IPD cases in adults 218 years; PCV13 serotypes accounted for 53% in 2019 and 29% of IPD in 2016. The correlations between IPD (ABC) with INV pneumonia (SENTRY) and N-INV pneumonia (SENTRY) were 0.937 and 0.973 (both P < 0.01), respectively (Table 1). The proportion of IPD and N-INV pneumonia due to vaccine serotypes decreased consistently and monotonically until 2014 and then plateaued (Figure 1).

**Conclusion.** We found a strong correlation between IPD and N-INV pneumonia, both of which were significantly associated with PCV13 vaccine coverage. Our findings suggest that the decrease in IPD and N-INV pneumonia due to PCV13 serotypes could reflect the impact of PCV13 vaccination in preventing disease in each population. Further studies are needed to assess whether these trends will continue in the future.

**Disclosures.** J. A. Suaya, A. G. Arguedas, D. L. Swardlow, Pfizer Inc.: Employee and Shareholder, Salary. R. E. Mendes, Merck: Research Contractor, Research support. J. Vojicic, Pfizer: Employee and Shareholder, Benefits and stock and Salary. R. E. Isturiz, Pfizer Inc.: Employee and Shareholder, Salary and Stock & Stock Options. B. D. Gesnner, Pfizer Inc.: Employee and Shareholder, Salary.

**1447. Molecular Epidemiology, Serotype Distribution, Antimicrobial Sensitivity, and Clinical Findings of Adult Pneumococcal Pneumonia Patients in Japan: Hospital-Based Study**

Satotaka Kaku, MD, PhD; M. Motosu Suzuki, MD, PhD; Christopher M. Parry, MD, PhD; Michio Yasunami, MD, PhD; Moto Kusonose Morimoto, MD, PhD; and Adult Pneumonia Study-group Japan; 1Department of Clinical Medicine, Institute of Tropical Medicine, Nagasaki University, Nagasaki, Japan; 2Adult Pneumonia Study Group-Japan, Nagasaki, Japan; 3Clinical Sciences, Liverpool School of Tropical Medicine, Liverpool, UK; 4Department of Medical Genomics, Life Science Institute, Saga-ken Medical Centre Koseikan, Saga, Japan

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

**Friday, October 5, 2018: 12:30 PM**

**Background.** S. pneumoniae (SP) is one of the most important bacteria for pneumonia among adults. We investigated hospital-based proportion of antimicrobial resistance, distribution of serotypes, sequence types (STs) and clinical findings among adult pneumococcal pneumonia patients, and compared microbiological results with the previous study that was reported 10 years ago in Japan.

**Methods.** A multicenter prospective surveillance for adult pneumonia was conducted from September 11 to August 2014 in Japan. We enrolled aged over 15 years, community-acquired or healthcare-associated pneumonia patients, and compared microbiological results with the previous study that was reported 10 years ago in Japan.

**Results.** A total of 210 patients were admitted to the inpatient pediatric service. The proportion of 13-valent pneumococcal conjugate vaccine and 23-valent pneumococcal polysaccharide vaccine serotypes was 58.5 and 75.6%, respectively. Most of SP strains were sensitive for antibiotics (96.1% for PCG, 94.1% for CTRX, and 81.5% for MEP). The proportion of 3 or more CURB-65 score was 36.4 and 20.7%, respectively; the proportion of 3 or more CURB-65 score than those of the previous study were 22.9% and 8.1%, respectively. The proportion of 3 or more CURB-65 score was 36.4 and 20.7%, respectively; the proportion of 3 or more CURB-65 score than those of the previous study were 22.9% and 8.1%, respectively.

**Conclusion.** In Japan, SP sensitivity for antibiotics, dominant serotype and ST were not changed so much from 10 years ago. Serotype 3 contributed to the disease severity of adult pneumococcal pneumonia in Japan.

**Disclosures.** K. Morimoto, Pfizer: speaker, Speaker honorarium.

**1448. Impact of Mental Illness on Outcomes of Outpatients with Community-Acquired Pneumonia**

Kari Mergenhan, PharmD, BCPS AQ-ID; Megan Skelly, PharmD; Bethany Wattengel, PharmD; Randal Napierala, PharmD; John Sellick, DO, MS, FIDSA, FSHEA and Jennifer Schroek, PharmD; Department of Infectious Diseases, VA Western New York Healthcare System, Buffalo, New York; 1Psychiatry, VA WNY Healthcare System, Buffalo, New York; 2Pharmacy, VA WNY Healthcare System, Buffalo, New York; 3Department of Medicine, VA Western New York Healthcare System, Buffalo, New York; 4Department of Pharmacy, VA Western New York Healthcare System, Buffalo, New York

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

**Friday, October 5, 2018: 12:30 PM**

**Background.** The Infectious Diseases Society of America (IDSA) made guidelines for management of community-acquired pneumonia (CAP) in healthy infants and children older than 3 months of age. These were made to assist clinicians in choosing appropriate antibiotic therapy in order to decrease morbidity and mortality and minimize unnecessary antimicrobial resistance. According to the guideline, narrow-spectrum antibiotics at first-line treatment but inappropriate selection of broad-spectrum antibiotics remains an issue. Our study investigates the concordance between emergency department (ED) and in-patient prescribers in choosing appropriate antibiotic therapy for CAP.

**Methods.** This retrospective chart reviews the aforementioned population who were admitted to the inpatient pediatric service via the ED from January 1, 2015–December 1, 2017. Data collection included patient demographics, prior antibiotic use from an outside prescriber, the antimicrobial prescribed in the ED, and the antimicrobial used in the pediatric unit. The primary outcome determined the consistency between the prescribing patterns in the ED and the inpatient. A descriptive statistical analysis was conducted afterward.

**Results.** A total of 210 patients were admitted to the inpatient pediatric service. The ED prescribed an aminopenicillin to 2.9% of patients or a cephalosporin as monotherapy to 70.8%; 9.9% of cases were started on both. A significant positive correlation was noted (P = 0.65; 0.0001); however, differences in prescribing rates of a QTc prolonging agent were not statistically significant (85.3% vs. 83.4% P = 0.5353).

**Conclusion.** While mental illness is often associated with poor outcomes, this study emphasizes the need to continue to remove the stigma of mental illness when treating patients with community-acquired infections.

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

**1449. Comparison of Emergency Department vs. Inpatient Pediatric Treatment for Empiric Community Aquired Pneumonia in Infants and Children over 3 Months of Age**

Jan Fune, MD, Pediatrics, Jersey Shore University Medical Center, Neptune, New Jersey

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

**Friday, October 5, 2018: 12:30 PM**

**Background.** Morbidity and mortality associated with antimicrobial resistance are high. Our study investigates the concordance between emergency department (ED) and in-patient prescribers in choosing appropriate antibiotic therapy for CAP.

**Methods.** This retrospective chart review was performed using ICD-9/10 codes for CAP between January 1, 2008 and January 31, 2018. Patients were included if they were seen at the Western New York VA Healthcare System, emergency room, primary or rural care clinics. Data were analyzed via the Student's t-test or chi-squared test.

**Results.** A total of 518 patients met criteria met criteria and 49% had a psychiatric disorder. Compared with patients without psychiatric disorders, patients with psychiatric co-morbidity were more likely to receive an appropriate dose of antibiotics (99.4% vs. 93.6% P = 0.0004) as well as an appropriate duration (78% vs. 68% P = 0.03). Patients with a psychiatric disorder were not more likely to experience failure or subsequent admission. There was no statistically significant difference in early or late CAP treatment failure in those with a psychiatric disorder compared with those without (P = 0.3383; P = 0.016). There was also no statistically significant difference in 30-day readmission rates, 30-day mortality, or 90-day mortality (P = 0.4095; P = 0.3383; P = 0.3790).

**Conclusion.** While mental illness is often associated with poor outcomes, this study emphasizes the need to continue to remove the stigma of mental illness when treating patients with community-acquired infections.

**Disclosures.** All authors: No reported disclosures.
between April 2014 and March 2018 were enrolled. Differences on patients’ background and clinical parameters between MCAP and CAP caused by *S. pneumoniae* (SCAP) were compared with elucidate the clinical characteristics of MCAP. Patients with bed-ridden status, residents in nursing home, more than two microorganisms were detected from sputum, were excluded.

**Results.** During the study period, 114 MCAP and 107 SCAP were identified. In two groups, general status was mild (score ≤2) in 65.7% vs. 64.4% according to Japanese pneumonia severity scoring system (A-DROP), and the qSOFA score was also relatively low (score ≤2) in 95.6% vs. 91.5%. Although there was no difference in the ratio of sex in two groups, the age was significantly higher in MCAP cohort (the mean age; 77 ± 68 years old, P = 0.01). Compared with SCAP, MCAP had a significantly higher pulmonary underlying diseases such as bronchiectasis (P < 0.01), asthma (P < 0.05), interstitial pneumonia (P < 0.05), and lung cancer (P < 0.05), home oxygen therapy (P < 0.01), and systemic disease (P < 0.05). Diagnostic concordance rate between sputum smear on Gram-stain and bacterial cultivation was lower in MCAP patients (78% vs. 87.8%; P = 0.05). In radiological findings, bronchopneumonia pattern was predominant in MCAP group than PCAP group (95.6% vs. 62.6%; P < 0.01). On the other hand, developing a chill and co-infection with flu were common in PCAP patients (78% vs. 87.8%; P < 0.01). There was no statistical significant difference on length of treatment and hospital stay in two groups (P = 0.66 and 0.55, respectively). All patients in both groups recovered.

**Conclusion.** In the present study, the characteristics of MCAP were as follows; (i) mainly occurred in elderly patients under pulmonary and systemic diseases, (ii) pre-sent with relatively mild symptoms, (iii) bronchopneumonia pattern was predominat, and (iv) benign prognosis.

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

1451. Predictive Values of Methicillin-Resistant Staphylococcus aureus (MRSA) Nasal Swab PCR Assay for MRSA Pneumonia

Man Ting Chou, PharmD1; Romic Eskandarian, PharmD2; Hemi Jung, PharmD3; Ross Pineda, PharmD Candidate 20194; Su Lee, PharmD4; and Keitaro Kagwaguchi, PharmD5.

**Methods.** One hundred seventy-four patients met the inclusion criteria, 30 with positive MRSA nares and 144 with negative MRSA nares. No statistical differences were found between baseline characteristics between the two groups. The positive predictive value of the MRSA nasal swab for MRSA pneumonia was 0.3 and its negative predictive value was 0.97. The sensitivity was 64% and the specificity was 87%.

**Table 1.** Predictive Values of MRSA Nasal Swab for MRSA Pneumonia

| Respiratory Culture | Respiratory Culture | Predictive Value |
|---------------------|---------------------|-----------------|
| MRSA Nares (+) (N = 30) | 9 | 21 | 0.3 |
| MRSA Nares (+) (N = 144) | 5 | 129 | 0.97 |

**Conclusion.** MRSA nasal swab has a negative predictive value to rule out MRSA pneumonia and reduces time to discontinuation of empiric MRSA-targeted antimicrobial therapy. The positive predictive value was low and should not be used as a sole factor to initiate antimicrobial therapy.

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

1452. Non-invasive Pneumococcal Pneumonia in Adults in Portugal: Continued Decline of PCV13 Serotypes (2015–2017)

Catarina Silva-Costa, PhD; Eliza Lopes, MSc; Mario Ramírez, PhD; Jose Malo-Cristino, MD, PhD and Portuguese Group for the Study of Streptococcal Infections; Instituto de Microbiologia, Instituto De Medicina Molecular, Faculdade de Medicina, Universidade de Lisboa, Lisbon, Portugal

**Session 147. Respiratory Infections: CAP**

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**Background.** The Center for Disease Control (CDC) reports that methicillin-resistant Staphylococcus aureus (MRSA) has been linked to over 80,000 severe infections and 11,000 deaths per year. Due to this concern, patients are commonly and overly started on empiric MRSA-targeted antimicrobial agents. Antimicrobial stewardship encourages the rapid de-escalation of therapy to minimize the overuse of antibiotics and resistance to these antimicrobials. Respiratory cultures are used to confirm organ ism(s) which may take days to result. Recent emerging literature suggests that the use of MRSA nasal swab PCR assay as a predictive diagnostic tool for MRSA pneumonia to shorten the duration of empiric therapy. The primary objective of this study was to assess both the positive and negative predictive values of the MRSA nasal swab for MRSA pneumonia.

**Methods.** We conducted a single-centered, retrospective chart review of all patients admitted from February 2017 to 2018 with a confirmed diagnosis of pneumonia. Patients who were screened for MRSA nares and had a respiratory culture within 48 hours of the screening were included in this study. Patients who failed to meet these criteria, they were excluded from the study. This study has been exempt from the Institutional Review Board (IRB).

**Results.** One hundred seventy-four patients met the inclusion criteria, 30 with positive MRSA nares and 144 with negative MRSA nares. No statistical differences were found between baseline characteristics between the two groups. The positive predictive value of the MRSA nasal swab for MRSA pneumonia was 0.3 and its negative predictive value was 0.97. The sensitivity was 64% and the specificity was 87%.

**Background.** In 2015, PCV13 was introduced in the National Immunization Plan for children, a significant decrease in the proportion of PCV13 serotypes was noted in the adult population, although a considerable fraction of disease is still caused by vaccine serotypes. Moreover, nonvaccine serotypes are becoming important causes of NIPP, emphasizing the importance of continued surveillance studies.

**Disclosures.**

M. Ramirez, Pfizer: Speaker’s Bureau, Speaker honorarium; Glassmuth Inc: Consultant, Consulting fee; Medco: Consultant, Consulting fee. J. Melo-Cristino, Pfizer: Grant Investigator and Speaker’s Bureau, Research grant and Speaker honorarium; Merck Sharp and Dohe: Consultant, Speaker honorarium.

**Session 147. Respiratory Infections: CAP**

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**Background.** Pneumonia is a serious illness with potentially long-lasting but poorly-characterized impact on quality of life. The Japanese Goto Epidemiology Study is a prospective, active, population-based surveillance study with community-onset pneumonia (COMP), that includes assessment of Quality Adjusted Life Years (QALYs).

**Methods.** Patients with X-ray/CT scan confirmed COPD enrolled in the Goto cohort were consented to participate in QALY assessment responded to Japanese versions of EuroQol-5D-5L (EQ-5D-5L) health state classification (primary), EQ-5D visual analog scale, and SF-6D (secondary) instruments. This interim analysis reports 91-day QALYs based on Day 1 (diagnosis), 8, 16, 31, and 91 EQ-5D-5L responses of patients enrolled between June 1, 2017 and February 7, 2018. In addition, we developed hypothetical QALYs had the patients not developed pneumonia (control). Using the EQ-5D-5L scores from Day 30 (via recall) carried forward and adjusted by the natural decline in scores and death with age. QALYs were calculated as the area (trapezoidal method) under the survival weighted pneumonia and control EQ-5D-5L QALY score curves.

**Results.** The 234 patients were 55% male, 88% aged 264 years, 45% nursing home residents, and 65% initially hospitalized (35% initially outpatient) for COP. Compliance for interviews among survivors was 100%. EQ-5D-5L scores were 0.732 at Day –30, decreased to 0.590 at diagnosis, and rose to 0.675 by Day 91. The average score at all time points remained below Day –30 (all P values <0.01). Compared with hypothetical controls, development of pneumonia on average resulted in a loss of 0.0429 QALYs (P <0.001) during the first 91 days of follow-up.

**Conclusion.** Among residents of Goto Island, Japan, significant QALY losses were observed in association with a diagnosis of pneumonia and had not returned to baseline by 3 months after diagnosis. Scores and cumulative QALY losses during the first 3 months after pneumonia diagnosis were comparable to those experienced by US adults with chronic heart failure during a 3-month period.

**Disclosures.** H. Glick, K. Hirano, Pfizer Inc: Consultant, Research support. T. Miyazaki, Pfizer Inc.: Collaborator, Research support and Speaker honorarium. H. Glick, M. Gonzalez, R. D. Gessler, A. G. Arguedas, Pfizer Inc: Employee and Shareholder, Salary. R. E. Isturiz, Pfizer, Inc: Employee and Shareholder, Salary and Stock & Stock Options. S. Kohno, Pfizer Inc.: Consultant, Research support and Speaker honorarium.