



Department of Health and Social Services  
William H. Hogan, MSW, Commissioner

Division of Public Health  
Ward Hurlburt, MD, MPH, CMO/Director

Editor:  
Joe McLaughlin, MD, MPH

3601 C Street, Suite 540  
Anchorage, Alaska 99503

<http://www.epi.Alaska.gov>

Local (907) 269-8000  
24 Hour Emergency (800) 478-0084

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## Alaska Pneumococcal Polysaccharide Vaccine Recommendations Revised

### National PPV23 Vaccination Recommendations

The Advisory Committee on Immunization Practices (ACIP) recommends routine immunization with pneumococcal polysaccharide vaccine 23-valent (PPV23) for all persons aged  $\geq 65$  years, as well as younger persons with certain high risk conditions. The ACIP also recommends one-time revaccination with PPV23 at least 5 years after the previous dose for persons aged  $\geq 65$  years who were first immunized before age 65 years. In addition to these established recommendations, in December 2008, the ACIP posted updated provisional recommendations for the use of pneumococcal vaccines.<sup>1</sup> Those updated provisional recommendations that pertain to PPV23 vaccine include the following:

- vaccinate adults (aged 19–64 years) who are cigarette smokers or who have asthma;
- revaccinate persons aged  $\geq 2$  years with immune-compromising conditions, sickle cell disease, or functional or anatomic asplenia,  $\geq 5$  years after their first PPV23 dose;
- PPV23 is not routinely recommended for American Indian/Alaska Native (AI/AN) children aged 24–59 months without high risk conditions; and
- public health authorities may recommend the use of PPV23 for AI/AN persons aged 50–64 years who are living in areas in which the risk of invasive pneumococcal disease (IPD) is increased.

### Alaska-specific Background

Studies conducted in the 1980s indicated that the incidence of IPD was much higher in Alaska Native persons than in the general U.S. population. In addition, Alaska Native persons experienced disease at younger ages than typically seen in other populations. These factors led to the adoption of the following recommendations:

- administer PPV to all Alaskan adults aged  $\geq 55$  years;<sup>2</sup> and
- revaccinate all Alaskans who receive pneumococcal vaccine every 6 years.<sup>3</sup>

In order to provide a single recommendation for all Alaskans, these recommendations included *all* Alaska adults.

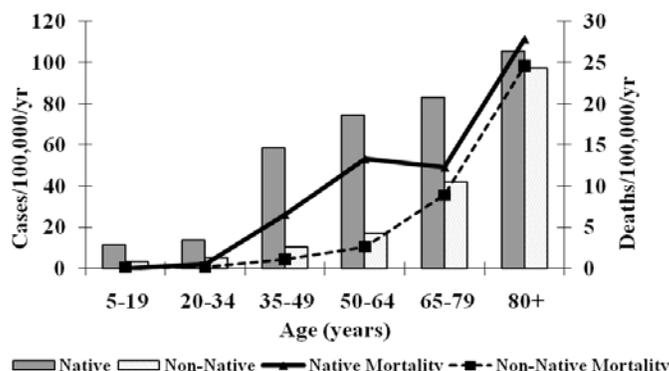
More recent related studies have indicated the following:

1. Revaccination is associated with increased local side effects, though these are relatively minor.<sup>4</sup>
2. When compared with non-Native Alaskans, Alaska Native persons have had age-adjusted invasive pneumococcal disease (IPD) rates 2–3 fold greater and at a younger age. The majority of IPD cases occurred in persons with underlying conditions/behaviors associated with increased risk of IPD in other populations.<sup>5</sup>

### IPD Case and Mortality Rates in Alaska, 1994–2008

Alaska's IPD rates from 1994–2008 were derived from state-wide population-based laboratory surveillance performed by the Centers for Disease Control and Prevention's Arctic Investigations Program. A case of IPD is defined as a clinically compatible illness in an Alaska resident with an isolate of *Streptococcus pneumoniae* from a normally sterile body site. Denominators for calculating IPD incidence were based on population estimates from Alaska Department of Labor and Workforce Development. Compared to non-Native Alaskans, Alaska Native persons aged 50–64 years were at significantly increased risk for IPD (RR, 4.4; 95% CI, 3.50–5.45) and IPD-associated mortality (RR, 5.1; 95% CI, 2.88–8.90; Figure). The IPD rate among Alaska Native persons aged 50–64 years is similar to reported IPD rates among U.S. adults aged  $\geq 65$  years.<sup>6</sup>

Figure. Incidence of Invasive Pneumococcal Disease Cases and Mortality, by Race — Alaska, 1994–2008



### Discussion

Due to their high IPD disease and mortality rates, Alaska Native persons aged 50–64 years should receive one dose of PPV23 at age  $\geq 50$  years. In accordance with current national guidelines,<sup>1</sup> all Alaskans should receive first-time vaccination or a single revaccination (at least 5 years after any previous dose) at age  $\geq 65$  years (Box). With these changes, Alaska health care providers now may use the nationally distributed Vaccine Information Statement (VIS) for PPV23 vaccine.<sup>7</sup>

### Box. Updated Recommendations for PPV23 Vaccination in Alaska

PPV23 vaccination is routinely recommended for:

1. All adults aged  $\geq 65$  years (at least 5 years after any previous dose that may have been received);
2. Previously unvaccinated Alaska Native persons aged  $\geq 50$  years;
3. Persons aged 2–64 years who have chronic cardiovascular disease (including congestive heart failure and cardiomyopathy); chronic pulmonary disease (including COPD and emphysema); diabetes mellitus, cochlear implants, chronic liver disease (including cirrhosis); alcoholism; cerebrospinal fluid leak;
4. Persons aged 19–64 years who are smokers or have asthma;
5. Persons aged 2–64 years who have functional or anatomic asplenia (including persons with sickle cell disease or splenectomy patients);
6. Immunocompromised persons aged  $\geq 2$  years, including those with HIV infection, leukemia, lymphoma, Hodgkin's disease, multiple myeloma, generalized malignancy, chronic renal failure, or nephrotic syndrome; those receiving immunosuppressive chemotherapy (including corticosteroids); and those who have received an organ or bone marrow transplant.

One-time revaccination is recommended if at least 5 years have elapsed since receiving their most recent dose for:

1. Persons aged  $\geq 65$  years who were immunized before age 65 years;
2. Persons aged  $\geq 2$  years who are in categories 5 and 6 above.

### References

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4. Jackson LA, Benson P, Sneller VR et al. Safety of revaccination with pneumococcal polysaccharide vaccine. *JAMA* 1999;281:243–248.
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7. Pneumococcal Polysaccharide Vaccine VIS; April 16, 2009. Available at: <http://www.cdc.gov/vaccines/pubs/vis/downloads/vis-ppv.pdf>