AMGA
Advancing High Performance Health

AMGA Foundation

Adult Immunization (AI) Best Practices Learning Collaborative, Group 2: Case Study

Summit Medical Group

Summit, NJ

Organizational Profile

Established in 1929, Summit Medical Group (Summit) is the largest for-profit, physician-owned and governed multispecialty group in New Jersey. Now in its 89th year of practice, Summit provides comprehensive, integrated primary and specialty care for more than half a million patients in the area. Employing more than 800 providers representing over 70 specialties and more than 150 primary care physicians, Summit is composed of a flagship, four hubs, and over 80 satellites in over seven counties.

Acronym Legend

ACIP: Advisory Committee on Immunization Practices

AI Collaborative: AMGA's Adult Immunization Best Practices Collaborative

CDC: Centers for Disease Control and Prevention

EHR: Electronic Health Record

PCV: Pneumococcal Conjugate Vaccine

PPSV: Pneumococcal Polysaccharide Vaccine

PVMA: Pneumococcal Vaccine Management Algorithm

Executive Summary

Summit's participation in the AMGA Adult Immunization Best Practices Learning Collaborative (AI Collaborative) quality improvement initiative to improve adult influenza and pneumococcal vaccination rates was driven by the clear, evidence-based recommendations by the Centers for Disease Control and Prevention (CDC) Advisory Committee on Immunization Practices (ACIP).

Summit focused on the following three strategies:

- Increasing vaccination rates in adult patients by the use of standardized best practice algorithms and protocols to reduce variations and improve clinical outcomes in chronic disease
- Improve prompt access for vaccination through the development of protocols driven to expand access to vaccination in ambulatory settings, such as primary care settings
- Address patient engagement through a "myth busters" campaign that included education on the importance of vaccinations to reduce the incidence of seasonal flu-related hospitalizations and influenza and pneumococcal pneumonia deaths

To achieve these goals, Summit formed an AI Collaborative committee consisting of members from the primary care, infectious disease, and the population health teams and took several actions in the one-year project.

Program Goals and Measures of Success

The AI Collaborative goals were set by AMGA Foundation based on reviewing the Healthy People 2020 goals from the federal Office of Disease Prevention and Health Promotion (HP2020)[1], baseline data for each group, and with input from the Collaborative advisors (see Appendix).

Summit's goals while participating in the AI Collaborative included patient and provider education, development and implementation of a pneumococcal vaccination algorithm to reduce variability in practice, and staff education and engagement to improve internal vaccination results. In addition, Summit leveraged provider reports and electronic health record (EHR) alerts to raise awareness of their performance in these adult immunization metrics.

Data Documentation and Standardization

For each quality initiative or collaborative, a data analytics team member was assigned to work collaboratively with the multidisciplinary workgroup leading the AI Collaborative efforts. Key data team members participated in the data orientation webinar and were part of the multidisciplinary AI Collaborative workgroup.

Summit has a standard process that is used when there are new measures or initiatives that require regular/ongoing outcomes reporting. A data analytics team member is assigned as needed to each project and/or measure. Measure specifications and required reporting are reviewed with the assigned team member by the Summit clinical/content expert to ensure understanding of the measure's intent and the initiative goals. The team member then develops graphical flowcharts and the necessary database queries in order to regularly report per the required schedule. The team member follows standard procedures to test and validate the data outputs to ensure accuracy in reporting.

Population Identification

Summit has more than 400 providers addressing adult immunizations in 60 locations and maintains a group-wide patient registry to track patients requiring immunization.

Intervention

Provider and Clinical Staff Engagement

Summit's Infectious Disease Physician Champion and clinical pharmacist attended individual department meetings to introduce the AI Collaborative and provide educational materials to specialty and primary care providers on pneumonia and flu vaccines based on CDC and ACIP recommendations. There was a heavy focus on adherence to guidelines and tips on handling the challenges of vaccinating patients with resistance to obtaining vaccines in the outpatient setting.

This was the first year Summit implemented a mandatory employee vaccine program, which was well received and included recognition via an employee ribbon worn on their badge. This had a subsequent effect of raising patient awareness when interacting with employees.

Development of a Vaccine Algorithm

Summit providers' use of standardized best practice algorithms and protocols has reduced variation and improved clinical outcomes in chronic diseases. With this in mind, the infectious disease physicians and clinical pharmacist developed a pneumococcal vaccine management algorithm (see Appendix) based on the CDC ACIP recommendations. This algorithm served as an education tool for the providers to intervene appropriately to EHR point-of-care vaccination prompts.

Prompt Access for Vaccination

Summit implemented prompt and easy protocol-driven access to vaccination in ambulatory settings, including primary care offices. The primary care offices implemented additional flu clinics group-wide that provided convenient and timely access to influenza vaccination, which resulted in improved vaccination rates. Dedicated additional resources allowed for sufficient staffing at flu clinics. In addition, they increased their surveillance of vaccine inventory to ensure they did not encounter a vaccine shortage.

Enhanced Patient Engagement

Summit addressed patient engagement and education on the importance of vaccination to reduce the incidence of seasonal flu-related hospitalizations and deaths and pneumococcal pneumonia death through several channels. Summit developed an adult immunization fact sheet for outpatient offices to share with patients skeptical about vaccination safety and efficacy and posted flu and pneumonia vaccine reminder signs in waiting areas. Awareness was also raised on the need to act promptly in getting vaccinated during phone on-hold recordings and marketing on social media sites.

Outcomes and Results

Summit began the AI Collaborative with a baseline performance rate of 76% for the pneumococcal immunization for adults aged ≥65 years of age. After intensive group-wide education, transparent performance reporting, and development/distribution of the Pneumococcal Vaccine Management Algorithm (PVMA), Summit closed the AI Collaborative with an achieved performance of 79% (see Appendix).

The PVMA specifically focused on new vaccine requirements where the overall goal was to immunize eligible patients with both the pneumococcal polysaccharide vaccine (PPSV) and the pneumococcal conjugate vaccine (PCV). As a result, Summit saw a significant increase in the number of patients who received both the PPSV and PCV—the rate went from 40% to 53.6%. This positive change occurred in line with a steady reduction in the number of patients without the PCV or PPSV. Further, clinician feedback validated the positive impact that the algorithm had on their clinical practices and patient awareness of the need for this important vaccination (see Appendix).

Summit initially chose to focus on the ≥65 patients who were eligible to receive a pneumococcal immunization vaccination based on the high variability across providers throughout the group. Summit continues to track the vaccination rate of high-risk patients aged 19-64. These immunization rates are routinely shared group-wide; however, it has been noted that performance has stagnated at 22%. This population has been identified as a significant improvement opportunity and will be targeted for future action steps starting with:

- The creation of a patient registry
- Raising clinician awareness of the need for vaccination; and,
- How the current algorithm can be applied to this vulnerable population

Throughout its participation in the AI Collaborative, Summit achieved a significant increase in the number of patients 18 years or older who received the influenza vaccination (see Appendix). The baseline performance rate was 33%. At the close of the AI Collaborative, 46% was achieved group-wide. Summit attributes this success to:

- Ongoing group-wide "myth busters" education campaign to engage all employees
- Clinician accountability to receive the flu vaccine
- Ongoing transparent reporting; and
- Provider accountability to achieve patient vaccination rates

In conclusion, the AI Collaborative provided the structure and sharing of "best practices," which greatly impacted vaccination rates across the large and widespread geographic region of central and northern New Jersey. As is evidenced by these increased vaccination rates, key processes have been implemented and hardwired into Summit that afford patients a higher standard of care.

Lessons Learned and Ongoing Activities

A significant challenge to implementing a group-wide adult immunization protocol that would improve flu vaccination rates was the short window of time Summit physicians had to achieve positive results. The physicians, however, were well informed about the move to value-based care and saw this as a positive step in improving clinical outcomes for their patients. Their Infectious Disease Physician Champion, a recognized expert in vaccination practices, led the effort.

Engaging patients in chronic illness management, disease prevention, and shared decision-making is also challenging and will continue to be a top priority for Summit. While it engaged patients during the AI Collaborative through the many social media outlets currently used by its marketing department, Summit also initiated utilizing its patient portal to message flu vaccine reminders, a tactic that will continue.

An additional challenge derives from the fact that many patients now obtain vaccinations through retail pharmacies, which are not required to fax documentation of the vaccine administered to the patient's primary care physician. While Summit can record patient self-reported flu vaccination, they may not record self-reported pneumonia vaccination without documentation. The Adult Immunization Quality Improvement Committee will continue to strategize solutions to improve capture of their patient's vaccinations administered outside of Summit.

Participation in the AI Collaborative engaged and challenged Summit Medical Group's primary care and specialist teams to provide patients with an improved quality of care, resulting in improved quality of life.

References

1. Office of Disease Prevention and Health Promotion (ODPHP). Healthy People 2020. https://www.healthypeople.gov.

Collaborative Goals

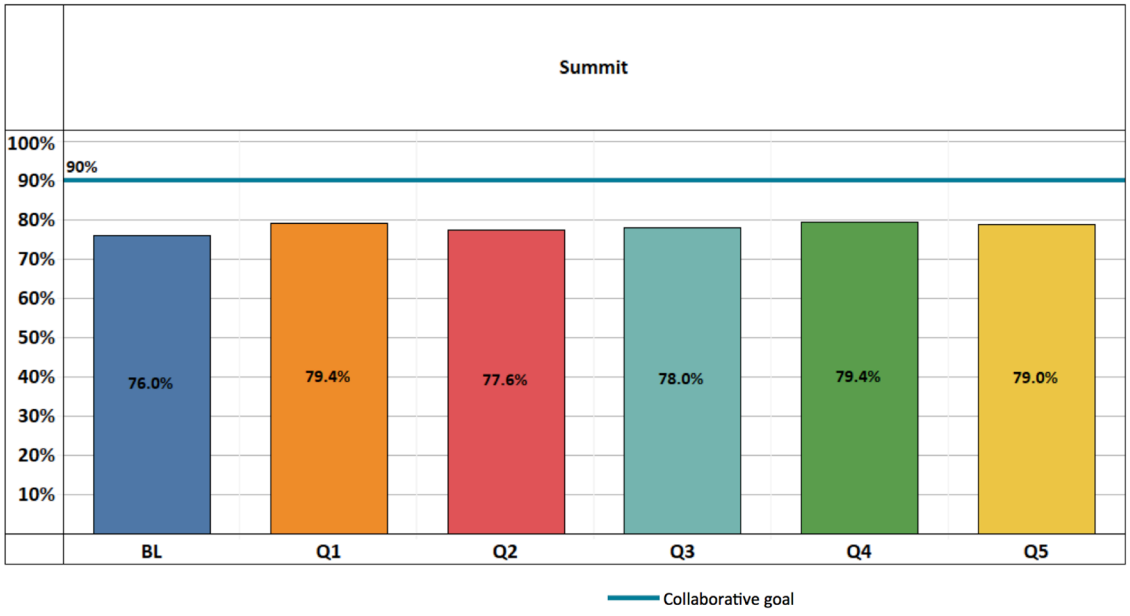
Measure	Healthy People 2020	Collaborative Goal
Measure 1 (65+) Any	90%	90%
Measure 1 (65+) Both PPSV and PCV*	90%	60%
Measure 2 (High-Risk)	60%	45%
Optional Measure 2a (At-Risk)**		
Measure 3 (Flu)	70%/90%***	45%

* 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.

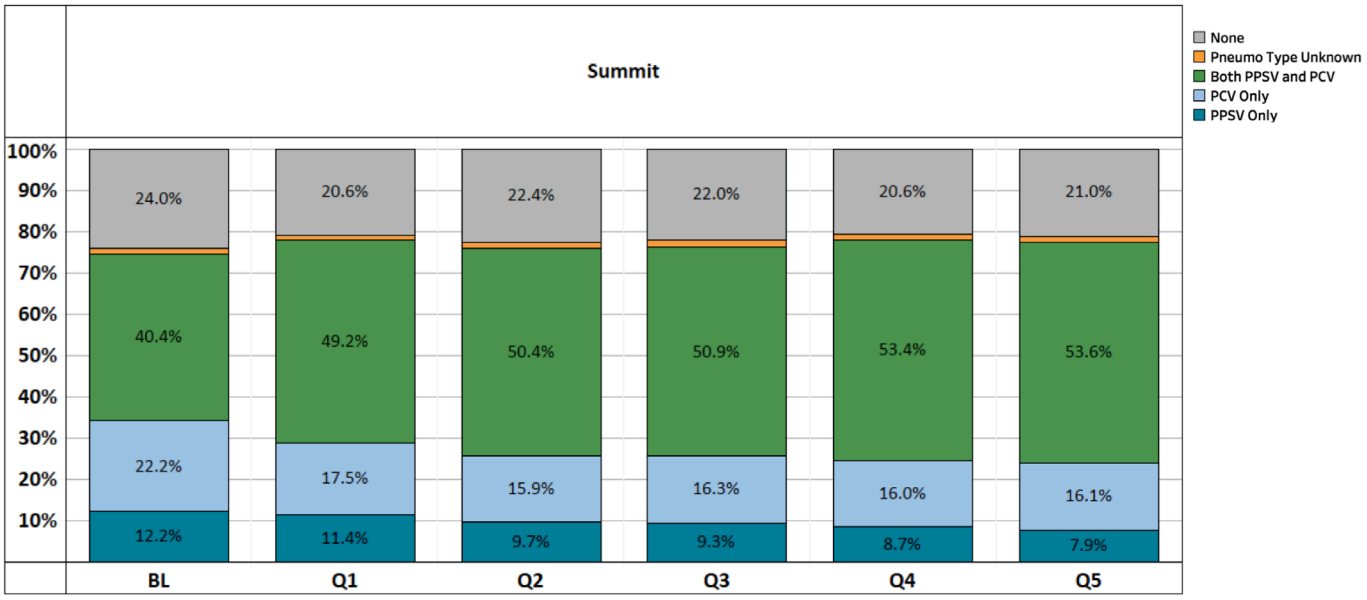
*** 70% for all patients, 90% for Medicare patients

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

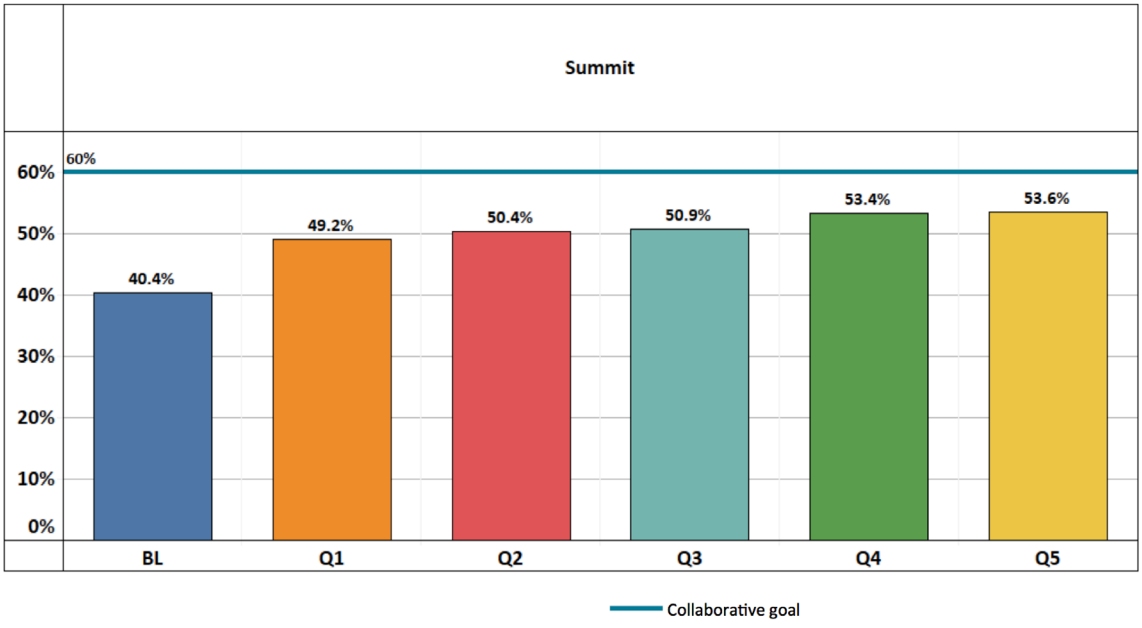


Appendix

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

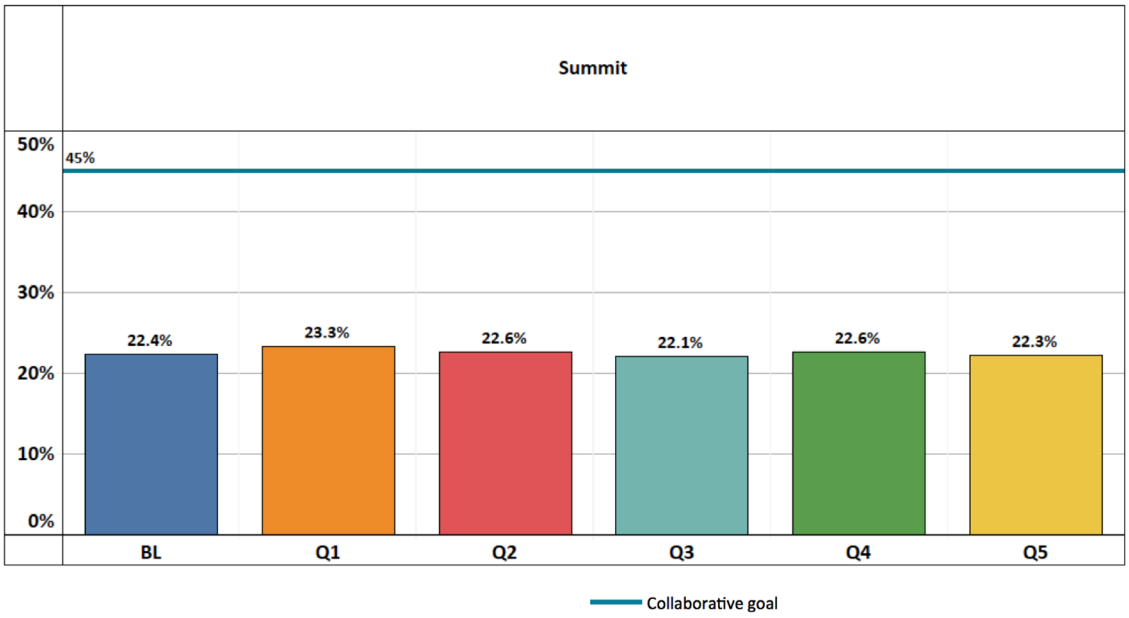


Measure 1 – Both PPSV and PCV Immunization for Adults Ages ≥ 65

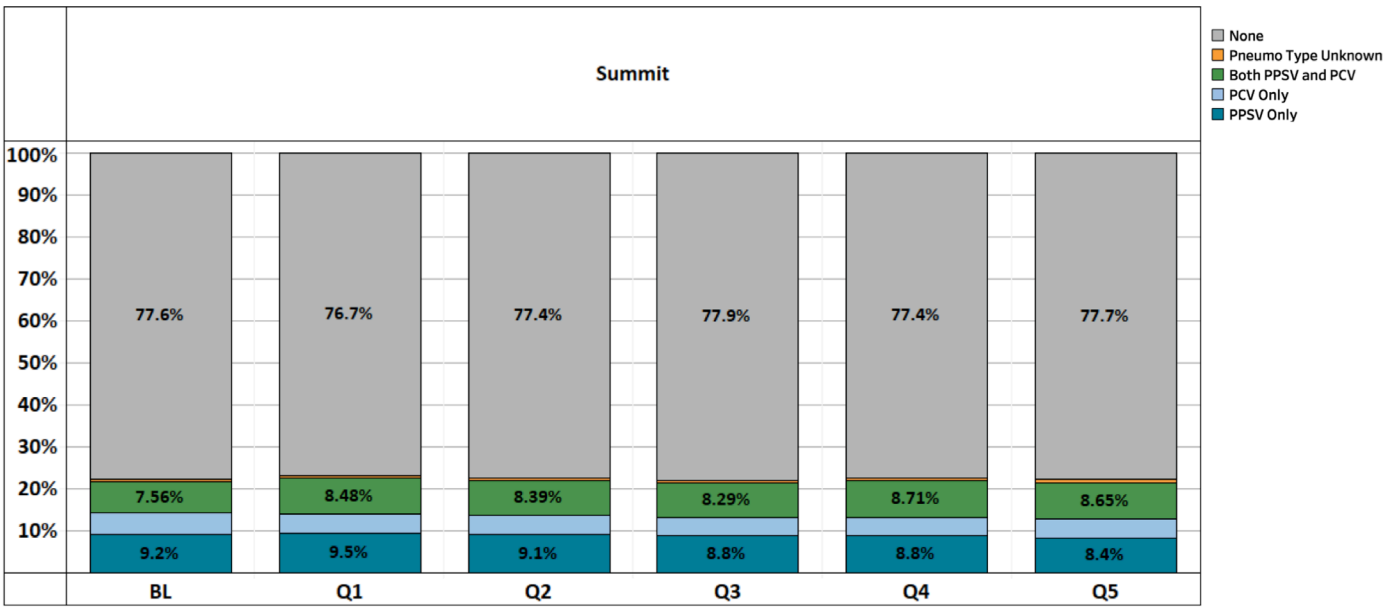


Appendix

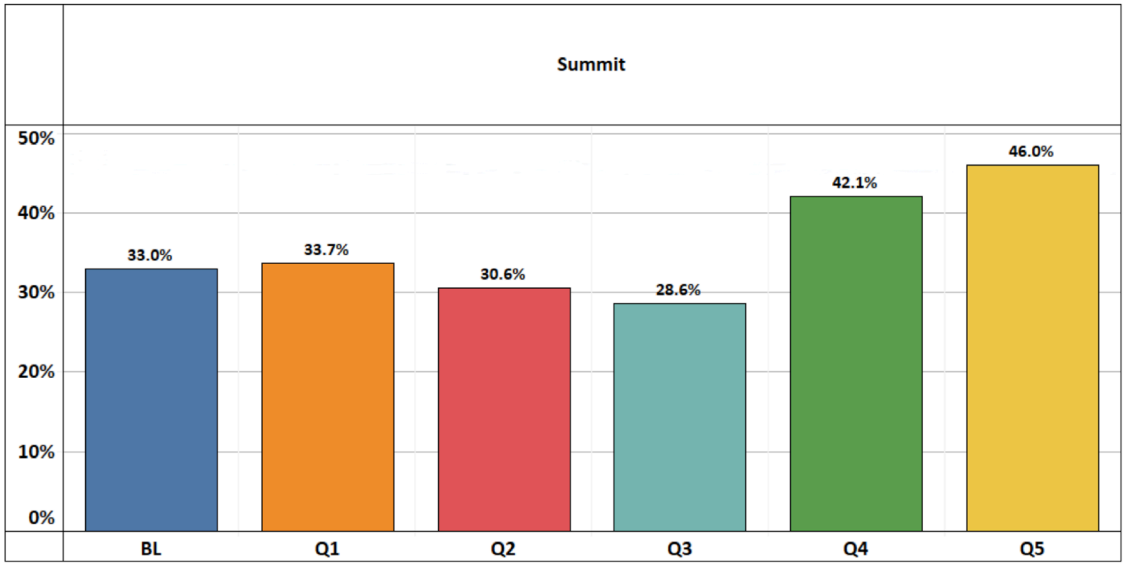
Measure 2 – Pneumococcal (Any) Immunization for Adults Ages 19–64 with High-Risk Conditions



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



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



Pneumococcal Vaccine Timing for Adults

SUMMIT MEDICAL GROUP

Clinical Pearls

PCV13 (Prevnar13®)
1 Dose for PCV13-Naïve Adults
- ≥ 65 years of age
- ≥ 19 years of age with certain medical conditions [Table 1]

PPSV23 (Pneumovax®23)
- ≥ 65 years of age: 1 dose regardless of vaccine history
- 19-64 years of age with certain medical conditions: 1-2 doses depending on medical conditions [Table 1]

PCV13 and PPSV23 should not be administered during the same office visit.

When both are indicated, PCV13 should be given before PPSV23 whenever possible.

If either vaccine is inadvertently given earlier than the recommended window, do not repeat the dose.

In adults pneumococcal vaccine (PCV13 or PPSV23) can be administered during the same visit with influenza vaccination, but at a different injection site, if feasible. Each vaccine should be administered with a separate syringe.**

Pneumococcal Vaccine Timing for Adults ≥ 65 years of age

Pneumococcal vaccine-naïve persons or those with unknown vaccination history aged ≥ 65 years

PCV13 at age ≥ 65 years → ≥ 1 year* → **PPSV23**

Persons who previously received PPSV23 at age ≥ 65 years

PPSV23 already received at age ≥ 65 years → ≥ 1 year → **PCV13**

Persons who previously received PPSV23 before age 65 who are now at age ≥ 65 years

PPSV23 already received at age ≥ 65 years → ≥ 1 year → **PCV13 at age ≥ 65 years** → ≥ 1 year → **PPSV23**

≥ 5 year

Pneumococcal Vaccine Timing for Adults < 65 years of age

Pneumococcal vaccine-naïve persons or those with unknown vaccination history aged < 65 years

PCV13 at age < 65 years → ≥ 8 weeks → **PPSV23**

Persons who previously received PPSV23 at age < 65 years

PPSV23 already received at age < 65 years → ≥ 1 year → **PCV13**

* For adults with immunocompromised conditions, cerebrospinal fluid leaks, or cochlear implants, may administer ≥ 8 weeks (Table 1)

** Reference: https://www.cdc.gov/vaccines/vpd/pneumo/hcp/administering-vaccine.html

Appendix

Table 1. Indications for Administration of PCV13 or PPSV23 for Adults

Medical Indication	Underlying Medical Condition	PCV13 ≥ for 19 years	PPSV23* for 19-64 years		PCV13 at ≥ 65 years	PPSV23 at ≥ 65 years
		Recommended	Recommended	Revaccination	Recommended	Recommended
None	None of the below				X	X ≥ 1 year after PCV13
Immunocompetent persons	Alcoholism Chronic heart disease† Chronic liver disease Chronic lung disease¤ Cigarette smoking Diabetes mellitus		X		X	X ≥ 1 year after PCV13 ≥ 5 years after any PPSV23 at < 65 years
	Cochlear implants CSF leaks	X	X ≥ 8 weeks after PCV13		X If no previous PCV13 vaccination	X ≥ 8 weeks after PVC13 ≥ 5 years after any PPSV23 at < 65 years
Persons with functional or anatomic asplenia	Congenital or acquired asplenia Sickle cell disease/other hemoglobinopathies	X	X ≥ 8 weeks after PCV13	X ≥ 5 years after first dose PPSV23	X If no previous PCV13 vaccination	X ≥ 8 weeks after PVC13 ≥ 5 years after any PPSV23 at < 65 years
Immunocompromised persons	Chronic renal failure Congenital or acquired immunodeficiencies◊ Generalized malignancy HIV infection Hodgkin disease Iatrogenic immunosupression¥ Leukemia Lymphoma Multiple myeloma Nephrotic syndrome Solid organ transplant	X	X ≥ 8 weeks after PCV13	X ≥ 5 years after first dose PPSV23	X If no previous PCV13 vaccination	X ≥ 8 weeks after PVC13 ≥ 5 years after any PPSV23 at < 65 years

* This PPSV23 column only refers to adults 19 through 64 years of age. All adults 65 years of age or older should receive one dose of PPSV23 5 or more years after any prior dose of PPSV23, regardless of previous history of vaccination with pneumococcal vaccine. No additional doses of PPSV23 should be administered following the dose administered at 65 years of age or older.

† Includes congestive heart failure and cardiomyopathies

¤ Includes chronic obstructive pulmonary disease, emphysema, and asthma

◊ Includes B- (humoral) or T-lymphocyte deficiency, complement deficiencies (particularly C1, C2, C3, and C4 deficiencies), and phagocytic disorders (excluding chronic granulomatous disease)

¥ Diseases requiring treatment with immonusuppressive drugs, including long-term systemic corticosteroids and radiation therapy

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This project was sponsored by Pfizer Inc. Pfizer was not involved in the development of content for this publication.