



### Pneumococcal Vaccines for Older Adults

Jenny Galbraith, Adult Immunization Manager



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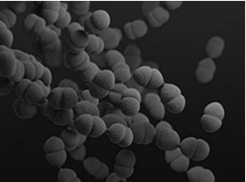
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### Pneumococcal Disease



- Pneumococcal disease is a name for any infection caused by bacteria called *Streptococcus pneumoniae*, or pneumococcus.
- People spread pneumococcal bacteria to others through direct contact with respiratory secretions, like saliva or mucus.
- Children younger than 5 years old and adults 65 years or older are at increased risk for pneumococcal disease.
- Experts don't know why, but people of certain racial and ethnic groups have increased rates of pneumococcal disease:
  - Alaska Native people
  - African American people
  - Certain American Indian people



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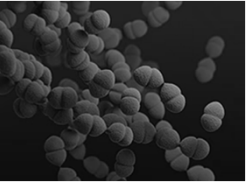
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### Pneumococcal Disease



- Chronic conditions and other factors that increase someone's risk for pneumococcal disease include:
  - Alcoholism
  - Cerebrospinal (around the brain and spinal cord) fluid leak
  - Chronic heart, kidney, liver, or lung disease
  - Cigarette smoking
  - Cochlear implant (surgically implanted hearing device to help people with severe hearing loss)
  - Diabetes
  - Immunocompromising condition (having a weakened immune system)
  - Chronic lung disease includes chronic obstructive pulmonary disorder (COPD), emphysema, and asthma.



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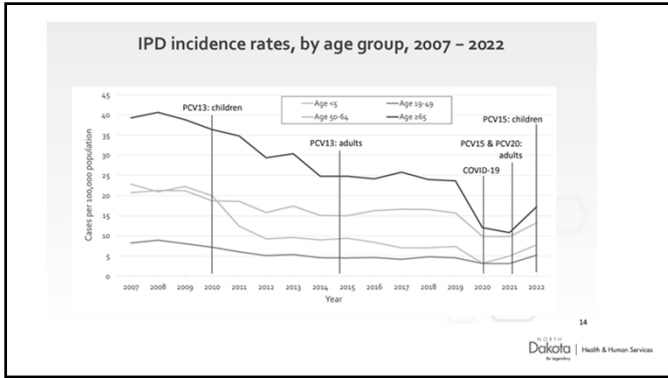
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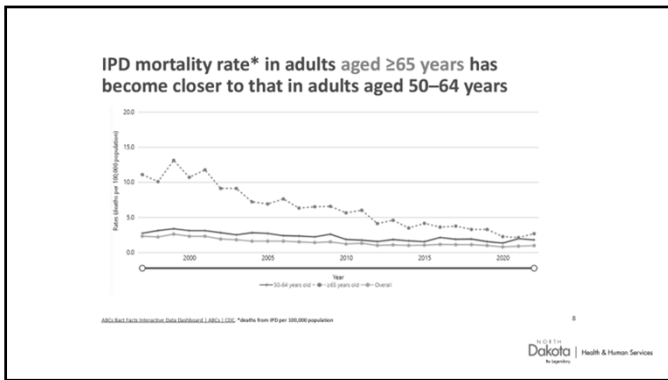
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**Pneumococcal Vaccines available for Adults**

- Pneumococcal conjugate vaccines
  - PCV15 – Vaxneuvance®
  - PCV20 – Prevnar 20™
  - PCV21 – CAPVAXIVE™
- Pneumococcal polysaccharide vaccine
  - PPSV23 – Pneumovax® 23, 2 years and older

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### Recent Changes to Adult Pneumococcal Vaccine Recommendations

- Introduction of PCV21(CAPVAXIVE™)
- Lowered the age-based recommendation for all PCVs to over 50 years.



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### Recent Changes to Adult Pneumococcal Vaccine Recommendations

- Introduction of PCV21(CAPVAXIVE™)
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#### Adult Pneumococcal Vaccines

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	A	B	V	4	B	9	9	3	3	1	1	2	5	W	2	5	5	6	3	3	5	5							
	C	A	F	F	F	A	A	F	B	F	A	C	F	A	B	F	B												
PCV15																													
PCV20																													
PPSV23																													
PCV21																													

21-valent pneumococcal conjugate vaccine (CAPVAXIVE™, Merck):  
 • Approved by the FDA for adults aged ≥18 years on June 17, 2024<sup>1</sup>

- PCV13=13-valent pneumococcal conjugate vaccine
- PCV15=15-valent pneumococcal conjugate vaccine
- PCV20=20-valent pneumococcal conjugate vaccine
- PPSV23=23-valent pneumococcal polysaccharide vaccine



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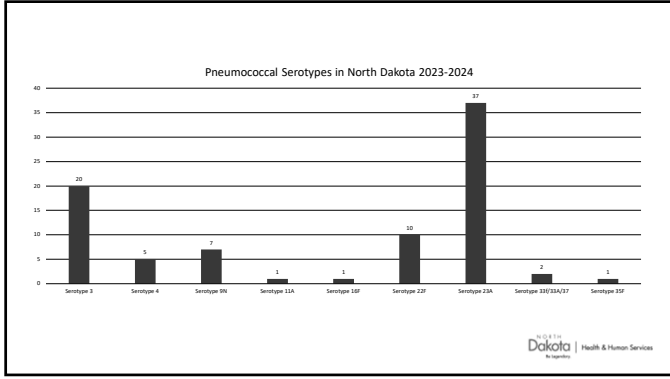
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### Recent Changes to Adult Pneumococcal Vaccine Recommendations

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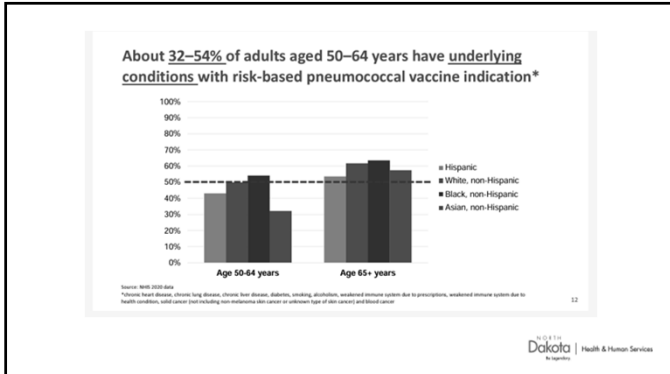
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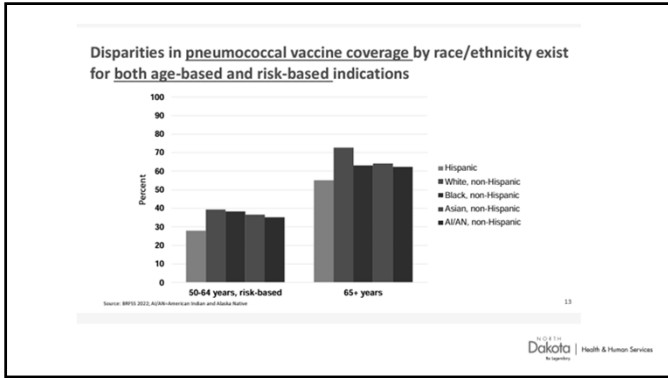
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**Key factors in the WG recommendations**

1. Health equity: Higher pneumococcal disease rates in Black/African American adults, with earlier peak
2. Risk prevalence: 33–54% of adults aged 50–64 years already with indication for risk-based pneumococcal vaccination\*
3. Vaccine coverage: Age-based recommendation likely to improve uptake vs. risk-based recommendation
4. Simplicity: Easier to implement uniform recommendation across all PCVs
5. Economic consideration: PCV21 at age 50 (and 65 years) had lower cost/QALY gained than PCV20, while both PCV21 and PCV20 improved health outcomes
6. Serotype coverage: the serotype compositions of PCV20 and PCV21 are quite different

\*Data is for adults with any of the following condition and is not an exhaustive list of conditions: chronic heart disease, chronic lung disease, chronic liver disease, diabetes, smoking, alcoholism, weakened immune system due to prescription, weakened immune system due to health conditions, solid cancer (not including non-melanoma skin cancer or unknown type of skin cancer) and blood cancer. Source: BPHO 2022

\*Except for certain adult populations in the western United States where high percentages (i.e., >80%) of PCV covered by serotype 4 have occurred

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### Pneumococcal Vaccination

- CDC recommends PCV15, PCV20, or PCV21 for adults who never received a PCV and are
  - Ages 50 years or older
  - Ages 19 through 49 years with certain risk conditions

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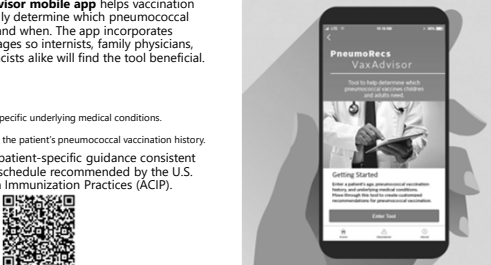
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## PneumoRecs VaxAdvisor Mobile App

The **PneumoRecs VaxAdvisor mobile app** helps vaccination providers quickly and easily determine which pneumococcal vaccines a patient needs and when. The app incorporates recommendations for all ages so internists, family physicians, pediatricians, and pharmacists alike will find the tool beneficial.

- Users simply:
  - Enter a patient's age.
  - Note if the patient has specific underlying medical conditions.
  - Answer questions about the patient's pneumococcal vaccination history.
- Then the app provides patient-specific guidance consistent with the immunization schedule recommended by the U.S. Advisory Committee on Immunization Practices (ACIP).



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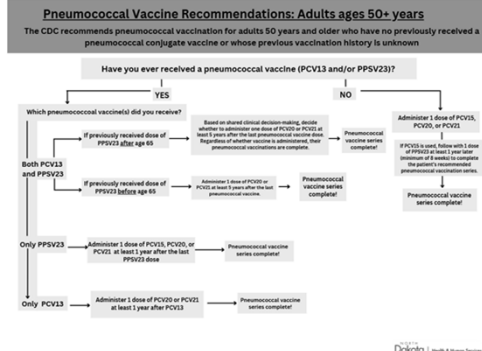
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### Pneumococcal Vaccine Recommendations: Adults ages 50+ years

The CDC recommends pneumococcal vaccination for adults 50 years and older who have not previously received a pneumococcal conjugate vaccine or whose previous vaccination history is unknown

NDHHS  
Pneumococcal  
Vaccination  
Flowchart



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                graph TD
                    Q1{Have you ever received a pneumococcal vaccine PCV13 and/or PPSV23?}
                    Q1 -- YES --> Q2{Which pneumococcal vaccine(s) did you receive?}
                    Q1 -- NO --> A1[Administer 1 dose of PCV15, PCV20, or PCV21]
                    A1 --> C1[Pneumococcal vaccine series complete]
                    Q2 -- "Both PCV13 and PPSV23" --> A2[Administer 1 dose of PCV15, PCV20, or PCV21]
                    A2 --> C1
                    Q2 -- "Only PPSV23" --> A3[Administer 1 dose of PCV15, PCV20, or PCV21 at least 1 year after the last PPSV23 dose]
                    A3 --> C1
                    Q2 -- "Only PCV13" --> A4[Administer 1 dose of PCV20 or PCV21 at least 1 year after PCV13]
                    A4 --> C1
                    Q2 -- "Previously received dose of PPSV23 after age 65" --> A5[Administer 1 dose of PCV15, PCV20, or PCV21 at least 1 year after the last pneumococcal vaccine]
                    A5 --> C1
                    Q2 -- "Previously received dose of PCV13 after age 65" --> A6[Administer 1 dose of PCV20 or PCV21 at least 1 year after the last pneumococcal vaccine]
                    A6 --> C1
                    Q2 -- "Previously received dose of PCV13 and PPSV23 after age 65" --> A7[Administer 1 dose of PCV15, PCV20, or PCV21 at least 1 year after the last pneumococcal vaccine]
                    A7 --> C1
                    
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## Pneumococcal (PCV15, PCV20, PCV21 &/or PPSV23)

For patients 50 years or older who have not previously received a pneumococcal vaccine or whose previous vaccination history is unknown:

- 1 dose PCV15, PCV20 or PCV21.
  - If PCV15 is used, this should be followed by a dose of PPSV23 given at least 1 year (minimum of 8 weeks) after the PCV15 dose.



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**Pneumococcal (PCV15, PCV20, PCV21 &/or PPSV23)**

- **For adults 50 years or older who have only received PPSV23:**
  - Give 1 dose of PCV15, PCV20, or PCV21 (at least one year after the most recent PPSV23 vaccination).
  
- **For adults 50 years or older who have received PCV13 only:**
  - Give 1 dose of PCV20 or PCV21 at least 1 year after PCV13.



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**Pneumococcal (PCV15, PCV20 &/or PPSV23)**

- **For adults 50 years or older who have received PCV13 and PPSV23:**
  - If PPSV23 was received **after age 65:**
    - Based on shared clinical decision-making, 1 dose of PCV20 or PCV21 at least 5 years after the last pneumococcal vaccine.
  
  - If PPSV23 was received **before age 65:**
    - Give 1 dose of PCV20 or PCV21 at least 5 years after the last pneumococcal vaccine dose.



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**Will people vaccinated at age 50 need additional doses of pneumococcal vaccine in the future?**

- It is likely. Effectiveness of pneumococcal polysaccharide vaccine (PPSV23) begins waning significantly after about 5 years. While current pneumococcal conjugate vaccines (PCVs) are expected to remain effective longer than that, for at least several years, a future PCV dose may be needed by those vaccinated at younger ages to boost protection later in life.
- When ACIP voted to lower the routine PCV vaccination age to 50, the committee took into consideration that an additional dose, perhaps 10 or 15 (or more) years later, may be needed.
- In coming years, ACIP will periodically review any evidence of waning protection, evaluate future pneumococcal vaccine products, and make recommendations for revaccination of older adults when needed.



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**NDHHS  
Pneumococcal  
Vaccination  
Flowchart:**

Adults 19-49 years with certain underlying medical conditions or other risk factors or who have not previously received a pneumococcal vaccine or whose previous vaccination status is unknown.

**Pneumococcal Vaccine Recommendations: Adults ages 19-49 years**  
The CDC recommends pneumococcal vaccination for adults 19-49 years with certain underlying medical conditions <sup>1-11</sup> or other risk factors <sup>12</sup> for who have not previously received a pneumococcal conjugate vaccine or whose previous vaccination history is unknown.

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**Pneumococcal (PCV15, PCV20, PCV21 &/or PPSV23)**

**Immunocompromising Conditions:**

- Chronic renal failure
- Congenital or acquired asplenia
- Congenital or acquired immunodeficiencies (Includes B- [humoral] or T-lymphocyte deficiency, complement deficiencies [particularly C1, C2, C3, and C4 deficiencies], and phagocytic disorders [excluding chronic granulomatous disease])
- Generalized malignancy
- HIV infection
- Hodgkin disease
- Iatrogenic immunosuppression (Diseases requiring treatment with immunosuppressive drugs, including long-term systemic corticosteroids and radiation therapy)
- Leukemia
- Lymphoma
- Multiple myeloma
- Nephrotic syndrome
- Sickle cell disease or other hemoglobinopathies
- Solid organ transplant

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**Pneumococcal (PCV15, PCV20, PCV21 &/or PPSV23)**

**Chronic Health Conditions:**

- Alcoholism
- Chronic heart disease (Including congestive heart failure and cardiomyopathies, excluding hypertension)
- Chronic liver disease
- Chronic lung disease (Including chronic obstructive pulmonary disease (COPD), emphysema, and asthma)
- Cigarette smoking
- Diabetes mellitus

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27

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### Pneumococcal (PCV15, PCV20, PCV21 &/or PPSV23)

- **If patient is ages 19–49 years with certain underlying medical conditions or other risk factors who have not previously received any pneumococcal vaccine:**
  - 1 dose PCV15, PCV20, or PCV21.
    - If PCV15 is used, this should be followed by a dose of PPSV23 given at least 1 year after the PCV15 dose.
    - A minimum interval of 8 weeks between PCV15 and PPSV23 can be considered for adults with an immunocompromising condition, cochlear implant, or cerebrospinal fluid leak.
- **For those who have only received PPSV23:**
  - Give 1 dose of PCV15, PCV20, or PCV21 at least one year after the most recent PPSV23 vaccination.



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### Pneumococcal (PCV15, PCV20 &/or PPSV23)

- **For those who have received only PCV13:**
  - Give one dose of PCV20 or PCV21 at least 1 year after PCV13. Regardless of which vaccine is used their pneumococcal vaccinations are complete.
- **For those who have only received PPSV23:**
  - Give 1 dose of PCV15, PCV20, or PCV21 at least one year after the most recent PPSV23 vaccination.



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### Pneumococcal (PCV15, PCV20 &/or PPSV23)

- **For those who have received PCV13 and PPSV23:**
  - Chronic Health Conditions – No additional doses of any type of pneumococcal vaccine are recommended at this time.
  - CSF leak or cochlear implant - Give one dose of PCV20 or PCV21 at least 5 years after the last pneumococcal vaccine dose **or** give no additional pneumococcal vaccines.
    - If PCV20 or PCV21 is administered, their pneumococcal vaccinations are complete.
    - If no additional dose given Pneumococcal vaccine series complete until age 50.
  - Immunocompromising Condition
    - If your patient has only received 1 dose of PPSV23, administer 1 dose of PCV20 or PCV21 at least 5 years after the last pneumococcal vaccine.
    - If your patient has received 2 doses of PPSV23, give one dose of PCV20 or PCV21 at least 5 years after the last pneumococcal vaccine dose **or** give no additional pneumococcal vaccines.
      - If PCV20 or PCV21 is administered, their pneumococcal vaccinations are complete.
      - If no additional dose given Pneumococcal vaccine series complete until age 50.



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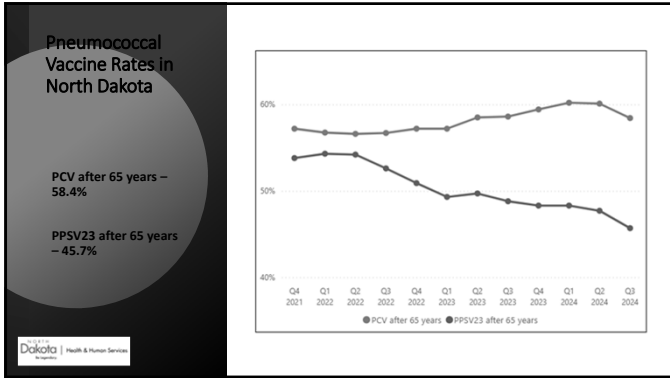
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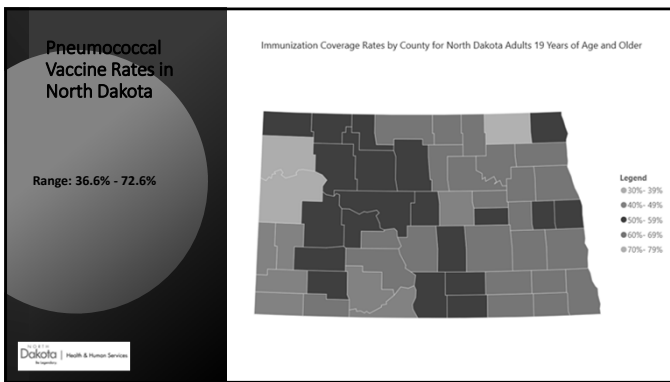
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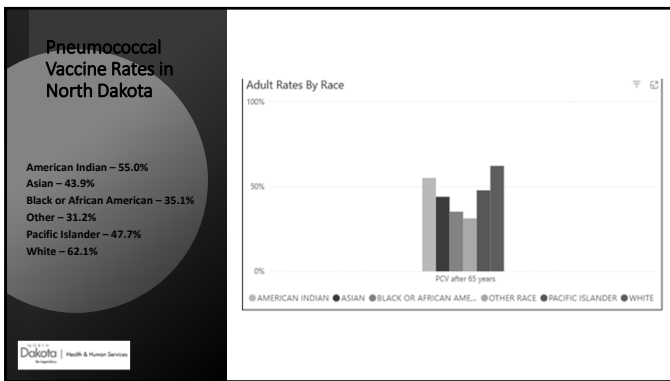
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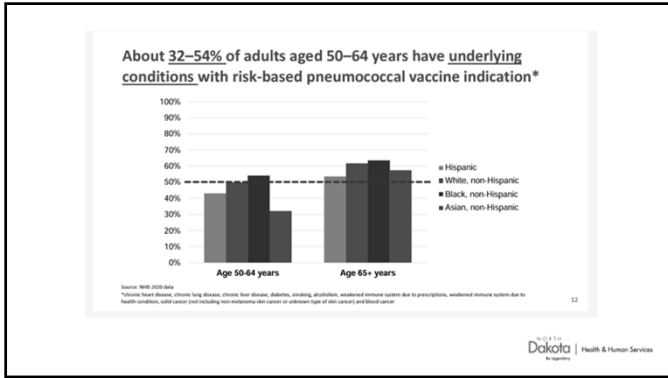
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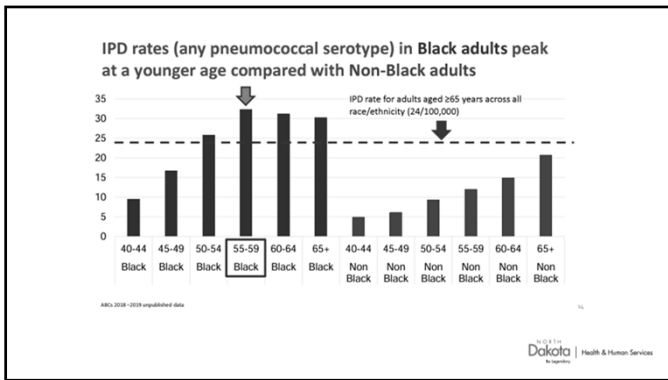
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### North Dakota Vaccines for Children (VFC) and Vaccines for Adults (VFA) Programs

VFA Program	PCV15, PCV20, PCV21, or PPSV23
<ul style="list-style-type: none"> <li>Provides select vaccines at no cost to adults 19 years and older                             <ul style="list-style-type: none"> <li>Uninsured</li> <li>Underinsured</li> </ul> </li> <li>Does <b>not</b> include all routinely recommended vaccines</li> </ul>	<ul style="list-style-type: none"> <li>Available to eligible adults 19-64 years who meet one of the following criteria:                             <ul style="list-style-type: none"> <li>Chronic renal failure</li> <li>Nephrotic syndrome</li> <li>Congenital or acquired immunodeficiency</li> <li>Iatrogenic immunosuppression</li> <li>Generalized malignancy</li> <li>HIV</li> <li>Hodgkin disease</li> <li>Leukemia</li> <li>Lymphoma</li> <li>Multiple myeloma</li> <li>Solid organ transplant</li> <li>Congenital or acquired asplenia</li> <li>Sickle cell disease</li> <li>Other hemoglobinopathies</li> <li>Alcoholism</li> <li>Chronic health disease (including congestive heart failure and cardiomyopathies) or Chronic liver disease</li> <li>Chronic lung disease (including chronic obstructive pulmonary disease (COPD), emphysema and asthma)</li> <li>Cigarette smoking</li> <li>Diabetes mellitus</li> <li>Cochlear implant</li> <li>CSF Leak</li> </ul> </li> </ul>

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### Standards for Adult Immunization Practice

- Incorporate immunization needs assessment into every clinical encounter.
- Strongly recommend needed vaccine(s) and either administer vaccine(s) or refer patient to a provider who can immunize
- Stay up-to-date on, and educate patients about, vaccine recommendations.
- Implement systems to incorporate vaccine assessment into routine clinical care.
- Understand how to access immunization information systems (i.e., NDIIIS)
- For immunizations you are unable to administer: establish referral relationships with other immunizing providers.
  - Follow up to confirm patient receipt of recommended vaccines.



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### Additional Strategies to Increase Adult Immunization Rates

- Provide information about future doses and reinforce the importance of staying on schedule by providing the parent with a personalized list of future vaccines with clear "on or after" dates.
- Implement a scheduling process before patients leave the office.
- Implementing/improving reminder/recall using a combination of methods.
- Partner with community partners to offer off-site clinics.
- Offer immunizations at specialty provider visits.



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### Post-Test

- Post-test
  - Nurses interested in continuing education credit, visit Successfully complete the five-question post-test to receive your certificate: [https://ndhealth.co1.qualtrics.com/jfe/form/SV\\_5gVX9H5aocbhHQ6](https://ndhealth.co1.qualtrics.com/jfe/form/SV_5gVX9H5aocbhHQ6)
  - Credit for this session will be available until February 12, 2025.
- This presentation will be posted to our website: [www.hhs.nd.gov/immunizations](http://www.hhs.nd.gov/immunizations)

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## Staff Members

### Immunization Unit

Molly Howell, MPH Director Phone: 701-328-4556 Email: <a href="mailto:mahowell@nd.gov">mahowell@nd.gov</a>	Mary Woinarowicz, MA NDIS Manager Phone: 701-328-2404 Email: <a href="mailto:marywoinarowicz@nd.gov">marywoinarowicz@nd.gov</a>
Abbi Berg, MPH VFC/Quality Improvement Manager Phone: 701-328-3324 Email: <a href="mailto:aberg@nd.gov">aberg@nd.gov</a>	Allison Dykstra, MS NDIS Coordinator Phone: 701-328-2420 Email: <a href="mailto:adykstra@nd.gov">adykstra@nd.gov</a>
Miranda Baumgartner VFC/QI Coordinator (West) Phone: 701-328-2035 Email: <a href="mailto:mbaumgartner@nd.gov">mbaumgartner@nd.gov</a>	Ronda Kercher NDIS Data Admin Phone: 701-226-1379 Email: <a href="mailto:rkercher@nd.gov">rkercher@nd.gov</a>
Rachel Flores VFC/QI Coordinator (East) Phone: 701-328-9016 Email: <a href="mailto:rflores@nd.gov">rflores@nd.gov</a>	Melissa Marto NDIS Data Quality Coordinator Phone: 701-328-4169 Email: <a href="mailto:mmarto@nd.gov">mmarto@nd.gov</a>
Jenny Galbraith Adult Immunization Manager Phone: 701-328-2335 Email: <a href="mailto:jgalbraith@nd.gov">jgalbraith@nd.gov</a>	Lynsde Monson CDC Public Health Advisor Phone: 701-239-7169 Email: <a href="mailto:lynmonson@nd.gov">lynmonson@nd.gov</a>
Kristen Vetter Adult Immunization Coordinator Phone: 701-328-8672 Email: <a href="mailto:kristenvetter@nd.gov">kristenvetter@nd.gov</a>	Danni Pinnick, MPH Immunization Surveillance Coordinator Phone: 701-239-7169 Email: <a href="mailto:dpinnick@nd.gov">dpinnick@nd.gov</a>

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Questions?

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