expanded Gram-negative coverage (i.e. cefepime) for documented DRIP< 4, and lack of expanded Gram-negative coverage with aminoglycosides in ICU patients with documented DRIP≥4 were also common

Conclusion: An increase in guideline-directed therapy and a decrease in use of carbapenems were seen after implementation of DRIP score documentation at time of order entry. Overall concordance with guidelines was low, and additional review is needed to identify if providers are accurately documenting the DRIP score. Future directions should focus on education of clinicians on the importance of accurate DRIP documentation in order to improve compliance with institutional guidelines.

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232. Impact of Weekend Initiation of Vancomycin or Piperacillin/Tazobactam on Days of Therapy Received upon Hospital Admission

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Session: P-8. Antimicrobial Stewardship: Trends in Antimicrobial Prescribing

Background: Antibiotic therapy for inpatients with suspected infections is typically empirically initiated and therapy narrowed or altered when additional diagnostic evidence becomes available. For patients whose therapy is initiated on a weekend, differences in hospital staffing may impact the timing of therapy changes. We aimed to compare the duration of therapy of vancomycin and piperacillin-tazobactam between those who had therapy initiated on a weekday versus a weekend day.

Methods: We performed a cross-sectional study among U.S. hospitals that contributed pharmacy data for inpatients to the Vizient clinical database in 2016. We identified vancomycin and piperacillin-tazobactam courses initiated within the first 48 hours of admission; courses were categorized as weekend initiation (Friday, Saturday, Sunday) versus weekday initiation. The median days of therapy were compared between weekend and weekday initiation using the Wilcoxon rank-sum test.

Results: Among the 145 hospitals representing approximately 3.7 million patient encounters there were 401,101 encounters with vancomycin and 221,751 with piperacillin/tazobactam initiated within the first 48 hours of admission. Of these courses, 33% of vancomycin and 40% of piperacillin/tazobactam were initiated on a weekend day. The median (IQR) days of therapy for vancomycin initiated on a weekend was 2 days (1–4 days) compared to 2 days (1–3 days) when initiated on a weekday (p< .01). The median (IQR) days of therapy for piperacillin/tazobactam was 3 days (2–5 days) for courses initiated on either a weekend or weekday (p< .01).

Conclusion: We observed a statistically significant difference in the days of therapy received by patient encounters with vancomycin or piperacillin/tazobactam initiated on weekdays versus weekends. However, because of the large sample size in this study, we had power to identify small differences as statistically significant. Still, for vancomycin the 75th percentile received at least one additional day of therapy when initiated on a weekend versus a weekday. Further exploration is needed to identify if weekend initiation is associated with extended durations of therapy in specific sub-populations of patients.

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

233. Improved Penicillin Susceptibility of Streptococcus pneumoniae and Increased Penicillin Consumption in Japan, 2013–18

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Session: P-8. Antimicrobial Stewardship: Trends in Antimicrobial Prescribing

Background: Penicillin is often recommended as the first choice for *Streptococcus pneumoniae* infection due to its effectiveness and narrow spectrum. However, it is not clear whether increased penicillin consumption at the population level induces penicillin resistance in *S. pneumoniae*. The main objective of this study was to examine the association between penicillin susceptibility of *S. pneumoniae* and penicillin consumption in Japan.

Methods: We used Japan Nosocomial Infection Surveillance data, which comprehensively collected all routine microbiological test results from approximately 2,000 out of 8,000 hospitals across Japan that voluntarily participated in the surveillance. on susceptibility of *S. pneumoniae*, and sales data obtained from IQVIA Services Japan on national penicillin and cephalosporin consumption from January 2013 to December 2018. Clinical and Laboratory Standards Institute minimum inhibitory concentration breakpoints for meningitis were used as indicators of susceptibility. We analysed both sets of data by decomposing them into seasonality components and chronological trend components. The cross-correlation function was checked using Spearman's rank correlation coefficient to examine for correlation between susceptibility and consumption.

Results: After adjusting for the influence of seasonality, the susceptibility of *S. pneumoniae* to penicillin gradually improved from 0.53 in January 2013 to 0.61 in December 2018 and penicillin consumption increased in the same period from 0.67 defined daily doses per 1,000 inhabitants per day (DID) in January 2013 to 1.23 DID in December 2018, thus showing positive cross-correlation (coefficient = 0.801, $p < 0.001$). Conversely, cephalosporin consumption decreased from 3.80 DID in January 2013 to 3.33 DID in December 2018, showing negative cross-correlation with penicillin susceptibility of *S. pneumoniae* (coefficient = -0.981, $p < 0.001$).

Figure 1. Trend of penicillin-susceptibility of Streptococcus pneumoniae in Japan, 2013–2018 (based on non-meningitis MICs)

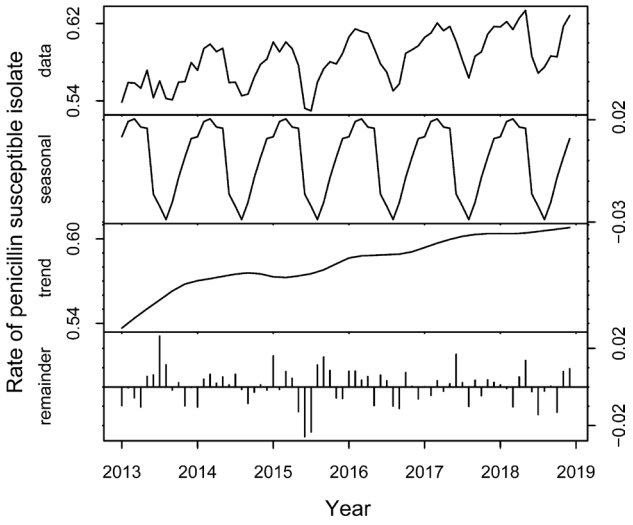

Figure 2. Sales amount of penicillins in Japan, 2013–2018

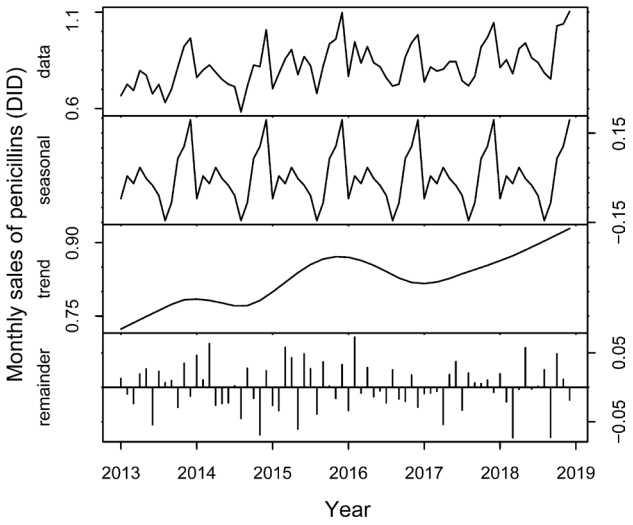

Figure 3. Sales amount of cephalosporins in Japan, 2013–2018