ADULT IMMUNIZATION RATES, RECOMMENDATIONS, AND RECALL
AUGUST 9, 2017
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NORTH DAKOTA IMMUNIZATION PROGRAM

2017 ADULT IMMUNIZATION SCHEDULE

GENERAL ADULT IMMUNIZATION RECOMMENDATIONS

For more information https://www.cdc.gov/vaccines/vpd/vaccines-age.html
INFLUENZA

• Annual vaccination is recommended for all persons aged ≥6 months.
• High-dose is an option for persons aged ≥65.
• High-dose vaccine was 24.2% more effective in preventing flu in adults 65 years of age and older relative to a standard-dose vaccine.
• The ACP no longer recommends that egg-allergic recipients be observed for 30 minutes following vaccination.
• Patients with a known history of severe egg allergy, any symptom other than hives, should be vaccinated in a setting under the supervision of a healthcare provider.

For more information: https://www.cdc.gov/vaccines/vpd/flu/index.html


TETANUS, DIPHTHERIA, PERTUSSIS (Tdap)

• Persons ≥11 years who have not received or have unknown immunization status should receive a dose.
• Administer 1 dose of Tdap vaccine to pregnant women during each pregnancy (preferred 27-32 weeks).
• Unvaccinated adults administer Tdap
• Td 4 weeks later
• Td 6-12 months after dose two.

For more information: https://www.cdc.gov/vaccines/vpd/pertussis/index.html

ZOSTER

• A single dose of zoster vaccine is recommended for adults ≥60 years.
• Persons ≥60 years with chronic medical conditions may be vaccinated unless their condition constitutes a contraindication, such as HIV/AIDS or another disease that affect the immune system, radiation or chemotherapy.

For more information: https://www.cdc.gov/vaccines/vpd/shingles/index.html

Some Shingles Facts

What Activates Shingles?
• Herpes virus that causes chickenpox activates the Shingles virus
What Can You Do To Reduce Risk?
• Get vaccinated
• Eat a healthy diet
• Exercise regularly
What Can You Do If You Get Shingles?
• Stay home if you can
• Wear a mask
• Wash your hands

For more information: https://www.cdc.gov/vaccines/vpd/shingles/index.html
ANTICIPATED ZOSTER VACCINE

Shingrix® (GSK) subunit vaccine, 2 doses
- Efficacy: 97% zoster in persons ≥ 50 years
- 91% in persons ≥ 70 years
- Duration of protection is still to be confirmed
- Year 4 - 85% in persons ≥ 70 years
- More local reactions than with Zostavax®

Zostavax® live, attenuated vaccine, 1 dose
- 2008 - ACIP recommended for immunocompetent ≥ 60 years
- Efficacy: 51% zoster; 67% PHN
- Reduced in older recipients
- Duration of protection zoster
  - Year 4: 45%
  - Year 9: 7%
- 31% adults ≥ 60 years in US have been vaccinated

ADULT PNEUMOCOCCAL (PCV 13)

- Until 2000, pneumococcal infections caused 60,000 cases of invasive disease annually.
- Up to 40% of these infections were caused by drug-resistant Streptococcus pneumoniae.
- Pneumococcal bacteria are resistant to one or more antibiotics in 30% of cases.
- Adults ≥65 who have not received PPSV23 or have an unknown vaccination history should receive a dose of PCV13.
- Adults ≥65 who have received one or more doses of PPSV23 should receive a dose of PCV13.
- PCV13 and PPSV23 should not be administered simultaneously.

ADULT PNEUMOCOCCAL (PPSV23)

- Pneumococcal Polysaccharide Vaccine (PPSV23)
  - Adults 65 years of age and older.
  - Administered 12 months after PCV13.
  - Adults who receive PPSV23 at ≥65 years should receive a single dose (no booster doses).
  - Adult who received a dose of PPSV23 before the age of 65, should receive another dose at least 5 years after the last dose.

For more information: http://www.cdc.gov/vaccines/vpd/pneumo/index.htm
HIGH RISK POPULATIONS

PNEUMOCOCCAL VACCINE FOR HIGH RISK

Single dose of PCV13 should be given to adults ≥19 years with certain medical conditions, that have not received previously received PCV13.

- Cochlear implant(s)
- CSF leaks
- Sickle cell disease and other hemaglobinopathies
- Asplenia
- Congenital or acquired immunodeficiencies
- HIV infection
- Chronic renal failure and nephrotic syndrome
- Leukemia or lymphoma
- Hodgkin disease
- Latrogenic immunosuppression solid organ transplant
- Multiple myeloma

For more information: https://www.cdc.gov/vaccines/vpd/pneumo/index.html
MENINGOCOCCAL (MENACWY, MCV4)

- Complement component deficiency (e.g., C5-C9, properdin, factor H, factor D, or are taking Soliris®)
- Functional or anatomic asplenia
  - Adults at increased risk because of complement component deficiencies and persons with functional or anatomic asplenia should receive a two-dose primary series, 2 months apart and then get a booster dose every 5 years.
- Microbiologist who is routinely exposed to Neisseria meningitidis (the causal pathogen)
- Traveling or residing in countries in which the disease is common
- Part of a population identified to be at increased risk because of a serogroup A, C, W or Y meningococcal disease outbreak
- A first-year college student living in a residence hall
- Military recruit

For more information https://www.cdc.gov/vaccines/vpd/mening/hcp/who-vaccinate-hcp.html

MENINGOCOCCAL B VACCINE

Adults should get serogroup B meningococcal vaccine if:

- They have complement component deficiency (e.g., C5-C9, properdin, factor H, factor D, or are taking soliris®).
- They have functional or anatomic asplenia.
- They are a microbiologist who is routinely exposed to Neisseria meningitidis (the causal pathogen).
- They are part of a population identified to be at increased risk because of a serogroup B meningococcal disease outbreak.

For more information https://www.cdc.gov/vaccines/vpd/mening/hcp/who-vaccinate-hcp.html

HEALTHCARE WORKER IMMUNIZATION RECOMMENDATIONS

For more information https://www.cdc.gov/vaccines/adults/rec-vac/hcw.html
**RECOMMENDATIONS**

- Due to the risk of exposure to vaccine preventable diseases, the Hospital Infection Control Practices Advisory Committee (HICPAC) encourages any facility or organization providing direct patient care, to develop a comprehensive immunization policy for all HCP.
- Facilities should review immunization records and immunity status for HCP at the time of hire and on a regular basis or in conjunction with routine annual disease prevention measures.

**HEALTH CARE PERSONNEL**

<table>
<thead>
<tr>
<th>Include but not limited to:</th>
<th>Physicians</th>
<th>Emergency Medical Service Personnel</th>
<th>Autopsy Personnel</th>
<th>Housekeeping</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurses</td>
<td>Laboratory Personnel</td>
<td>Students and Trainers</td>
<td>Laundry</td>
<td></td>
</tr>
<tr>
<td>Therapists</td>
<td>Technicians</td>
<td>Contractual Staff not Employed by the Healthcare Facility</td>
<td>Administrative/Clerical</td>
<td></td>
</tr>
<tr>
<td>Pharmacists</td>
<td>Dietary</td>
<td>Maintenance</td>
<td>Nursing</td>
<td></td>
</tr>
<tr>
<td>Nursing Assistants</td>
<td>Dental Personnel</td>
<td>Security</td>
<td>Volunteers</td>
<td></td>
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<tr>
<td>Other personnel not directly involved in patient care but potentially exposed to infectious agents.</td>
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**INFLUENZA HCP REQUIREMENT**

- HCP should get one dose annually.
- Early season 2015–16 flu vaccination coverage among HCP was 66.7%, similar to early season coverage during the 2014–15 season (64.3%).
- By occupation, early season flu vaccination coverage was highest among physicians (87.1%), nurse practitioners/physician assistants (83.8%), nurses (77.1%), pharmacists (76.8%), and other clinical professionals (72.6%).
- Early season flu vaccination coverage was higher among HCP whose employers required (87.1%) or recommended (61.9%) that they be vaccinated compared with those HCP whose employer did not have a requirement or a recommendation regarding flu vaccination (39.4%).
TETANUS, DIPHTHERIA, PERTUSSIS (Tdap)

- A single dose of Tdap is recommended for healthcare personnel not previously vaccinated.
- Give priority to vaccinating those who have direct contact with babies younger than 12 months of age.
- You should administer Tdap regardless of interval since the previous Td dose.

Healthcare personnel include but are not limited to physicians, other primary care providers, nurses, aides, respiratory therapists, radiology technicians, students (e.g., medical, nursing, and pharmaceutical), dentists, social workers, chaplains, volunteers, and dietary and clerical workers.

HEPATITIS B

If documented evidence of a complete and valid hepatitis B vaccination series AND up-to-date blood test demonstrating hep B immunity is not available, then HCP should receive the hep B series.

<table>
<thead>
<tr>
<th>Dose</th>
<th>Recommended Interval</th>
<th>Minimum Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Today</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Four weeks following dose one</td>
<td>Four weeks following dose one</td>
</tr>
<tr>
<td>3</td>
<td>Four to six months after dose two</td>
<td>Eight weeks between dose two and three and 16 weeks between dose one and three</td>
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<tr>
<td></td>
<td>Get anti-HBs serologic tested 1–2 months after dose #3.</td>
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</table>

Vaccine Effectiveness: The 3-dose vaccine series administered at 0, 1, and 6 months produces a protective antibody response in approximately 90% of healthy adults aged 19 years after dose one, 75% after dose two, and 100% after dose three.

HEP B NON-RESPONDER

- Repeat the 3-dose series
- Test for anti-HBs 1–2 months after the third dose of vaccine
- If the test is still negative after a second vaccine series, the person should be tested for HBsAg and total anti-HBc to determine their HBV infection status.
- People who test negative for HBsAg and total anti-HBc should be considered vaccine non-responders and susceptible to HBV infection.
- Those found to be HBsAg negative but total anti-HBs positive were infected in the past and require no vaccination or treatment. If the HBsAg and total anti-HBc tests are positive, the person should receive appropriate counseling for preventing transmission to others as well as referral for ongoing care to a specialist experienced in the medical management of chronic HBV infection. They should not be excluded from work.
Healthcare personnel born in 1957 or later

- Unvaccinated HCP, or HCP who do not have serology demonstrating immunity to measles or mumps, should get 2 doses of MMR vaccine separated by a minimum of 28 days.
- HCP that have not had the MMR vaccine, or do not have serology demonstrating immunity to rubella, are recommended to receive 1 dose of MMR.

<table>
<thead>
<tr>
<th>Vaccine Effectiveness</th>
<th>Dose One</th>
<th>Dose Two</th>
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<tbody>
<tr>
<td>Measles</td>
<td>95%</td>
<td>99%</td>
</tr>
<tr>
<td>Mumps</td>
<td>80%-85% (range: 75%-91%)</td>
<td>79%-95%</td>
</tr>
<tr>
<td>Rubella</td>
<td>95% (85%-99% CI)</td>
<td>&gt;99%</td>
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MMR CONTINUED

HCP born before 1957

- HCP lacking laboratory evidence of measles, mumps and/or rubella immunity confirmation of disease, should consider two doses separated by 28 days.
- Healthcare facilities should recommend two doses during an outbreak of measles or mumps and one dose during an outbreak of rubella for unvaccinated HCP or HCP lacking serology of measles, mumps and/or rubella.

VARICELLA

- HCP who do not have evidence of immunity should receive two doses of varicella vaccine, with a minimum interval of 4 weeks between dose one and two.

Evidence of Immunity

- Documentation of 2 doses of vaccine given no earlier than 12 months of age, at least 3 months between doses for children younger than age 13 years, or at least 4 weeks between doses for people 13 years and older.
- A healthcare provider’s diagnosis of varicella or verification of history of varicella disease.
- History of herpes zoster, based on healthcare provider diagnosis.
- Laboratory evidence of immunity or laboratory confirmation of disease.
- Birth before 1980 is not considered evidence of immunity for HCP.
MENINGOCOCCAL

• Give both MenACWY and MenB to microbiologists who are routinely exposed to isolates of Neisseria meningitidis.

• Every 5 years boost with MenACWY if risk continues.

ADULT IMMUNIZATION RATES

Immunization rates represent data from the North Dakota Immunization Information System (NDIIS).

NORTH DAKOTA ADULT IMMUNIZATION RATES

• Represent NDIIS adult immunization data.

• Adult NDIIS participation is not required in North Dakota.

• Immunization rates only reflect adults participating with the NDIIS.

• Immunization rates may include adults that have moved or gone elsewhere.
NDIIS ADULT PARTICIPATION

Percent of adults 19 years of age and older with at least one adult administered dose of vaccine in the NDIIS

NORTH DAKOTA ADULT NDIIS IMMUNIZATION RATES

NDIIS Data is subject to the following limitations: only represents active adult participants and providers are not required to enter data for individuals 19+ years of age.

NORTH DAKOTA ADULT PCV13 RATES 65+ YEARS OF AGE

- Adult PCV13 NDIIS immunization rates range from 22% - 66% with a state average 47.9%.
- There are currently 33 counties with adult NDIIS PCV13 immunization rates below the state average.
NORTH DAKOTA ADULT PPSV23 RATES 65+ YEARS OF AGE
• PPSV23 adult NDIIS immunization rates range from 21% - 59% with a state average 42.1%.
• There are currently 28 counties with adult NDIIS PPSV23 immunization rates below the state average.

NORTH DAKOTA ZOSTER RATES 60+ YEARS OF AGE
• Zoster (shingles) NDIIS immunization rates range from 12% - 53% with a state average 36.8%.
• There are currently 24 counties with NDIIS zoster immunization rates below the state average.

REMINDER RECALL
**REMINDER OR RECALL**

- A reminder is communication to an individual that he/she is **due now or on a future date** for immunization(s).
- A recall is communication to an individual that he/she is **past due** for immunization(s).
- The primary benefit of reminder/recall is to improve the timeliness and completion of immunizations recommended by the advisory committee on immunization practices (ACIP) to prevent disease. The reminder/recall report is generated from the North Dakota Immunization Information System (NDIIS) based on the immunization forecaster.

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**ADULT RECALL PILOT PROGRAM**

- The North Dakota Immunization Program implemented an adult immunization recall pilot in:
  - Grand Forks County – Recall postcards
  - Stutsman – Recall postcards
  - Morton County – Recall letters
- Postcards and letters are distributed quarterly for adults 60+ years of age.
- Pilot county immunization rates are currently being evaluated.
- Quarter three recall letters and postcards will be mailed the week of August 28.

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**PFIZER REMINDER RECALL**

- Immunization reminder/recall postcards are available through Pfizer.
- Postcards are free and have prepaid postage.
- Pfizer also provides a reminder phone call service through Televox.
- Patient information is not shared with Pfizer.
REMINDER RECALL STEP 1 & 2

1. To run the reminder/recall report, log in to the NDIS.
2. Click the Create Reminder-Recall hyperlink from your home screen.

REMINDER RECALL STEP 3

- Select your provider from the provider field drop-down box. Clients pulled onto report will be based off of the patient’s last provider visited without influenza vaccine.
REMINDER RECALL STEP 4

Indicate which gender you would like your reminder/recall to include.

- The NDDoH recommends always including all genders when running this report.
- The default is set for "All".

Gender: [All] [Male] [Female] [Unknown]

REMINDER RECALL STEP 5

- Select the race you want the report to include by changing the drop-down box from the default of "All" or leave the box as is to look at all races.
- The NDDoH recommends always including all races when running this report.

REMINDER RECALL STEP 6

- The maximum number of recall tries is set to "No Maximum"
  - A recall try is counted when the report is downloaded or if postcards/labels are printed from the report.
  - The number of recall tries is reset to zero when a new dose is added to the client's record.

Maximum Recall Tries: [No Maximum]
REMINDER RECALL STEP 7

• Use radio button to indicate if you would like Air Force base clients included in your report.

  Include Air Force base clients:  Yes  No

Air Force bases in North Dakota do not enter immunizations into the NDIIS, so Air Force children and adults may show up as being behind on immunizations and may receive unnecessary reminder-recall mailings from the immunization program.

REMINDER RECALL STEP 7 CONTINUED

• In order for a patient to be considered an "Air Force base", they must be marked as such on their client demographics page.

REMINDER RECALL STEP 8

• Use radio button to indicate if you would like to exclude Influenza vaccines from Last Provider Visited.

  Exclude Influenza from Last Provider Visited:  Yes  No

The NDDoH recommends using the default setting of "Yes" for this question as not all patients get their influenza vaccine from their primary care provider.
REMINDER RECALL STEP 9

- Indicate which age range you would like the report to include.
- Note - only one box can be checked.

REMINDER RECALL STEP 10

- Select the vaccine(s) that you would like for your reminder/recall.

If no vaccines are selected, then all forecasted vaccines will be included for which a patient is due or past due.

REMINDER RECALL STEP 11

- Use the radio buttons to indicate if you want to use reminder, recall, or both.
REMINDER RECALL STEP 12

• Click Run Reminder Recall button to obtain the list of desired patients.

REMINDER RECALL STEP 12 CONTINUED

• A list of patients matching the selected criteria will be displayed on the screen.
• Patients with an incomplete address will be highlighted in orange.
• Patients whose address has been marked as "Air Force base" on their demographics page will be highlighted in yellow.

REMINDER RECALL STEP 13

• Once report results are displayed, you can:
  • Download the list of patients as an excel document.
  • Print labels to place on postcards.
  • Print mailing and return address directly onto postcards.
  • Remember that clicking one of these three buttons will count as a recall try for each client on the list.
**NDIIS TRAINING RESOURCES**

NDIIS training resources are available on the North Dakota Immunization Program website [http://www.ndhealth.gov/immunize](http://www.ndhealth.gov/immunize):

- NDIIS Forecasting (pdf and video)
- NDIIS MOGE Instructions (pdf)
- Looking up an Immunization Record (pdf and video)
- Reminder/Recall instructions (pdf)
- Managing private lot information (pdf and video)

**NORTH DAKOTA IMMUNIZATION PROGRAM**

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<thead>
<tr>
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<th>Phone</th>
<th>Email</th>
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</tr>
</tbody>
</table>

**POST-TEST**

- Successfully complete the five-question post-test to receive your certificate
- Credit for this session available until September 12, 2017
- This presentation will be posted to our website: [http://www.ndhealth.gov/immunize](http://www.ndhealth.gov/immunize)