Behind the Mask Office Hours

October 16th, 2025

Topics Discussed & References

ICAP Websites and Tools

- https://icap.nebraskamed.com/about-us/
- https://www.facebook.com/nebraska.icap.asap/
- https://www.linkedin.com/company/nebraska-icap-asap
- NebraskaICAP@nebraskamed.com
- **Perioperative Auditing Tool**- https://icap.nebraskamed.com/wp-content/uploads/sites/2/2024/10/Nebraska-HAI.AR-Advisory-Council-SSI-Subcommittee-Perioperative-Auding-Tool.xlsx
- **Intraoperative Anesthesia Infection Prevention Audit Tool-** https://icap.nebraskamed.com/wp-content/uploads/sites/2/2023/02/Intraoperative-Anesthesia-Infection-Prevention-Audit-Tool-1.pdf
- **SSI Review and Track Template-** https://icap.nebraskamed.com/wp-content/uploads/sites/2/2025/04/SSI-Review-and-Track-TEMPLATE.xlsx

Project Firstline Micro-Learns

- Training and Educational Materials | Project Firstline | CDC

SHEA Practice Recommendations

- 2022 SHEA Strategies to Prevent SSI in Acute Care Hospitals

Question

Is there any data correlating SSI with health facility environmental cleaning and disinfecting!

Many studies show associations (better cleaning=lower SSI), but proving *causal* link is more challenging (many confounders: surgical technique, antibiotic prophylaxis, patient factors, ventilation/air quality, traffic in OR, instrumentation, etc.). Environmental cleaning is one piece of a multifactorial puzzle. In addition, the definition of "good cleaning/disinfection" differs among facilities. Measuring cleaning quality is also challenging (i.e., fluorescent markers, microbiology sampling, surface ATP testing, etc.).

A few studies that support environmental cleaning include:

1. A longitudinal study in 8 hospitals found that environmental and surface contamination (fungi, bacteria) in operating rooms (ORs) was significantly associated with higher superficial SSI rates; in fact, when no contamination was

detected, no superficial SSIs occurred. The study looked at factors such as level of bacteria/fungi on surfaces, air renewal/ventilation, and found environmental factors mattered for superficial SSIs. They concluded: “Our results suggest the importance of environmental and surface contamination control to prevent SSI.”

   a. Alfonso-Sanchez, J. L., Martinez, I. M., Martín-Moreno, J. M., González, R. S., & Botía, F. (2017). Analyzing the risk factors influencing surgical site infections: the site of environmental factors. *Canadian journal of surgery. Journal canadien de chirurgie*, *60*(3), 155–161. https://doi.org/10.1503/cjs.017916

2. A study of 20 ORs (14 with an airflow/environmental quality improvement, 6 controls) looked at airborne microbial burden and SSI rates for certain procedures; the ORs with improved environmental quality had a reduction in SSI from 8.4% to 5.7%. This suggests improving environmental quality (air + surfaces) in the OR may have measurable impact.
   a. Wagner, J., Gormley, T., Markel, T. A., & Greeley, D. (2022, October 31). Operating room improvements based on Environmental Quality Index risk prediction can help reduce surgical site infections. *Medical Research Archives*, 10(10). https://doi.org/10.18103/mra.v10i10.3179

How often should EVS audits be done?

Environmental Services (EVS) cleaning audits should be performed as often as necessary to maintain consistent quality and minimize gaps in cleaning and disinfection practices.

The frequency should be risk-based and tailored to the facility. Areas with higher infection risk (e.g., ORs, ICUs, procedure rooms) or a history of findings may require more frequent audits, while lower-risk areas may be audited less often.

As a general standard:

- All areas should be audited at least once or twice per year, depending on facility size and resources.
- High-risk or problem-prone areas should have more frequent rounds until compliance is sustained.
- Documentation matters. If surveyors identify gaps, they will ask how often rounds are performed and why the frequency wasn’t increased when issues were noted.

Specific to joint replacements: What are the current recommendations regarding preoperative MRSA screening and the use of vancomycin for MRSA-positive patients when a facility is performing universal decolonization? Some have proposed discontinuing preoperative swabbing and omitting vancomycin (using only cefazolin) since all joint replacement patients are being decolonized.

- According to SHEA guidelines, MRSA screening is recommended, with vancomycin prophylaxis indicated for patients who test positive. While decolonization protocols are effective in reducing MRSA carriage, their efficacy compared with vancomycin for preventing MRSA surgical site infections has not been fully established. A recent study published in *ASHE* (PMID: 38415081) examined a similar approach and found that approximately 17% of MRSA SSIs occurred in patients who had undergone decolonization, suggesting that decolonization alone may not be sufficient to replace targeted prophylaxis.