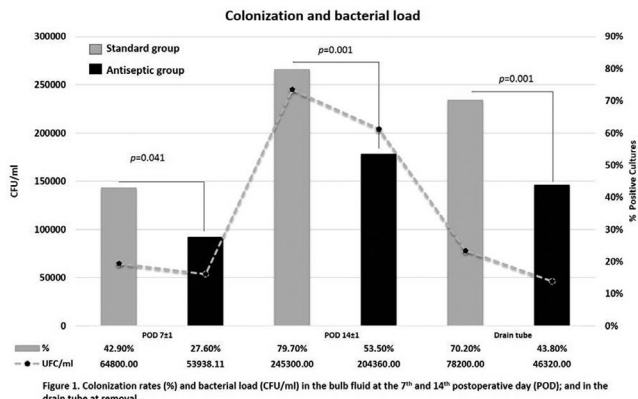


Background. Breast surgery is considered a clean surgery; however, surgical site infection (SSI) rates are higher than predicted. Postoperative drains remain *in situ* for several days with an inevitable bacterial colonization and increased risk of SSI.

Methods. We conducted a randomized controlled trial from October 2016 to January 2018 in a Mexican cancer center with high SSI prevalence. We included women with elective breast cancer surgery. Patients were randomized to control (standard drain care) or intervention (occlusive dressing with chlorhexidine 2% at the drain exit site). Perioperative management was standardized for both groups. Patient follow-ups were performed on a weekly basis for at least 30 days. Fluid cultures were performed at the first and second week as standardized in the laboratory. At the time of drain removal, the inner portion was sectioned and cultured by Maki's semi-quantitative technique. Bacterial quantification was performed using 16 s rRNA-qPCR assay. Culture results of drain fluid and tubing were compared between groups.

Results. We included 104 patients with 167 surgical drains. Patients' clinical characteristics (i.e., age, body mass index, comorbidities, clinical stage, preoperative risk, neoadjuvant therapy) were similar in both groups, with no statistical differences. Bulb fluid cultures at the first postoperative week were positive in 42.9% of the control group compared with 27.6% of the antiseptic group ($P = 0.04$). Cultures from the second week assessment were positive in 79.4% of the control group vs. 53.5% of the antiseptic arm ($P = 0.001$). Cultures from drain-tubes were positive in 70.2 and 43.8% ($P = 0.001$) of the control and antiseptic group, respectively (Figure 1). Eleven patients developed an SSI, three (15.4%) from the intervention group, and eight (15.8%) from the control group ($P = 0.11$). Eighty-four pathogens were isolated from the control group samples at week 1 vs. 52 from the intervention group. *Staphylococci* spp. were the most common microorganisms in Week 1, 61.9% control and 35% intervention group.

Conclusion. Local antiseptics provide an opportunity to test simple, safe, and low-cost interventions that may reduce drain bacterial colonization after breast surgery and potentially decrease infectious complications. Our microbiology findings question breast tissue sterility.



Disclosures. F. Rivera-Buendía, 3M: Donated the dressings used, Research support. D. Vilar-Compte, 3M: Donated the dressings used, Research support.

2123. High Utilization of Post-Discharge Antibiotics After Mastectomy in a Nationwide Cohort of Commercially Insured Women

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Background. Prophylactic antibiotics are commonly prescribed at discharge for mastectomy, despite many guidelines recommending discontinuation 24 hours after surgery. The objective of this study was to determine the prevalence and patterns of post-discharge prophylactic antibiotic use after mastectomy in a geographically representative, commercially insured population.

Methods. We identified a cohort of women aged 18–64 years undergoing mastectomy between January 2010 and June 2015 using the Truven Health MarketScan Databases. Patients with evidence of an infection during the surgical admission or 30 days prior were excluded. Post-discharge antibiotic use was identified from outpatient drug claims within 5 days post-discharge. Univariate logistic regression was used to compare antibiotic use by reconstruction type and geographic factors.

Results. The analysis included 43,391 mastectomy procedures. The median age was 52 years; 37,687 (86.8%) patients resided in an urban/suburban area; 27,264 (62.8%) of mastectomy procedures involved immediate reconstruction (IR) and 39,825 (91.8%) patients had a diagnosis of breast cancer or carcinoma *in situ*. Post-discharge prophylactic antibiotics were used in 16,493 (38.0%) surgeries. The most commonly prescribed antibiotics were cephalaxin (59.0%), cefadroxil (9.6%), clindamycin (8.3%), and trimethoprim/sulfamethoxazole (TMP/SMX) (7.5%). Antibiotic use did not change significantly from 2010 to 2015 for mastectomy only ($P = 0.064$) or mastectomy + IR ($P = 0.1912$; Cochran–Armitage test). Mastectomy patients with IR were more likely to be prescribed antibiotics (50.7% of IR vs. 19.8% of mastectomy only; $P < 0.001$). In

mastectomy only and mastectomy + IR, antibiotic use varied by U.S. region (Figure 1). Among mastectomy + IR, the type of post-discharge antibiotic prescribed differed by U.S. region (Figure 2). In mastectomy + IR, TMP/SMX use increased from 2010 to 2015 (3.3% of procedures in 2010 vs. 5.7% in 2015; $P < 0.001$; Cochran–Armitage test).

Conclusion. Post-discharge prophylactic antibiotic use is common after mastectomy and varies by reconstruction status and U.S. region. Regional variation in prescribing practices is potential targets for antimicrobial stewardship interventions.

Figure 1.

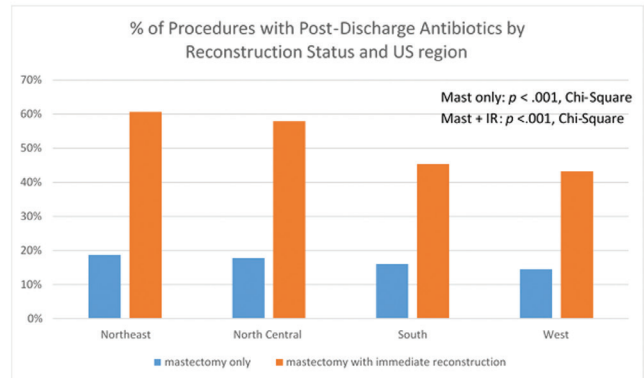
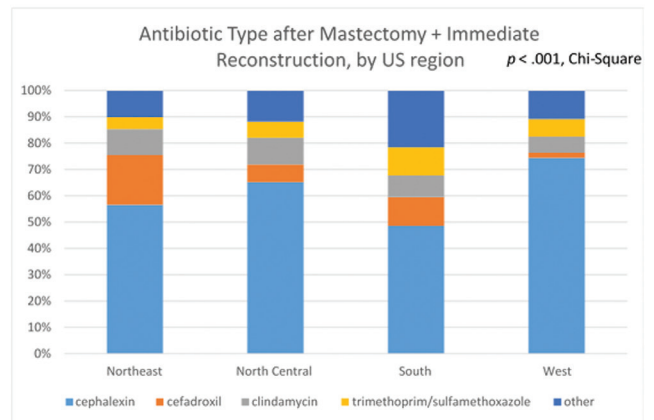


Figure 2.



Disclosures. All authors: No reported disclosures.

2124. A Bundled Intervention Was Associated with Decreased Risk of Complex *Staphylococcus aureus* Surgical Site Infections among Patients Undergoing Clean Operative Procedures

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Background. Our previous multicenter study suggested that a bundled intervention was associated with lower rates of complex *S. aureus* surgical site infections (SA SSIs) among patients undergoing cardiac or orthopedic operations in community hospitals. We aimed to evaluate the effect of this bundle in patients undergoing neurosurgical (NSG) operation, cardiac operation, or hip/knee arthroplasty at an academic health center.

Methods. This pragmatic quasi-experimental study included adult patients who underwent one of the procedures between June 1, 2012 and September 30, 2015 except those whose operations were done to treat infection. The bundle involved screening patients for SA nasal carriage, decolonizing carriers with intranasal mupirocin and chlorhexidine-gluconate bathing, and perioperative prophylaxis with vancomycin and ceftazidime for patients who carried MRSA. The primary outcome was complex SA SSIs. To analyze changes in SSI rates, we used Poisson regression in time-series analysis. We used breast operations as a non-equivalent control group.