

**9. Influenza Vaccine Rates Amongst Patients With Limited English Proficiency In A Primary Health Care Clinic; Our 3 Years Experience.**

Eloho Ajayi, MD<sup>1</sup>; Atsoufui kpehor, MD<sup>2</sup>; Shristi Khanal, MD<sup>2</sup>; Samavia Munir, MD<sup>2</sup>; Adrian Estepa, MD<sup>3</sup>; <sup>1</sup>University of Cincinnati, College of Medicine, Cincinnati, Ohio; <sup>2</sup>Abington-Jefferson Health, Abington, Pennsylvania; <sup>3</sup>Abington - Jefferson Health, Abington, Pennsylvania

Session: P-2. Adult Vaccines

**Background:** Influenza has been recognized to be a significant cause of morbidity and mortality. It was the cause of 10.1% of all deaths recorded on death certificates during the week ending January 20, 2018. In order to reduce the risk of influenza, Centers for Disease Control recommends that every person six months and older who have no contraindications be vaccinated with the influenza vaccine.

Limited English Proficiency (LEP) describes individuals who have limited ability to speak, read, write or understand English language. Sadly, there is an increasing body of data that suggest that patients with LEP are less likely to seek out medical attention in a timely manner, are less adherent to medically recommended preventive and therapeutic measures. The purpose of this study was to determine the rate of acceptance of the Influenza vaccine amongst patients with LEP in our resident ran out-patient clinic.

**Methods:** This study was retrospective, data was obtained through chart review of the electronic medical records (EMR). Patients had to be at least 18 years old and registered patients at our primary health care clinic to be enrolled in this study. Data was gathered for the 2015–2016, 2016–2017 and 2017–2018 influenza seasons. The months of October to May were designated as the Influenza season as these months have been identified as the time frame that the influenza virus has the most activity.

**Results:** 109 of 499 the randomly selected participants were not included in the final analysis due to reasons like: no visit to the primary health care clinic during specified periods, ability to communicate in English, insufficient data in to the EMR. Data from 390 patients were analyzed. 43.3% spoke Spanish, 36.2% were Portuguese speaking and 20.5% spoke other languages. A large majority of patients across all language groups did not receive the influenza vaccine each season.

Table 1

Table 1. Participants who did not receive the influenza vaccination each season.

	Spanish n (%)	Portuguese n (%)	Korean n (%)	Others* n (%)	p-Value
2015-2016 Influenza season.	126 (75)	122 (87.8)	29 (78.4)	32 (74.4)	0.0334
2016-2017 Influenza season.	123 (73.21)	84 (60.4)	23 (62.16)	33 (76.7)	0.0494
2017-2018 Influenza season.	115 (68.5)	97 (70.3)	21 (56.8)	31 (72.1)	0.4202

\* Others = Chinese, Arabic, Russian, Vietnamese, Polish, Hindi, Bengali, Creole.

Figure 1

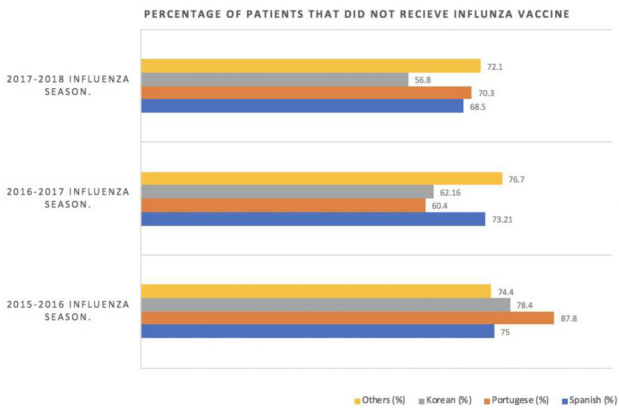
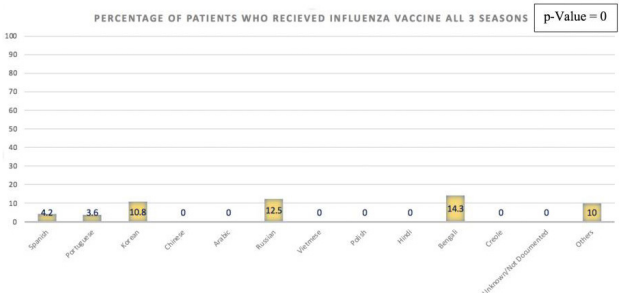


Figure 2



**Conclusion:** Results from this study indicate that there was an alarmingly low rate of influenza vaccination among patients with LEP in our primary care clinic in during the 2015–2016, 2016–2017 and 2017–2018 influenza seasons. This highlights the need for implementing interventions aimed at both understanding why this vaccination gap exist and improving the vaccine acceptance rate amongst this venerable population.

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**10. Kinetics of Post-Vaccination Seroprotection to S. Pneumonia for the Immune-Compromised and Vaccine-Naïve Populations**

Jeffrey Gruenglas, DHSc(c), MBE, MA<sup>1</sup>; James Mond, MD, PhD<sup>1</sup>; Micaela Scobie, PhD<sup>2</sup>; Cynthia Tolman, MS<sup>1</sup>; Joseph Martinez, n/a<sup>2</sup>; <sup>1</sup>ADMA Biologics, Boca Raton, Massachusetts; <sup>2</sup>Immune Diagnostics, Ashville, North Carolina

Session: P-2. Adult Vaccines

**Background:** *S. pneumonia* infection presents a significant challenge, accounting for 20–38% of hospital-acquired pneumonia, and the leading cause of community-acquired pneumonia despite availability of effective vaccines. Incidence is highest in children under 2 years, the immunocompromised, and elderly. CDC has reported the emergence of antibiotic resistance in ~30% of cases, adding to risk of morbidity and mortality. Fewer than half of the elderly are vaccinated and vulnerable to infection on admission. Passive immunotherapy as an adjunct to vaccines may improve outcomes in such populations. The objective of this study was to evaluate whether seroprotective response induced with a pneumococcal conjugate vaccine could rapidly yield protective opsonic levels of antibody within anticipated duration of hospitalization.

**Methods:** Healthy donors (n=30) were immunized with Prevnar. Blood was drawn on days 0, 3, 7, 10, 14, 21, and 28. Samples were pooled and tested for presence of functional opsonic antibodies recognizing capsular polysaccharides. Clearance mechanism of *S. pneumonia* was based on antibody recognition to pneumococcal capsular polysaccharide and opsonic titers used as an *in vitro* surrogate to evaluate the efficacy of vaccine.

**Results:** There was little to no opsonic activity against most serotypes on day 0, except for low antibody activity with serotypes 1, 3, 4, and 5. Titers increased, with protective levels achieved by day 10 for most serotypes (except 14 and 18C), peaking at day 14 or after across serotypes (Figures 1 and 2). Average titers rose from log<sub>2</sub> titer 2 on day 0 to log<sub>2</sub> titer 8 on days 21 and 28. Titers against most serotypes reached log<sub>2</sub> 10 (titer 1024) or higher. Patients remained susceptible to nosocomial infection for at least 10 days post admission until protective titers are reached.

OPK titers (log<sub>2</sub> scale) for serum samples on day 0 (pre), day 3, 7, 10, 14, 21, 28, and control for *S. pneumoniae* serotypes 1, 3, 4, 5, 6A, 6B, 7F, 9V. N=2.

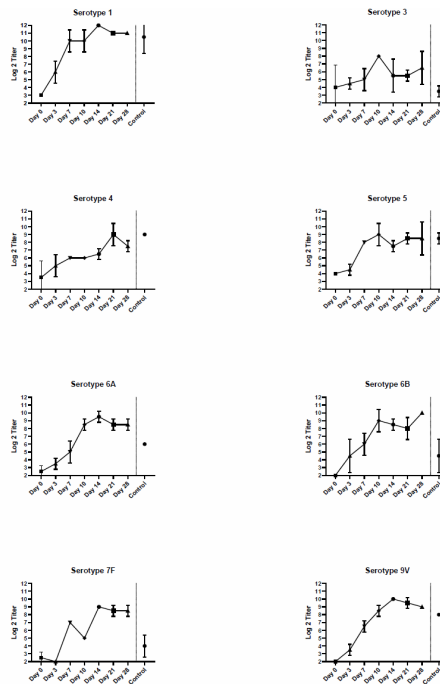


Figure 1. OPK titers (log<sub>2</sub> scale) for serum samples on day 0 (pre), day 3, 7, 10, 14, 21, 28, and control for *S. pneumoniae* serotypes 1, 3, 4, 5, 6A, 6B, 7F, 9V. N=2.