

# PNEUMOCOCCAL VACCINATION ACROSS THE LIFESPAN: INTEGRATING VACCINE RECOMMENDATIONS

Pneumococcal disease causes approximately **150,000 hospitalizations** and **thousands of deaths** each year in the U.S.

Pneumococcal disease poses the greatest risk to young children, older adults and people with certain immunocompromising or risk-disposing conditions. To keep your patients safe, follow the steps outlined below.

## STEP 1

### IS YOUR PATIENT ELIGIBLE FOR PNEUMOCOCCAL VACCINATION?

The Centers for Disease Control and Prevention (CDC) recommends pneumococcal vaccination in the following individuals **without predisposing medical conditions**:

- Children younger than **2 years** (three-dose primary series at ages 6 months, 2 years and 4 years, plus a booster at 12 months).
- Children aged **2-4 years** who did not complete all four doses.
- Adults **65 years or older**.

The CDC also recommends pneumococcal vaccination in children 2 years or older and adults younger than 65 years **with the following risk conditions**:

- Chronic medical conditions:
  - Alcohol use disorder.
  - Chronic heart disease (particularly cyanotic congenital heart disease or heart failure).
  - Chronic kidney disease.
  - Chronic liver disease.
  - Chronic lung disease, including moderate or severe persistent asthma.
  - Cigarette use.
  - Diabetes.
- Cerebrospinal fluid leak.
- Cochlear implant.
- Immunocompromising conditions, including:
  - Maintenance dialysis or nephrotic syndrome.
  - Congenital or acquired asplenia or splenic dysfunction.
  - Congenital or acquired immunodeficiency.
  - Treatment with immunosuppressives or radiation therapy.
  - HIV infection.
  - Sickle cell disease or hemoglobinopathies.
- Solid organ transplant.

Note for a full list of risk conditions:



[CDC Summary Page](#)



[PneumoRecs VaxAdvisor  
Mobile App](#)

## STEP 2

### START THE CONVERSATION.

Make every visit a vaccine visit! Don't wait for your patients to bring up vaccination – start the conversation with an assumptive vaccine recommendation: “Since you are due for your pneumococcal vaccination, we can take care of that today while you're here.”

Explain the risk for pneumococcal disease using information specific to patients and their caregivers. For example, if a patient is taking an immunosuppressive drug, their immune system may not be able to fight off the infection, putting them at risk of pneumonia, meningitis and bacteremia.

If you practice in a non-immunizing clinic, you can still make a difference in reducing the rates of pneumococcal disease! Prescribe patients a recommended vaccine using an electronic or paper prescription. The prescription can be provided to the patient or sent straight to their pharmacy of choice.

## STEP 3

### SELECT AN APPROPRIATE PNEUMOCOCCAL VACCINE BASED ON YOUR PATIENT'S AGE, HEALTH STATUS AND VACCINE HISTORY.

As of 2023, three pneumococcal vaccines are recommended for use by the Advisory Committee on Immunization Practices (ACIP). These vaccines, their indications and their serotype coverage are summarized below.

#### ACIP-RECOMMENDED PNEUMOCOCCAL VACCINES

VACCINE	INITIAL APPROVAL	SEROTYPE COVERAGE			APPROVED AGES
<b>PCV15</b> (Vaxneuvance)	2021	1, 3, 4, 5, 6A, 6B, 7F, 9V, 14, 18C, 19A, 19F, 23F	22F, 33F		≥6 weeks
<b>PCV20</b> (Pevnar20)	2021			8, 10A, 11A, 12F, 15B	≥6 weeks
<b>PPSV23</b> (Pneumovax 23)	1983	1, 2, 3, 4, 5, 6B, 7F, 8, 9N, 9V, 10A, 11A, 12F, 14, 15B, 17F, 18C, 19A, 19F, 20, 22F, 23F, 33F			≥50 years or ≥2 years with risk factors

Note that a fourth pneumococcal vaccine, PCV13 (Pevnar13), is approved in the U.S., but the ACIP no longer recommends it due to the availability of pneumococcal vaccines with broader coverage. If PCV13 is the only option available, however, it may still be used.

# STEP 3

Pneumococcal vaccine recommendations are based on patient age, vaccination history and health status. A brief overview of ACIP recommendations for pneumococcal vaccinations are included below.

## CHILDHOOD PNEUMOCOCCAL VACCINATIONS

Age at first pneumococcal vaccination	Primary PCV 15/PCV20 series	PCV15/20 booster	Additional vaccinations for children with risk conditions older than 2 years
<b>2-6 months</b>	Three doses at least four weeks apart	One dose at age 12-15 months	If prior vaccination schedule was completed and included any PCV20 dose, no additional vaccine dose recommended.
<b>7-11 months</b>	Two doses at least four weeks apart	One dose at age 12-15 months	If prior vaccination schedule was completed but did not include a PCV20 dose: <ul style="list-style-type: none"> <li>● <b>Chronic medical conditions, CSF leak or cochlear implant</b> — One dose of PCV20 or PPSV23 at least eight weeks after PCV13/PCV15.</li> <li>● <b>Immunocompromising conditions</b> — One dose of PPSV23 followed five years later by either PPSV23 or PCV20, or one dose of PCV20.</li> </ul>
<b>12-23 months</b>	Two doses at least eight weeks apart	-	
<b>24-71 months with risk conditions</b>	One to two doses	-	
<b>24-59 months without risk conditions</b>	One dose	-	-
<b>6-18 years with risk conditions</b>	One dose	-	If PCV20 was used, no additional vaccine dose is recommended.  If PCV15 was used, give one dose of PPSV23 (if not previously given) at least eight weeks later.

CSF, cerebrospinal fluid; PCV, pneumococcal conjugate vaccine; PPSV23, pneumococcal polysaccharide vaccine.

# STEP 3

## ADULT PNEUMOCOCCAL VACCINATIONS

Prior vaccine (age)	Vaccine options
<b>Adults aged 65 years and older</b>	
<b>None or PCV7 only</b>	<ul style="list-style-type: none"> <li>Single dose of PCV20.</li> <li>One dose of PCV15 followed by PPSV23 at least one year later.</li> </ul>
<b>PPSV23 only</b> (any age)	<ul style="list-style-type: none"> <li>Single dose of PCV20 at least one year after PPSV23.</li> <li>Single dose of PCV15 at least one year after PPSV23.</li> </ul>
<b>PCV13 only</b> (any age)	<ul style="list-style-type: none"> <li>Single dose of PCV20 at least one year after PCV13.</li> <li>Single dose of PPSV23 at least one year after PCV13.</li> </ul>
<b>PCV13 + PPSV23</b> (any age) (age <65 years)	<ul style="list-style-type: none"> <li>Single dose of PCV20 at least five years after last pneumococcal vaccine.</li> <li>Single dose of PPSV23 at least five years after last pneumococcal vaccine.</li> </ul>
<b>PCV13 + PPSV23</b> (any age) (age ≥65 years)	Shared decision making between patient and provider: Single dose of PCV20 at least five years after PPSV23.
<b>Adults aged 19-64 years with immunocompromise<sup>a</sup></b>	
<b>None or PCV7 only</b>	<ul style="list-style-type: none"> <li>Single dose of PCV20.</li> <li>One dose of PCV15 followed by PPSV23 at least eight weeks later.</li> </ul>
<b>PPSV23 only</b>	<ul style="list-style-type: none"> <li>Single dose of PCV20 at least one year after PPSV23.</li> <li>Single dose of PCV15 at least one year after PPSV23.</li> </ul>
<b>PCV13 only</b>	<ul style="list-style-type: none"> <li>Single dose of PCV20 at least one year after PCV13.</li> <li>One dose of PPSV23 at least eight weeks after PCV13, followed by second dose ≥five years later.</li> </ul>
<b>PCV13 + one dose of PPSV23</b>	<ul style="list-style-type: none"> <li>Single dose of PCV20 at least five years after last pneumococcal vaccine.</li> <li>Single dose of PPSV23 at least five years after last pneumococcal vaccine.</li> </ul>
<b>PCV13 + two doses of PPSV23</b>	<ul style="list-style-type: none"> <li>Single dose of PCV20 at least five years after last pneumococcal vaccine.</li> <li>No pneumococcal vaccine.</li> </ul>

<sup>a</sup>Review pneumococcal vaccination status again when patient reaches 65 years of age.

## STEP 4

### PROVIDE PATIENT COUNSELING AND VACCINATE OR REFER FOR VACCINATION.

Once an appropriate pneumococcal vaccine has been selected, patients should be counseled about vaccine side effects, which are typically mild and resolve in about two days. Side effects can include localized reactions, irritability in children, fever, muscle aches and pains.

This is a good opportunity to remind patients and caregivers about the benefits of vaccination, including reduced risks for otitis media, development of invasive pneumococcal disease and hospitalization for pneumococcal pneumonia.

Over the last two decades, pneumococcal conjugate vaccines have significantly improved the health of young children, averting:

- Nearly 97 million cases of acute otitis media.
- More than 282,000 cases of invasive disease.
- Between 400,000 and 700,000 pneumonia hospitalizations.

#### RESOURCES AND TOOLS FOR PNEUMOCOCCAL VACCINATION

##### CDC Pneumococcal Vaccination Summary



##### Child and Adolescent Immunization Schedule



##### Adult Immunization Schedule



##### PneumoRecs VaxAdvisor Mobile App for Clinicians



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