1437. Family Duty and Safety Linked to Overcoming Attitudinal Barriers to Adult Pneumococcal Vaccination in Disparate Populations

Maria-Stephanie Tolg
Marc L. Hutchison
University of Rhode Island, mlhutch@uri.edu

Brian Krueger
University of Rhode Island

Katherine Kelly Orr
University of Rhode Island, kellyo@uri.edu

Jennifer M. DeAngelis
University of Rhode Island, jdeangelis7915@uri.edu

See next page for additional authors

Follow this and additional works at: https://digitalcommons.uri.edu/psc_facpubs

Citation/Publisher Attribution

This Article is brought to you for free and open access by the Political Science at DigitalCommons@URI. It has been accepted for inclusion in Political Science Faculty Publications by an authorized administrator of DigitalCommons@URI. For more information, please contact digitalcommons-group@uri.edu.
1437. Family Duty and Safety Linked to Overcoming Attitudinal Barriers to Adult Pneumococcal Vaccination in Disparate Populations

Creative Commons License

This work is licensed under a Creative Commons Attribution-Noncommercial-No Derivative Works 4.0 License.

Authors
Maria-Stephanie Tolg, Marc L. Hutchison, Brian Krueger, Katherine Kelly Orr, Jennifer M. DeAngelis, Aisling R. Caffrey, and Kerry L. LaPlante

This article is available at DigitalCommons@URI: https://digitalcommons.uri.edu/psc_facpubs/30
1435. The Cost-Effectiveness of Vaccinating With an Adjuvanted Trivalent Influenza Vaccine for the 65+ Population in Argentina

Van Nguyen, PharmD1; Carla Vizzotti, MD, CEP, CET2; Analiza Urena, MD, CEP, CET3; Alberto Girlanda, MD1; MD Nilos Ribeiro Gontijo, MD4; Maria Cecilia Magneres, MD2 and Heather Richardson, MPH5; VHN Consulting, Montreal, QC, Canada; Universidade Iakov, Buenos Aires, Argentina; Universidade Iakov, Buenos Aires, Argentina; Seqirus, Buenos Aires, Argentina, Seqirus, Summit, New Jersey

Session: 146. Pneumococcal Vaccines
Friday, October 5, 2018: 12:30 PM

Background. Despite the current vaccination program in Argentina for older adults aged 65 years and older, there is cost-effectiveness of vaccines for this population in Argentina is limited due to immunosenescence and the resulting suboptimal clinical effect of influenza vaccines in this age group. There is an unmet clinical need in those aged 65+ for an influenza vaccine that offers enhanced protection. The objective of this study was to evaluate the cost-effectiveness (CE) of the MF9 adjuvanted vaccine (aTIV) in Argentina compared with current vaccination policy with an un-adjuvanted vaccine (TIV).

Methods. A static decision tree CE model of aTIV was developed to estimate the cost-effectiveness compared with TIV vaccine in those aged 65+ in Argentina. The model considered both health and medical benefits of vaccination in an influenza season from the patient and the societal perspective. The main outcomes include events, death, LLY, QALYs, and costs. To the extent possible, model inputs were sourced from Argentina, in regions where local data were insufficient, international inputs were utilized. Vaccine efficacy assumptions were extracted from recent literature search.

Results. Using aTIV instead of TIV resulted in additional 530 deaths averted and 3,980 incremental quality-adjusted life-years (QALYs) gained. The incremental cost-effectiveness ratio (ICER) was US$243 and US$937 per QALY from societal and payer’s perspective respectively. In all univariate sensitivity analyses, aTIV remained highly cost-effective by meeting the threshold of one GDP per capita in Argentina. From a societal perspective, the probabilistic sensitivity analyses showed aTIV cost-saving in 30% of the simulations.

Conclusion. This analysis suggests that vaccinating with aTIV in Argentina would be a highly cost-effective in providing additional health gains while reducing healthcare resources utilization and costs.

Disclosures. N. Giglio, Sanofi Pasteur: Consultant, Speaker honorarium.

1436. Risk Factors for Invasive Pneumococcal Disease in Adults 65 Years Old Following Pneumococcal Conjugate Vaccine Recommendation

Olivia M. Almazan, MPH1, Wei Xing, MS2; Monica M. Farley, MD, FIDSA3; William Schaffner, MD, FIDSA, FSHEA4; Ann Thomas, MD, MPH5; Arthur Reingold, MD, FIDSA6; Lee H. Harrison, MD7; Cortine Holtzman, MPH8; Jemma V. Rowlands, MPH9; Susan Petit, MPH10; Megan Barnes, MSHP11; Salina Torres, PhD12; Bernard Beall, PhD13; Cynthia Whitney, MD, MPH, FIDSA12; and Tamarra Pilishvili, MPH13;14; Centers for Disease Control and Prevention, Atlanta, Georgia; 2Department of Medicine, Emory University School of Medicine and Atlanta VA Medical Center, Atlanta, Georgia; 3Vanderbilt University School of Medicine, Nashville, Tennessee; 4Oregon Public Health Division, Portland, Oregon; 5University of California–Berkeley, Berkeley, California; 6Johns Hopkins University Bloomberg School of Public Health, Pittsburgh, Pennsylvania; 7Minnesota Department of Health, St. Paul, Minnesota; 8New York State Department of Health, Albany, New York; 9Connecticut Department of Public Health, Hartford, Connecticut; 10Colorado Department of Public Health and Environment, Denver, Colorado; 11New Mexico Emerging Infections Program, Santa Fe, New Mexico; 12Respiratory Diseases Branch, Centers for Disease Control and Prevention, Atlanta, Georgia

Session: 146. Pneumococcal Vaccines
Friday, October 5, 2018: 12:30 PM

Background. In 2014, pneumococcal conjugate (PCV13) and polysaccharide (PPSV23) vaccines were recommended in series for all US adults 65 years old. We conducted a case-control study to evaluate risk factors for invasive pneumococcal disease (IPD) among adults 65 years old.

Methods. IPD cases (isolation of pneumococcus from sterile sites) were identified through Active Bacterial Core surveillance during 2015–2018. Isolates were serotyped using whole genome sequencing. Four controls, identified through a commercial data base, were matched by age and zip of IPD case. We used vaccination and medical histories from providers, vaccine registry participants, and interview interviews. A functional status score was calculated based on participant interview. We calculated IPD odds ratios using multivariable conditional logistic regression.

Results. We enrolled 328 IPD cases and 1514 matched controls. Fifty percent of case-patients and 55% of controls received a dose of PCV13. Case-patients were more likely than controls to have a chronic condition (heart, liver, or lung disease, diabetes, cochlear implant, alcohol abuse, smoking; 82% vs. 59%), immunosuppression (60% vs. 32%), poor functional status (score of > 3; 71% vs. 50%), annual household income <$30,000 (38% vs. 25%) and education level of high school or less (36% vs. 25%). In a multivariable model, case patients were more likely than controls to have a chronic condition (OR 2.48; 95% CI 1.72, 3.58), immunosuppression (OR 2.56; 95% CI 1.92,3.42), poor functional status (OR 3.66, 95% CI 2.42, 5.54), and primary or secondary smoking exposure (OR 3.09, 95% CI 1.32, 7.2). In analysis limited to PCV13-type cases and matched controls, adjusting for PCV13 receipt, measures of association were no longer significant for chronic conditions (OR 1.45; 95% CI 0.71, 2.95), immunosuppression (OR 1.51, 95% CI 0.83, 2.74), or poor functional status (OR 1.98, 95% CI 0.91, 4.3).

Conclusion. Chronic and immunosuppressive conditions represent IPD risk factors for adults in the era of PCV13 use; functional status was also identified as a risk factor. Targeted evaluation of adults with poor functional status could inform IPD prevention strategies. PCV13 may reduce the risk of PCV13-type IPD associated with chronic conditions and poor functional status.

Disclosures. W. Schaffner, Centers for Disease Control and Prevention, Consulting fee; Pfizer: Member, Data Safety Monitoring Board, Consulting fee; Seqirus: Consultant, Consulting fee; Dynavax: Consultant, Consulting fee; Shionogi: Consultant, Consulting fee.

1437. Family Duty and Safety Linked to Overcoming Attitudinal Barriers to Adult Pneumococcal Vaccination in Disparate Populations

Maria-Stephanie Tolg, PharmD1; Marc Hutchinson, PhD2; Brian Krueger, Ph.D3; Katherine Orr, PharmD4; Jennifer DeAngelis, BA5; Aisling Caffrey, PhD, MS6; and Kerry LaPlante, PharmD, FCCP, FIDSA7,8,9; Providence Veterans Affairs Medical Center, Providence, Rhode Island, Political Science, The University of Rhode Island, Kingston, Rhode Island; College of Pharmacy, University of Rhode Island, Kingston, Rhode Island, Division of Infectious Diseases, Warren Alpert Medical School of Brown University, Providence, Rhode Island

Session: 146. Pneumococcal Vaccines
Friday, October 5, 2018: 12:30 PM

Background. Minority adult populations are at a higher risk for invasive pneumococcal disease and also have significantly lower vaccination rates when compared with the general population. Ingrained attitudes are a significant barrier to receipt of pneumococcal vaccine in these disparate populations, and therefore we tested targeted informational messaging to overcome these.

Methods. A survey instrument of attitudinal questions related to pneumococcal vaccination was administered via YouGov, an online public national survey house in 300 surveys among community members who had either ever been vaccinated or not vaccinated against pneumococcal disease. Respondents were randomly assigned into subsamples that received different science-based messages that included information on pneumococcal vaccines related to: pneumonia prevention, fatality/consequences, vaccine safety information, family duty/safety, and a combined vignette including all of these. Because of the random assignment, any differences observed in the respondents’ outcomes across subsamples can be attributed to the messages. Descriptive statistics were used to compare the persuasive effectiveness of these messages to conventional vaccine information across racial and ethnic subpopulations, the disparate population was persuaded to receive the vaccine only when family duty and safety were linked within the information messages. Future studies implementing this informational messaging strategy should be performed to validate this finding.

Disclosures. A. Caffrey, Pfizer Pharmaceuticals: Consultant, Consulting fee; Seqirus: Consultant, Consulting fee; Dynavax: Consultant, Consulting fee; Seqirus: Consultant, Consulting fee; Shionogi: Consultant, Consulting fee.

1438. Uptake of 13-Valent Pneumococcal Conjugate Vaccine in High-Risk Adults Aged 19–64 Years: A Kaplan–Meier Approach

Jeffrey Vietti, PhD1; Birol Emit, PhD2; James Harnett, PharmD3 and Erica Chisolm, PharmD3; Pfizer Inc, Collegeville, Pennsylvania; 4Pfizer Inc, New York, New York

Session: 146. Pneumococcal Vaccines
Friday, October 5, 2018: 12:30 PM

Background. Coverage estimates for pneumococcal vaccination in the United States come from the National Health Interview Survey (NHIS) and do not differenti- ate between 13-valent conjugate vaccine (PCV13) and 23-valent polysaccharide vac- cine (PPSV23). This study was conducted to assess coverage of PCV13 among adults