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Background. Drug shortages directly impact patient care. Rates of drug shortages have declined except for antimicrobials, where shortage rates remain similar each year.[1] In November 2018, a national cefazolin shortage occurred driving health systems to implement a therapeutic interchange of cefazolin for cephalexin for post-operative antimicrobial prophylaxis. The objective of this study is to determine whether SSI-rates change when post-operative cephalexin is used in placed of cefazolin.

Methods. This was a retrospective, observational cohort study of patients receiving post-operative antimicrobial prophylaxis at a community-based health system in Oregon and Washington between May 2018 – August 2019. Participants were divided into 3 periods for SSI-rate trend analysis: pre-shortage (May 2018 – October 2018), shortage (November 2018 – February 2019), and post-shortage (March 2019 – August 2019). The primary outcome was SSI-rates between groups.

Results. There were 6,378 patients in total (5,840 cefazolin vs. 538 cephalexin). There were no significant differences in baseline characteristics of age, sex, body mass index (BMI), or hospital location. The rate of SSI between pre-shortage and post-shortage cefazolin groups was not statistically different (14 [0.5%] vs. 23 [0.8%]; p=0.16). The primary outcome of SSI in the shortage group who received cephalexin was not statistically different (37 [0.6%] vs. 0 [0%]; p=0.07).

Conclusion. National drug shortages significantly impact patient care, often leading to seeking evidence-poor alternative medications. These results suggest cephalexin may be an acceptable post-operative prophylaxis antimicrobial if cefazolin is unavailable.

Disclosures. **All Authors**: No reported disclosures

813. Implementing a Nurse-driven Nasal Decolonization Intervention to Prevent Surgical Site Infections within the Veterans Health Administration

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Background. *Staphylococcus aureus* surgical site infection (SSI) is common and devastating clinically. Pre-operative decolonization is associated with reduced incidence, but has been variably adopted due to barriers implementing high-efficacy prevention bundles, including unintentional non-compliance applying intra-nasal mupirocin by patients at home. Three Veterans Affairs (VA) facilities attempted to implement an alternate evidence-based SSI prevention program that included intranasal povidone-iodine used in the pre-operative setting to reduce challenging patient-burden steps and to overcome other mupirocin barriers. Our objective was to identify strategies used for successful implementation of intranasal povidone-iodine.

Methods. We conducted pre- and post-implementation semi-structured interviews and site visits at three VA hospitals. Participants included surgery and clinic staff (e.g., nurses, physicians, care managers), infection control staff, and administrative leadership. Interviews were audio recorded and transcribed. Our interdisciplinary team performed a deductive and inductive consensus-based analysis.

Results. Implementation of this SSI prevention process was successful when nurse champions drove the implementation. Qualitative interviews indicate that nurses used a variety of strategies and messages variant on their audience. Nurse-driven facilitators included: key leadership buy-in and strategic decisions about timing and setting of implementation (i.e., start implementation in units with likely early adopters then when project is working well circle back to the early detractors). The primary implementation barrier identified was lack of a champion. One site stated that in the absence of a champion, a mandate or top-down approach may be needed for implementation at their facility.

Conclusion. Nurse champions facilitated successful SSI prevention process implementation. Nurses used strategies and approaches dependent on their knowledge and understanding of the stakeholders and setting to obtain buy-in. Future implementation of new clinical practices should consider utilizing nurse champions to promote uptake.

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814. Successful Treatment of *Cutibacterium* acnes (CA) Prosthetic Device Infection (PDI) with Oral Linezolid and Rifampin (LR)

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Background. CA PDI is increasingly recognized. CA is felt to create a slime layer that makes infection more likely and treatment more difficult in this setting. Traditional management has included prosthetic device explantation (PDE), prolonged antibiotic treatment, and delayed reimplantation. Recent interest in the use of oral treatment regimens and single stage procedures with long duration antibiotic therapy led us to treat a series of patients with oral treatment and retained prosthesis after debridement. We report those results.

Methods. Sequential patients with CA PDI treated with oral therapy were identified. All patients underwent debridement of the tissue, exchange of components and/or reimplantation of the prosthetic device. Only patients with exchanges were included. PDE was excluded. MIC testing for CA isolates was obtained when possible. Initial treatment was recorded at time of surgery. LR was the treatment of choice unless toxicity developed. A minimum of a 3-month follow-up post treatment was required to be included. 6 and 12 month follow up were obtained for all patients but 1 at this time.

Results. 10 patients were treated (Table 1). Shoulder joint infections were most common. All patients were treated with LR. All completed a minimum of 42 days of treatment (Table 2). The medication was well tolerated. The most common adverse events were nausea. 9/10 patients with 12 month follow up had no evidence of relapse. 1/10 had no relapse at 3 months. Typical for CA infection laboratory markers for infection were not markedly elevated. Notably thrombocytopenia did not occur (Table 3).

Table 1. Distribution of Prosthetic Device Infections

Prosthetic Device	Number of Patient
Breast Implant	1
Shoulder Implant	5
Knee Implant	1
Hip Implant	2
Fracture fixation	1

Table 2. Duration of Treatment

Duration of Tx	Number of Patient
60 days	3
90 days	4
>90 Days	3

Table 3. Selected Laboratory Results

Test	Mean	Range
ESR Start (mm/hr)	31.4	2-95
ESR End (mm/hr)	10.7	2-24
CRP Start (mg/l)	9.94	1.7-23
CRP End (mg/l)	6.12	1-35
WBC Start (x 10^3/µl)	8.27	4.7-14.3
WBC End (x 103/µl)	6.63	4.1-10.6
Hgb Start (g/dl)	14.48	8.3-16.2
Hgb End (g/dl)	12.94	10-15.5
Plt Start (x 103/µl)	309	207-551
Plt End (x 103/µl)	240	169-409

Conclusion. We demonstrated the ability to successfully treat 10/10 patients with CA PDI without explantation using prolonged oral treatment with LR after debridement. This combination should be considered a treatment option and explored further as a low cost, well tolerated, high value treatment approach to this difficult infection.

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815. Short-Course vs. Extended-Course Perioperative Antibiotic Prophylaxis in Patients Receiving Unilateral Primary Total Knee Arthroplasty

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