

concerns. FPT governments continue to work collaboratively to ensure that Canada is ready to respond to public health events and is prepared to protect the health of Canadians. Opportunities for international collaboration on IPC products, as well as knowledge exchange and mobilization, continue to thrive.

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**Presentation Type:**

Late Breaker Oral

**Making a Case for Adjusting NHSN SSI Risk Stratification Classification for Use of Enhanced Electronic Infection Surveillance**

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**Background:** A large healthcare system in Georgia went live with an enhanced electronic infection surveillance system in August of 2018. The system was employed at its facilities using a staggered approach. Prior to the implementation of this infection surveillance platform, the healthcare system performed healthcare-associated infection (HAI) surveillance using an in-house culture-based system. The NHSN estimates that culture-based surveillance misses 50%–60% of true surgical site infections (SSIs). Due to the lack of clinical-based detection methods (eg, radiologic imaging), we were unable to appropriately detect all patient harm using the old surveillance system. **Method:** A retrospective analysis was performed to assess the change in HAI for colon (COLO), abdominal hysterectomy (HYST), hip prosthesis (HPRO), and knee prosthesis (KPRO). SSI cases that met NHSN surveillance criteria were reviewed to determine whether they would have been identified prior to launching the new enhanced electronic surveillance system. **Results:** Systemwide, 8 of 26 COLO SSIs (31%) and 9 of 18 HYST SSIs (50%) would have not been detected using our old surveillance system. HPRO SSIs and KPRO SSIs identified by our new surveillance system were detected using our old surveillance system, and no change was observed. **Conclusion:** This analysis showed an increase in COLO SSIs and HYST SSIs from enhanced

surveillance. Electronic surveillance systems are not considered a risk factor in the NHSN annual facility survey that aids in calculating a facility's standardized infection ratio (SIR). These data help support NHSN consideration of modifying the logistic regression calculation used for the complex SSI models. This revision would allow facilities to compare themselves equitably to those using electronic infection surveillance.

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Late Breaker Oral

**Measles Exposure Investigation in a Children's Hospital Emergency Department— Denver Metropolitan Area, Colorado, 2019**

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**Background:** On December 14, 3 unvaccinated siblings with recent international travel presented to Children's Hospital Colorado emergency department (CHCO-ED) with fever, rash, conjunctivitis, coryza, and cough. Measles was immediately suspected; respiratory masks were placed on the patients before they entered an airborne isolation room, and public health officials (PH) were promptly notified. Notably, on December 12, 1 ill sibling presented to CHCO-ED with fever only. We conducted an investigation to confirm measles, to determine susceptibility of potentially exposed ED contacts and healthcare workers (HCWs), and to implement infection prevention measures to prevent secondary cases. **Methods:** Measles was confirmed using polymerase chain reaction testing. Through medical record review and CHCO-ED unit-leader interviews, we identified patients and HCWs in overlapping ED areas with the first sibling, until 2 hours after discharge. Measles susceptibility was assessed through interviews with adults accompanying pediatric patients and HCW immunity record reviews. Potentially exposed persons were classified as immune ( $\geq 1$  documented measles-mumps-rubella (MMR) vaccination or serologic evidence of immunity), unconfirmed immune (self-reported MMR or childhood vaccination without documentation), or susceptible (no MMR vaccine

	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Total COLO HAIs Identified through new System	Total COLO HAIs Since Go Live-August 2018
System	0	0	0	0	2	1	0	1	1	2	1	8	26

Fig. 1.

	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Total HYST HAIs Identified through new System	Total HYST HAIs Since Go Live-August 2018
System	0	0	0	0	0	0	1	3	1	2	2	9	18

Fig. 2.

history or age <12 months). Susceptibility status directed disease control intervention, and contact follow-up was 21 days. **Results:** On December 14, all 3 siblings (ages 8–11 years) had laboratory-confirmed measles and were hospitalized. CHCO's rapid isolation of the 3 cases within 5 minutes after presentation to the ED eliminated the need for exposure assessment on the day of hospitalization. However on December 12, the 1 ill sibling potentially exposed 258 ED contacts (90 patients, 168 accompanying adults) and 22 HCWs. The PH department identified 158 immune contacts (61%), 75 unconfirmed immune contacts (29%), and 19 susceptible contacts (8%); 6 contacts (2%) were lost to follow-up. Overall, 15 susceptible contacts received immune globulin (IG) postexposure prophylaxis and 4 contacts were placed on 21-day quarantine. Unconfirmed immune contacts self-monitored for measles symptoms and were contacted weekly by PH for 21 days. Moreover, 20 immune HCWs monitored symptoms daily; 2 susceptible HCWs were placed on 21-day quarantine. No secondary cases were identified. **Conclusions:** Rapid measles identification and isolation, high levels (90%) of immunity among contacts, prompt administration of IG, and effective collaboration between PH and CHCO prevented transmission.

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#### **Presentation Type:**

Late Breaker Oral

#### **Performance of Mumps PCR and Serologic Testing During a University-Associated Mumps Outbreak in Charleston, SC**

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**Background:** Sensitive diagnostic testing is critical in responses to mumps outbreaks. PCR testing of buccal swabs is the most sensitive diagnostic test, but IgM serology remains standard in much of the United States. We provided testing guidance stressing use of mumps PCR to ambulatory clinics and emergency departments in addition to the standard serologic testing for acute mumps beginning in 2018. We compared the performance of PCR and IgM serology to assess cases of parotitis presenting during a community outbreak of mumps in fall 2019 associated with a university in Charleston, SC. **Methods:** All patients tested for mumps who presented to our facility (ER and ambulatory clinics) with mumps PCR and/or mumps IgM ordered between September 2019 and January 2020 were included. Mumps PCRs were sent to a commercial reference laboratory (ARUP). Confirmed cases were defined as having a positive mumps PCR and/or IgM with parotitis. Clinical characteristics of mumps patients including age, duration of symptoms, MMR history, and association with the university were obtained by chart review. **Results:** Mumps was confirmed in 15 of 44 tested patients (34%), with 15 of 15 mumps patients (100%) having positive PCR and 1 of 15 patients (7%) and 1 of 15 patients (7%) having positive and equivocal mumps IgM serologies, respectively. Only 1 patient who did not meet our mumps case definition (no CT imaging evidence of parotitis, no fevers, chronic sinus symptoms) had a positive PCR and had recent receipt of a third MMR dose in response to the ongoing outbreak. Median age for mumps patients was 22 years (range, 15–48) with 8 of 15 cases (53%) detected among university students and an additional 2 cases having close connections to the university associated with the outbreak. Only 1 of 15 mumps patients (6.7%) was febrile at presentation (median temperature,

37.2°C) and mumps cases presented for testing  $\leq 3$  days for 7 of 15 cases (47%) (range, 0–13 days from symptom onset). No cases were diagnosed by IgM only, and 10 of 15 mumps cases had some recollection of remote MMR immunization, whereas 6 of 15 (40%) had 2 documented MMR doses at <5 years of age. **Conclusion:** Serologic IgM testing for diagnosis of mumps appears insensitive for detection of cases in outbreaks within highly immunized adult patients. Although our recommended shift to PCR likely enhanced case finding during this outbreak, the potential for false-positive PCRs due to vaccine strain shedding following third-dose MMR immunization may also be considered a threat to the specificity of the test during outbreak situations.

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#### **Presentation Type:**

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#### **Potential Impact of CDC's Enhanced Barrier Precautions Recommendations on Veterans' Affairs Long-Term Care Facilities**

Martin Evans, University of Kentucky School of Medicine/VHA; Stephen Kralovic, University of Cincinnati; Gary Roselle, VA Medical Center; [Karen Lipscomb](#), Veterans' Affairs; Linda Florida, Veterans' Affairs

**Background:** We previously showed that ~25% of Veterans' Affairs (VA) long-term care facility (LTCF) residents had 1 or more indwelling medical devices. Of these devices, 36% were indwelling urinary catheters, 18% were percutaneous gastrostomy tubes, 12% were peripherally inserted central catheters, 8% were suprapubic urinary catheters, and 6% were peripheral intravenous catheters. Approximately 11% of those with an indwelling device developed an LTCF-acquired infection, compared to 3.5% of those without a device. Methicillin-resistant *Staphylococcus aureus* (MRSA) is a targeted multidrug-resistant organism (MDRO) in all VA LTCFs nationwide. All admissions to VA LTCFs are screened for MRSA carriage upon admission and, since 2013, those that screen positive (~21%) are placed in VA enhanced barrier precautions (EBPs). VA EBPs require that all healthcare workers entering a resident's bedroom don gowns and gloves for specific activities likely to be associated with contamination of the worker's hands and clothes. With proper hand hygiene and clean clothing, the colonized resident is encouraged to leave their bedroom and participate fully in all LTCF activities. In July 2019, the US Centers for Disease Control and Prevention (CDC) recommended the use of EBPs for all residents in LTCFs with a wound or device regardless of their colonization status if a resident is identified within the facility with novel or targeted MDROs including panresistant organisms, carbapenemase-producing gram-negative bacteria, and *Candida auris*. **Methods:** We assessed the potential impact of this recommendation on VA LTCFs by asking our 133 LTCFs to do a 1-day point-prevalence survey. **Results:** In total, 63 sites (47%) responded. On the survey day, there were 4,777 residents in the participating facilities, of whom 891 (18.7%) were under EBPs or contact precautions (CPs) for MRSA or other MDROs. Moreover, 963 (20.2%) residents (not already in EBP or CP) had a wound or an indwelling device such as central venous catheter, urinary catheter, feeding tube, tracheostomy or were on a ventilator (if >1 device, resident counted only once). If newly published CDC recommendations were implemented for novel or targeted MDRO precautions in VA LTCFs nationwide, 1,854 residents (38.8%) in VA LTCFs would be placed under