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## Updated Adult Pneumococcal Vaccination Recommendations

### Background

*Streptococcus pneumoniae*, or pneumococcus, is a common bacterial cause of otitis media and sinusitis. Pneumococci can also invade normally sterile parts of the body and cause severe illness, such as bacteremia, meningitis, and pneumonia. Adults who are at increased risk for invasive pneumococcal disease (IPD) and mortality include 1) persons aged  $\geq 65$  years, 2) persons with certain medical conditions (Table), and 3) Alaska Native persons aged  $\geq 50$  years (Figure).

On June 20, 2012, the Advisory Committee on Immunization Practices (ACIP) recommended that 13-valent pneumococcal conjugate vaccine (PCV13) be administered, in addition to the pneumococcal polysaccharide vaccine (PPSV23), to adults aged  $\geq 19$  years who have immunocompromising conditions, asplenia, cochlear implants, or cerebrospinal fluid leaks (Table).<sup>2</sup>

On August 13, 2014, the ACIP added a new recommendation that PCV13 be administered to adults aged  $\geq 65$  years, in series with PPSV23 (Box).<sup>1-3</sup>

**Table. Medical Conditions or Other Indications for Administration of PCV13 and PPSV23, and Revaccination for Adults Aged  $\geq 19$  Years,\* by Risk Group<sup>1-3</sup>**

Risk Group and Underlying Medical Condition	Recommended		Revaccinate 5 years after last PPSV23
	PCV13	PPSV23	PPSV23
<b>Immunocompetent Persons</b>			
Chronic heart <sup>†</sup> or lung disease <sup>±</sup>		✓	
Diabetes mellitus		✓	
Cerebrospinal fluid leak	✓	✓	
Cochlear implant	✓	✓	
Alcoholism		✓	
Chronic liver disease, cirrhosis		✓	
Cigarette smoking		✓	
Alaska Native Adults 50-64 years		✓	
<b>Persons with Functional or Anatomic Asplenia</b>			
Sickle cell disease/hemoglobinopathy	✓	✓	✓
Congenital or acquired asplenia	✓	✓	✓
<b>Immunocompromised Persons</b>			
Congenital/acquired immunodeficiency**	✓	✓	✓
Human immunodeficiency virus infection	✓	✓	✓
Chronic renal failure	✓	✓	✓
Nephrotic syndrome	✓	✓	✓
Leukemia/Lymphoma/Hodgkins	✓	✓	✓
Generalized malignancy	✓	✓	✓
Iatrogenic immunosuppression <sup>††</sup>	✓	✓	✓
Solid organ transplant	✓	✓	✓
Multiple myeloma	✓	✓	✓
<b>Adults 65 years and older</b>			
No prior PCV13 or PPSV23 <sup>±±</sup>	✓	✓	
Prior PPSV23 dose at $\geq 65$ years	✓		
Prior PPSV23 dose before 65 years	✓	✓	

\*See the Box on this page for additional age-specific vaccine administration recommendations.

<sup>†</sup>Congestive heart failure and cardiomyopathies, excluding hypertension.

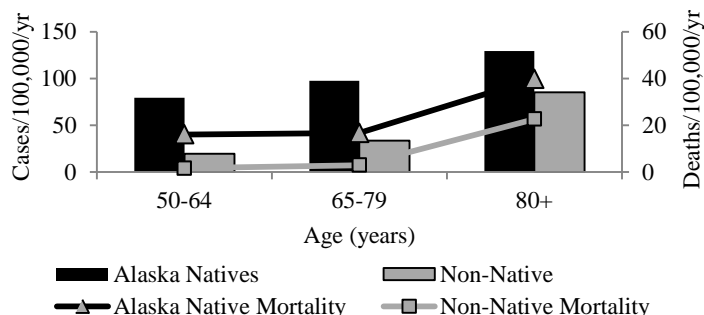
<sup>±</sup>Including chronic obstructive pulmonary disease, emphysema, and asthma.

\*\*Includes B- or T-lymphocyte deficiency, complement deficiencies, and phagocytic disorders (excluding chronic granulomatous disease).

<sup>††</sup>Diseases requiring treatment with immunosuppressive drugs, including long-term systemic corticosteroids and radiation therapy.

<sup>±±</sup>New recommendation.<sup>1</sup>

**Figure. IPD Incidence and Mortality Rates, by Race, in Persons Aged  $\geq 50$  Years Old — Alaska, 2008–2013<sup>2</sup>**



### Box. Summary ACIP Recommendations for Pneumococcal Vaccination in Adults<sup>1,4</sup>

#### Adults Aged $\geq 19$ Years with Specified High-Risk or Immunocompromising Conditions

- Adults not previously given PCV13 or PPSV23
  - Vaccinate with a dose of PCV13 first, followed by a dose of PPSV23  $\geq 8$  weeks later; and
  - Subsequent doses of PPSV23 should follow current PPSV23 recommendations for adults at high risk (Table).
- Adults who previously received  $>1$  doses of PPSV23
  - Vaccinate with a PCV13 dose  $\geq 1$  year after the last PPSV23 was received; and
  - Subsequent doses of PPSV23 should be given  $\geq 8$  weeks after PCV13 and follow current PPSV23 recommendations for adults at high risk (Table).

#### Adults Aged $\geq 65$ Years

- Pneumococcal vaccine-naïve adults aged  $\geq 65$  years
  - Vaccinate with a dose of PCV13 first, followed by a dose of PPSV23 6–12 months later.
- Adults who previously received PPSV23 at  $\geq 65$  years
  - Vaccinate with a PCV13 dose  $\geq 1$  year after the last PPSV23 dose.
- Adults who previously received PPSV23 before age 65 years and are now aged  $\geq 65$  years
  - Vaccinate with a PCV13 dose  $\geq 1$  year after the last PPSV23, and
  - Vaccinate with one PPSV23 dose 6–12 months after the PCV13 dose and  $\geq 5$  years after the last PPSV23 dose.

### Discussion

Alaska health care providers should vaccinate adults with PCV13 and PPSV23 in accordance with the new ACIP recommendations.<sup>1-3</sup> Providers with questions are welcome to contact the Alaska Immunization Program at 907-269-8000.

### References

1. CDC. Use of 13-Valent Pneumococcal Conjugate Vaccine and 23-Valent Pneumococcal Polysaccharide Vaccine among Adults Aged  $\geq 65$  Years: Recommendations of the ACIP. *MMWR* 2014;63(37):822-25. Available at: <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6337a4.htm>
2. State of Alaska *Epidemiology Bulletin* Updated Pneumococcal Vaccination Recommendations for High-Risk Adults. No. 24; Nov 27, 2012. Available at: [http://www.epi.alaska.gov/bulletins/docs/b2012\\_24.pdf](http://www.epi.alaska.gov/bulletins/docs/b2012_24.pdf)
3. CDC. Arctic Investigations Program (AIP), unpublished data, 2014.
4. CDC. Use of 13-Valent Pneumococcal Conjugate Vaccine and 23-Valent Pneumococcal Polysaccharide Vaccine for Adults with Immunocompromising Conditions: Recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR* 2012;61(40):816-19. Available at: <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6140a4.htm>