



Advancing High Performance Health

AMGA Foundation

**Adult Immunization (AI)
Best Practices Learning
Collaborative, Group 3:
Case Study**

Lahey Health
Burlington, MA



Organizational Profile

Lahey Health is an integrated healthcare system with a broad range of services. There are four acute care hospitals with a total of 835 beds. Three of these are community hospitals and one is a tertiary institution. The geographic location of these facilities covers a significant portion of Northeastern Massachusetts. Lahey Health includes 220 primary care physicians affiliated with the system, the vast majority of whom are employed by the system, and 1,175 specialists.

In addition, the system owns a robust behavioral health system, including substance abuse, emergency services, outpatient providers, and an inpatient behavioral health facility with 62 beds. Two acute skilled nursing facilities are owned, as well as an assisted living facility. Integrated into the system are home care agencies that cover the geography of all the acute care systems. Employed or affiliated physicians who care for patients in a preferred network of post-acute facilities.

In 2015, the system began an implementation of Epic. At the time of application, the tertiary institution and one of the community hospitals has completed the implementation of this electronic health record (EHR). All of the physicians employed in the tertiary institutions and most of the primary care physicians affiliated with the community hospital that has implemented Epic are on the same platform. During the collaborative, the second community hospital and its employed physician practices completed implementation.

Population health initiatives have been pursued assertively. Lahey Health participates in an MSSP ACO program with approximately 40,000 lives, and overall, there are almost 200,000 lives under value-based contracts.

Executive Summary

Lahey Health's focus was to improve the pneumococcal vaccination rate for all our adult populations. A robust outpatient and inpatient vaccination program was already in place for the >65 population, therefore the majority of efforts were focused on the high-risk 19-64 population.

Identifying and gaining provider input and consensus on the definition of "high-risk" was instrumental in the success of the collaborative. Once in agreement on who was high-risk, the team worked toward educating clinicians and patients via multiple platforms before conducting specific patient outreach

efforts. Additional efforts such as Epic builds, immunization interfaces, and specialty clinic workflows are in the pipeline.

The timeframe allowed by the collaborative is, in our opinion, not long enough to obtain leadership buy-in, and develop and implement initiatives. A minimum of two years seems a more realistic approach for change at a network level and three to five before sustainability is achieved.

Program Goals and Measures of Success

Lahey Health's goals, set by the leadership team, were to improve pneumococcal vaccinations for the >65 population to the Healthy People 2020 goal of 90% and to improve the pneumococcal vaccination rates for the 19-64 high risk population by 10%.¹ Goals were to be achieved by education, developing workflows and maximizing use of technology with electronic medical record enhancements and Optum One data analytics.

Collaborative goals were set for the Adult Immunization Collaborative (Groups 2 and 3 participants). The collaborative goals were set based on reviewing the Healthy People 2020 goals from the federal office of Disease Prevention and Health Promotion (HP2020), baseline data for each group and with input from the Collaborative advisors (see Appendix).

Population Identification

Lahey Health utilized two primary care practice sites—one clinic and one community—as pilots to identify opportunities and/or barriers across Lahey Health's diverse practice structure. General Internal Medicine (GIM) is a clinic located within the tertiary Lahey Hospital and Medical Center campus. It consists of 45 physicians and 22 advanced practitioners and had 7,700 patients (93%) eligible for the pneumococcal vaccination. Danvers Medical Associates (DMA) is a community practice located north of Boston. DMA consists of three physicians and two advanced practitioners and had 560 patients (7%) eligible for the pneumococcal vaccination.

Lahey Health used Optum One to monitor and report their selected measures. Optum One creates variables using underlying data from a variety of data sources including Rx tables, Rx history/patient reports, immunization tables, CPT/G codes, health maintenance tables, and ICD codes. Custom denominator lists were created by the Optum Analytics data

team and uploaded into the application for each reporting period. These lists along with reporting templates in the Optum One application were used to retrieve data needed for AMGA reporting and to identify populations for Lahey Health interventions.

Intervention

Lahey Health's workgroup developed an action plan based on the AMGA Collaborative Framework. A decision was made to develop and implement at least one initiative from each category and attempt to incorporate at least one initiative from each level within said category.

- Provider and staff education
 - Laminated and distributed the California Department of Public Health's Pneumococcal Timing Flyer² (see Appendix) and distributed to all clinicians within the two practice sites
 - Robert Duncan, M.D., director, Infection Prevention and Hospital Epidemiology, and collaborative champion, conducted provider training/education sessions to all clinicians affiliated with the pilot sites, on the latest guidelines
 - Quarterly progress reported via provider newsletter
- Patient education
 - Through a collaboration with the marketing team at Lahey Health a patient education flyer (see Appendix) was developed and distributed via multiple formats; digitally on televisions within practices, printed for distribution to patients, Facebook, and Twitter
 - Lahey Health incorporated within an article published on Lahey's site: Myhealthystate.org
 - Posters were printed and displayed in practice waiting areas and exam rooms
 - Patient letter was developed for targeted outreach to high-risk patients
 - Preventive care functionality, which included pneumococcal vaccination compliance for patients >65, was added to MyChart, Lahey Health's patient portal via Epic's Health Maintenance
- Information technology
 - Health Maintenance Topic within Epic indicates compliance for pneumococcal vaccination for patients >65
- Developed bidirectional feed for vaccinations with the State of Massachusetts' registry
- Inpatient point of care notification system via EMR for vaccine naive patients
- Clinical support
 - Developed pharmacy led pneumococcal vaccination clinics for targeted high-risk patient population outreach campaign
 - Educate and develop program to allow medical assistants the capability and authority to administer vaccines
- Compensation
 - Worked with Merck Pharmaceuticals™ to develop a rebate program for improvement in adult pneumococcal vaccine rates

Outcomes and Results

Lahey Health met and/or exceeded its internal goals for adult pneumococcal vaccination rates both the >65 and high-risk populations. Pneumococcal vaccination rates among patients 65 and older hit the Health People and Collaborative goal of 90% vaccinated (any vaccine) in quarter two. Although Lahey Health did not retain that level in subsequent quarters, overall performance was improved over baseline. In particular, Lahey Health was recognized for the high rate of improvement (12%) of this patient population receiving both the PPSV and PCV. Any improvement for this population is significant as baseline was above collaborative average. Pneumococcal vaccinations rates for high-risk patients age 18-64 improved 22% from baseline; however, Lahey Health did not achieve collaborative goals for this population.

Lessons Learned and Ongoing Activities

Lahey Health's most valuable lesson learned through the collaborative was to set realistic expectations for the vetting, development and implementation of any program or initiative. Securing proper approvals, defining a program, and gathering the appropriate stakeholders can be a complex and time-consuming endeavor.

Education and consensus among physicians prior to roll-out of any initiatives was the key to a successful implementation. Provider contribution led to greater participation and will

continue to generate benefits downstream. The patient outreach initiative was not as successful as hoped entirely due to the fact this edict was not followed. Outreach was conducted using Optum data that was not vetted prior to roll-out. As identified by Dr. Duncan at the onset, the Optum One Analytics tool had a broader oncology definition for high-risk than Dr. Duncan was comfortable with. Therefore, this subset of patients should have been reviewed and/or excluded prior to patient outreach. Unfortunately, this led to significant concern among patients and providers, and the initiative was put on hold until further evaluation could be completed.

Overall, the greatest achievement was the increase in attention to adult vaccinations, especially for the at-risk and high-risk populations, across the system.

Lahey Health encountered significant barriers in implementation of any EMR-related initiatives as resources were allocated to other system-wide initiatives—mainly, the transition of a community hospital and subsequent employed practices onto the system in early 2018. The exploration of an

outside merger also impacted viability of development of any new programs. However, a preventive care module is slated for implementation in the electronic medical record within the foreseeable future, as are other technological advancements, such as incorporating employee vaccinations into medical records via portal.

References

1. Office of Disease Prevention and Health Promotion (ODPHP). Healthy People 2020. [healthypeople.gov](https://www.healthypeople.gov).
2. California Department of Public Health, Immunization Branch. This publication was supported by Grant Number H23/CCH922507 from the Centers for Disease Control and Prevention (CDC). [EZIZ.org](https://www.eziz.org).

Collaborative Goals

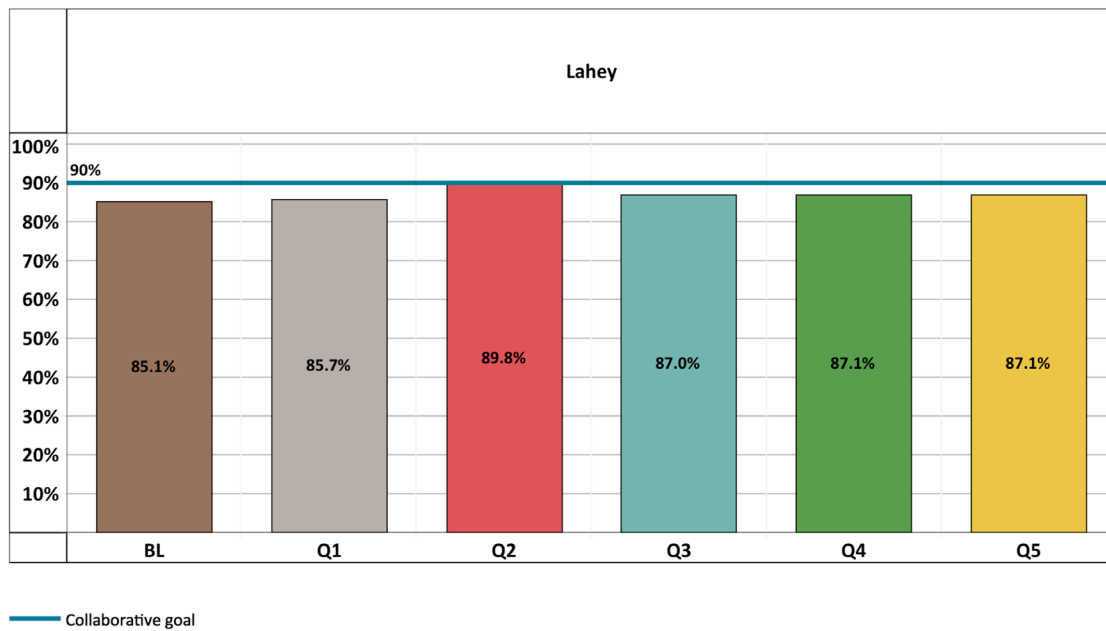
Measure	Healthy People 2020	Collaborative Goal
Measure 1 (65+) Any	90%	90%
Measure 1 (65+) Both PPSV and PCV*	90%	60%
Measure 2 (High-Risk)	60%	45%
Optional Measure 2a (At-Risk)**		
Measure 3 (Flu)	70%/90%***	45%

* Increasing “Both” is a good goal for Groups which are already doing well on “Any”

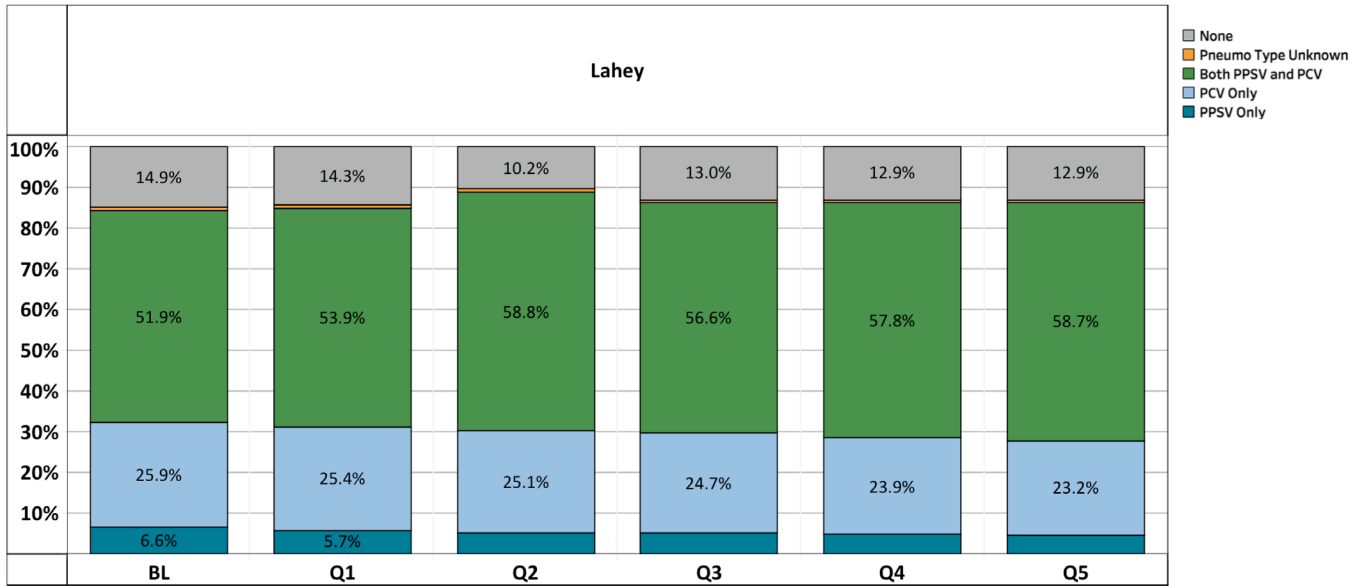
** According to CDC guidelines, it is not currently recommended that the at-risk population receive PCV. Therefore, “PPSV” or “Unknown pneumococcal vaccination” are numerator options for Measure 2a.

*** 70% for all patients, 90% for Medicare patients

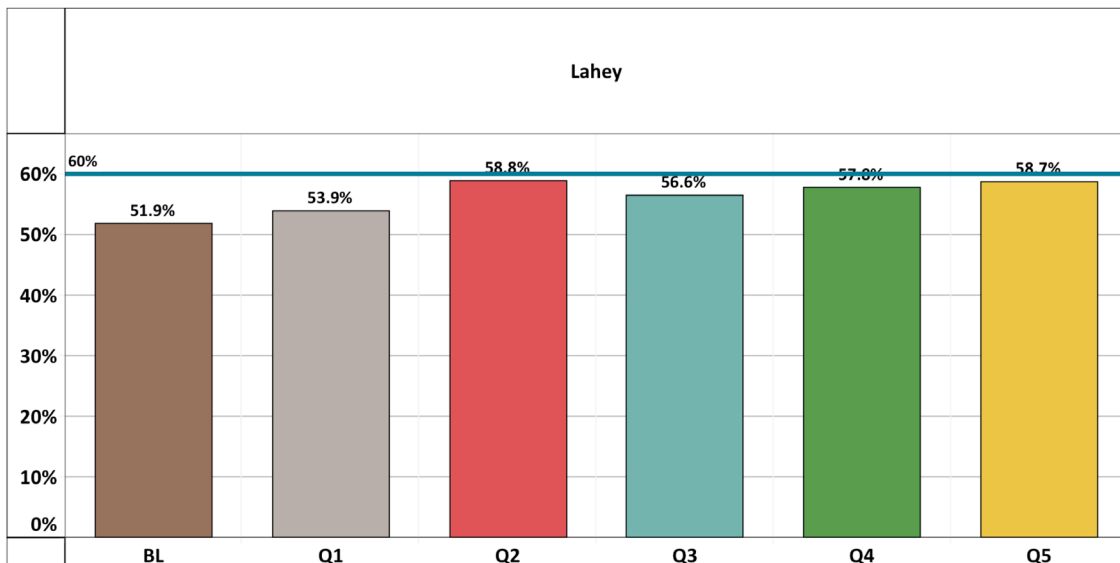
Measure 1 – Pneumococcal (Any) Immunization for Adults Ages ≥ 65



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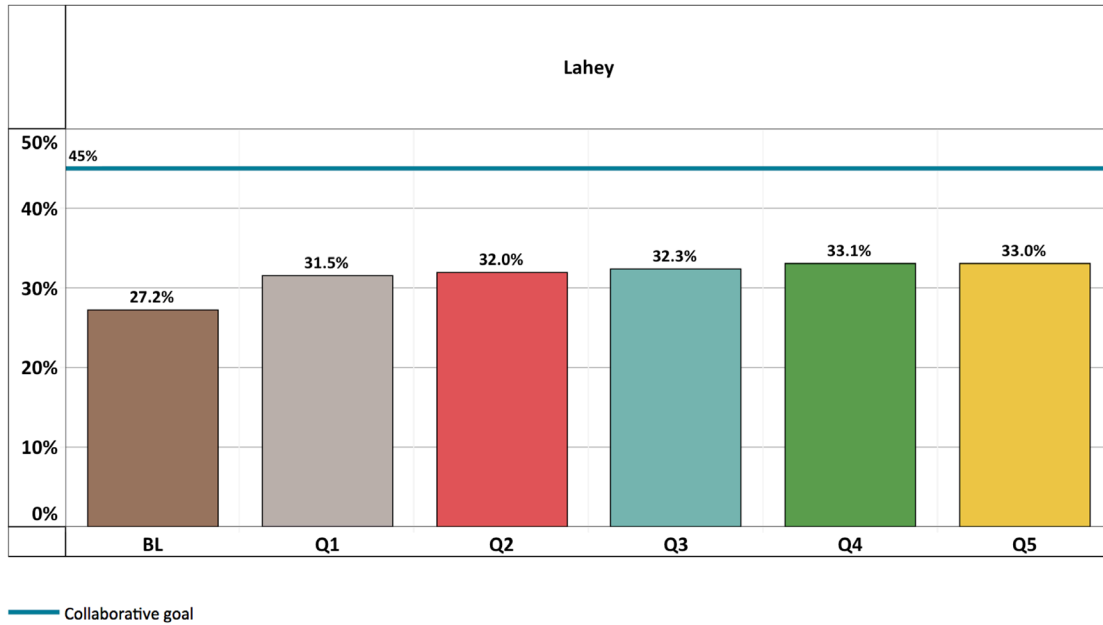


Measure 1 – Both PPSV and PCV Immunization for Adults Ages ≥ 65

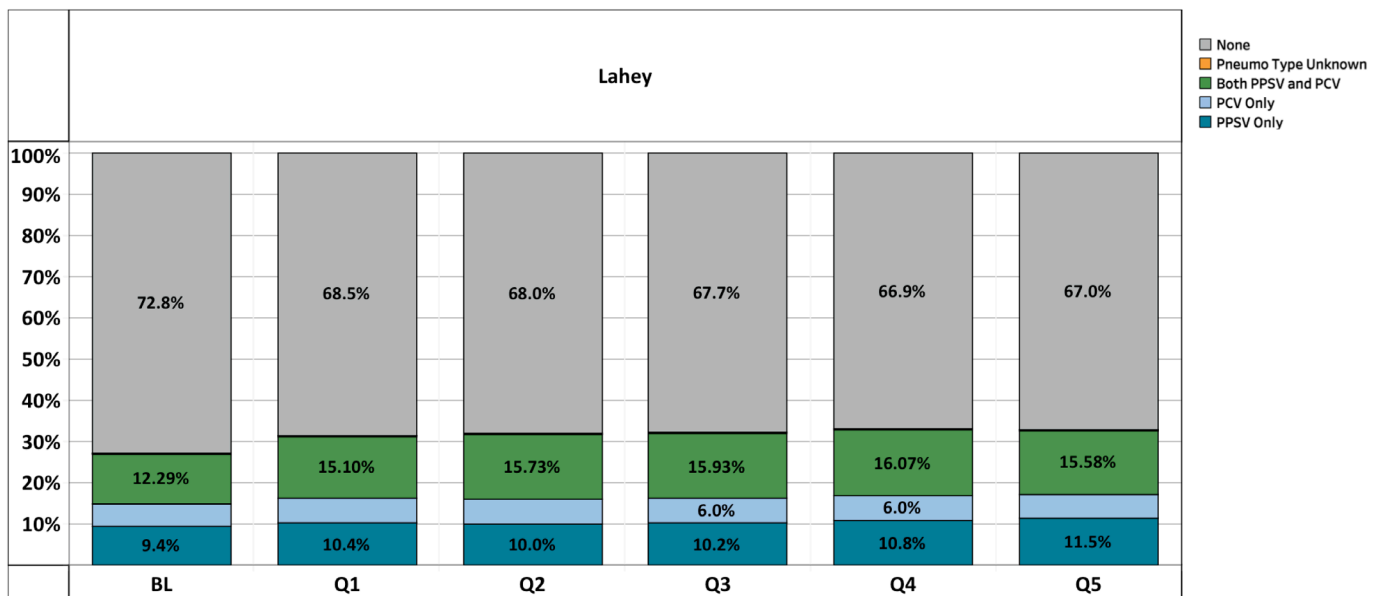


— Collaborative goal

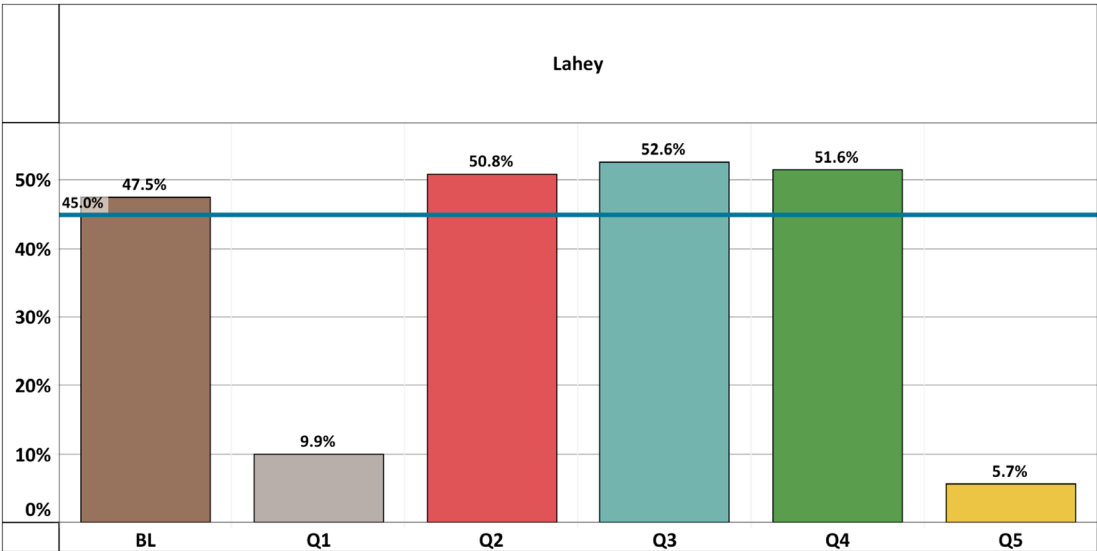
Measure 2 – Pneumococcal (Any) Immunization for Adults Ages 19–64 with High-Risk Conditions



Measure 2 – Pneumococcal (Any) Immunization for Adults Ages 19–64 with High-Risk Conditions



Measure 3 – Influenza Immunization, Age ≥ 18



— Collaborative goal

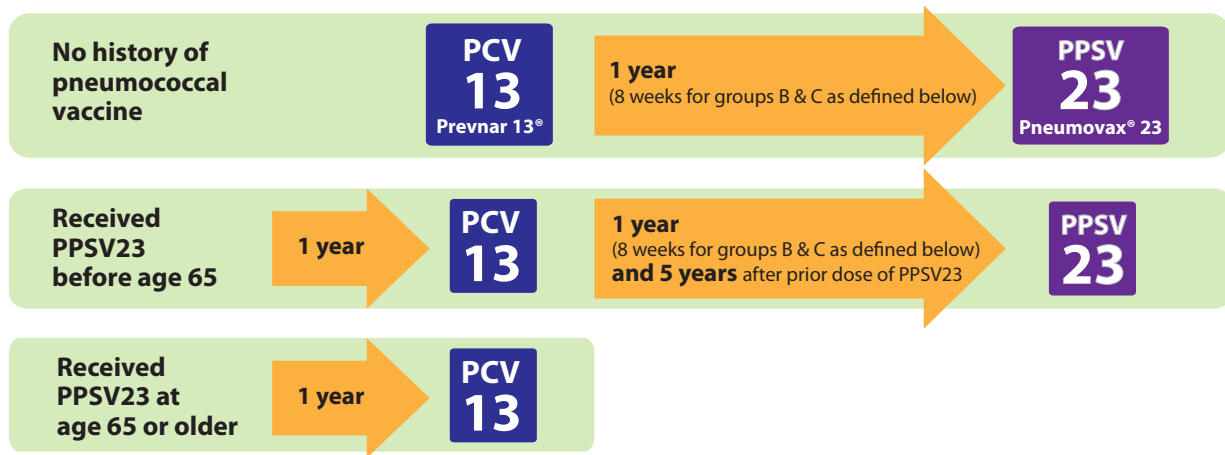
Pneumococcal Timing Chart

Pneumococcal Vaccine Timing—For Adults

DO NOT administer PCV13 and PPSV23 at the same visit.

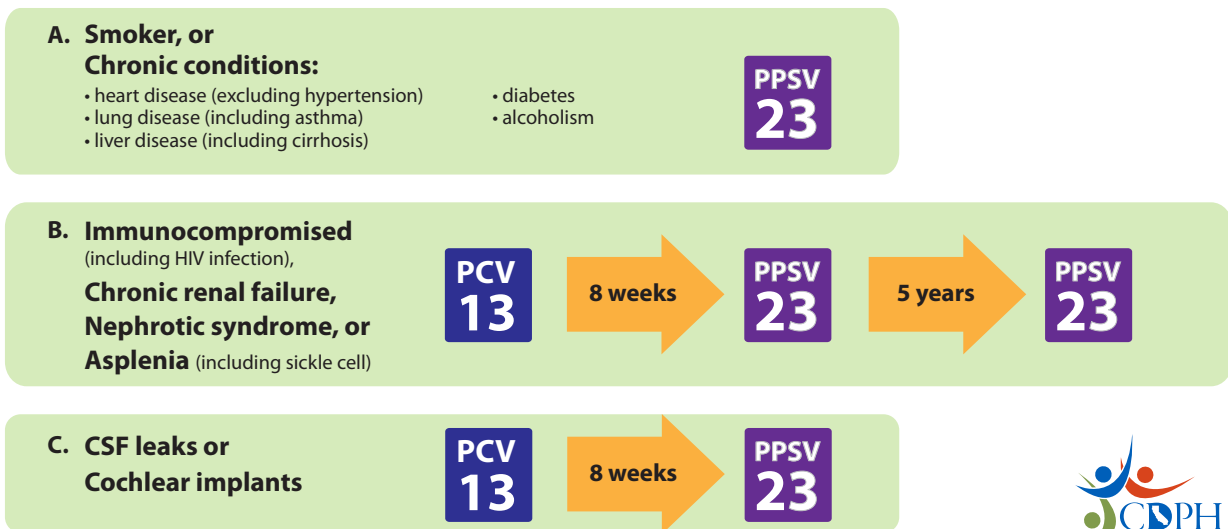
Age 65 Years or Older

- If PCV13 was given before age 65 years, no additional PCV13 is needed.



Age 19-64 Years With Underlying Condition(s)

- Prior doses count towards doses recommended below and do not need to be repeated.
- If PPSV23 given previously – wait one year before giving PCV13
 - for group B, wait at least five years before giving a second dose of PPSV23.
- No more than two doses of PPSV23 recommended before 65th birthday and one dose thereafter.



For further details, see: www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/pneumo.html

California Department of Public Health, Immunization Branch www.EZIZ.org

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What do these three people have in common?



They are **ALL** at risk for pneumonia.

IF YOU ARE:

65 years or older	OR	18 and older with <ul style="list-style-type: none">• diabetes• heart or lung disease• a compromised immune system	OR	A smoker
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You could be at risk for pneumococcal disease or pneumonia. Pneumococcal disease kills tens of thousands of US adults every year and can leave you with serious illness and life-long complications.

Don't risk it!

Ask your health care provider about pneumococcal vaccination.



Project Team

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