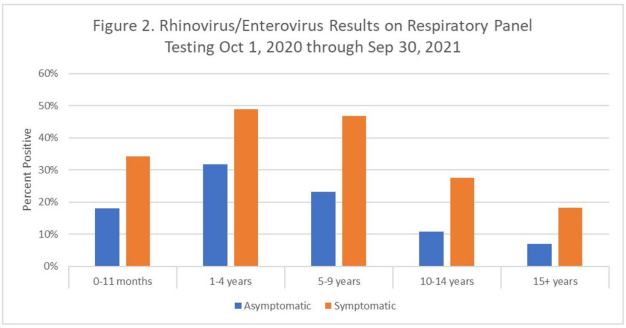

shedding of SARS-CoV-2 may explain why asymptomatic prevalence surpasses symptomatic prevalence in the resolution phase after outbreaks.

Funding: None
Disclosures: None

Antimicrobial Stewardship & Healthcare Epidemiology 2022;2(Suppl. S1):s61–s62
doi:10.1017/ash.2022.175

Presentation Type:
Poster Presentation - Poster Presentation
Subject Category: Respiratory Viruses Other than SARS-CoV-2

Relevance of RSV in hospitalized adults and the need for continued testing

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Background: RSV is underrecognized in hospitalized adults. A better understanding of RSV in this population could help prioritize targeted viral-testing resources. Hospitalization and in-hospital outcomes are widely accepted as markers of clinical severity with respect to acute respiratory illness (ARI). We compared characteristics and clinical outcomes between adults hospitalized with ARI from October 2016 through May 2019. **Methods:** All hospitalized adults (≥ 18 years) who met a standardized case definition of ARI were prospectively enrolled across 3 respiratory seasons from 9 hospitals participating in the US Hospitalized Adult Influenza Vaccine Effectiveness Network (HAIVEN). Demographic data were collected during enrollment interviews, and electronic medical records (EMRs) were reviewed to extract comorbidity data. Throat and nasal swabs collected at enrollment were tested for ARI pathogens using real-time PCR assays at respective HAIVEN research laboratory sites. Characteristics and clinical outcomes of participants were compared using χ^2 or nonparametric tests where appropriate. Multivariable logistic regression models were used to test associations between infection status, characteristics, and clinical outcomes, adjusting for age, sex, race, Charlson comorbidity index (CCI), body mass index (BMI), site, season, and days to admission. **Results:** In total, 10,311 adults were included, 22.3% (n = 2,300) were aged 18–49 years, 33.2% (n = 3,423) were aged 50–64 years, and 44.5% (n = 4,588) were aged ≥65 years. Moreover, 6% of adults tested positive for RSV (n = 622), 18.8% positive for influenza (n = 1,940), and 75.1% negative for both (n = 7,749). Obesity and age ≥65 years were significantly associated with RSV detection when compared with participants negative for both RSV and influenza. Patients aged 18–49 years and ≥65 years with RSV had significantly higher median CCI scores compared to patients with influenza (Fig. 1.). The proportion of adults with CHF or COPD was significantly (p-value **Conclusions:** Severe RSV illness may differ from severe influenza illness, and those infected with RSV may have different characteristics than those infected with influenza. Hospitalized adults with RSV infection were more likely to have underlying cardiopulmonary comorbidities and higher CCI scores as well as experience an extended length of hospital stay and need for mechanical ventilation. These data highlight the importance of retaining testing for RSV in older adults hospitalized with ARI.

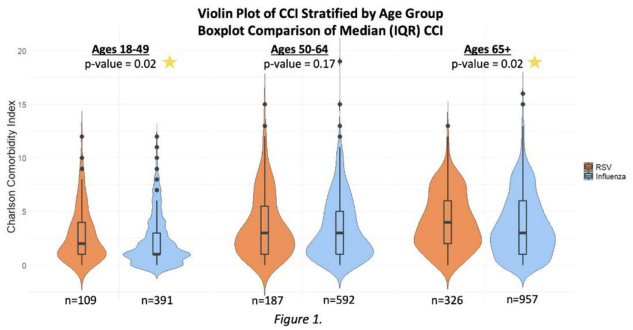

Fig. 1.

Funding: None
Disclosures: None

Antimicrobial Stewardship & Healthcare Epidemiology 2022;2(Suppl. S1):s62
doi:10.1017/ash.2022.176

Presentation Type:
Poster Presentation - Poster Presentation
Subject Category: SSI

Feasibility and acceptability of intranasal povidone iodine decolonization among orthopedic trauma surgery patients

Marin Schweizer; Loreen Herwaldt; Linda Boyken; Jean Pottinger; Rachel Quinn; Daniel Diekema; Fiona Armstrong Pavlik; Melissa Ward; Poorani Sekar and Michael Willey

Background: Nasal decolonization significantly decreases the incidence of *Staphylococcus aureus* surgical-site infections (SSIs). Patient adherence with self-administration of a decolonization ointment (ie, mupirocin) is low, especially among patients having urgent surgery. Povidone-iodine decolonization may overcome patient adherence challenges because povidone-iodine needs to be applied only on the day of surgery. We assessed the effectiveness and acceptability of povidone-iodine decolonization given on the day of surgery among patients having orthopedic trauma surgery. **Methods:** Adult patients who underwent operative fixation of traumatic lower extremity fractures were consented to receive 10% intranasal povidone-iodine solution. Povidone-iodine was applied ~1 hour before surgical incision and was reapplied the evening after surgery. Patients were tested for *S. aureus* nasal colonization before surgery, the evening after surgery (before povidone-iodine reapplication), and the day after surgery. Swabs were inoculated into Dey-Engley neutralizer and processed in a vortexer. A series of dilutions were performed and plated on mannitol salt agar plates. *S. aureus* cultures were quantitatively assessed to determine the reduction in *S. aureus* after povidone-iodine use. Reductions in *S. aureus* nasal growth were evaluated using the Skillings-Mack test. SSIs manifesting within 30 and 90 days of surgery were identified using NHSN definitions. A survey was administered the morning after surgery to determine the acceptability of intranasal povidone-iodine. **Results:** In total, 51 patients participated in this pilot study between February 2020 and June 2021. Nasal samples from 12 participants (23.5%) grew *S. aureus*. The *S. aureus* concentration decreased significantly across the time points (P = .03) (Fig. 1). No SSIs were identified within 30 days of surgery. One SSI occurred within 90 days of surgery; this patient did not carry *S. aureus*, and cultures from the infected site were negative. Also, 31% of patients reported at least 1 mild side effect while using povidone-iodine: dripping (n = 7), itching (n = 6), dryness (n = 4), stinging (n = 4), staining (n = 3), unpleasant taste (n = 3), runny nose (n = 2), burning (n = 1), sneezing (n = 1), sore throat (n = 1), tickling (n = 1), and/or cough (n = 1). Also, 86% of patients stated that povidone-iodine felt neutral, pleasant, or very pleasant, and only 14% stated that it felt unpleasant or very unpleasant. **Discussion:** In this pilot study, 2 applications of nasal povidone-iodine

https://doi.org/10.1017/ash.2022.177 Published online by Cambridge University Press

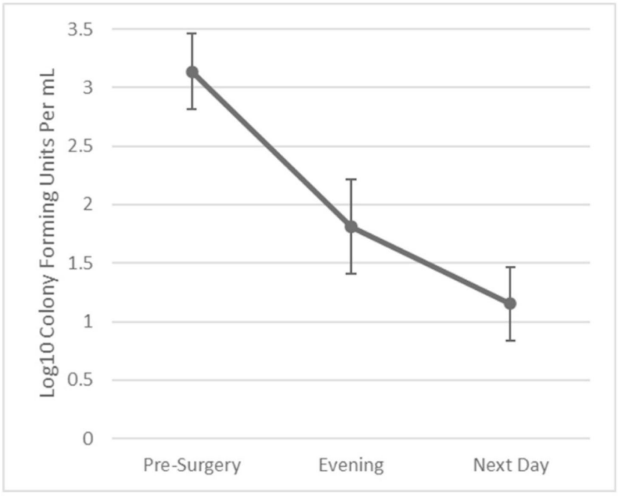

Fig. 1.

on the day of surgery were acceptable for patients, and this protocol significantly reduced *S. aureus* concentration in nares of patients. Future large clinical trials should evaluate whether this 2-application regimen of povidone-iodine significantly decreases rates of SSI among orthopedic trauma surgery patients.

Funding: PDI Healthcare
Disclosures: None

Antimicrobial Stewardship & Healthcare Epidemiology 2022;2(Suppl. S1):s62–s63
doi:10.1017/ash.2022.177

Presentation Type:
Poster Presentation - Poster Presentation
Subject Category: SSI

Implementation of surgical site infection surveillance in 16 health facilities in Sierra Leone

Rugiatu Z. Kamara; Monique Foster; Jamine Weiss and Christiana Conteh

Background: Surgical site infections (SSIs) are associated with increased healthcare costs, antibiotic resistance, morbidity, and mortality. In low- and middle-income countries (LMICs), SSIs account for most healthcare-acquired infections (HAIs). In Africa, up to 20% of women who undergo a caesarean section develop a wound infection. Surveillance has been shown to be an essential component in the overall strategy to reduce SSIs. **Methods:** Surgical site infection surveillance is being implemented in 16 health facilities in Sierra Leone, with at least 1 from each of the 5 US Census regions: Eastern, Western, Northern, Northwestern, and Southern. These health facilities were selected based on the availability of a dedicated infection prevention and control (IPC) focal person. Women were observed for 30 days after caesarean section. A standardized surgical safety and surveillance checklist including case definitions and observable criteria (eg, purulent drainage, wound abscess, or intentional reopening) was used. Clinical staff were trained to collect data and to conduct in-person and phone interviews with patients on days 3, 7, and 30 after caesarean section. **Results:** From March 2021 to July 2021, a total of 2,529 women had caesarean sections in 15 health facilities; most occurred in the Northern region (785 of 2,529). Among these 2,529 women, 1,522 (60%) had an SSI surveillance checklist started, and of those 1,522, 632 (42%) had a completed checklist. Health facilities in most of the rural regions, (Eastern, Northwestern, and Southern) had no completed checklists. The overall SSI rate for the 15 health facilities was 3% (70 of 2,529). The Southern region had the highest SSI rate at 50% (35 of 70), but the Western region did not report any SSIs. Of the 70 cases, 49 (70%) were identified through active inpatient surveillance and 21 (30%) were identified through postdischarge surveillance. **Conclusions:** One of the priorities of Sierra Leone's National IPC Action Plan is to establish HAI surveillance. Surgical site surveillance is an essential component of HAI surveillance and leads to timely identification so infections can be treated quickly. This study was limited by inadequate data collection and patients lost to follow-up after discharge. However, this study illustrates that surveillance leads to the diagnosis of most SSI cases after caesarean section while patients are still hospitalized. Simple yet effective SSI surveillance can be conducted in LMICs to identify and ultimately treat SSI after caesarean section. More support is needed in rural and smaller facilities for better implementation of SSI surveillance in Sierra Leone.

Funding: None
Disclosures: None

Antimicrobial Stewardship & Healthcare Epidemiology 2022;2(Suppl. S1):s63
doi:10.1017/ash.2022.178

Presentation Type:
Poster Presentation - Poster Presentation
Subject Category: Surveillance/Public Health

Increases in methicillin-sensitive Staphylococcus aureus bloodstream infection incidence, 2016–2019

Kelly Jackson; Joelle Nadle; Susan Ray; Ruth Lynfield; Ghinwa Dumyati; Marissa Tracy; William Schaffner; David Ham and Isaac See

Background: Incidence of methicillin-sensitive *Staphylococcus aureus* (MSSA) bloodstream infections (BSIs) in the United States during 2012–2017 has been reported to have been stable for hospital-onset BSIs and to have increased 3.9% per year for community-onset BSIs. We sought to determine whether these trends continued in more recent years and whether there were further differences within subgroups of community-onset BSIs. **Methods:** We analyzed CDC Emerging Infections Program active, population- and laboratory-based surveillance data during 2016–2019 for MSSA BSIs from 8 counties in 5 states. BSI cases were defined as isolation of MSSA from blood in a surveillance area resident. Cases were considered hospital onset (HO) if culture was obtained >3 days after hospital admission and healthcare-associated community-onset (HACO) if culture was obtained on or after day 3 of hospitalization and was associated with dialysis, hospitalization, surgery, or long-term care facility residence within 1 year prior or if a central venous catheter was present ≤2 days prior. Cases were otherwise considered community-associated (CA). Annual rates per 100,000 census population were calculated for each epidemiologic classification; rates of HACO cases among chronic dialysis patients per 100,000 dialysis patients were calculated using US Renal Data System data. Annual increases were modeled using negative binomial or Poisson regression and accounting for changes in the overall population age group, and sex. Descriptive analyses were performed. **Results:** Overall, 8,344 MSSA BSI cases were reported. From 2016–2019 total MSSA BSI rates increased from 23.9 per 100,000 to 28.5 per 100,000 (6.6% per year; $P < .01$). MSSA BSI rates also increased significantly among all epidemiologic classes. HO cases increased from 2.5 per 100,000 to 3.2 per 100,000 (7.9% per year; $P = .01$). HACO cases increased from 12.7 per 100,000 to 14.7 per 100,000 (7.0% per year; $P = .01$). CA cases

Figure. Rate of methicillin-sensitive *Staphylococcus aureus* bloodstream infections by year – overall and by epidemiologic class, 2016–2019 (graphs with different y-axis scales).