

77 observational months (55 before the intervention and 22 after the intervention) were included. The mean monthly MRSA acquisition rates were 7.0 per 1,000 patient days before the intervention and 4.4 per 1,000 patient days after the intervention ( $P < .001$ ), with a mean number of patient days of 2,516.3 per month before the intervention and 2,427.2 per month after the intervention ( $P = .0172$ ). The mean monthly number of MRSA-colonized patients on admission to the hospital decreased from 24.8 before the intervention to 18.7 after the intervention ( $P < .001$ ). Mean monthly hand hygiene compliance rate increased significantly from 65.7% before the intervention to 87.4% after the intervention ( $P < .001$ ). After adjusting for the number of MRSA-colonized patients on admission and hand hygiene compliance rates, a constant trend was observed from January 2013 to July 2017 (adjusted mean coefficient, 0.012; 95% CI, -0.037 to 0.06), with an immediate drop in September 2017 (adjusted mean coefficient, -2.145; 95% CI, -0.248 to -0.002;  $P = .033$ ), followed by a significant reduction in MRSA acquisition after the intervention from September 2017 through June 2019 (adjusted mean coefficient, -0.125; 95% CI, -4.109 to -0.181;  $P = .047$ ). **Conclusions:** Topical intranasal octenidine, coupled with universal chlorhexidine baths, can reduce MRSA acquisition in extended-care facilities. Further studies should be conducted to validate the findings in other healthcare settings.

**Funding:** None

**Disclosures:** None

Doi:10.1017/ice.2020.888

#### **Presentation Type:**

Poster Presentation

#### **Investigation and Containment of New Delhi Metallo- $\beta$ -Lactamase (NDM)-Producing Carbapenem-Resistant Enterobacteriaceae (CRE) in a Hospital Intensive Care Unit**

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**Background:** With increasing medical tourism and international healthcare, emerging multidrug resistant organisms (MDROs) or “superbugs” are becoming more prevalent. These MDROs are unique because they are resistant to antibiotics and can carry special resistance mechanisms. In April 2019, our hospital was notified that a superbug, New Delhi Metallo- $\beta$ -lactamase (NDM)-producing carbapenem-resistant Enterobacteriaceae (CRE), was identified in a patient who had been transferred to another hospital after being at our hospital for 3 weeks. Our facility had a CRE admission screening protocol in place since 2013, but this patient did not meet the criteria to be screened on admission. **Methods:** The infection prevention (IP) team consulted with the Minnesota Department of Health (MDH) and gathered stakeholders to discuss containment strategies using the updated 2019 CDC Interim Guidance for Public Health Response to Contain Novel or Targeted Multidrug-resistant Organisms (MDROs) to determine whether transmission to other patients had occurred. NDM CRE was classified under tier 2 organisms, meaning those primarily associated with healthcare settings and not commonly identified in the region, and we used this framework to conduct an investigation. A point-prevalence study was done in an intensive care unit that consisted of rectal screening of 7 patients for both CRE and *Candida auris*, another emerging MDRO. These swabs were sent to the Antibiotic Resistance Laboratory Network

(ARLN) Central Regional Lab at MDH for testing. An on-site infection control risk assessment was done by the MDH Infection Control Assessment and Response (ICAR) team.

**Results:** All 7 patients were negative for both CRE and *C. auris*, and no further screening was done. During the investigation, it was discovered that the patient had had elective ambulatory surgery outside the United States in March 2019. The ICAR team assessment provided overall positive feedback to the nursing unit about isolation procedures, cleaning products, and hand hygiene product accessibility. Opportunities included set-up of soiled utility room and updating our process to the 2019 MDH recommendation to screen patients for CRE and *C. auris* on admission who have been hospitalized, had outpatient surgery, or hemodialysis outside the United States in the previous year. **Conclusions:** Point-prevalence study results showed no transmission of CRE and highlighted the importance of standard precautions. This event supports the MDH recommendation to screen for CRE any patients who have been hospitalized, had outpatient surgery, or had hemodialysis outside the United States in the previous year.

**Funding:** None

**Disclosures:** None

Doi:10.1017/ice.2020.889

#### **Presentation Type:**

Poster Presentation

#### **Investigation of a Prolonged Group A *Streptococcus* Outbreak Among Residents and Outpatients Receiving Wound Care at a Long-Term Care Facility (LTCF)**

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**Background:** In February 2019, the Colorado Department of Public Health and Environment (CDPHE) identified a cluster of 3 invasive group A *Streptococcus* (GAS) infections in residents receiving wound care in a long-term care facility (LTCF). An investigation revealed a larger outbreak that extended to nonresidents receiving outpatient wound care at the LTCF. **Methods:** A case was defined as a positive culture for GAS *emm* type 82 from an individual with exposure to the LTCF between January and June 2019. Cases were categorized as clinical (symptoms of GAS disease or GAS isolated from a wound or sterile site) or carriage (no symptoms). Carriers were identified via samples collected from throat and skin lesions. Screening occurred in 2 rounds and included residents of affected units followed by screening of all wound-care staff and residents facility-wide. Available isolates were sent for *emm* type testing and whole-genome sequencing (WGS) at the CDC. CDPHE staff performed infection control observations. **Results:** We identified 14 cases: 8 clinical and 6 carriage (from 5 residents and 1 staff member). Two patients with invasive GAS died. Of 8 patients with clinical GAS, 6 resided in the facility on or 1 day prior to symptom onset; 2 were not residents but received outpatient therapy at the LTCF. All 8 patients with clinical GAS (100%) and 3 carriers had received wound care. The staff member with *emm* 82 carriage had provided wound care and occupational therapy to the affected residents and the 2 outpatients. Two