strategy could serve as a model to improve antimicrobial stewardship in community, non-teaching hospitals.

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752. What’s Next? Sustaining Hospital-Initiated Nursing Home Antimicrobial Stewardship Programs
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Background. The core elements provide a framework for nursing homes (NH) to establish antibiotic stewardship programs (ASP). We report on implementation and sustainability of ASP through a hospital-NH partnership.

Methods. Since 2014, a hospital-based team (HBT) assisted 9 NH in Monroe County, NY in implementing ASP. Enrollment was staggered; data are currently available from 2 NH: Facility X (470 beds, full-time medical director and Infection Preventionist (IP)); and Facility Y (288 beds, part-time medical director and IP). The HBT analyzed antibiotic data to develop initial interventions focusing on reducing urinary tract infection (UTI) treatment and quinolone use. Activities included (1) regular presentation of antibiotic days of therapy (DOT), urine culture rates and treatment appropriateness; (2) coaching on interpretation and use of data to expand interventions; (3) creation of a good practice guide for diagnosis and treatment of common infections; and (4) education of nurses, providers, and families.

Results. The HBT provided drug expertise and support throughout the project; however, involvement of NH staff varied. The Facility X IP assumed responsibility for the review and feedback of urine culture data and education and the medical director educated nurses and families on treatment guidelines. Facility Y’s ASP was led by the medical director and focused mainly on education of clinicians. Facility X saw significant reductions in all metrics in 2016. Facility Y significantly reduced their quinolone use and urine culture rate; however, this did not translate into a reduction in DOT for UTI (Table 1).

Table 1. Rates per 1,000 resident days

| Facility | 2014 | 2016 | Rate Ratio (RR) |
|----------|------|------|----------------|
| Facility X | 11.6 | 8.8 | 0.77 (0.71–0.82) |
| Facility Y | 178 | 98 | 0.56 (0.52–0.59) |

Conclusion. Hospital expertise can aid in implementing ASP core elements and changing prescribing practices. Ownership by NH staff, leadership support, and a multidisciplinary approach are key for NH ASP success. Both NH achieved improvement; however, Facility X has greater potential for sustainability due in part to a full-time IP champion that made data actionable and fostered collaboration between disciplines.

Disclosures. All authors: No reported disclosures.

753. Antimicrobial Stewardship Program for Broad-Spectrum Oral Antibiotic Use in a Pediatric Emergency Department: an Interrupted Time-Series Analysis
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Background. Oral third-generation cephalosporins are often inappropriately prescribed at outpatient clinics in Japan for mild infections by viruses and bacteria susceptible to agents with a narrower spectrum despite the absence of any recommendations for the use of these drugs as a first-line treatment in the existing guidelines. Our aim was to evaluate an antimicrobial stewardship program (ASP) targeting outpatient use of oral third-cephalosporins at an emergency department.

Methods. Patients visiting the emergency department (ED) at Tokyo Metropolitan Children’s Medical Center in Japan between March 2010 and May 2016 were included. The first period (pre-intervention) between March 2010 and September 2010 had no ASP; the second period (intervention) 1 between October 2010 and March 2013 had an ASP with consultations with an infectious diseases physician and a no-antibiotic policy for the common cold; and the third period (intervention 2) between April 2013 and May 2016 included an ASP with the requirement for permission to prescribe oral third-generation cephalosporins. We compared the number of prescriptions for third-generation cephalosporin’s prescriptions among the three periods. Antibiotic use was calculated by the number of prescriptions per 1,000 ED visits.

Results. In total 232,548 patients were included. Oral antibiotics were prescribed for 13,227 cases (5.7%). Boys numbered 7,440 (66 %), and the median age was 54 months (IQR: 27–98 months). After interventions 1 and 2, the use of oral third-generation cephalosporins declined from 19 per 1,000 ED visits in the pre-intervention period to 6.6 per 1,000 ED visits during intervention 1 (−4.0; 95% CI: −6.3 to −1.7, P = 0.001) and 0.10 per 1,000 ED visits during intervention 2 (−0.31; 95% CI −1.8 to 1.2, P = 0.675).

Conclusion. The ASP at our ED was effective in decreasing the prescription of oral third-generation cephalosporin.

Disclosures. All authors: No reported disclosures.

754. Don’t Ask, Don’t Tell: Quality of β-Lactam Allergy Assessment in Patients with Methicillin-Susceptible Staphylococcus aureus (MSSA) Infections at a Tertiary-Care VA Medical Center
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Background. β-Lactams (BL) are optimal therapy for MSSA infections; however, allergies to BL are reported frequently and may alter antibiotic selection for these infections. Limited data exist evaluating the frequency at which a new BL allergy history (AH) is taken when patients present with MSSA infections.

Methods. We conducted a 10-year retrospective review of patients treated for MSSA infections with report of BL allergy in the allergy section of the electronic medical record (EMR). Acquisition of new AH on initiation of empiric or definitive MSSA antimicrobial therapy was reviewed. Standard allergy characterization questions assess (1) age at BL reaction, (2) recognition of reaction, (3) timing from reaction, (4) route of administration, (5) rationale for BL, (6) prior BL tolerance, (7) con founding medications, and (8) symptom resolution. A new AH was considered inappropriate if 0/8 items were addressed. Types of infection, types of allergic reaction, BL agents, adverse events and treatment failure rates were also analyzed.

Results. Providers seeing 142 MSSA-infected patients with EMR-based BL AH did not gather any new AH 59% of the time (83/142). Of those, 36% (30/83) of patients had an “unknown” AH in the EMR, yet no new AH was taken prior to MSSA therapy selection. When a new AH was taken, previous BL exposure (39%), recall of reaction (41%), and symptoms (83%) were the most asked questions. The likelihood of exploring past BL exposure (predictor of ability to tolerate current BL) increased from 17 to 42% when 2 vs. 3 questions were assessed, respectively. Most interestingly, new provider-verified symptoms differed from prior documentation in the allergy section of the EMR 65% of the time. The most common AEs, AEs treated were skin infections (34%) and bacteremia (32%). Overall, no significant differences in treatment failures and adverse events were found between patients treated with BL and non-BL therapy, perhaps due to heterogeneity of infection types.

Conclusion. In ~40% cases, new BL allergy histories were not obtained prior to initiating treatment of MSSA infections, despite our data suggesting AH reassessment uncovers new, clinically relevant information. Routine incorporation of better AH can enhance antimicrobial stewardship programs.

Disclosures. All authors: No reported disclosures.

755. Promoting Judicious Antibiotic Use: Results of an Outpatient-Based Randomized EMR generated intervention study
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Background. According to the CDC, up to 50% of antibiotic (abx) prescriptions are not needed or inappropriate—often used too long or too broadly. Repercussions include multidrug resistance, adverse reactions, and increased incidence and mortality from Clostridium difficile. A JAMA study demonstrated that IDSA guidelines can influence abx prescribing patterns positively for genitourinary infections. In this electronic age, interventions include providing direct access to guidelines through a Best Practice Alert (BPA) embedded within electronic medical records (EMR). This assists clinicians when recommending abx. The study’s goal was to improve compliance with guidelines when treating uncomplicated UTIs at outpatient sites by using targeted education and Clinical Decision Support (CDS).

Methods. Outpatient sites were randomized with matching into two groups: BPA intervention group (IG) (71 sites; 4,555 visits) or control group (CG) (56 sites; 2,078 visits). The BPA listed the appropriate abx regimens according to guidelines. A second
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 < 0.001). However, overall IDSA recommended compliance did not significantly increase: IG -2% vs CG 1% (P = 0.26). 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 BPs 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.

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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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Background. Acute bacterial pneumonia is a common empiric diagnosis in medical intensive care unit (MICU) patients. Clinical, 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 a 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 -213.9, 95% CI -270.8 to -163.9). The usage of narrow spectrum antibiotics increased during the pilot period.

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

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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