Results. A total of 172,916, 70,049, and 34,854 infants were included in C1, C2, and C3. Among infants with > 8 months of follow-up from birth (N=132,183 for C1&C3, 16,522 for C3), 3-primary dose completion was statistically significantly higher before COVID than during COVID (crude OR = 1.10, 95% CI: 1.06-1.15). The 3-primary dose adherence was also higher before COVID than during COVID (crude OR = 1.10, 95% CI: 1.05-1.15). Among infants with ≥2, 4 and 6 months of follow-up adherence of each individual dose was consistently higher before COVID than during COVID (crude OR = 1.10, 95% CI: 1.06-1.15). The odds of primary dose C&A in cohorts C1 and C3 vs C2 and descriptive analyses were used to explore primary dose C&A in relation to booster dose C&A.

Table 1. Comparison of completion and adherence of primary dosing series per-COVID vs. during-COVID era

Conclusion. These results indicated that PCV13 full completion was statistically lower during COVID, but the magnitude of the difference in infants was not extensive. Infants who completed or adhered to all three primary doses were more likely to complete or adhere to the booster dose. Further research is warranted as structured datasets mature to capture the full time span of COVID-19 mitigation measures.

Disclosures. Liping Huang, MD, MA, MS; Jennifer I. Nguyen, ScD, MPH1; Johnna Perdrizet, MPH1; Tamuno Alfred, PhD2; Adriano Arguedas, MD2; Pfizer Inc, Collegeville, PA; Pfizer Inc., New York, New York; Pfizer Inc, Collegeville, Pennsylvania

Session: P-69. Pediatric Vaccines

Background. Coronavirus Disease 2019 (COVID) mitigation measures may have unintended consequences, such as reduced or delayed access to routine immunizations. This study examined (1) PCV13 routine vaccination completion and adherence (C&A) among US infants before and during the COVID pandemic and (2) the relationship between primary dose C&A and booster dose C&A.

Methods. Retrospective data from the Optum de-identified Clininformatics Data Mart Database were used to create 3 cohorts: C1, Pre-COVID; C2, During COVID; C3, Cross-COVID (Figure 1). The completion was defined as number of PCV13 doses received within 8 months of birth, and the adherence was defined as number of doses received at ACIP recommended time (≥2, 4, 6 months, etc 5 days). Univariable logistic regression was used to compare the odds of primary dose C&A in cohorts C1 and C3 vs C2 and descriptive analyses were used to explore primary dose C&A in relation to booster dose C&A.

Figure 1: Study population and inclusion criteria

Results. A total of 172,916, 70,049, and 34,854 infants were included in C1, C2, and C3. Among infants with > 8 months of follow-up from birth (N=132,183 for C1&C3, 16,522 for C3), 3-primary dose completion was statistically significantly higher before COVID than during COVID (crude OR = 1.10, 95% CI: 1.06-1.15). The 3-primary dose adherence was also higher before COVID than during COVID (crude OR = 1.10, 95% CI: 1.05-1.15). Among infants with ≥2, 4 and 6 months of follow-up adherence of each individual dose was consistently higher before COVID than during COVID (crude OR = 1.10, 95% CI: 1.05-1.15). The odds of primary dose C&A in cohorts C1 and C3 vs C2 and descriptive analyses were used to explore primary dose C&A in relation to booster dose C&A.
IRRs were estimated using linear mixed-effects regression. Results were stratified by product (PCV10 vs. PCV13) and amount of prior PCV7 use (none; some (1-3 years or 4-5 years with <70% uptake); or many (≥4 years with ≥70% uptake).

**Results.** 40 surveillance sites (8 PCV10, 31 PCV13) in 28 countries, primarily high-income (82%) that had both CSF and IPD data were included in analyses. CSF+ accounted for 9.0% of IPD cases (IQR across sites: 6.2%-15.6%). The rate and amount of decline was generally similar between meningitis and IPD across all strata. At 5 years after PCV10/13 introduction, the IRRs across PCV7-use strata were 0.28-0.32 for pneumococcal meningitis and 0.22-0.43 for all IPD at PCV10-using sites, and 0.27-0.41 and 0.21-0.32, respectively, for PCV13-using sites. Only one site from the African meningitis belt contributed eligible data, which lacked pre-PCV data to estimate IRRs, but incidence rate of both IPD and meningitis decreased following PCV introduction.

**Conclusion.** Net declines in all-serotype IPD and CSF+ meningitis in children <5 years were similar on average for both PCV10 and PCV13. Data from low-income, high-burden, and meningitis-belt regions were limited.

**Disclosures.** Maria Deloria Knoll, PhD; Merck (Research Grant or Support); Pfizer (Research Grant or Support)

1181. Serotype Distribution by Age of Remaining Invasive Pneumococcal Disease After Long-Term PCV10/13 Use: The PSERENADE Project
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**Session:** P-69. Pediatric Vaccines

**Background.** Pneumococcal conjugate vaccines (PCV) have reduced invasive pneumococcal disease (IPD) (see other PSERENADE abstract), of which >70% was vaccine-type pre-PCV. We described the serotype (ST) distribution of remaining IPD in countries with mature infant PCV10/13 programs.

**Methods.** IPD ST distribution data were obtained directly from surveillance sites, supplemented with published literature. Mature programs were defined as exclusive use of PCV10 or PCV13 for at least 5-7 years (dependent on if prior PCV7 use and/or PCV10/13 catch-up) with primary series uptake >70%. The distribution was estimated using a multinomial Dirichlet regression, stratified by PCV product and age (< 5 years, ≥5 years).

**Results.** Serotype (ST) 3 is illustrated separately in lighter purple in the bars corresponding to products that include ST3 due to the uncertain effectiveness against ST3 in current products. ST6C is illustrated in grey above the bars where ST6A is included. Although ST6C is not included in PCV10 or PCV13, PCV13 offers cross-protection through ST6A. ST6A also benefits from cross-protection with ST6B, included in both PCV10 and PCV13. Therefore, ST6A causes a very small fraction of disease in both settings and age groups, and it is not shown. Confidence intervals do not include ST6C, as this serotype is not included in PCV10/13. PCV13 is Pfizer’s Prevnar13/Prevenar13; PCV10 is GSK’s Synflorix.

**Conclusion.** IPD due to vaccine STs was low for both children and adults in countries with mature PCV programs. ST distribution of remaining IPD differed between PCV10 and PCV13 sites and between age groups. Higher-valency PCVs under evaluation target over half of remaining IPD cases, but some prevalent STs are not included in known investigational products.