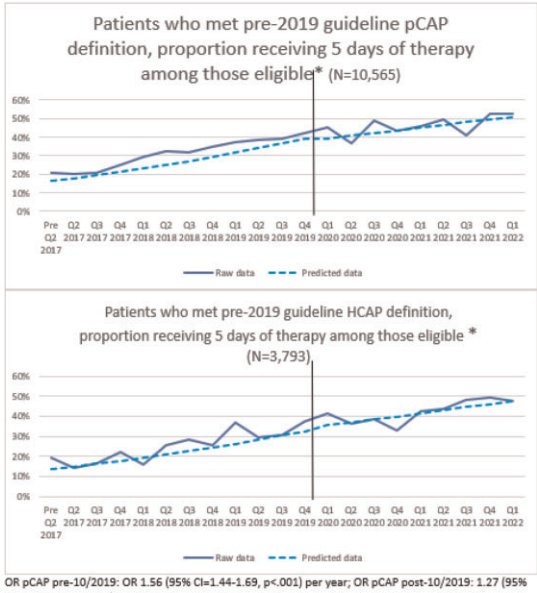
Session: 221. Antimicrobial Stewardship: Trends in Antimicrobial Prescribing
Saturday, October 22, 2022: 12:15 PM

Background. In 10/2019, revised ATS/IDSA community-acquired pneumonia (CAP) guidelines removed healthcare-associated pneumonia (HCAP), expanding patients eligible for a 5-day antibiotic course. Using data from 46 hospitals in the Michigan Hospital Medicine Safety Consortium, we quantified the impact of removing HCAP on antibiotic duration for CAP.

Methods. From 11/2017 to 1/2022, data were abstracted from medical records of adult non-ICU medical patients admitted with pneumonia. Our primary outcome was percentage of patients who received 5-days of antibiotics out of those who, under the new CAP guidelines would be eligible for 5-days (including patients defined as HCAP prior to the 2019 guideline) [Table 1]. We evaluated using Chi-square, if the effect of the guidelines differed for patients defined as CAP based on the 2007 CAP guideline (pCAP) vs. HCAP. To assess the effect of the new guideline on 5-day therapy, we used segmented logistic regression accounting for hospital level clustering to look at changes at baseline and overtime before and after 10/2019.

Table 1. Pneumonia definition details

Pneumonia Classification	Definition
Healthcare-associated pneumonia (HCAP-as defined in 2005 HCAP/HAP/VAP Guidelines, removed in 2019 CAP guidelines)	Nursing home resident, hospitalization within 90 days, intravenous chemotherapy, home wound care or infusion therapy, or chronic dialysis within 30 days
pCAP (CAP as defined by the 2007 IDSA/ATS guideline)	Patients admitted with pneumonia that do not meet HCAP or the following exclusion criteria: Moderate immune compromise, structural lung disease, respiratory culture with *Staphylococcus aureus* or non-fermenting gram negative, moderate to severe chronic obstructive pulmonary disease
Community-acquired pneumonia (CAP-as defined in ATS/IDSA 2019 guidelines)	Includes pCAP + HCAP
Eligible for 5-day antibiotic duration	Any of the above definitions (CAP, HCAP, or pCAP) who were clinically stable by day 5, or discharged by day 3 of hospitalization, or no alternative reason for longer duration



OR pCAP pre-10/2019: OR 1.56 (95% CI=1.44-1.69, p<.001) per year; OR pCAP post-10/2019: 1.27 (95% CI=1.14-1.42, p<.001); p=0.001
OR HCAP pre-10/2019: OR 1.51 (95% CI=1.33-1.71, p<.001) per year; OR HCAP post-10/2019: OR 1.28 (95% CI=1.09-1.51, p=0.003; p=0.12
pCAP-Community-acquired pneumonia meeting 2007 IDSA CAP guideline definition; HCAP-Healthcare associated pneumonia meeting 2005 HCAP/HAP/VAP guideline definition; Q-Quarter; OR-Odds ratio
Vertical line approximates 10/2019, date of guideline revision publication.

Figure 1. Applying pre-2019 pneumonia definitions for the entire time period, percent of pneumonia patients who received 5 days of treatment among those eligible over time, pCAP vs HCAP

Results. When applying the 2019 CAP definition to 34,810 patients admitted with pneumonia over the entire period, 41.2% (N=14,358) of patients were eligible for 5-day duration. Applying pre-2019 categorization to the entire period, 46.4% of pCAP (N=10,565/22,757) and 31.5% of HCAP (N=3793/12,053) were eligible for 5-day duration. Of those 5-day eligible, 34.4% (N=4,936) received 5 days (pCAP 35.5% N=3750; HCAP 31.2% N=1186, P< .001). Before 10/2019, 29.5% (N=2,018) of patients with pCAP who were eligible received 5 days vs 23.6% (N=548) of HCAP (P< .001). Post 10/2019, 46.5% (N=1,732) of patients with pCAP eligible received 5 days vs 43.5% (N=638) of HCAP (P=0.049). The improvement rate in 5-day therapy decreased after 10/2019, with similar decrements for both pCAP and HCAP [**Figure 1**].

Conclusion. Among patients hospitalized with pneumonia, two thirds received an excess antibiotic duration, with similar proportions for pCAP and HCAP. Prior

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1800. Impact of Updated ATS/IDSA CAP Guidelines on Duration of Antibiotics

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to the new guidelines, the 5-day treatment rate was improving for HCAP and pCAP. However, the rate of improvement decreased after 10/2019 for both pCAP and HCAP, suggesting the 2019 guidelines did not have an added effect on improving antibiotic duration.

Disclosures. **Valerie Vaughn, MD, MSc**, Thermo Fisher Scientific: Honoraria.