who received VPT to VCT for surgical prophylaxis. Patients receiving other surgical prophylaxis regimens due to allergy or colonization history were excluded. Donor and recipient culture data from bronchoscopy samples were collected to determine the incidence of *Pseudomonas* in the 14-day post-transplant period. The secondary outcome was the incidence of post-transplant CDC-defined pneumonia. Statistical analysis was performed using SAS 9.4 (Cary, NC).

Results. One hundred patients were included in the pre-protocol group (VPT), and 65 in the post-protocol group (VCT). *Pseudomonas* was recovered in recipient BALs on post-op day 2–14 in 8 (8%) patients in the VPT group compared with 5 (7.7%) patients in the VCT group ($P = 1.0$). Mean time to *Pseudomonas* isolation was 8.4 days in the VPT group compared with 5.4 days in the VCT group. Incidence of pneumonia on post-op day 2–14 was 6% in the VPT group vs. 3% in the VCT group ($P = 0.48$). Surgical site infections were rare in the VCT group with an incidence of 1.5% (1/65).

Conclusion. Isolation of Pseudomonas was rare in both time periods and an increase was not detected when anti-pseudomonal coverage was removed from the surgical prophylaxis regimen. Safe deescalation of surgical prophylaxis regimens are an important antimicrobial stewardship initiative.

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2139. Improving Peri-Operative Skin Prep Technique at a Large Tertiary Medical Center: A Quality Improvement and Educational Initiative

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Session: 235. Healthcare Epidemiology: Surgical Site Infections
Saturday, October 6, 2018: 12:30 PM

Background. Surgical site infections (SSIs) are the most common cause of healthcare-associated infections. As part of our campaign to reduce SSIs at UT Southwestern Medical Center in Dallas, TX, we sought out to audit skin prep practices with the initial focus on application technique and a secondary focus on choice of product.

Methods. Infection Prevention for the University hospitals audited appropriateness of skin prep for compliance with manufacturer's directions and whether sufficient drying time was allowed. Skin prep was done appropriately less than 50% of the time. BD assessed skin prep practices in May 2017 using a standardized observation tool that evaluated method, prep time, compliance to prep time, dry time and compliance to dry time for ChloraPrep, Duraprep, and other CHG and Iodine solutions. Prep time and dry time were measured and compliance was calculated as a percentage.

Results. A total of 51 cases were observed. ChloraPrep was used most often, followed by two-step PVP Scrub and Paint, CHG and DuraPrep. ChloraPrep was applied correctly 44% of the time and DuraPrep 0% of the time. ChloraPrep prep time was compliant only 6% of the time. Dry time compliance was 45% for ChloraPrep and 50% for DuraPrep. Overall application method was correct 41% of the time, proper prep time 3% (compared with a national average of 44%), proper dry time of 41%. A skin prep task force worked to simplify the products available and clarified instructions for use. Inservice training programs were developed. Nursing educators developed an audit and competency tool for monitoring.

Conclusion. The correct application technique, prep time and dry time were adhered to in <50% of the observations. Of interest is that national averages for all of these categories were <50% as well. The results of the assessment at UT Southwestern are not unique and reflect a larger issue in how skin prep is performed across the country. It became clear that doing a deeper dive to understand the barriers in implementing appropriate skin prep practices was necessary. We were able to simplify the various products available to surgical staff, provide consistent recommendations on directions for use and provide hands on teaching to ensure competency. We hope to be able to identify a cost savings in addition to showing a reduction in surgical site infections.

Disclosures. **L. Pearson**, BD: Employee, Salary. **L. Williams**, BD: Employee, Salary.

2140. Healthcare-Associated Infection Outbreak Investigation of an Elevation of Surgical Site Infections at a Critical Access Hospital

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Session: 235. Healthcare Epidemiology: Surgical Site Infections
Saturday, October 6, 2018: 12:30 PM

Background. Reported incidence of surgical site infections (SSIs) in the United States commonly ranges from approximately 0.5–20%. An infection preventionist at a critical access hospital (CAH) notified the Nebraska Department of Health Human Services (NDHHS) Healthcare-Associated Infection (HAI) program of a surgeon with a 6-month SSI rate of 29% ($N = 7$) and requested assistance.

Methods. NDHHS HAI program and local health department personnel conducted an investigation. Overall SSI rates were calculated, and seven reported SSI charts were abstracted using the Centers for Disease Control and Prevention's HAI Outbreak Investigation Form. An additional nine-patient charts with similar characteristics were abstracted and used as the control group. These cases had the same procedures performed at the same facility, by the same surgeon, and during the same period of time but did not develop infections.

Results. In 2016, of the 452 procedures at this CAH, 17 developed SSIs (rate = 3.8%). SSIs occurred following the most invasive procedures being performed on the sickest patients at this CAH. Of the 17 SSIs, 15 (88.2%) were orthopedic and performed by three surgeons. Surgeon A performed 24 procedures with seven SSIs (rate = 29.2%). Surgeon B performed 171 procedures with five SSIs (rate = 2.9%) and Surgeon C performed 13 procedures with three SSIs (rate = 23.1%). The seven SSIs associated with Surgeon A used different operating room (OR) personnel, rooms, antibiotics, and durations. There were 0 deaths. The seven SSIs and nine controls were evaluated using a stepwise regression model. Using the variables for bone graft, hardware, OR location, and number of people in the OR, the only significant variable was the number of people in the OR. There was an average of 10 people in the OR among cases and seven among controls. Logistic regression yielded an odds ratio of 1.8 (95% CI: 0.99–3.26).

Conclusion. SSIs occurred primarily after orthopedic procedures, and two of three surgeons were found to have elevated rates. Analysis showed the number of people in the OR was potentially associated with SSIs. After following NDHHS recommendations to limit door openings and OR traffic, there were no additional cases. Additionally, we outlined our methodology in a publically-available response guideline posted to the NDHHS web page.

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2141. Characteristics and Prognosis of Patients with a Prosthetic Vascular Graft Infection (PVGI): A Prospective Cohort of 200 patients

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Session: 235. Healthcare Epidemiology: Surgical Site Infections
Saturday, October 6, 2018: 12:30 PM

Background. The aim of the present study was to describe the characteristics and prognosis of patients admitted for a PVGI and to assess the factors associated with the death of these patients.

Methods. All consecutive patients admitted in our department between January 1, 2000 and January 1, 2018 for a PVGI were enrolled in the present prospective cohort study. PVGIs were divided into extracavitary (femoro-femoral, femoro-popliteal and axillo-femoral) and cavitary (aorto-iliac, aorto-femoral, ilio-femoral, aortic); into "early" infection (<4 months) and late. Patients' baseline characteristics and their follow-up were described, and factors associated with death were assessed by using a logistic multivariate regression model.

Results. Overall, 200 patients were included during this period. The median age of patients was 69 years [IQR: 61–78], mainly of men (86%). One hundred and sixteen patients had an intracavitary PVGI (58%). Enterobacteriaceae and MSSA were the most frequent pathogens ($n = 60$ and 59), followed by coagulase negative staphylococci ($n = 30$), Streptococcus ($n = 26$) and enterococcus ($n = 25$). Surgery with replacement of the infected prosthesis was performed in 102 patients (53%). Culture of material samples taken during surgery were plurimicrobial in 67 patients (34%). After surgery, the median follow-up of patients was 7.5 months [IQR: 2–19] during which 30 presented a failure (15%) and 85 patients died, 41 due to the PVGI (21%). Factors independently associated with death in multivariate analysis were: to be over 70 years old (OR = 8.2; $P < 0.01$), to stay in ICU for more than 6 days (OR = 5.9; $P = 0.01$) and to have an intracavitary PVGI (OR = 9.0; $P = 0.02$). Antibiotic therapy regimen combining rifampicin to another antibiotic was associated with a decreased mortality (OR = 0.11; $P < 0.01$).

Conclusion. Our results suggest that the prognostic of patients admitted for PVGI depends on the site of infection and the occurrence of a shock after the admission. We found a better prognosis for patients with an extracavitary PVGI, without sepsis. Finally, PVGI treated with an antibiotic combination including rifampicin had a better outcome.

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2142. Understanding Errors in Sterile Processing of Surgical Instruments That Lead to Need for Immediate Use Sterilization in the Operating Room

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Session: 235. Healthcare Epidemiology: Surgical Site Infections
Saturday, October 6, 2018: 12:30 PM

Background. "Flash sterilization", an outdated term for immediate-use sterilization. Immediate use is broadly defined as the shortest possible time between a sterilized item's removal from the sterilizer and its aseptic transfer to the sterile field for use in the procedure for which it was sterilized, but at our institution, immediate-use sterilization of individual unwrapped objects has a very specific definition: this is a vacuum sterilization performed in a pre-vacuum sterilizer (as opposed a gravity displacement steam sterilizer) with a complete cycle composed of a 4-minute exposure