

*influenzae* (Hi) 15.4% (33.3% nontypable Hi), *B-hemolytic Streptococci* Group A 1.5% and *Neisseria meningitidis* 0.7%. Seventy-one percent of cases had complications (pleural effusion 63%, necrotizing pneumonia 11.1%, pneumothorax 8.1%, lung abscess 3.7%, atelectasis 0.7%). Other clinical manifestations combined with CABP were: sepsis 20%, cellulitis/abscess 9.6%, arthritis 6.7%, meningitis 5.9% and osteomyelitis 3.7%. Condensation was the predominant radiological pattern for all agents in 88.1%. Lethality rate was 3%. Sp was more associated with age  $\geq 24$  months [OR 2.78 (1.18–6.64)] and Hi was more associated with age  $< 24$  months [OR 4.76 (1.62–14.31)]. Complications were significantly higher among Sa pneumonia cases. Children with CABP and sepsis or arthritis had higher lethality [OR 13.38 (1.14–355.45) and OR 17.71 (1.46–223.73)], respectively.

**Conclusion.** After PCV13 introduction Sp was still the most common organism causing CABP, mainly in  $\geq 24$  months of age. Sa followed in frequency with high morbidity. CABP combined with other clinical manifestations were more associated with lethality.

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#### 1461. Non-Invasive Pneumococcal Pneumonia in the United States, 2013–2014

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**Session:** 147. Respiratory Infections: CAP

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**Background.** Surveillance for pneumococcal pneumonia (PP) is challenging due to limitations of available diagnostic tests. Previous studies estimated PP from all-cause pneumonia or invasive pneumonia (i.e., positive *S. pneumoniae* sterile site culture). In 2014, pneumococcal conjugate vaccine (PCV13) was recommended for adults  $\geq 65$  years old. We established population-based surveillance for non-invasive pneumococcal pneumonia (NPP) to estimate disease burden and establish a baseline for PCV13 impact evaluation.

**Methods.** We defined a case as clinically or radiographically confirmed pneumonia, positive pneumococcal urine antigen test (UAT), and no evidence of invasive pneumococcal disease in a hospitalized adult  $\geq 18$  years old residing in our surveillance areas, which overlap with active bacterial core surveillance areas representing 17,000,000 adults across the United States. We estimated NPP incidence (cases/100,000 population) using US Census data and applying two adjustment factors: (1) the proportion of pneumonia tested by UAT in sampled facilities to account for the fact not all possible cases are tested and (2) the proportion of pneumonia seen at facilities offering UAT in the catchment area.

**Results.** In 2013–2014, 1,854 patients met our case definition; median age was 65 years (range 18–102). On average, patients were diagnosed on hospital Day 1 (range –3 to 30 days) and hospitalized for 5 days (range  $< 1$ –152). Adjusting the crude incidence of 6/100,000 (reported UAT cases) by factors 1 and 2, we estimated NPP incidence to be 99/100,000 population.

**Clinical Description of Patients with UAT Confirmed NPP (N 1,854)**

	<i>n</i>	(%)
Age $\geq 65$ years	953	(51)
Radiographically confirmed pneumonia	1,604	(87)
Intensive care unit admission	653	(35)
Died	119	(6)
Underlying medical condition	1,752	(95)
Immunocompromising condition	764	(41)
Smoke tobacco	677	(37)

**Conclusion.** Our population-based surveillance system allows us to estimate the incidence of laboratory confirmed NPP. Given imperfect UAT sensitivity, this is an underestimate. A more sensitive and serotype-specific UAT could provide improved detection and understanding of NPP. Nonetheless, NPP surveillance allows us to better understand populations at risk for NPP and establish a baseline to evaluate impact of PCV13 on NPP incidence among adults.

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#### 1462. Hospital Admission Patterns in Adult Patients with Community-Acquired Bacterial Pneumonia Who Received Ceftriaxone and a Macrolide by Pneumonia Severity Index Score

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**Session:** 147. Respiratory Infections: CAP

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**Background.** Given the disparity in cost between inpatient and outpatient care, the IDSA/ATS community-acquired pneumonia (CAP) guidelines recommend use of site-of-care severity of illness indicators to identify CAP patients who may be candidates for outpatient treatment. Despite this level 1 recommendation, there are limited data on US hospital community-acquired bacterial pneumonia (CABP) admissions patterns stratified by Pneumonia Severity Index (PSI) score and presence of comorbidities. This study described hospitalization and length of stay (LOS) patterns among adult patients with CABP who received ceftriaxone (CTX) and a macrolide (M) at admission in the MedAssets database. The primary objective was to quantify the proportion of admissions and associated hospital LOS among “low-risk” patients (PSI score  $\leq 90$ ) where outpatient or short admission is advocated.

**Methods.** A retrospective study of patients hospitalized for CABP and in the MedAssets database during 2012–2015 was performed. Inclusion criteria: (1) age  $\geq 18$  years, (2) a primary diagnosis for CABP, (3) received CTX and a M on hospitalization Day 1 or 2, and (3)  $\geq 1$ -year enrollment before the index date. For patients with multiple hospitalizations for CABP during the study period, only the first episode was considered. Distribution of hospital admissions was stratified by PSI categories and Charlson Comorbidity Index (CCI). Both PSI and CCI were derived from diagnosis codes. Hospital LOS and mortality rates were tabulated across resulting PSI-CCI categories.

**Results.** During the study period, 68,254 patients met inclusion criteria. Among hospitalized CABP patients, 35% had a PSI score  $\leq 70$  and 33% had a PSI score between 71–90. The mean LOS for patients with a PSI score  $\leq 70$  and 71–90 ranged between 5.2 and 6.6 days, depending on CCI score. Mortality was less than 0.5% for patients with PSI score  $\leq 70$  and 1.4% for patients with a 71–90 PSI score.

**Conclusion.** More than two-thirds of hospitalized CABP patients who received CTX and an M had a PSI score  $\leq 90$ . On average, hospital LOS was 5–6 days for CABP patients with PSI  $\leq 90$ . These findings reflect the critical need to identify outpatient treatments that can effectively reduce hospital admissions.

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#### 1463. Comparative Evaluation of Adverse Tendon Events Between Recipients of Fluoroquinolones and Ceftriaxone/Azithromycin Among Veterans Affairs Patients with Community Acquired Bacterial Pneumonia

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**Background.** Fluoroquinolones (FQs) are used commonly for patients with community acquired bacterial pneumonia (CABP). A recent FDA Drug Safety Communication strengthened labeling regarding tendinopathy/tendon rupture for FQs. The data prompting this change lacked a comparator group of patients using other antibiotics, like ceftriaxone/azithromycin (CTX-AZ) for similar indications. The objectives of this study were to compare the incidence of adverse tendon events (TE) between FQ and CTX-AZ among patients with CABP and determine if FQ treatment is independently associated with TE.

**Methods.** A retrospective cohort study was performed among patients in the Upstate New York Veterans’ Healthcare Administration. Inclusion criteria: (1) age  $\geq 18$  years, (2) diagnosis of CABP (ICD9 code with manual confirmation) from January 2014 to December 2015, (3) receipt of IV/oral FQ or CTX-AZ  $\geq 1$  day, and (4) treatment initiated as inpatient. Data were collected from pt’s medical records. Occurrence of TE was defined using a natural word search algorithm of patients’ clinical progress notes within 90 days of starting FQ or CTX-AZ therapy. Search terms were: tendinopathy, tendon pain, tendon rupture, tendinitis, and Achilles heel pain/tear/torn/rupture. Classification and regression tree (CART) was used to identify breakpoints in continuous variables associated with TE.

**Results.** There were 379 FQ and 274 CTX-AZ recipients. Mean  $\pm$  standard deviation (SD) ages for FQ and CTX-AZ recipients were, 73.0  $\pm$  12.7 vs. 72.8  $\pm$  12.7 years, respectively. Mean (SD) APACHE-II was significantly higher for FQ than CTX-AZ recipients, 10.2  $\pm$  5.1 vs. 8.5  $\pm$  3.6, respectively ( $P < 0.001$ ). Residence in the intensive care unit at start of therapy did not differ (FQ: 11.6% vs. CTX-AZ: 10.2%,  $P = 0.58$ ). The incidence of TE did not differ between groups (FQ: 9/379 [2.4%] vs. CTX-AZ: 4/274 [1.5%],  $P = 0.57$ ). In multivariate analyses (figure), treatment was not independently associated with TE (aOR: 1.78, 95% confidence interval: 0.51–6.21,  $P = 0.37$ ) after adjustment for treatment duration, APACHE-II, age  $\geq 52$  years and BMI  $\geq 27.5$ .