) | 9 (5-16) |
| Linen and laundry     | 451 (28.0)    | 9 (5-16)     |
| Environmental prevention of infection | 451 (28.0) | 9 (5-16) |
| Balance negative pressure | 268 (16.5) | 9 (5-16) |
| Total                 | 1562 (97.4)   | 9 (5-16)     |

**Conclusion.** ICTR has strength in regular visits to each department. However, additional observation is necessary, especially for prevention of catheter-related infection and surgical site infection.

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**868. Investigations of Healthcare-Associated Elizabethkingia Infections—United States, 2013–2019**

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**Session:** P-41; HA1: Outbreaks

**Background.** 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 HA1 outbreaks and infection control breaches. We reviewed consultations involving EK species as the primary pathogen of concern 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.

Mitigation measures included efforts to reduce EK in facility water systems, such as the development of water management plans, consulting water management specialists, flushing water outlets, and monitoring water quality, as well as efforts to minimize patient exposure such as cleaning of shower facilities and equipment, storage of respiratory therapy supplies away from water sources, and use of splash guards on sinks.

**Conclusion.** EK is an important emerging pathogen that causes HA1 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 in these settings are important measures to reduce infection risk among vulnerable patients.

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**869. Outbreak of Vancomycin Resistant Enterococcus faecium (VREFm) in a Hematology Unit Identified Through Whole Genome Sequencing**

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**Session:** P-41; HA1: Outbreaks

**Background.** Enterococcus faecium (EFm) is a common inhabitant of the human intestinal tract. Infection due to EFm is predominantly associated with the healthcare setting. EFm with reduced susceptibility to vancomycin (VREFm) is a major nosocomial problem due to VREFm's resistance to established antibiotics. Whole genome sequencing (WGS) is an emerging technology in the identification and characterization of VREFm outbreaks in healthcare settings.

**Methods.** A 67-year-old male patient was admitted to the hematology unit with acute promyelocytic leukemia. A blood culture site revealed VREFm (EFm, EFm), and EFm was isolated from several sites, including the respiratory tract, blood, urine, and stool. The VREFm isolate was characterized using a combination of pulsed-field gel electrophoresis (PFGE), multilocus sequence typing (MLST), and WGS.

**Results.** WGS analysis revealed that the VREFm isolate was highly related to an isolate from the respiratory tract of a healthcare worker, who had traveled to the Philippines. The healthcare worker had traveled to the Philippines for a vacation and returned with a respiratory tract infection. The healthcare worker was also identified as a source of VREFm infection in another patient in the hematology unit.

**Conclusion.** WGS analysis provided important insights into the epidemiology of VREFm outbreaks in healthcare settings, particularly in hematology units. This approach can facilitate targeted interventions to prevent and control VREFm outbreaks in healthcare settings.

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