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Emergency Department Specific Antimicrobial Stewardship Intervention Reduces Antibiotic Duration and Selection for Discharged Adult and Pediatric Patients with Skin and Soft-tissue infections

Permalink

<https://escholarship.org/uc/item/8095j4n3>

Journal

Open Forum Infectious Diseases, 4(Suppl 1)

ISSN

2328-8957

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Publication Date

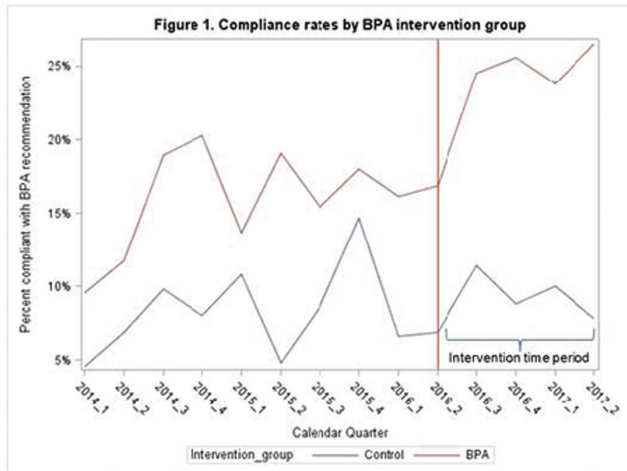
2017

Peer reviewed

modification presented all providers with a list of abx options including dosage and frequency. The effects of two CDS interventions were assessed for one year.

Results. Results indicate the IG improved in BPA abx compliance over the CG. Figure 1 shows compliance with BPA recommended antibiotics among the IG increased from 17% to 23% during Q1 2014-Q2 2017 compared with a 0% increase in the CG ($P < .0001$). However, overall IDSA recommended compliance did not significantly increase: IG -2% vs CG 1% ($P = .26$). UTI patients of providers who saw the BPA alert were 1.9 times (CI: 1.7, 2.3) times more likely to receive recommended abx compared with the CG.

Conclusion. This randomized control study provides promising data that the use of CDS, specifically BPAs embedded within EMRs, can be used effectively to assist and encourage compliance with guidelines. Next steps include: continuing to educate providers on best practices, consider including more abx options in BPA to reduce errors in prescribing and improve overall compliance, and implementing similar CDS interventions for upper respiratory infections and other infections.



Disclosures. All authors: No reported disclosures.

756. Emergency Department Specific Antimicrobial Stewardship Intervention Reduces Antibiotic Duration and Selection for Discharged Adult and Pediatric Patients with Skin and Soft-tissue infections

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Session: 75. Stewardship: Program Implementation

Thursday, October 5, 2017: 12:30 PM

Background. Skin and soft-tissue infections (SSTI) account for 2.4 million annual U.S. emergency department (ED) visits. A majority of physicians give empiric antibiotic treatment that is non-compliant with guidelines, leading to potential patient harm and fueling the emergence of antibiotic resistance. The ED is a deserving focus of antimicrobial stewardship yet interventions have not been well studied in this setting.

Methods. Quasi-experimental study of a multifaceted antimicrobial stewardship intervention at an academic ED in a setting of high prevalence of clindamycin resistance among *S. aureus*. Our intervention included educational presentations by a physician champion, implementation of an electronic order set based on 2014 IDSA guidelines, dissemination of an ED specific *S. aureus* wound isolate antibiogram, monthly departmental peer-comparisons, and bimonthly, confidential, individual audit and feedback. Visits with ICD-10 codes for cutaneous abscess or other SSTI for patients discharged to home from the ED for consented providers were included for analysis. Primary endpoint of antibiotic selection and treatment duration was assessed during the pre-intervention and intervention periods using contingency tables for categorical outcome and a linear regression model for clustered survey data for comparing mean durations.

Results. Seventy-four consented providers' data were included, accounting for 310 patient visits over the baseline (Oct 15-Mar 16) and 315 visits over the intervention period (Oct 16-Mar 17). Mean antibiotic duration decreased from 9.5 to 6.5 days, a difference (95% CI adjusted for provider cluster effects) of -3.0 (-0.6, -5.3) days. Among patients discharged with a diagnosis of abscess, the use of >2 antibiotics declined from 12% (15/125) in the baseline to 4% (4/110) in the intervention period. The relative frequency of clindamycin use decreased from 59% to 23%. Among patients discharged with a diagnosis of cellulitis, cephalixin use increased from 22% to 42%, with clindamycin use declining from 58% to 28%.

Conclusion. Our ED specific antibiotic stewardship program successfully reduced antibiotic duration and improved guideline adherence in discharged patients with SSTI. Similar implementation strategies should be assessed in a wider variety of settings.

Disclosures. All authors: No reported disclosures.

757. Antibiotic Stewardship in the Medical Intensive Care Unit of an Academic Medical Center: Impact of a Pneumonia Diagnostic Bundle with Pharmacist Intervention

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Session: 75. Stewardship: Program Implementation

Thursday, October 5, 2017: 12:30 PM

Background. Acute bacterial pneumonia is a common empiric diagnosis in medical intensive care unit (MICU) patients. Clinically, however, it may be difficult to distinguish from nonbacterial causes of inflammation and infection of the lung(s). Incomplete diagnostic workup at the time of empiric antibiotic initiation or misinterpretation of available data may impede antibiotic de-escalation and discontinuation. We aimed to reduce unnecessary antibiotic use in the MICU by (1.) bundling pneumonia diagnostic orders into a single comprehensive order set and (2.) by implementing a daily pharmacist-driven antibiotic time-out.

Methods. This before-and-after quality improvement pilot project was conducted in the MICU of Baystate Medical Center, a closed 16-bed unit, from December 2016 through March 2017. Outcomes were compared with a baseline period from December 2015 through March 2016. At baseline, all diagnostic orders were entered individually via computer physician order entry (CPOE) and daily antibiotic stewardship was not provided. For the pilot, a pneumonia order set was built which includes all diagnostic tests and recommended empiric antibiotics based on the local antibiogram. Of note, serial procalcitonin levels first became available at our institution through this order set. An interpretation algorithm was adapted from the literature to aid in their interpretation. A new MICU clinical pharmacist position was created which allowed antibiotic time-outs to be conducted 7 days per week. Antibiotic discontinuation was assessed by comparing days of antibiotic therapy per 1000 patient-days.

Results. For all antibiotics used to treat bacterial pneumonia, total days of therapy per 1000 patient-days in the MICU decreased from 905.7 in the baseline period to 688.4 in the pilot period (rate difference -217.3, 95% CI -270.8 to -163.9). The usage of narrow spectrum antibiotics increased during the pilot period.

Conclusion. Bundling pneumonia diagnostic orders together into a single order set inclusive of serial procalcitonin measurement as well as providing daily pharmacist-led antibiotic time-outs were associated with decreased antibiotic usage in the MICU.

Disclosures. All authors: No reported disclosures.

758. Antimicrobial Stewardship Facetime: Comparison of Two Rounding Models at a Tertiary Medical Center

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Session: 75. Stewardship: Program Implementation

Thursday, October 5, 2017: 12:30 PM

Background. As an 886-bed tertiary care hospital with both teaching and private physician groups, Cedars-Sinai Medical Center has a unique opportunity to incorporate antimicrobial stewardship pharmacist (ASP) rounds with both a general medicine teaching service (TS) as well as a non-teaching hospitalist group (NTH). The impact of ASP rounds on antimicrobial (ABX) utilization and notable differences in clinical outcomes associated with both rounding models were evaluated.

Methods. An ASP was incorporated into existing teaching rounds for TS and disposition planning rounds for NTH. ASP-TS and ASP-NTH rounds both occurred once daily on weekdays with facetime of 3-4 hours per day for TS and 0.5-1 hour per day for NTH. Metrics included ASP recommendations and acceptance rates, total ASP time, ABX utilization, and clinical outcomes. Chi-squared and the Student's t-test were used as appropriate.

Results. Between November 2016 to April 2017, ASPs reviewed 3184 NTH patients and 1322 TS patients. More opportunities for ASP intervention were identified with TS (40% vs. 26%, $P < 0.001$). Overall recommendation acceptance rates were higher for TS compared with NTH (95% vs. 79%, $P < 0.001$). Total recommendations identified per ASP-hour were higher for NTH vs. TS (1.76 vs. 0.93). ASP recommendations targeting ABX de-escalation, unnecessary use of fluoroquinolones, and treatment of asymptomatic bacteriuria were similar for both groups.

Compared with baseline rates, ASP rounds were associated with a significant reduction (-6%, $P = 0.01$) in ABX days-of-therapy (DOT) for NTH but not for TS (-1%,