FQHC CASE STUDY:
EL RIO HEALTH

Prioritization of PCV Vaccination in an FQHC Setting

Explore how El Rio Health, a Federally Qualified Health Center (FQHC) comprising 13 sites in Tucson, Arizona, has leveraged technology and data to help address barriers to vaccination and improve clinical outcome measures for their pediatric patients. Dr. Rajiv Modak, Chief Quality Officer at El Rio Health, offers practical insights and strategies for FQHCs and other public health organizations to consider in their practices.

The unique role of FQHCs

FQHCs provide care for many of America's historically underserved communities, which include 9.4 million children. While invasive pneumococcal disease (IPD) rates have dropped significantly since the introduction of pneumococcal conjugate vaccines (PCVs), children who are publicly insured still face higher rates of disease than those who are commercially insured, underscoring the need for equitable vaccination access.[1,2]

Persistent disparities in childhood vaccination coverage by race and ethnicity, poverty status, metropolitan statistical area status, and health insurance status have been documented—leaving children, including those with underlying medical conditions, vulnerable to pneumococcal disease.[3,4]

Help protect the youngest: The highest incidence rates for IPD occur in the first 2 years of life, which is why it's so important to help protect babies during this time.[5]

Diabetes: Children aged 5 to 17 years with diabetes are at 5.4 times greater risk for IPD compared with healthy children in the same age range.[6]

Asthma: Children with asthma are at 1.6 to 2.1 times greater risk for IPD compared with healthy children in the same age range, making them especially vulnerable to IPD.[6]

El Rio Health: Serving Their Community

El Rio Health at a glance

230

medical providers on staff, including medical, dental, behavioral health, and clinical pharmacists[7]

~545,700

annual patient visits across 13 sites in Tucson, Arizona[8]

~1900

total employees[8]

Patient demographics[8]

Ethnicity/race:

Hispanic/Latino: 63%

White: 28%

American Indian: 7%

African American: 6%

Some patients identified with more than one ethnicity/race.

Health insurance:

50% Medicaid

27% Private insurance

13% Medicare

10% Uninsured

Language:

Primarily English, with ~20% to 30% of patients speaking Spanish primarily

Income:

Approximately one-third of patients are below the federal poverty level

Pediatric patients: ~25%

A 10-year effort to create a culture of quality improvement

Initially, El Rio Health focused on standard measures like well visits, cancer screenings, hypertension control, and diabetes control. As workflows matured, they began to differentiate between in-clinic and outreach strategies, with a focus on identifying patients in higher-risk groups such as[8]:

- Adults with asthma for flu vaccines
- Immunocompromised individuals
- Pediatric patients who need vaccinations

Now empowered by a modern electronic health record (EHR) system, El Rio Health has progressed to using a more comprehensive approach to improving patient care and reaching key quality outcome measures.

"This [initiative] has come out of a 10-year history of focusing on clinical quality outcomes and clinical quality improvement.

"As we started to mature and understand how we utilize in-clinic workflows vs outreach workflows to target patients, we started to think, 'Let's expand our focus to other areas, specifically targeting our highest-risk patients.'"

*—**Dr. Modak, Chief Quality Officer,** El Rio Health*

Actor Portrayals

Actor Portrayals

Removing Barriers to Improve Accessibility for Patients

Making vaccination an easier choice

Understanding the challenges patients face in keeping up to date on their vaccinations, El Rio Health has made substantial efforts to streamline visits[7]:

- **Walk-in vaccine clinics**

  An open-clinic policy where patients can arrive to the clinic at any time and be seen by a nurse or doctor for their vaccine—no appointment needed.[7]

- **Staff surges**

  Staffing levels are calibrated for higher-demand periods, like flu season, so patients can receive care promptly.[7]

- **Standing orders**

  Robust standing orders facilitate care without the need for a new prescription from a physician.[7]

"The mission of a community health center is how do we understand the barriers that our patients have, and then how do we take steps to help overcome those barriers, rather than waiting for patients to do that on their own."

*—**Dr. Modak, Chief Quality Officer**, El Rio Health*

How El Rio Health Drives Higher Vaccination Rates

A data-driven approach to in-clinic workflows and patient outreach

El Rio Health empowers providers to identify opportunities and strive toward key quality measures.

Leveraging built-in clinical decision support functionality, patient profiles show a list of care gaps or interventions that a patient is due for.[7]

Example: *An alert that reminds the nurse or physician that a patient is due for their annual influenza vaccine.*

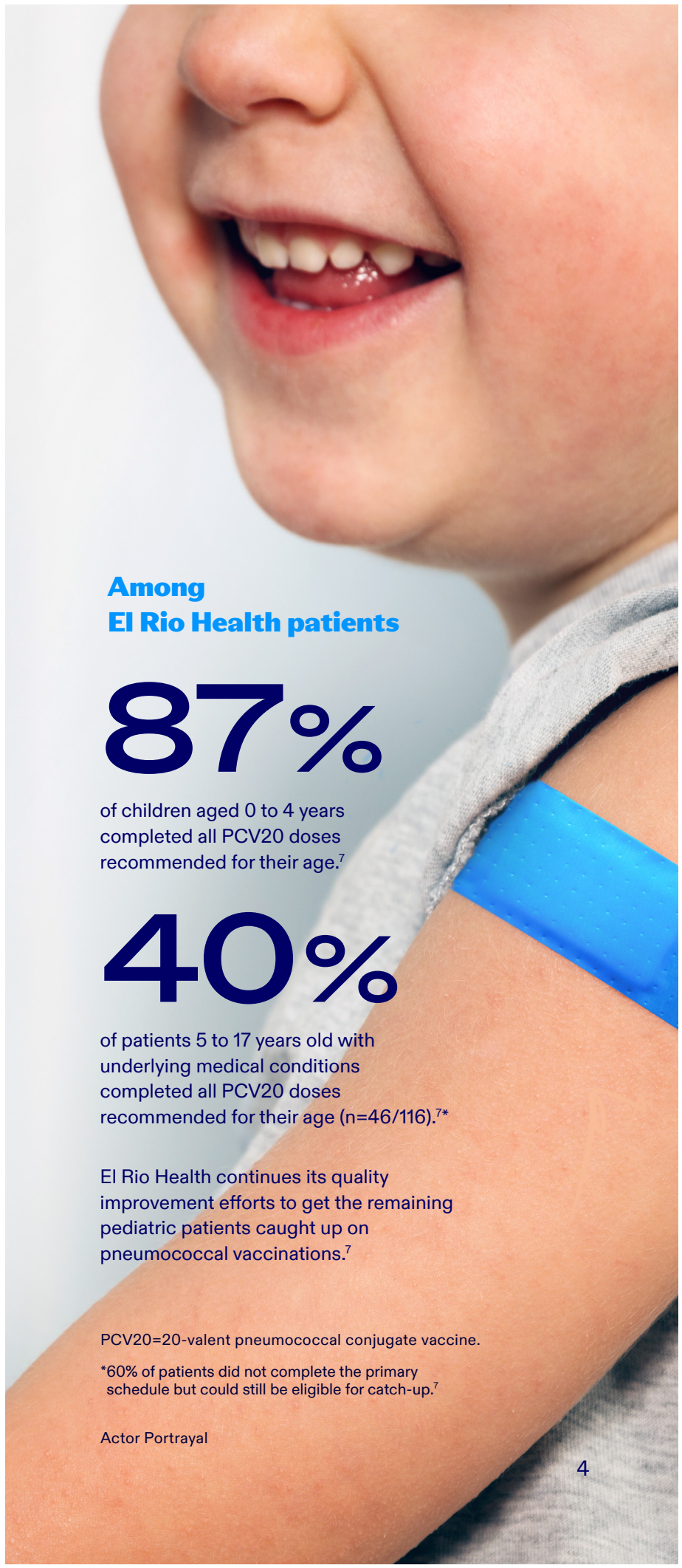
Patients with high-risk conditions (eg, severe persistent asthma, diabetes, immunocompromised patients) are identified via previously defined filters within the EHR.[7]

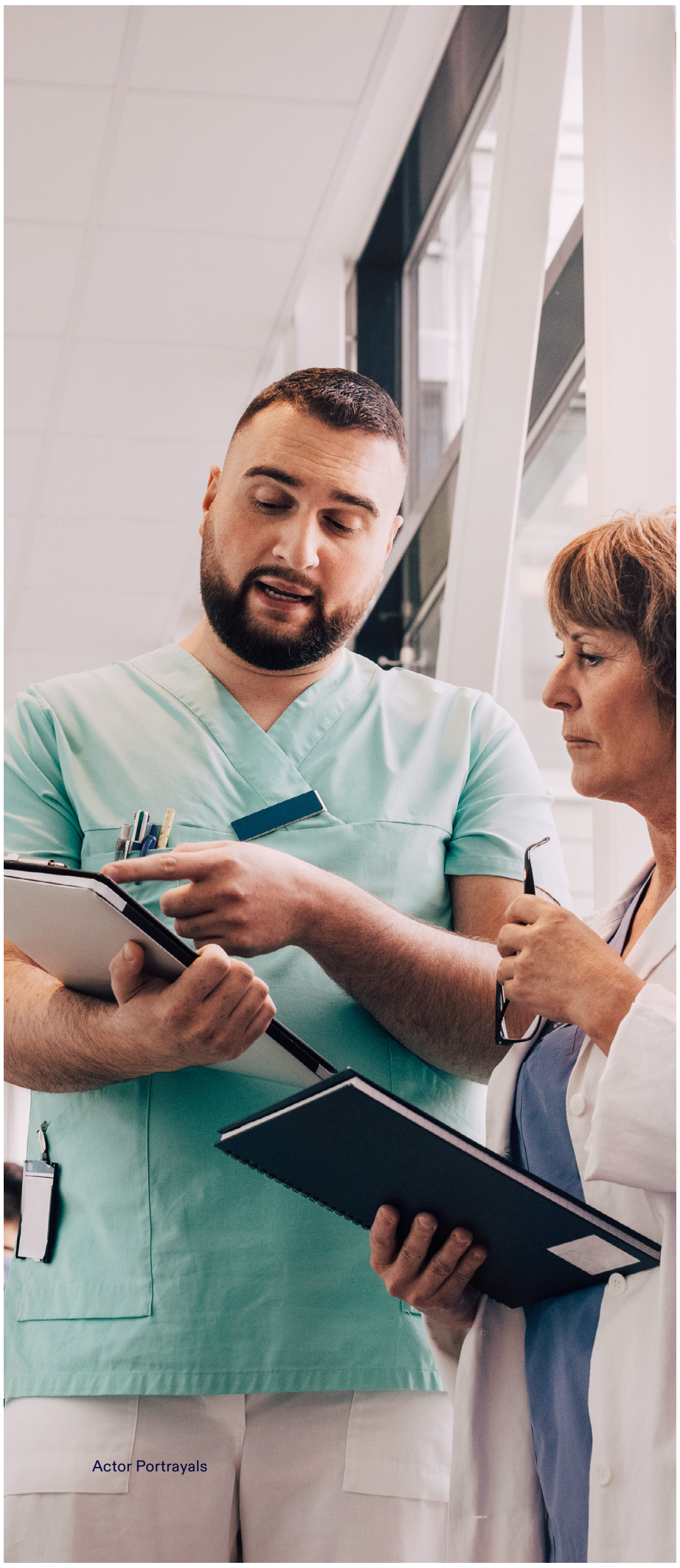
Once key groups are identified, outreach text messages can be sent to many patients at once, reminding them they may be due for a vaccine, screening, or follow-up visit.[7]

Staff is trained to inform patients about the importance of specific vaccines, helping to relieve vaccine hesitancy and highlight the risks of vaccine-preventable diseases.[7]

When creating alerts for a risk group that may need an intervention, be sure to use the correct diagnosis codes.

Example: *"Moderate persistent asthma" or "severe persistent asthma" may be more appropriate than simply "Asthma" to capture patients who are considered higher risk for pneumococcal disease and need a pneumococcal vaccination.*





Actor Portrayals

CREATING AN EFFECTIVE VACCINATION PROGRAM IN YOUR PRACTICE

Consider These Tips From El Rio Health

Make care accessible

Many FQHC patients face significant barriers in scheduling appointments and regularly following up with their care. El Rio Health allows patients to walk in anytime without needing a vaccination appointment. Staff levels are augmented at key times so patients can receive care in a timely manner, and standing orders make routine care more efficient.[7]

Optimize your EHR data

An EHR system that includes population health and clinical decision support tools can be used to create alerts and streamline patient outreach. Collect and analyze data to monitor important quality measures related to gaps in care.[7]

Identify high-risk patients and reach out

In-clinic education and outreach efforts between visits can be crucial to improving outcomes for the most vulnerable in your community.[7]

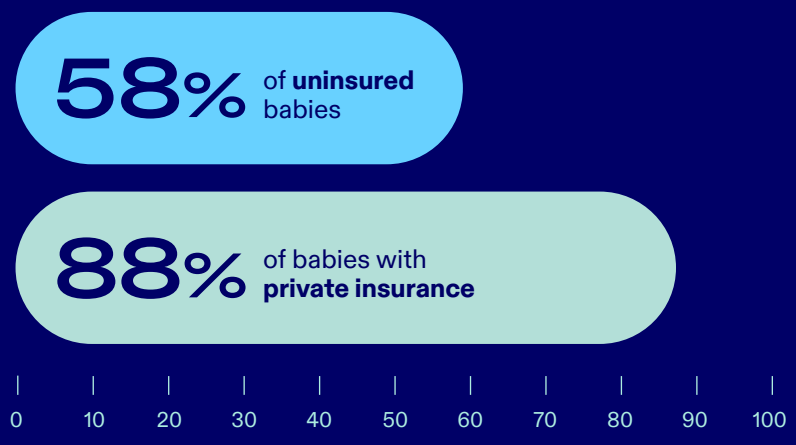
"Make vaccinations a high priority by making it open-access and having no need for an appointment for a vaccine. This is a huge way to signal to staff that vaccines are our highest priority, and that we're removing all the barriers we can to getting [patients] those vaccines."

—***Dr. Modak, Chief Quality Officer,*** *El Rio Health*

FQHCs Are Uniquely Positioned to Address Pneumococcal Vaccination Disparities[3]

FQHCs are critical sources of preventive care for underserved populations—serving **1 in 10** individuals in the US. A higher proportion of children from low-income neighborhoods have underlying medical conditions such as asthma or diabetes, which puts them at greater risk for IPD. **FQHCs are key access points for Medicaid, uninsured, and underinsured patients.**[3,4,9-12]

Only 58% of uninsured babies (n=569) and 76% of Medicaid-eligible babies (n=10,018) received ≥4 doses of a PCV by age 2 compared with 88% of babies with private insurance (n=16,007) among babies born during 2020-2021, according to the National Immunization Survey-Child.[3*]



*Estimated vaccination coverage by age 24 months among babies born during 2020-2021 from the National Immunization Survey-Child, United States, 2021-2023. The Kaplan-Meier method was used to estimate vaccination coverage to account for babies whose vaccination history was ascertained before age 24 months.[3]

Actor Portrayals

Prevnar 20®
Pneumococcal 20-valent Conjugate Vaccine

Prevnar 20® helps protect against 20 serotypes responsible for **the majority of IPD cases in children under 5 years of age**[13,14†]

Prevnar‡ vaccines have reduced the pediatric burden of IPD in children under 5 by 95% since their introduction in 2000.[15]

Prevnar 20 continues this legacy of protection in your community, helping to protect babies and children against IPD with the **broadest serotype coverage** available in a pediatric PCV.[13,16]

Prevnar 20 helps protect against the 20 *Streptococcus pneumoniae* serotypes in the vaccine.[13]

Prevnar 20 is the only PCV indicated to help prevent otitis media.[15,16]

†Based on 2023 CDC surveillance data.[14]

‡Prevnar includes Prevnar® (Pneumococcal 7-valent Conjugate Vaccine [Diphtheria CRM_{197} Protein]), Prevnar 13® (Pneumococcal 13-valent Conjugate Vaccine [Diphtheria CRM_{197} Protein]), and Prevnar 20. In the US, Prevnar (PCV7) was available from 2000 to 2010, and Prevnar 13 was available from 2010 to 2024. Prevnar 20 has been available since 2023.[13,17]

Prevnar 20 is the **only pneumococcal vaccine option you need** for children[4]

Children who have received a complete pneumococcal vaccine series that included Prevnar 20 do not need any additional doses. **Only Prevnar 20 eliminates the need for one or more PPSV23 vaccines in children with certain underlying medical conditions.[4]**

Streamline pneumococcal vaccine stocking for all children with a single vaccine by stocking Prevnar 20.

Learn more

Upon clicking, or scanning, brings user to the Prevnar Peds Dosing Page: https://prevnar20pediatric.pfizerpro.com/dosing

CDC=Centers for Disease Control and Prevention; PCV7=7-valent pneumococcal conjugate vaccine; PPSV23=23-valent pneumococcal polysaccharide vaccine.

INDICATIONS AND IMPORTANT SAFETY INFORMATION

INDICATIONS

- Prevnar 20® is a vaccine indicated for active immunization for the prevention of invasive disease caused by *Streptococcus pneumoniae* serotypes 1, 3, 4, 5, 6A, 6B, 7F, 8, 9V, 10A, 11A, 12F, 14, 15B, 18C, 19A, 19F, 22F, 23F, and 33F in individuals 6 weeks of age and older
- Prevnar 20® is a vaccine indicated for active immunization for the prevention of otitis media caused by *S. pneumoniae* serotypes 4, 6B, 9V, 14, 18C, 19F, and 23F in individuals 6 weeks through 5 years of age

IMPORTANT SAFETY INFORMATION

- Do not administer Prevnar 20® to individuals with a severe allergic reaction (eg, anaphylaxis) to any component of Prevnar 20® or to diphtheria toxoid
- Safety and immunogenicity data on Prevnar 20® are not available for individuals in immunocompromised groups, and vaccination should be considered on an individual basis. Based on experience with pneumococcal vaccines, individuals with altered immunocompetence may have reduced immune responses to Prevnar 20®
- Apnea following intramuscular vaccination has been observed in some infants born prematurely. Vaccination of premature infants should be based on the infant's medical status and the potential benefits and risks
- In individuals 2, 4, 6, and 12 through 15 months of age vaccinated with a 4-dose schedule, the most commonly reported solicited adverse reactions (>10%) were irritability, pain at the injection site, drowsiness, decreased appetite, injection site redness, injection site swelling, and fever
- In individuals 15 months through 17 years of age vaccinated with a single dose, the most commonly reported solicited adverse reactions (>10%) were irritability, pain at the injection site, drowsiness, fatigue and muscle pain, decreased appetite, injection site swelling and redness, headache, and fever

Please click for Prevnar 20® full Prescribing Information.

Upon clicking brings user to the Prevnar PI: https://labeling.pfizer.com/ShowLabeling.aspx?id=15428

References: 1. National Association of Community Health Centers. America's health centers. Published October 31, 2024. Accessed February 26, 2025. https://www.nachc.org/wp-content/uploads/2023/08/Americas-Health-Centers-2024 **2.** Mohanty S, Done N, Liu Q, et al. Incidence of pneumococcal disease in children ≤48 months old in the United States: 1998–2019. *Vaccine*. 2024;42(11):2758-2769. **3.** Hill HA, Yankey D, Elam-Evans LD, et al. Decline in vaccination coverage by age 24 months and vaccination inequities among children born in 2020 and 2021 — National Immunization Survey-Child, United States, 2021–2023. *MMWR Morb Mortal Wkly Rep*. 2024;73(38):844-853. **4.** Farrar JL, Gierke R, Andrejko KL, et al. Use of 20-valent pneumococcal conjugate vaccine among U.S. children: updated recommendations of the Advisory Committee on Immunization Practices — United States, 2023. *MMWR Morb Mortal Wkly Rep*. 2023;72(39):1072. **5.** Gierke R, McGee L, Beall B, Pilishvili T. Pneumococcal. In: Roush SW, Baldy LM, eds. *Manual for the Surveillance of Vaccine-Preventable Diseases*. Centers for Disease Control and Prevention. June 29, 2020. Accessed January 31, 2024. https://www.cdc.gov/surv-manual/php/table-of-contents/chapter-11-pneumococcal.html **6.** Pelton SI, Weycker D, Farkouh RA, Strutton DR, Shea KM, Edelsberg J. Risk of pneumococcal disease in children with chronic medical conditions in the era of pneumococcal conjugate vaccine. *Clin Infect Dis*. 2014;59(5):615-623. **7.** Data on file. El Rio Case Study Interview. Pfizer Inc. **8.** Data on file. El Rio Case Study Interview Email. Pfizer Inc. **9.** National Association of Community Health Centers. 2025 uniform data system chartbook: analysis of the 2023 UDS data. May 13, 2025. Accessed August 27, 2025. https://www.nachc.org/resource/2025-uniform-data-system-chartbook-analysis-of-the-2023-uds-data/ **10.** Zanobetti A, Ryan PH, Coull B, et al. Childhood asthma incidence, early and persistent wheeze, and neighborhood socioeconomic factors in the ECHO/CREW Consortium. *JAMA Pediatr*. 2022;176(8):759-767. **11.** Perng W, Conway R, Mayer-Davis E, Dabelea D. Youth-onset type 2 diabetes: the epidemiology of an awakening epidemic. *Diabetes Care*. 2023;46(3):490-499. **12.** Centers for Disease Control and Prevention. Pneumococcal vaccination. October 26, 2024. Accessed September 2, 2025. https://www.cdc.gov/pneumococcal/vaccines/index.html **13.** Prevnar 20® (Pneumococcal 20-valent Conjugate Vaccine) Prescribing Information. Wyeth Pharmaceuticals LLC, 2023. **14.** Centers for Disease Control and Prevention. 1998-2023 serotype data for invasive pneumococcal disease cases by age group from Active Bacterial Core surveillance. Updated March 14, 2025. Accessed June 9, 2025. https://data.cdc.gov/d/qvzb-qs6p **15.** Centers for Disease Control and Prevention. Pneumococcal disease surveillance and trends. September 9, 2024. Accessed December 2, 2024. https://www.cdc.gov/pneumococcal/php/surveillance/ **16.** Vaxneuvance™ (Pneumococcal 15-valent Conjugate Vaccine) Prescribing Information. Merck Sharp & Dohme Corp, 2023. **17.** Prevnar 13® (Pneumococcal 13-valent Conjugate Vaccine [Diphtheria CRM_{197} Protein]) Prescribing Information. Wyeth Pharmaceuticals LLC, 2019.

Pfizer