



Pneumococcal Vaccines

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Pneumococcal Vaccines Work Group Members

- **ACIP members**

- Grace Lee (Chair)
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- Tamara Pilishvili (NCIRD)
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- Rick Zimmerman (AAFP)
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- Monica Farley (DVA)
- Jeffrey Duchin (U. of Washington)
- Keith Klugman (Gates Foundation)
- Kathy Neuzil (IDSA)
- Arthur Reingold (U of California, Berkeley)
- Keipp Talbot (Vanderbilt University)

Terms of Reference

- Review current data on efficacy, effectiveness, immunogenicity, and cost-effectiveness of pneumococcal vaccines
- Review current recommendations considering up-to-date evidence, including epidemiological studies, and assess strength of the evidence
- Revise or update recommendations for pneumococcal vaccine use, as needed

Pneumococcal Conjugate Vaccine Recommendations

PCV13 for individuals with immunocompromising conditions

PCV7 for children

PCV13 for children

PCV13 in series with PPSV23 for adults ≥ 65 years old

Evaluation of PCV13 in adults ≥ 65 years old

2000

2010

2012-2013

2014

presently



2014 ACIP Age Based Recommendation

- In 2014 when ACIP recommended PCV13 in series with PPSV23 for adults ≥ 65 years old the thinking was:
 - Short-term, the recommendation was warranted because while indirect effects had decreased vaccine-type IPD, there was still a significant burden of pneumonia, especially among older adults
 - Long-term public health benefits expected to be limited because of anticipated continued indirect effects from pediatric PCV13 program
- Therefore, the recommendation was made with a commitment to re-evaluate this policy 4 years later and revise as needed

Re-evaluation of PCV13 for adults ≥ 65 years

- Monitor pneumococcal disease including both invasive disease and non-invasive pneumonia among adults ≥ 65 years
- Evaluate impact of direct and indirect effects on pneumococcal disease among adults ≥ 65 years
- Continue to monitor vaccine safety

Table 1. Medical conditions or other indications for administration of PCV13 and PPSV23 for adults

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

*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.

†Including congestive heart failure and cardiomyopathies

‡Including 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 immunosuppressive drugs, including long-term systemic corticosteroids and radiation therapy

Today's Pneumococcal Vaccines Session Outline

- PCV13 impact on IPD and serotype distribution for the remaining disease burden with a focus on adults ≥ 65 years old—Dr. Tamara Pilishvili (CDC/NCIRD)
- Incidence of non-invasive pneumococcal pneumonia among adults ≥ 65 years old—Ryan Gierke (CDC/NCIRD)
- Impact of introduction of infant vaccination with PCV13 on pneumonia and IPD in the United States, 2005–2014—Dr. Fernanda Lessa (CDC/NCIRD)
- Economic analysis of continuing a recommendation to immunize with PCV13 for adults ≥ 65 years in the context of continuing herd immunity from the childhood immunization program—Dr. Charles Stoecker (Tulane University, School of Public Health and Tropical Medicine)
- Preliminary Evidence to Recommendations for the ongoing review of the PCV13 recommendation for adults ≥ 65 years old—Dr. Almea Matanock (CDC/NCIRD)

Discussion Question for Today's Pneumococcal Vaccines Session

- Which domains of the EtR framework warrant additional exploration regarding continued use of PCV13 in immunocompetent adults ≥ 65 years?
 - Benefit, risks
 - Values
 - Acceptability
 - Resource use
 - Feasibility