



Fig. 1.

did not reach statistical significance due to the small number of cases overall. The products were well tolerated by patients and staff who applied them to nonambulant patients. **Conclusions:** Octenidine baths and nasal gel reduced risk of MRSA bacteremia in a cohort of MRSA-positive patients, and this strategy may be preferable to the universal use of antiseptic baths.

**Funding:** None

**Disclosures:** None

Doi:10.1017/ice.2020.941

### Presentation Type:

Poster Presentation

### Onsite-Assessment of Infection Prevention Preparedness in Community Healthcare Settings

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**Background:** Well-designed infection prevention programs include basic elements aimed at reducing the risk of transmission of infectious agents in healthcare settings. Although most acute-care facilities have robust infection prevention programs, data are sporadic and often lacking in other healthcare settings. Infection control assessment tools were developed by the CDC to assist health departments in assessing infection prevention

preparedness across a wide spectrum of health care including acute care, long-term care, outpatient care, and hemodialysis. **Methods:** The North Carolina Division of Public Health collaborated with the North Carolina Statewide Program for Infection Control and Epidemiology (SPICE) to conduct a targeted number of on-site assessments for each healthcare setting. Three experienced infection preventionists recruited facilities, conducted on-site assessments, provided detailed assessment findings, and developed educational resources. **Results:** The goal of 250 assessments was exceeded, with 277 on-site assessments completed across 75% of North Carolina counties (Table 1). Compliance with key observations varied by domain and type of care setting (Table 2). **Conclusions:** Comprehensive on-site assessments of infection prevention programs are an effective way to identify gaps or breaches in infection prevention practices. Gaps identified in acute care primarily related to competency validation: however, gaps presenting a threat to patient safety (ie, reuse of single dose vials, noncompliance with sterilization and/or high-level disinfection processes) were identified in other care settings. Infection control assessment and

Table 1. Assessments completed by facility type

Facility Type	Target	Completed
Acute Care	30	33
Long-Care Facilities (LTCFs)	80	113
Outpatient	100	91
Hemodialysis	40	40

Table 2. Compliance of key observations by health care facility type

Health care Setting	Observation(s)	Total # Observation(s)	Observation(s) in compliance (%)
Acute Care	Hand hygiene competency demonstrated	33	2 (6%)
	Selection/use of personal protective equipment (PPE) competency demonstrated	33	5 (15%)
	Preparing/administering injections/parenteral infusions competency demonstrated	33	6 (18%)
LTCFs	Adherence to injection safety/point of care testing/assisted monitoring blood glucose (AMBG) monitored	113	43 (38%)
	Antimicrobial Stewardship program addresses all steps in CDC tool	113	1 (1%)
	Monitors/documents adherence to hand hygiene	113	27 (24%)
Outpatient	Safe injection competency demonstrated	90	30 (33%)
	Process for high-level disinfection of reusable devices includes all steps outlined in CDC assessment tool	28	4 (14%)
	Terminal sterilization process for medical devices includes all steps outlined in CDC tool	68	11 (16%)
Hemodialysis	Routine application of antibiotic/povidone-iodine ointment to catheter exit sites	40	1 (2%)
	Storage/preparation injectable medication room separate from treatment area	40	8 (20%)
	Use of PPE competency	40	23 (57%)

response findings underscore the need for ongoing assessment, education, and collaboration among all healthcare settings.

**Funding:** None

**Disclosures:** None

Doi:10.1017/ice.2020.942

**Presentation Type:**

Poster Presentation

**Opening Doors in the Operating Rooms: An Intervention and Outcome Study**

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**Background:** Surgical site infections (SSIs) are a major cause of morbidity and mortality with an estimated cost of \$3–10 billion annually in the United States. Laminar air flow in the operating room (OR) is 1 factor in reducing SSIs. Opening the OR door results in interruption of laminar air flow. As a part of annual infection prevention evaluation of our facility, we observed cases in the OR in which we identified excessive unnecessary door openings during surgical cases. We report an intervention in door openings in the OR and the effect on infection rate after surgery. **Methods:** We conducted an observational analytical study using prospective audit and feedback. Door-opening counters were placed on 4 OR doors. Each day, they were reset and the number was logged for each case by the circulating nurse. A baseline number of door openings was established between April 18, 2019, and May 2, 2019. Subsequently, daily feedback sheets were provided to all persons involved in the previous day's procedures detailing the rationale to limit unnecessary door openings and the number of door openings that had occurred during the case(s) in which they were specifically involved from May 3, 2019, to June 4, 2019. Analyses of postoperative infection rates compared with historical controls were conducted. Using Stata version 15 statistical software, independent sample *t* tests were performed to see the difference between control and intervention groups. A CI 95% was set for significance. **Results:** There were no differences between control and intervention groups with the number of procedures (71 vs 80), OR, duration of procedure, or type of case. Outliers due to vibration of doors triggering the counters were removed, and door stabilizations were performed throughout the study. After removing outliers, there were no differences in control groups and interventions groups (39 vs 43). An independent sample *t* test showed a significant difference in the mean number of door openings between the control and intervention groups: 32.13 versus 24.84 ( $P < .05$  and  $P = .0072$ ). There have been no postoperative infections in any of the cases in the study to date compared to an overall annual rate of 1.5% in 2018 at our facility. **Conclusions:** Prospective audit and feedback to OR staff can reduce the number of unnecessary door openings during operating procedures. The baseline number of door openings from this study was 25 per case. No postoperative infections occurred in the patients receiving surgery in this study.

**Funding:** None

**Disclosures:** None

Doi:10.1017/ice.2020.943

**Presentation Type:**

Poster Presentation

**Operating Room Nurses' Knowledge of Surgical Site Infection Prevention Measures**

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**Background:** Surgical site infection (SSI) stands out among healthcare-related infections as one of the most important globally due to

its associated morbidity and mortality. However, it is well known that the transoperative period is recognized as one of the most critical moments for the prevention of SSI. **Objective:** We evaluated the knowledge of the operating room (OR) nurse coordinators regarding SSI prevention measures. **Methods:** We conducted a cross-sectional study in 30 large hospitals in the state of Minas Gerais, Brazil, from February 2018 to April 2019. Data were collected through interviews with OR nurse coordinators. **Results:** Administration time of prophylactic antibiotic administered between 30 and 60 minutes prior to surgery was reported by 84% of the professionals and the suspension of this agent in the first 24 hours was reported by 47.8%. Preoperative hair removal within the operating room was mentioned by 60% of respondents and 36.7% mentioned using a razor. The Safe Surgery program of the WHO was unknown to 6.7% of nurses. Among those who knew about it, 20.8% stated that there was no surgical site demarcation. Presentation of the surgical team occurred before the beginning of the procedure in only 53.3% of the institutions. Patient surveillance for SSI was reported by 93.3% of respondents, but the criteria adopted for the diagnosis of SSI were unknown, even though SSI rates were given for 90% of services, predominantly via meetings (53.5%). **Conclusions:** The knowledge of nurses related to the prevention of SSI was not satisfactory, pointing to the need for immediate efforts in education and awareness programs. Such programs may facilitate changes in practice through the recognition of surgical patient risk by these professionals, thus leading to better planning and practice during the trans-operative period.

**Funding:** None

**Disclosures:** None

Doi:10.1017/ice.2020.944

**Presentation Type:**

Poster Presentation

**Optimizing Sentinel Surveillance to Target Containment of Emerging Multidrug-Resistant Organisms in Regional Networks**

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**Background:** Successful containment of regional outbreaks of emerging multidrug-resistant organisms (MDROs) relies on early outbreak detection. However, deploying regional containment is resource intensive; understanding the distribution of different types of outbreaks might aid in further classifying types of responses. **Objective:** We used a stochastic model of disease transmission in a region where healthcare facilities are linked by patient sharing to explore optimal strategies for early outbreak detection. **Methods:** We simulated the introduction and spread of *Candida auris* in a region using a lumped-parameter stochastic adaptation of a previously described deterministic model (*Clin Infect Dis* 2019 Mar 28. doi:10.1093/cid/ciz248). Stochasticity was incorporated to capture early-stage behavior of outbreaks with greater accuracy than was possible with a deterministic model. The model includes the real patient sharing network among healthcare facilities in an exemplary US state, using hospital claims data and the minimum data set from the CMS for 2015. Disease progression rates for *C. auris* were estimated from surveillance data and the literature. Each simulated outbreak was initiated with an importation to a