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Updated Adult Pneumococcal Vaccination Recommendations

Background

Streptococcus pneumoniae, or pneumococcus, is a common bacterial cause of otitis media and sinusitis. Less commonly, it can invade normally sterile body sites and cause severe illness, such as bacteremia, meningitis, and pneumonia. Adults who are at increased risk for invasive pneumococcal disease (IPD) and mortality include persons aged ≥ 65 years and persons aged 19–64 years with certain risk factors (Table). The purpose of this *Bulletin* is to present recent IPD case information reported to the Alaska Section of Epidemiology (SOE) and the Centers for Disease Control and Prevention Arctic Investigations Program (AIP), as well as updated pneumococcal vaccine recommendations for Alaskans.

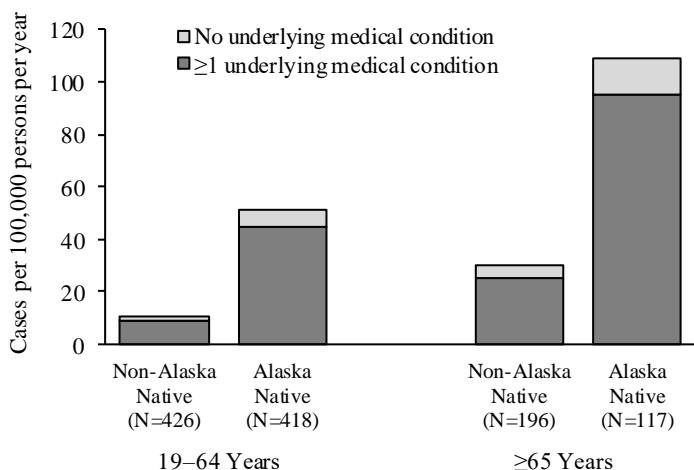
Table. Underlying Medical Conditions or Other Risk Factors for which Pneumococcal Vaccine is Recommended among Adults Aged 19–64 Years¹

Immunocompetent persons
<ul style="list-style-type: none"> Alcoholism Cerebrospinal fluid leak Chronic heart, liver, or lung disease Cigarette smoking Cochlear implant Diabetes mellitus
Persons with functional or anatomic asplenia
<ul style="list-style-type: none"> Congenital or acquired asplenia Sickle cell disease or other hemoglobinopathies
Immunocompromised persons
<ul style="list-style-type: none"> Chronic renal failure Congenital or acquired immunodeficiencies Generalized malignancy Human immunodeficiency virus infection Hodgkin's disease Iatrogenic immunosuppression Leukemia or lymphoma Multiple myeloma Nephrotic syndrome Solid organ transplant

Alaska Epidemiology Update

During 2011–2020, 1,157 cases of IPD among adults aged ≥ 19 years were reported in Alaska, including 844 (73%) cases among adults aged 19–64 years and 313 (27%) cases among adults aged ≥ 65 years. The average annual incidence of IPD among adults aged 19–64 years was 18 cases per 100,000 persons compared to 41 cases per 100,000 adults aged ≥ 65 years (Figure). Overall, 85% of adults with IPD in each age group had an underlying medical condition or other risk factor. IPD rates among Alaska Native adults were 3–5 times higher than non-Alaska Native adults. Of Alaska Native adults aged 19–64 years with IPD, 88% (367/418) had an underlying medical condition or other risk factor.

Figure. IPD Incidence per 100,000 Adults per Year, by Age Group and Proportion with an Underlying Medical Condition — Alaska, 2011–2020



ACIP Recommendations

In 2021, 20-valent pneumococcal conjugate vaccine (PCV20) and 15-valent pneumococcal conjugate vaccine (PCV15) were licensed by the Food and Drug Administration (FDA) for use in adults. The Advisory Committee on Immunization Practices (ACIP) now recommends PCV20 or PCV15 for all adults aged ≥ 65 years and adults aged 19–64 years with certain underlying medical conditions (Box).¹ When PCV15 is used, it should be followed by a dose of 23-valent pneumococcal polysaccharide vaccine (PPSV23).

Box. Recommendations for Use of Pneumococcal Vaccines among Adults Aged ≥ 19 Years^{1,2}

Adults aged ≥ 65 years, OR

Adults aged 19–64 years with certain underlying medical conditions or other risk factors

- Adults who have not previously received PCV or whose previous vaccination history is unknown should receive 1 dose of PCV (either PCV20 or PCV15).
- When PCV15 is used, it should be followed by 1 dose of PPSV23 ≥ 1 year later (an earlier interval can be considered for certain high-risk adults).
- If PCV20 is used, a dose of PPSV23 is NOT indicated.

Adults who previously received PPSV23 only

- Adults who have only received PPSV23 may receive a PCV (either PCV20 or PCV15) ≥ 1 year after their last PPSV23 dose.
- When PCV15 or PCV20 is used in those with previous PPSV23 receipt, it need not be followed by another dose of PPSV23.

Adults who previously received PCV13

- Adults aged 19–64 years with underlying medical conditions or other risk factors (Table) who previously received PCV13 but have not completed their recommended pneumococcal vaccine series with PPSV23 may receive 1 dose of PCV20 if PPSV23 is not available. If PCV20 is used, their pneumococcal vaccination is complete.
- Adults aged ≥ 65 who previously received PCV13 should receive 1 dose of PPSV23 ≥ 1 year after PCV13 was received.

Abbreviations: PCV = Pneumococcal conjugate vaccine; PCV20 = 20-valent pneumococcal conjugate vaccine; PCV15 = 15-valent pneumococcal conjugate vaccine; PPSV23 = 23-valent pneumococcal polysaccharide vaccine

Alaska Recommendations and Rationale

The Alaska data shown here further support recommendations for the use of PCV among adults aged ≥ 65 years and adults aged 19–64 with an underlying medical condition or other risk factor. The great majority (85%) of Alaska adults aged 19–64 years with IPD had an underlying medical condition or other risk factor for which PCV would now be recommended. Because IPD rates remain substantially higher among Alaska Native adults (Figure), implementation of these new recommendations will be particularly impactful in this population.

Alaska clinicians should vaccinate adults with PCV20 or PCV15 in accordance with the new ACIP recommendations.^{1,2} Health care providers and tribal health organizations statewide should develop systems to identify adults with underlying medical conditions or risk factors for whom PCV is recommended. The Alaska Immunization Program is supplying PCV20 for those providers enrolled to receive state-supplied vaccine. Clinicians may contact the Alaska Immunization Program at 907-269-8088 for more information.

Reference

- Kobayashi M, et al. Use of 15-valent PCV and 20-valent PCV among U.S. Adults: Updated recommendations of the Advisory Committee on Immunization Practices — United States, 2022. *MMWR Morb Mortal Wkly Rep* 2022;71(4):109–17. Available at: <https://www.cdc.gov/mmwr/volumes/71/wr/pdfs/mm7104a1-H.pdf>
- CDC Pneumococcal Vaccine Recommendations website. Available at: <https://www.cdc.gov/vaccines/vpd/pneumo/hcp/recommendations.html>