

## ORAL ABSTRACTS

**1326. Validation of the Antibiotic Spectrum Score Method to Measure Antibiotic De-escalation (AD) Utilizing Electronic Bar Code Medication Administration Data in Patients with Healthcare Associated Pneumonia (HCAP)**

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**Session:** 183. Advancing the Science of Antibiotic Stewardship  
Saturday, October 11, 2014: 10:30 AM

**Background.** Antibiotic de-escalation (AD) is an important component of antibiotic stewardship, yet it is difficult to measure. We previously developed a numerical scoring (Spectrum Score) method to compare antibiotic spectra between treatment

regimens at baseline (2d) and later (4d) during hospitalization to identify AD events. We recently reported the sensitivity to identify AD events as judged by antibiotic stewards was 86.3%, however, the method misclassified cases of AD involving oral (PO) substitution (ICHE, In Press). The present aim was to validate an improved spectrum score method which accounts for substitution of PO antibiotics.

**Methods.** Random admissions (n = 100) were selected from a VA-wide cohort of patients with HCAP and daily antibiotic administration data abstracted. Rules were applied to electronic antibiotic data to adjust for overlapping regimen changes then daily spectrum scores were calculated. Two antibiotic stewards scored the vignettes on a 7-point Likert scale: from escalation to de-escalation. The change in spectrum score was calculated (2d-4d score) for each case. To account for PO substitution, 3 points were added to the change in spectrum score values for cases with only PO antibiotics given on 4d. Correlation between a change in spectrum score and mean Likert scores was estimated with Pearson's correlation coefficient. To summarize test characteristics, the sensitivity and specificity of the sign of change in spectrum score to predict expert AD classification were calculated.

**Results.** The mean (SD) 2d and 4d spectrum scores were 44.8(8.4) and 42.6(9.4), respectively (p = 0.001). Stewards identified AD, no change in therapy, or escalation in 35%, 59%, and 6% of cases, respectively [average intra-class correlation coefficient - + 95% CI: [ 0.85 (0.77-0.90)], whereas, the spectrum score method identified AD, no change in therapy, or escalation in 35%, 58.0%, and 7% of these cases, respectively. The sensitivity and specificity of the spectrum score method to identify AD events judged by stewards was 91.4 and 95.4%, respectively. Pearson correlation coefficient = 0.658 (p < 0.01).

**Conclusion.** The spectrum score method, which can measure AD in electronic medical records, demonstrated good sensitivity and specificity to identify AD events as judged by antibiotic stewards.

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