

commitment by hospital management and healthcare workers may be needed for further improvement.

Disclosures:

If I am providing recommendations involving clinical medicine, they will be based on evidence that is accepted within the profession of medicine as adequate justification for their indications and contraindications in the care of patients. All scientific research referred to will conform to the generally accepted standard of experimental design, data collection and analysis.

Disagree

If I am presenting research funded by a commercial company, the information presented will be based on generally accepted scientific principals and methods, and will not promote the commercial interest of the funding company.

Disagree

If I am discussing specific healthcare products or services, I will use generic names to extent possible. If I need to use trade names, I will use trade names from several companies when available, and not just trade names from any single company.

Disagree

I have disclosed all relevant financial relationships and I will disclose this information to learners.:

Disagree

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Funding: None

Doi:[10.1017/ice.2020.1178](https://doi.org/10.1017/ice.2020.1178)

Presentation Type:

Poster Presentation

The Importance of Environmental Screening in a Methicillin-Resistant *Staphylococcus aureus* (MRSA) Outbreak Investigation in a Transplant Unit

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Background: Methicillin-resistant *Staphylococcus aureus* (MRSA) colonization conveys a higher risk of invasive infection. The transplant cohort is a group of immunocompromised patients who are at higher risk of infection. We conducted an outbreak investigation of hospital-acquired MRSA colonization within the transplant unit, which led to the discovery of positive isolates within our environment and to changes in our hospital disinfection policies. **Methods:** Our transplant unit consists of 8 single, positive-pressure rooms housed separately at the side of a larger ward. Staffing from this unit differs from the rest of the shared ward that houses up to 60 patients. As part of hospital screening, we found that a patient admitted for a stem-cell transplant had acquired nosocomial MRSA colonization. Given the unusual occurrence of such an event, a root-cause analysis was conducted. **Results:** A meeting was convened together with nursing, medical staff, and ancillary staff. Identified areas of potential transmission were deemed equipment, staff, and patients, and screening was performed. Shared equipment included the portable electrocardiogram (ECG) machines and portable x-ray machines and boards. In particular, ECG machines were shared with the adjoining non-transplant oncology ward. The usual practice was to clean the machine after use but not prior to the next use. This was deemed a possible exposure risk in view of a recent MRSA outbreak in a separate section of the ward. Positive isolates were found on both the x-ray and ECG machines. All healthcare workers were screened and were negative for MRSA. Furthermore, 7 patients admitted during the same time period were also screened for MRSA and were

Table 1. Summary of Screening Results

Category	No. Screened	Positive Screens
ECG machines	2	1
X-ray machines	2	1
X-ray plates	2	0
Nurses	29	0
Doctors	9	0
Radiology staff	10	0
Housekeeping staff	8	0
Patients	7	0
Total	69	2

negative. Given the concurrent outbreak within the ward, pulsed-field gel electrophoresis was performed for all MRSA isolates obtained and the outbreak strain. These were found to be nonclonal (Table 1). Work processes for both the cleaning of ECG and x-ray machines were enhanced and modified. Hand hygiene measures to ward and radiology staff were reinforced. Thus far, no further cases have been detected. **Conclusions:** The environment is an important part of outbreak investigation. Shared equipment is often overlooked during day to day processes but should not be neglected. This can result in changes to hospital disinfection policy.

Funding: None

Disclosures: Indumathi Venkatachalam reports receiving honoraria for speaking engagements for bioMérieux and Pfizer and serving on an expert panel for MSD Pharma.

Doi:[10.1017/ice.2020.1179](https://doi.org/10.1017/ice.2020.1179)

Presentation Type:

Poster Presentation

The Second Central Line Increases Central-Line-Associated Bloodstream Infection Risk by 80%: Implications for Inpatient Quality Reporting Programs

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Background: The NHSN methods for central-line-associated bloodstream infection (CLABSI) surveillance do not account for additive CLABSI risk of concurrent central lines. Past studies were small and modestly risk adjusted but quantified the risk to be ~2-fold. If the attributable risk is this high, facilities that serve high-acuity patients with medically indicated concurrent central-line use may disproportionately incur CMS payment penalties for having high CLABSI rates. We aimed to build evidence through analysis using improved risk adjustment of a multihospital CLABSI experience to influence NHSN CLABSI protocols to account for risks attributed to concurrent central lines. **Methods:** In a retrospective cohort of adult patients at 4 hospitals (range, 110–733 beds) from 2012 to 2017, we linked central-line data to patient encounter data (age, comorbidities, total parenteral nutrition, chemotherapy, CLABSI). Analysis was limited to patients with >2 central-line days, with either a single central line or concurrence of no more than 2 central lines where insertion and removal dates overlapped by >1 day. Propensity-score matching for likelihood of concurrence and