length of stay (LOS), ICU LOS, 90-day incidence of extended spectrum β-lactamases (ESBLs), and 30-day readmission rates and incidence of *Clostridium difficile*. Adverse events including acute kidney injury and QTc prolongation were also evaluated pre- and post-implementation of the guideline.

**Results.** A total 150 patients were included in this study to meet power for the primary objective. Levofloxacin DOT/1000 patient-days was reduced by 3.4 days in the post-implementation period (P < 0.001) with a 63% reduction in individual levofloxacin orders (P = 0.001). Furthermore, there were significantly lower 30-day mortality rates in the post-implementation period, which persisted in a multivariate logistic regression analysis (P = 0.01). There was no difference in hospital or ICU LOS, 30 day readmission rates or incidence of *Clostridium difficile*, or 90-day incidence of ESBLs. There was also no difference in adverse events between the two study periods.

**Conclusion.** This study demonstrates that the implementation of a combination anti-pseudomonal guideline can decrease levofloxacin use while reducing 30-day mortality rates without increasing hospital or ICU LOS.

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1587. Adherence to Institutional Guidelines for Community and Nosocomial Pneumonia and Its Impact on In-hospital Mortality and 30-day Readmission in a Community Health System

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**Background.** An IRB approved retrospective chart review was conducted on patients admitted for > 24 hours with a confirmed diagnosis of bacterial pneumonia. Patients were included if they were ≥18 years old and diagnosed with community-acquired pneumonia (CAP) or hospital-acquired pneumonia (HAP) between April and September 2016. The primary objective of the study was to measure adherence to institutional treatment guidelines (ITG) and its impact on mortality and 30-day readmissions.

**Methods.** Overall, antipseudomonal and anti-MRSA antibiotic utilization was decreased after hospital day 1. We excluded patients who were discharged with or changed to a quinolone by hospital day 1. A de-escalation was defined as stopping both drugs by day 4, but continuing another antibiotic. Patients were matched on propensity for de-escalation and compared on late deterioration, inpatient mortality, length of stay (LOS), and 30-day readmission. The propensity model included demographic and treatment characteristics that were observed as proxies for clinical severity. We also compared adjusted outcomes across hospital quartile of de-escalation.

**Results.** Of 224,400 patients included, 4121 (18.4%) had both drugs stopped within 4 days. Median age was 72 years, 56% were female, and 39% were admitted to the intensive care unit (ICU). Compared with patients without de-escalation, those de-escalated had similar demographics, but fewer co-morbidities and less severe disease at days 1 and 4. After propensity-matching, there were no significant differences in 83 variables. In the matched sample, de-escalated patients had lower odds of inpatient mortality (OR 0.67, 95% CI 0.60–0.73), subsequent transfer to ICU (OR 0.31; 95% CI 0.19–0.52), LOS (OR 0.79; 95% CI 0.77–0.80) and lower costs (OR 0.79; 95% CI 0.77–0.80). Hospital rates of de-escalation ranged from 6–67%. Hospital de-escalation quartile was not significantly associated with any outcome.

**Conclusion.** In a sample of US hospitals, <20% of pneumonia patients had anti-pseudomonal coverage de-escalated following negative cultures, but it varied widely by hospital. De-escalation with high rates of de-escalation did not occur in any hospital. Following negative cultures, de-escalation appears safe in selected patients.

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1589. Evaluation of the Empiric use of Levofloxacin in Combination with Anti-pseudomonal Beta-lactams for the Treatment of Pneumonia

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**Background.** With the release of the 2005 IDSA/ATS pneumonia guidelines healthcare providers were advised to consider numerous patient risk factors for multidrug resistant organisms. Furthermore, these guidelines encouraged empiric treatment with two agents active against pseudomonas, based on the assumption that combination therapy increases treatment success. An evaluation of our institution’s respiratory cultures revealed that levofloxacin covers only 2% of pseudomonas isolates resistant to piperacillin-tazobactam, and no isolates resistant to cefepime or imipenem.

Our primary objective was to correlate this evaluation’s findings with patient outcomes by comparing mortality rates experienced by patients receiving levofloxacin plus an anti-pseudomonal β-lactam vs. those receiving β-lactam alone for the empiric treatment of pneumonia. Secondary objectives were to identify between group differences in length of stay, 30-day readmission, duration of mechanical ventilation, and occurrence of *Clostridium difficile* infection.

**Methods.** This single-center, retrospective chart review was conducted by evaluating records of patients with a discharge diagnosis of pneumonia from January 1, 2014 to September 1, 2016. Patients were included if they received at least 48 hours of empiric treatment with an IV anti-MRSA agent plus an anti-pseudomonal β-lactam. Patient enrollment is displayed in Figure 1.

**Results.** Of 1897 patient screened, 228 patients were included. There were 146 patients who received monotherapy with an anti-pseudomonal β-lactam and 82 patients who additionally received levofloxacin. Baseline characteristics were comparable between groups. The mean age was 68.8 years, 51% were male, 45.6% had a diagnosis of COPD at baseline, and the average qSOFA score upon admission was 0.66. There was no significant difference in mortality (P = 0.438), nor any secondary objective. No significant difference in the duration of therapies prior to de-escalation was observed (P = 0.395).

**Conclusion.** Addition of levofloxacin to β-lactam therapy did not impact clinical outcomes in this population. Further analysis of site-specific data is warranted, as the results of this study may not be generalizable.
The Drug Resistance in Pneumonia score (DRIP) is a recently developed prediction tool to identify patients with community-acquired pneumonia (CAP) at increased risk for drug resistant pathogens (DRP). The DRIP score has better performance characteristics than other available prediction tools which have been associated with increased broad-spectrum antibiotic use. We evaluated the potential impact of the DRIP score on CAP management at the Salt Lake City VA, a 106 bed facility with a Hospitalist service staffed by Internal Medicine residents and Department of Medicine faculty and an antibiotic stewardship program (ASP).

Methods. We performed a retrospective chart review of adult inpatients with pneumonia present on admission based on ICD9/10 coding between February 2016 and April 2017. Both DRIP and HCAP scores were calculated for each patient and antibiotic selection was collected by manual chart review. We compared actual antibiotic selection with potential changes in broad-spectrum antibiotic use in all patients and patients with a DRIP score ≥4 as compared with HCAP criteria. 158 patients were enrolled in the study period. Respiratory cultures were obtained in 27% (50/184) of participants with 2% (3/184) positive for a pathogen. Of 19,598 children hospitalized on survey days, 6,922 (35%) had ≥1 active antibiotic order at 0800 on a single day during three consecutive calendar quarters (Q3 2016 – Q1 2017). Each hospitalization re-admissions.

Results. Of 19,598 children hospitalized on survey days, 6,922 (35%) had ≥1 active antibiotic order. Median age of children receiving antibiotics was 3.7 years (0.5, 10.9). Appropriate use were bug-drug mismatch (26%), surgical prophylaxis > 24 hours (18%) and unnecessary antibiotic therapy (12%). ASPs would not have routinely reviewed 50% of all inappropriate orders. An additional 22% of inappropriate orders were for antibiotics typically reviewed by ASPs, but were yet to be reviewed at the time of the survey.

Conclusion. Cross-sectional analysis of antimicrobial prescribing at 30 U.S. children's hospitals. Participating hospitals were academic, tertiary care hospitals in the Sharing Antimicrobial Reports for Pediatric Stewardship (SHARPS) collaborative. Subjects were children 0–17 years with an active antibiotic order at 0800 on a single day during three consecutive calendar quarters (Q3 2016 – Q1 2017). Each hospital’s ASP used a standardized survey to collect data on antibiotic orders and evaluate appropriateness. Data were pooled from the three surveys. The primary outcome was the pooled estimate for the percentage of prescriptions classified as inappropriate. The impact of the ASP bundle initiative. The pre-intervention period was March 1, 2014 through October 31, 2014, and the intervention period was September 1, 2015 through April 30, 2016.

Results. A total of 39 and 61 patients were included in the pre-intervention and post-intervention cohorts, respectively. When compared with the pre-intervention group, mean duration of therapy decreased (9.0 vs. 5.6 days; P < 0.001). More patients received an appropriate duration of 7 days or less (38.5% vs. 8.7%; P < 0.001), while few patients received courses of more than 10 days (28.2% vs. 3.3%; P < 0.001). Fewer patients received intravenous vancomycin (28.2% vs. 4.9%; P = 0.002) and anti-pseudomonal β-lactams (25.6% vs. 6.6%; P = 0.02). Pneumonia-related 30-day re-admission rates (5.1% vs. 4.9%; P = 0.99) were unaffected. In the post-intervention group, patients with procalcitonin levels < 0.25µg/L received shorter duration of therapy compared with patients with levels ≥ 0.25µg/L (4.5 vs. 6.9 days; P = 0.001).

Conclusion. A syndrome-specific approach to antimicrobial stewardship practices, incorporating procalcitonin-guidance, led to shorter durations of therapy and decreased use of broad-spectrum antibiotics for the treatment of CAP without affecting hospital re-admissions.

Disclosures. All authors: No reported disclosures.

1590. Potential Impact of the DRIP Score on Antibiotic Use: a Retrospective Single-Center Study

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Background. The Drug Resistance in Pneumonia score (DRIP) is a recently developed prediction tool to identify patients with community-acquired pneumonia (CAP) at increased risk for drug resistant pathogens (DRP). The DRIP score has better performance characteristics than other available prediction tools which have been associated with increased broad-spectrum antibiotic use. We evaluated the potential impact of the DRIP score on antibiotic use and clinical outcomes warrants further large-scale evaluation in a variety of settings.

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1591. Impact of Antimicrobial Stewardship Program Guidance on the Management of Community-Acquired Pneumonia in Hospitalized Adults

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Background. Community-acquired pneumonia (CAP) is often treated with prolonged antibiotic therapy and unnecessary utilization of broad-spectrum antibiotics. An Antimicrobial Stewardship Program (ASP) bundled initiative, which included dissemination of a clinical decision algorithm, procalcitonin guidance, and prospective audit with feedback by the ASP team, was implemented.

Methods. A retrospective, pre-intervention/post-intervention study was conducted to compare management for patients admitted with CAP before and after implementation of the ASP bundled initiative. The pre-intervention period was March 1, 2014 through October 31, 2014, and the intervention period was September 1, 2015 through April 30, 2016.

Results. A total of 39 and 61 patients were included in the pre-intervention and post-intervention cohorts, respectively. When compared with the pre-intervention group, mean duration of therapy decreased (9.0 vs. 5.6 days; P < 0.001). More patients received an appropriate duration of 7 days or less (38.5% vs. 8.7%; P < 0.001), while few patients received courses of more than 10 days (28.2% vs. 3.3%; P < 0.001). Fewer patients received intravenous vancomycin (28.2% vs. 4.9%; P = 0.002) and anti-pseudomonal β-lactams (25.6% vs. 6.6%; P = 0.02). Pneumonia-related 30-day re-admission rates (5.1% vs. 4.9%; P = 0.99) were unaffected. In the post-intervention group, patients with procalcitonin levels < 0.25µg/L received shorter duration of therapy compared with patients with levels ≥ 0.25µg/L (4.5 vs. 6.9 days; P = 0.001).

Conclusion. A syndrome-specific approach to antimicrobial stewardship practices, incorporating procalcitonin-guidance, led to shorter durations of therapy and decreased use of broad-spectrum antibiotics for the treatment of CAP without affecting hospital re-admissions.

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1592. Appropriateness of Antibiotic Prescribing in U. S. Children's Hospitals: A National Point Prevalence Survey

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Background. Multiple studies estimate that inappropriate antibiotic prescribing ranges from 30–50% in hospitalized patients, but few have included pediatric patients. Pediatric studies characterizing inappropriate prescribing are needed to target and improve antimicrobial stewardship program (ASP) efforts.

Methods. Cross-sectional analysis of antimicrobial prescribing at 30 U.S. children's hospitals. Participating hospitals were academic, tertiary care hospitals in the Sharing Antimicrobial Reports for Pediatric Stewardship (SHARPS) collaborative. Subjects were children 0–17 years with an active antibiotic order at 0800 on a single day during three consecutive calendar quarters (Q3 2016 – Q1 2017). Each hospital's ASP used a standardized survey to collect data on antibiotic orders and evaluate appropriateness. Data were pooled from the three surveys. The primary outcome was the pooled estimate for the percentage of prescriptions classified as inappropriate, reason for inappropriate use, and ASP review status for each antibiotic.

Results. Of 19,598 children hospitalized on survey days, 6,922 (35%) had ≥1 active antibiotic order. Median age of children receiving antibiotics was 3.7 years (0.5, 10.9). Figures 1 and 2 show the most common antibiotics and indications. Of all antibiotic prescriptions classified as inappropriate. The impact of the ASP bundle initiative. The pre-intervention period was March 1, 2014 through October 31, 2014, and the intervention period was September 1, 2015 through April 30, 2016.

Results. A total of 39 and 61 patients were included in the pre-intervention and post-intervention cohorts, respectively. When compared with the pre-intervention group, mean duration of therapy decreased (9.0 vs. 5.6 days; P < 0.001). More patients received an appropriate duration of 7 days or less (38.5% vs. 8.7%; P < 0.001), while few patients received courses of more than 10 days (28.2% vs. 3.3%; P < 0.001). Fewer patients received intravenous vancomycin (28.2% vs. 4.9%; P = 0.002) and anti-pseudomonal β-lactams (25.6% vs. 6.6%; P = 0.02). Pneumonia-related 30-day re-admission rates (5.1% vs. 4.9%; P = 0.99) were unaffected. In the post-intervention group, patients with procalcitonin levels < 0.25µg/L received shorter duration of therapy compared with patients with levels ≥ 0.25µg/L (4.5 vs. 6.9 days; P = 0.001).

Conclusion. A syndrome-specific approach to antimicrobial stewardship practices, incorporating procalcitonin-guidance, led to shorter durations of therapy and decreased use of broad-spectrum antibiotics for the treatment of CAP without affecting hospital re-admissions.

Disclosures. All authors: No reported disclosures.