Table 2: Number of observed, predicted counterfactual, and averted hepatitis A cases in the post- HepA vaccination period (2015-2018), according to age group.

Age groups	Observed	Predicted counterfactual	Averted cases	
			Median	Percentiles (2.5 -97.5%)
<12 months	88	404	316	288; 336
1-4 years old	423	2,375	1,952	1,855; 2,023
5-14 years old	1,925	10,427	8,502	8,062; 8,857
15-39 years old	3,495	6,302	2,807	2,488; 3,025
≥40 years old	1,255	1,575	320	262; 371
Total	7,186	21.654	14,468	13,395; 15,138

Conclusion. In Brazil, the single-dose hepatitis A vaccine childhood program effectively reduced the Hepatitis A incidence, HCRU and associated-costs in vaccinated and in some non-vaccinated age groups.

Disclosures. Ana Luiza Bierrenbach, MD, MSc, PhD, MSD Brazil (Grant/Research Support, Scientific Research Study Investigator, Research Grant or Support) Yoonyoung Choi, PhD, MS, RPh, Merck (Employee) Paula M. Batista, BSc, MSD Brazil (Employee) Fernando Serra, MD, MSD Brazil (Employee) Cintia Parellada, MD, PhD, MSD Brazil (Employee) Guilherme Julian, BSc, MSc, IQVIA (Employee) MSD (Consultant, Research Grant or Support) Karina Nakajima, BSc, PhD, IQVIA (Employee)MSD (Consultant, Research Grant or Support) Thais Moreira, MD, MSc, MSD Brazil (Employee)

1393. Factors Associated with Co-administration of Pentavalent DTaP-IPV/Hib and Monovalent Hepatitis B Vaccine in the United States (US)

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Session: P-63. Pediatric Vaccines

Background. The US vaccination schedule includes DTaP, IPV, Hib and HepB doses in the first 6 months of life. A previous analysis found variability in the timing of HepB doses in infants receiving DTaP-IPV/Hib. We explored factors associated with co-administration of DTaP-IPV/Hib and HepB on the same day.

Methods. This was a retrospective study using the MarketScan® commercial claims and encounters database. Infants born from 1 July 2010 - 30 June 2016, continuously enrolled in an insurance plan for ≥ 13 months and receiving ≥ 3 DTaP-IPV/Hib doses were included.

Infants were assessed for HepB claims relative to the first and third DTaP-IPV/Hib doses. Because a HepB birth dose was assumed, the first HepB claim from 29 - 169 days following birth was counted as Dose 2, and the second claim from 170 days - 12 months as Dose 3. Associations between demographic, provider, and insurance characteristics, receipt of other pediatric vaccines, and co-administration of DTaP-IPV/Hib and HepB were analyzed using multivariate logistic regression.

Results. Among 165,553 infants who received a first DTaP-IPV/Hib dose, 60.7% received HepB Dose 2 on the same day. Among 162,217 infants who received a third DTaP-IPV/Hib dose, 45.1% received HepB Dose 3 on the same day.

Infants in the Northeast were less likely (OR=0.38, 95%CI=0.36-0.39), while those in the West were more likely (OR=1.41, 95%CI=1.36-1.46) than infants in the South to receive the first dose of DTaP-IPV/Hib and HepB Dose 2 on the same day. Infants vaccinated by pediatricians (OR=0.54, 95%CI=0.53-0.55) were less likely to receive the first dose of DTaP-IPV/Hib and HepB Dose 2 on the same day compared to infants vaccinated by family physicians. Infants who received PCV on the same day as the first dose of DTaP-IPV/Hib were more likely to receive HepB Dose 2 (OR=6.96, 95%CI=6.30-7.70) that day. These factors were also associated with co-administration of the third dose of DTaP-IPV/Hib and HepB Dose 3.

Conclusion. Differences in co-administration of DTaP-IPV/Hib and HepB were associated with region of residence, provider type and co-administration of PCV. The reasons underlying these differences merit exploration. A hexavalent vaccine containing DTaP, IPV, Hib, and HepB could improve timeliness of HepB vaccination, while reducing the number of injections during infancy.

Disclosures. Tanaz Petigara, PhD, Merck & Co., Inc. (Employee, Shareholder) Ya-Ting Chen, PhD, Merck & Co., Inc. (Employee, Shareholder) Zhiwen Liu, PhD, Merck & Co., Inc., (Employee) Michelle Goveia, MD, Merck & Co., Inc (Employee, Shareholder) David Johnson, MD, MPH, Sanofi Pasteur (Employee, Shareholder) Gary S. Marshall, MD, GlaxoSmithKline (Consultant, Scientific Research Study Investigator)Merck (Consultant, Scientific Research Study Investigator)Pfizer (Consultant, Scientific Research Study Investigator)Sanofi Pasteur (Consultant, Grant/Research Support, Scientific Research Study Investigator, Honorarium for conference lecture)Seqirus (Consultant, Scientific Research Study Investigator)

1394. Impact of 7-Valent and 13-Valent Pneumococcal Conjugate Vaccines in the United States: A Systematic Literature Review

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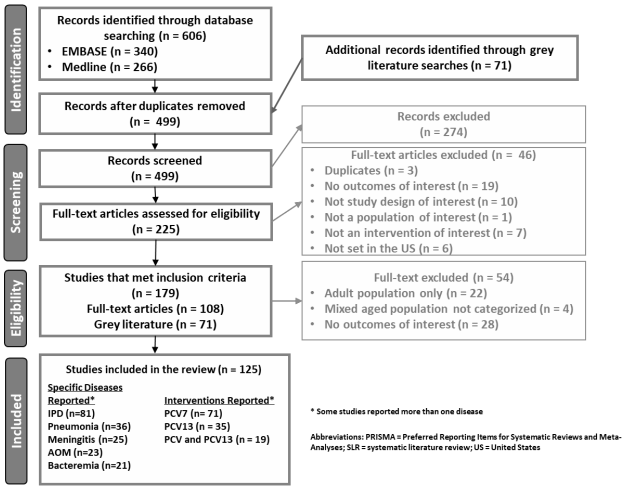
Session: P-63. Pediatric Vaccines

Background. The availability of 7-valent (PCV7) and 13-valent (PCV13) pneumococcal conjugate vaccines (PCVs) in the United States (US) since 2000 and 2010, respectively, has substantially reduced the occurrence, morbidity and mortality of pneumococcal disease. This systematic literature review aimed to assess the impact of the PCVs in reducing the pneumococcal disease burden since their introduction.

Methods. We searched Embase and Medline and disease-surveillance websites for observational studies of US participants < 19 years, published 1999–2019 and reporting incidence or prevalence of acute otitis media, invasive pneumococcal disease, meningitis, or pneumococcal disease-related morbidity, mortality, healthcare resource utilization (HCRU) or costs.

Figure. SLR Results - PRISMA Flow Chart

Results. Of 499 citations identified from the databases and other sources, 125 met inclusion criteria (Figure), all indicating clear reductions in multiple manifestations of pneumococcal disease with PCV7 and PCV13 use. However, variations across studies in outcomes reported, study years, and age strata, confounded assessment of vaccine impact on specific pneumococcal disease outcomes and key burden indicators, such as tympanostomy tube placement and antibiotic prescriptions.



Conclusion. PCVs have greatly decreased multiple manifestations of pneumococcal disease in the US. However, granular data on the frequency and morbidity associated with specific pneumococcal diseases and on associated HCRU are needed to quantify the public-health impact of these vaccines.

Disclosures. **Kristin Kistler, PhD**, **Evidera, Inc.** (Employee, Evidera, Inc. received the funding to conduct this study.) **Evelyn F. Gomez-Espinosa, BSc, PhD**, **Evidera Inc** (Employee, Scientific Research Study Investigator)**Pfizer Inc** (Consultant, Scientific Research Study Investigator) **Kelly Sutton, PhD**, **Evidera** (Other Financial or Material Support, Evidera, Inc. received the funding to conduct this study.) **Ruth Chapman, MSc, PhD**, **Evidera, Inc, (Evidera, Inc. received the funding to conduct this study.)** (Consultant) **Desmond Dillon-Murphy, MSc, PhD**, **Evidera, Inc. (Evidera, Inc. received the funding to conduct this study.)** (Consultant) **Matthew Wasserman, MSc.**, **Pfizer Inc.** (Employee)

1395. Influenza B-Associated Pediatric Mortality in the US Between 2010 and 2019

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Session: P-63. Pediatric Vaccines

Background. To assess the contribution of influenza B to mortality in the US pediatric population, we analyzed the proportion of influenza-associated pediatric mortality attributed to influenza A and B over nine influenza seasons using national surveillance data. The effectiveness of influenza vaccines against influenza B in the pediatric population was also assessed.

Methods. The study period was the 2010/11 to 2018/19 influenza seasons. Proportions of circulating strains in the general population and influenza-associated pediatric mortality for each season were obtained from annual Centers for Disease Control and Prevention Morbidity and Mortality Weekly Reports on influenza. A Chi-squared test with Yates' correction was used to assess the contribution of influenza B to pediatric mortality relative to its circulation among influenza viruses. Consolidated vaccine effectiveness (VE) against influenza B for inactivated influenza vaccine (IIV) in the 2010/11 to 2017/18 seasons and live attenuated influenza vaccine (LAIV) in the 2010/11 to 2015/16 seasons were obtained from a published meta-analysis and annual US Flu VE Network studies. There were no US data on LAIV VE for 2016/17 and 2017/18.