Conclusion. Influenza vaccination was most effective 14-89 days post-vaccination and effectiveness decreased thereafter. Repeat influenza vaccination, however, was not significantly associated with greater odds of influenza. The waning effectiveness of influenza vaccination indicates additional consideration be given to the timing of vaccination.

Disclaimer

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1513. Medically Attended Respiratory Syncytial Virus Hospitalizations (RSVH) and All-Cause Bronchiolitis Hospitalizations (BH) Among Children Aged ≤ 24 Months at RSV Season Start With Higher-Risk Congenital Heart Disease (CHD) Before and After the 2014 American Academy of Pediatrics (AAP) Policy

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Session: P-68. Respiratory Infections - Viral

Background. In 2014, the AAP stopped recommending palivizumab for use in children with hemodynamically significant CHD (hs-CHD) aged 12 to 24 months at the RSV season start. This analysis investigates the impact of the 2014 AAP policy on the contemporary burden of RSVH and BH in children with CHD for whom palivizumab immunoprophylaxis is no longer recommended.

Methods. All children with CHD aged ≤ 24 months at the start of the RSV season and hospitalized for RSV or BH during the 2010-2017 RSV seasons (November-March) were studied. RSVH and BH were defined by International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) and ICD-10-CM codes. As there are no ICD codes for hs-CHD, we evaluated the effect of the guidance on higher-risk CHD as defined by ICD codes.[1] Frequency and characteristics of RSVH and BH and disease severity (including intensive care unit [ICU] admission and mechinical ventilation) for these children before and after the 2014 AAP guidance using the Children's Hospital Association's Pediatric Health Information System[*] (PHIS) data set were described. SAS version 9.4 was used for statistical analysis of this data, with z-tests method used to determine statistical significance.

Results. RSVH significantly increased after 2014 for all higher-risk CHD children aged ≤ 24 months (3.4% [1992 RSVH CHD/59,217 RSVH] before the 2014 guidance and 4.0% [1798 RSVH CHD/45,470 RSVH] after; $P< 0.0001$) and for the subgroup of children aged 12 to 24 months at the start of the RSV season (0.5% before the guidance and 0.8% after; $P< 0.0001$). Disease severity as measured by ICU admissions in the 12 to 24 months subgroup also significantly increased after the 2014 guidance (0.2% before the guidance and 0.3% after; $P< 0.0001$). Mechanical ventilation usage was not statistically significantly increased after the 2014 guidance ($P=0.188$). A similar pattern of results was found for BH.

Conclusion. RSVH, BH, and associated disease severity significantly increased among higher-risk CHD children aged 12 to 24 months, within the PHIS health system, after the 3 RSV seasons following the 2014 AAP RSV immunoprophylaxis recommendations.

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1514. Mortality and Readmission in Adults during the First Year Following Hospitalization for Community-Acquired Pneumonia in the US

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**Session:** P-68. Respiratory Infections - Viral

Background. Increasing evidence suggests that the impact of community-acquired pneumonia (CAP) extends beyond discharge from the hospital and the acute phase of illness. We sought to characterize mortality and hospital readmission across the adult age span and spectrum of comorbidities.

Methods. A retrospective cohort design and data from Optum's de-identified Integrated Claims-Clinical dataset (2009-2018) were employed. Study population comprised all adults who, between 1.1.2013 and 12.31.2017, had ≥ 1 acute-care hospitalization for CAP; each qualifying CAP hospitalization separated by ≥ 365 days was included as a unique observation in analyses. Study outcomes included acute-care hospital readmission for any reason and death for any reason. Hospital readmission was ascertained during the 360-day period following discharge from the CAP hospitalization; death was ascertained during the CAP hospitalization as well as during the same 360-day period. Cumulative rates of mortality and readmission were summarized for all patients as well as subgroups defined on age and comorbidity profile (i.e., healthy, at-risk, high-risk).

Results. Study population totaled 37,006 patients who contributed 38,809 CAP hospitalizations; mean age was 71 years, 51% were female, and 88% had an at-risk (33%) or high-risk (55%) condition. Hospital readmission was 12.5% during the 30-day post-discharge period, and 42.3% during the 360-day post-discharge period. Mortality was 3.5% in hospital, 8.2% from admission to 30 days post-discharge, and 17.7% from admission to 360 days post-discharge. Mortality rates increased with age and severity of comorbidity profile; readmission rates were highest for persons aged 65-74 years and high-risk persons.

Rates of readmission and mortality among adults hospitalized for CAP

Figure. Rates of readmission and mortality among adults hospitalized for CAP

*Mortality at 0 days after discharge = mortality during CAP hospitalization
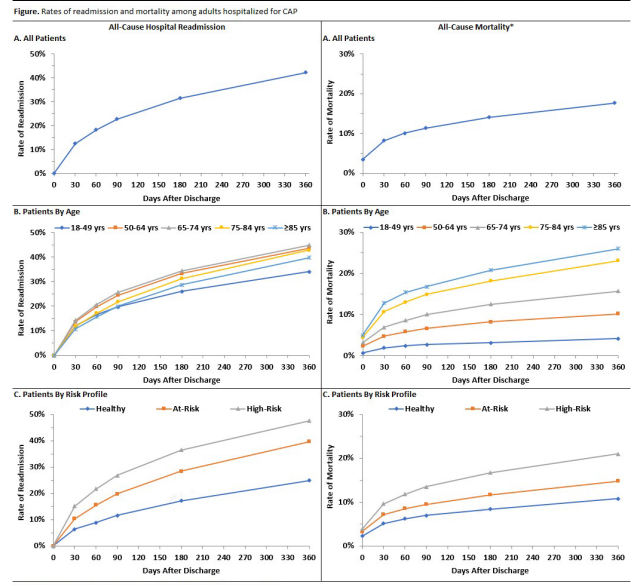
Conclusion. All-cause mortality up to 1 year following hospital admission for CAP was substantial, and was associated with increasing age and worsening comorbidity profile. Both readmission and mortality were greater at all ages in high-risk and at-risk groups compared with their healthy counterparts. Strategies that prevent pneumonia and/or the pathophysiologic changes that follow CAP, especially among individuals with comorbid conditions, have the potential to reduce morbidity and mortality following CAP as well as healthcare costs associated with readmission.

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1515. Nationwide trends of invasive pneumococcal disease in Spain for the period 2009-2019

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Session: P-68. Respiratory Infections - Viral

Background. Introduction of pneumococcal conjugate vaccines (PCV) is an effective measure to control the invasive pneumococcal disease (IPD) although the emergence of non-vaccine serotypes is of great concern worldwide.

Methods. This study includes national data from IPD cases affecting pediatric and adult population for the period (2009-2019). Data contain 25341 laboratory-confirmed clinical isolates of *Streptococcus pneumoniae* causing IPD in Spain.

Results. The overall reduction of IPD cases by serotypes included in PCV13 was 88% for children and 67% in adults with a constant increase of IPD cases by serotype 8 in adults since 2015. In children, serotypes 24F (12%), 8 (10%) and 3 (9%) were the most frequent in 2019 whereas in adults, serotypes 3 and 8 accounted for 37% of IPD cases. IPD cases in adults by additional serotypes covered by the 23-valent polysaccharide vaccine (PPV23) have risen constantly within the years, increasing from 19% in 2009 to 52% in 2019. IPD cases by Non-vaccine types in adults (not covered by PCV13 or PPV23) show a moderate increase from 14% in 2009 to 24% in 2019.

Conclusion. Emerging serotypes are observed in Spain with the rise of serotype 24F in children and 8 in adults as a worrisome event.

Disclosures. **Jose Yuste, n/a, GSK** (Consultant)**MSD** (Consultant, Research Grant or Support)**Pfizer** (Consultant)

1516. Outbreak of SARS-CoV-2 among Migrant Farm Workers in North Florida

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Session: P-68. Respiratory Infections - Viral

Background. Migrant farmworkers have been identified as a vulnerable population for Severe Acute Respiratory Syndrome Novel Coronavirus-2 infection (SARS-CoV-2). The objectives of this study were to detect the SARS-CoV-2 infection (COV19) status among 262 migrant farmworkers in North Florida.

Methods. This is a retrospective analysis of the information gathered from migrant workers referred by the Florida Dept. of Health for evaluation. Due to the urgency of returning to Mexico, subjects with which COV19 was detected were reevaluated for detailed medical history. Therefore, subjects that tested negative were later released following CDC guidelines. COV19 status was determined using an RNA qualitative nucleic acid amplification test (NAAT) from nasopharyngeal swabs collected over a three-day period. Variables collected include demography, symptoms, temperature, comorbidities, medication use, and vaccine status. Statistical significance for categorical variables was assessed using χ^2 test or Fisher's exact test where appropriate. Remaining variables were assessed using basic descriptive analysis.

Results. From the 262 subjects tested, 6 missed the follow up visit and data was unavailable. All were Mexican males, age 18-67 years, with positivity rate of 35.1%. Among the 92 (+) subjects, the average age was 34.1 years and 34.5 among the 164 (-) subjects, (p=< 0.77). The symptoms and temperatures are in Table 1. Three of the 92 COV19 (+) subjects were hospitalized, non-ICU and made an uneventful recovery. 59.8% of COV19 (+) subjects were asymptomatic. Among the 92 (+) subjects, 20.7% reported using acetaminophen within the last 60 days. The most common reported comorbidity was being a former smoker or current smoker, at 12.0% and 4.3% respectively.

Table 1: Characteristics of migrant workers with and without SARS-CoV-2 infection

	Migrant Workers (n=92) SARS-CoV-2 (+)	Migrant Workers (n=164) SARS-CoV-2 (-)	P value
Age, years	..	..	<0.77
Mean (SD)	34.1 (9.04)	34.5 (10.44)	..
Range	19-57	18-67	..
Symptoms Reported	37 (40.2%)	19 (11.9%)	<0.01
Subjective Fever	20 (21.7%)	6 (3.6%)	<0.01
Headache	14 (15.2%)	3 (1.8%)	<0.01
Cough	13 (14.1%)	8 (4.9%)	<0.01
Rhinorrhea	13 (14.1%)	3 (1.8%)	<0.01
Myalgia	12 (13.0%)	2 (1.2%)	<0.01
Chills	9 (9.8%)	0	<0.01
Diarrhea	6 (6.5%)	0	<0.01
Pleurodynia	5 (5.4%)	1 (0.6%)	<0.03
Sore Throat	5 (5.4%)	0	<0.01
Dyspnea	4 (4.3%)	1 (0.6%)	<0.06
Sneezing	2 (2.2%)	0	<0.13
Vomiting	1 (1.1%)	0	<0.36
Temperature Recorded	81 (88.0%)	146 (89.0%)	..
95.0-95.9	1 (1.2%)	1 (0.7%)	<0.59
96.0-96.9	4 (4.9%)	16 (10.9%)	<0.13
97.0-97.9	24 (29.6%)	50 (34.2%)	<0.48
98.0-98.9	24 (29.6%)	50 (34.2%)	<0.48
99.0-99.9	28 (34.6%)	28 (19.2%)	<0.01
100.0-100.9	0	1 (0.7%)	<0.65
Hospitalizations	3 (3.3%)	0	<0.05
Recovered	3 (100%)	0	..
Comorbidities Reported	19 (20.6%)	N/A	..
Former Smoker	11 (12.0%)	N/A	..
Current Smoker	4 (4.3%)	N/A	..
Chronic Lung Disease	2 (2.2%)	N/A	..
Cardiovascular Disease	1 (1.1%)	N/A	..
Seasonal Allergies	1 (1.1%)	N/A	..
Medication Use Reported	22 (23.9%)	N/A	..
Acetaminophen	19 (20.7%)	N/A	..
Naproxen	1 (1.1%)	N/A	..
Multivitamin	2 (2.2%)	N/A	..
Vaccination Status	84 (91.3%)	N/A	..
Unvaccinated	11 (13.1%)	N/A	..
Mono-Vaccinated	48 (57.1%)	N/A	..
Dual-Vaccinated	25 (29.8%)	N/A	..

Conclusion. The COVID-19 pandemic has highlighted migrant workers as a vulnerable population with astronomical COV19 rates, compared to others in FL (14/100,000). They are impoverished, uneducated, undocumented, uninsured and employed to perform arduous physical labor and it is essential to provide basic healthcare to prevent the spread of COV19.

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1517. Outcomes of Influenza Infection among Vaccinated and Un-Vaccinated Patients presenting to a Suburban hospital in Perth, Western Australia (WA), 2019 Southern Hemisphere Influenza Season

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Session: P-68. Respiratory Infections - Viral

Background. Influenza season started in April, earlier than any previous season. WA immunization registry showed a higher than average vaccine uptake. By October 22,770 cases and 80 influenza related deaths were recorded (in 2018: 3,679 cases and 13 deaths). We aimed to characterize clinical presentation and outcomes of laboratory confirmed Influenza, comparing vaccinated with unvaccinated controls.Hypothesis; vaccination would result in less severe disease and better outcomes. Primary objective: length of stay (LOS); Secondary objective: prevalence of severe respiratory illness, ICU admission and death.

Methods. Retrospective study, April to October 2019. Eligible patients had a telephone-based questionnaire for clinical and immunization data verification. Excluded; < 18 years; deceased; dementia; nursing home and unable to consent. Continuous and categorical data of cases (vaccinated) and controls (unvaccinated) were compared using Mann-Whitney U test (non parametric), student t-test (parametric). Correlation and multilinear regression analyses were undertaken to determine the effects of vaccination status and identified confounders on the primary outcome. Based on previous average LOS (5 days, SD 1.5) the sample required to detect a difference of 1 day with 80% power was 70 patients. This study was approved by the SJGHC HREC.

Results. Of 163 eligible, 83 completed the questionnaire. 8 were excluded. 75 underwent analysis (50 vaccinated and 25 unvaccinated). Median age was 75 (23-83) and 63 (33-70) respectively (p< 0.01). 76% vs 48% reported >1 comorbidity (p =0.02). 10% vs 0% were admitted to ICU (p =0.16). Higher vaccination uptake was seen in older patients and those with comorbid conditions. There was a strong correlation (Spearman r= 0.54 (0.34 to 0.68, p< 0.001) between age and length of stay, but none was found between comorbidity or vaccination and length of stay. Neither age (p >0.05), comorbidity status (yes/no; p=0.99), vaccination status (p=0.61) nor any combination of these variables were significantly associated with a dichotomised outcome of acute hospital stay > 3 days.

Conclusion. Vaccination with the 2019 influenza vaccine had no significant effect on hospital length of stay, mortality or critical care requirement in patients admitted to hospital with influenza.

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

1518. Real-World Comparative Effectiveness of Baloxavir Marboxil versus Oseltamivir on Influenza-Related Complication and Resource Utilization

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Session: P-68. Respiratory Infections - Viral

Background. In the 2018-19 season, there were an estimated 490,500 hospitalizations and 24,000 deaths from influenza in the US. Understanding how antiviral use affects rates and severity of complications is crucial to inform clinical practice. The objective of this study was to compare the frequency and costs of complications in influenza patients treated with baloxavir compared with oseltamivir-treated patients. This is one of the first analyses to examine comparative effectiveness of baloxavir in a real-world setting.

Methods. This retrospective cohort study used IBM MarketScan US administrative claims data from the 2018–19 influenza season. Patients were required to have an outpatient visit for influenza followed by a prescription for baloxavir or oseltamivir within 2 days. Baloxavir- and oseltamivir-treated patients were propensity score matched based on key baseline clinical and demographic characteristics. All-cause, all respiratory-related, and select respiratory-related (infection, asthma, and COPD) HRU in the 15 and 30 days following prescription fill were assessed using chi-square and Fisher's exact tests for categorical measures and Wilcoxon signed-rank tests for counts and costs.

Results. We included 5,080 baloxavir-treated patients and 10,160 matched oseltamivir-treated patients in the analysis. Statistically significantly lower HRU was associated with baloxavir compared with oseltamivir therapy (15-day: respiratory-related ED visits, select respiratory-related ED visits and outpatient visits; 30-day: all-cause hospitalization, respiratory-related ED visits, select respiratory-related ED visits and outpatient visits (**Table 1**). Similarly, associated costs were generally lower in the baloxavir-treated group. Baloxavir-treated patients had lower mean per-patient all-cause 15-day costs (ED visits: $30 [95% CI: $21–$39] vs $42 [95% CI: $32–$51]; hospitalizations: $31 [95% CI: $6–$55] vs $74 [95% CI: $43–$104]) and 30-day costs (ED visits: $46 [95% CI: $35–$57] vs $67 [95% CI: $55–$79]; hospitalizations: $47 [95% CI: $15–$80] vs $119 [95% CI: $78–$161]).