**Background.** Early diagnosis of influenza virus is critical for patient management and infection control. Both, Alere® i Influenza A and B two assay (Alere i; Abbott Laboratories) and Cobas Influenza A/B nucleic acid test (LIAT; Roche Molecular Systems Inc.) are rapid sample-to-answer CLIA waived molecular assays for flu detection. The aim of this study was to compare the performance of these two commercially available flu assays.

**Methods.** A total of 201 children <18 years were prospectively enrolled from January to April 2018. Subjects were included if a test order for flu test was considered eligible for participation. Nasopharyngeal swab specimens were obtained after consent. Aliquots were made for testing on different diagnostic platforms per manufacturer’s instructions. CDC Flu A/B PCR was used as a reference method to evaluate the performance of the two platforms.

**Results.** Among the 201 specimens tested, CDC PCR detected Flu A/B in 107 samples (Flu A: 73, Flu B: 36, Dual flu A/B positive: 2), while Alere i assay detected 102 samples (Flu A: 69, Flu B: 37, dual flu A/B positive: 4; invalid rate: 1/201 = 0.5%) and LIAT assay detected 112 samples (Flu A: 74, Flu B: 38; invalid rate: 11/201 = 5.5%). The overall sensitivities for Alere i vs. LIAT (95.3% vs. 100%) and specificities (100% vs. 94.7%) were comparable. Both molecular assays had >17% higher sensitivity than BD venous antigen test (BD) had a sensitivity and specificity of 77.6% (68.3–88.4) and 98.9% (93.3–99.9).

**Conclusion.** The diagnostic performance for Alere i and LIAT flu assays were found comparable. Both molecular assays had >17% higher sensitivity than BD venous antigen test. LIAT assay was found to be more sensitive than Alere i whereas Alere i had greater specificity than LIAT.

**Table 1:**

| Assay  | Target | True Positive | False Positive | True Negative | False Negative | Sensitivity % (Range) | Specificity % (Range) |
|--------|--------|---------------|----------------|--------------|----------------|-----------------------|-----------------------|
| Alere i | Flu A  | 68             | 1              | 127          | 5              | 93.2 (84.1–97.5)      | 99.2 (95.1–100.0)    |
|        | Flu B  | 35             | 2              | 163          | 1              | 97.2 (93.8–99.9)      | 98.8 (95.2–99.8)     |
|        | Overall| 102            | 0              | 94           | 5              | 95.3 (98.9–98.3)      | 100 (95.1–100)       |
| LIAT   | Flu A  | 73             | 1              | 127          | 0              | 100 (93.8–100)        | 99.2 (95.1–100.0)    |
|        | Flu B  | 34             | 4              | 161          | 2              | 94.4 (80.9–99.3)      | 97.6 (93.5–99.2)     |
|        | Overall| 107            | 5              | 89           | 0              | 100 (95.7–100)        | 94.7 (97.5–98.6)     |

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**2088. Association Between Implementation of Prevention Practices and CLABSI Incidence: A National Survey**

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**Session:** 234. Healthcare Epidemiology: Device-associated HAIs

**Saturday, October 6, 2018: 12:30 PM**

**Background.** Central-line-associated bloodstream infections comprise 35% of acquired BSI in Israeli intensive care units (ICUs). In 2012, an ongoing national intervention was initiated, including insertion and maintenance bundles, education, outcome surveillance and feedback on CLABSI rates. Following the intervention, a significant decrease in both total BSI and CLABSI rates were observed. However; periodic educational sessions, insertion and maintenance practices, and conducting of routine audits. The association between the prevention score and CLABSI rates during the first 6 months of 2017 was assessed using the Spearman correlation test. Negative binomial regression was used to calculate incident rate ratio.

**Results.** CLABSI rates in 26 general ICUs varied between 0.0 and 17.0 per 1,000 catheter-days. Higher prevention scores were associated with lower CLABSI rates (Spearman’s rho = −0.51, P = 0.01; Figure 1). Significant lower rates were observed in ICUs that had wards champions (IRR 0.48 CI 95% 0.32–0.73, P = 0.001) monitored compliance to preventive insertion measures (IRR 0.36, CI 95% 0.20–0.64, P = 0.001) used ultrasound for insertion (IRR 0.48, CI 95% 0.26–0.81, P = 0.006) and used simulations for teaching (IRR 0.41, CI 95% 0.24–0.70, P = 0.001).

**Conclusion.** More complete implementation of a multi-faceted intervention was associated with lower CLABSI rates in Israeli ICUs.

**FIGURE 1**

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

**2089. Dwindling Utilization of Central Venous Catheter Tip Cultures: An Analysis of Sampling Trends and Clinical Utility at 128 U.S. Hospitals 2009–2014**

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**Background.** The 2009 Infectious Diseases Society of America management guidelines for catheter-related bloodstream infection (CR-BSI) recommend the use of central venous catheter (CVC) tip cultures (TC) to aid in diagnosing CR-BSI. However, reimbursement penalties for CR-BSI and emerging evidence supporting watchful waiting rather than removing CVCs may have impacted sampling tendencies, and as such, the uptake of this recommendation and its clinical utility remain unknown.

**Methods.** Inpatient encounters with ≥1 orders for CVC TC and blood culture (BC; irrespective of collection site) respectively were identified in the Cerner Health Facts electronic health record database. Five-year trends (2009–2014) in TC sampling per 10,000 patients were analyzed and annual percent change (APC) in TC vs. BC sampling were compared. The proportions of (a) TCs with growth of noncontaminant microbial taxa and (b) taxon concordant TC–BC pairs sampled within 2 days of each other were calculated.

**Results.** Between 2009 and 2014, 18,080 TCs were sampled during 16,092 encounters among 14,844 patients at 128 US hospitals. Over the 5-year period, TC sampling decreased from 22/10,000 patients in 2009 to 8/10,000 patients in 2014 (APC: −14.7% [95% CI −22.3 to −6.4%], P < 0.01), representing a five-fold decrease compared with BC sampling (APC: −2.5% [−5.0 to 0%], P = 0.05; Figure 1). Only 1,561 (20%) TCs displayed any growth of noncontaminant taxa (Figure 2); the most common taxa isolated from TCs were S. aureus (56.5%), Enterobacteriaceae (16%), Candida sp. (13%), and P. aeruginosa (6%). Of the 3,651 positive TCs, 1,631 (46%) were not accompanied by growth in BCs; S. aureus represented 471 (29%) and Candida spp. represented 121 (7%) of isolated TC growth. Of the remaining 1,930 (54%) positive TCs that were accompanied by positive BCs, only 874 (45%) displayed species concordance.

**Conclusion.** The practice of sampling CVC tips for culture is steadily declining at U.S. hospitals. The majority of pathogenic species cultured from CVC tips are either unaccompanied by, or discordant with, growth in the bloodstream. Barring the isolation of S. aureus or Candida spp. from CVC tips alone, which may represent opportunities to treat, there appears to be limited clinical utility to TC sampling for diagnosing CR-BSI.
**Disclosures.** All authors: No reported disclosures.

**2090. Decontamination of Fusarium oxysporum from a Central Line Needleless Access Device Using a 70% Isopropyl Alcohol Impregnated Port Protector**

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**Session:** 234. Healthcare Epidemiology: Device-associated HAIs

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**Background.** *Fusarium* species, pervasive environmental fungi, cause disseminated infection in immunocompromised hosts including central line-associated bloodstream infections (CLABSIs), with a 75% mortality rate. Many hospitals utilize 70% isopropyl alcohol impregnated port protectors over needleless access devices (NADs) to reduce CLABSIs (Figure 1). These port protectors achieve ≥4-log reduction in colony-forming units (CFU’s) of *S. aureus*, *S. epidermidis*, *E. coli*, *C. albicans*, *P. aeruginosa* and *C. glabrata*. The effect against *F. oxysporum* has not been reported.

**Figure 1.** Port protector covering needleless access device.