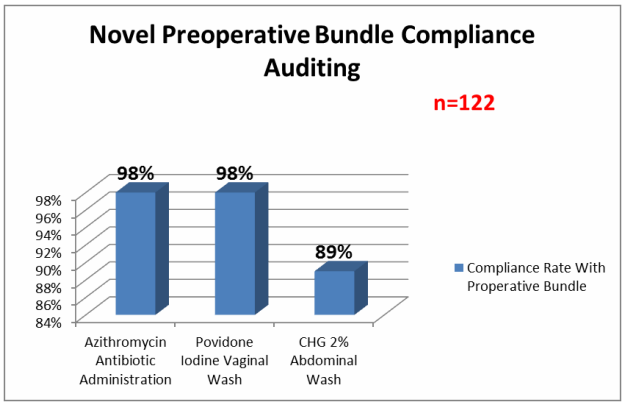
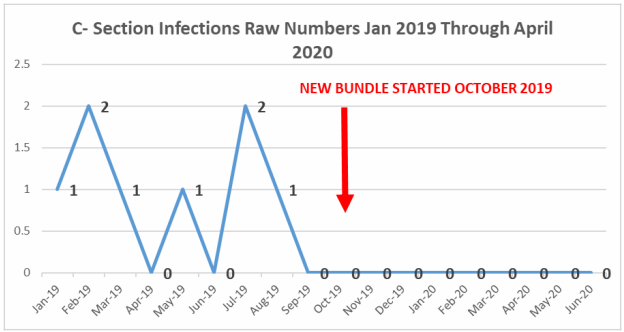
Novel Preoperative Bundle Auditing Compliance



Results. There were total of 212 patients who received C-section in Pre-POB group and 182 in Post-POB group. Baseline characteristics between the groups were similar. Overall C-section rates Pre-POB was 3.8 % vs 0% in Post-POB group. We noted a bundle compliance of 97.9% since implementation of POB. Real time prospective audit and feedback was provided to total of 122 cases after implementation of POB.

Comparison of C-Section Raw Numbers Calendar Year 2019 Pre and Post Novel Bundle Implementation



Conclusion. With implementation of POB, we noticed a significant drop in our C-section SSI. We observed a very high bundle compliance with implementation of prospective audit and feedback approach. This is the first study evaluating implementing a novel pre-operative bundle for patients undergoing C-section. Continued auditing and real time feed back of novel bundle will ensure continued success.

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

900. Retrospective Review of Microbiological profile in Post Surgical Spine Infections and Assess the Appropriateness of Current Pre-Op Antibiotic Prophylaxis Policy

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Background. SSI is a devastating complication of spine surgery that results in significant morbidity as it requires prolonged antibiotic courses and multiple surgical debridements. It also increases the economic burden on the health care system. So, it becomes important to learn the microbiological profile and assess the current pro-op antibiotic prophylaxis policy.

Methods. All cases reported by the hospital infection control surveillance program based on CDC/NHSN Surveillance definitions between January 2017 and July 2019 were retrospectively reviewed for microbiological data and surgical characteristics using electronic medical record, and non-parametric test was used to assess the difference in proportional distribution of gram-negative organisms between upper and lower spine groups.

Results. Between January 2017 and July 2019, 3561 spine surgeries were performed, 51 cases of SSI were reported, and 50 patients have microbiological data available. The most commonly isolated organism was Staphylococcus aureus (38%), followed by Escherichia coli (12%). There was no statistical difference for the distribution of gram-negative organisms in upper spine (17) and lower spine (33) surgeries (29.4% vs 48.4%, P Value = 0.24). However total gram-negative organisms accounted for 42% cases and lower spine surgical procedures were more likely to be associated with mixed infections including both gram negative and gram-positive organisms (15.1% vs 0%). Cefazolin resistant gram-negative organisms accounted for 22% of all gram-negative infections. Our current pre-op antibiotic policy recommends cefazolin plus or minus vancomycin (If MRSA screen positive) and clindamycin plus vancomycin in patients with severe penicillin allergy.

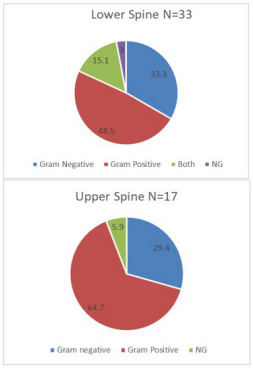
Table 1: Characteristics of the cultures

Post-surgical spine infection	Total N=50
Monomicrobial	38
Polymicrobial	10
No Growth	2

Table: 2 Microorganisms isolated from 50 patients with post-surgical spine infections

Gram-Positive Organisms	No. of Positive Cultures	% of total No. of Cases	Gram-Negative Organisms	No. of Positive Cultures	% of total No. of Cases
Staphylococcus aureus	19	38	E. coli	6	12
MRSA	10	20	Klebsiella pneumoniae	5	10
MSSA	9	18	Klebsiella oxytoca	1	2
Stapylococcus epidermidis	5	10	Enterobacter cloacae	4	8
MRSE	4	8	Pseudomonas aeruginosa	4	8
MSSE	1	2	Proteus mirabilis	1	2
Staphylococcus lugdunensis	1	2	Serratia marcescens	2	4
Streptococcus pyogenes	1	2	Citrobacter freundii	1	2
Streptococcus agalactiae	1	2			
Enterococcus faecalis	1	2			
Cutibacterium acne	2	4			
Peptostreptococcus	1	2			
Finegoldia magna	1	2			
Corynebactrium striatum	2	4			

Figure 1: Proportional distribution of Micro-organisms between lower and upper spine (Percentage on left side and No. of positive cultures on right side)



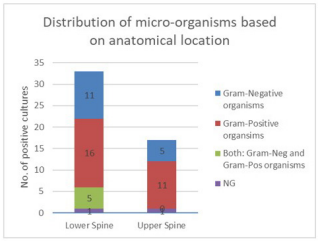


Figure 1: Proportional distribution of Micro-organisms between lower and upper spine (Percentage on left side and No. of positive cultures on right side)

Conclusion. Although gram-positive organism predominated, there was a substantial portion of gram-negative organisms in post-surgical spine infections. Cefazolin would cover at least half of the gram-negative organisms identified based on our antibiogram susceptibility pattern. However, in patients with penicillin allergy, our current recommended pre-operative antibiotic prophylaxis does not provide gram-negative coverage. We will therefore explore the value of adding an agent with gram negative coverage based on our institutional antibiogram.

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

901. Risk Prediction for Surgical Site Infection in Patients Subject to Knee Arthroplasty Surgery

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