2016 Immunization Update

Andy Noble, CDC Public Health Advisor
North Dakota Immunization Program
2015 Childhood Immunization Rates


^Hib shortage
Kindergarten Immunization Rates

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Rate</th>
<th>Healthy People 2020 goal</th>
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</thead>
<tbody>
<tr>
<td>Polio</td>
<td>91.24%</td>
<td>94.00%</td>
</tr>
<tr>
<td>DTaP</td>
<td>90.84%</td>
<td>94.00%</td>
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<tr>
<td>MMR</td>
<td>90.67%</td>
<td>94.00%</td>
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<tr>
<td>HepB</td>
<td>93.76%</td>
<td>94.00%</td>
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<tr>
<td>Varicella</td>
<td>90.15%</td>
<td>94.00%</td>
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Adolescent Immunization Rates

Estimated vaccination coverage among adolescents aged 13-17 years, North Dakota, NIS-Teen, 2008-2015

Revised APD definition

≥1 MenACWY
≥1 Tdap
≥1 HPV (females)
≥1 HPV (males)
≥3 HPV (females)
≥3 HPV (males)
Estimated vaccination coverage among adolescents aged 13-17 years, United States, HHS Region VIII, and North Dakota - National Immunization Survey-Teen (NIS-Teen), 2014-2015
Adult Pneumococcal Immunization Rates

North Dakota Adult Pneumococal and Influenza Rates

- 18-64 Pneumococcal
- ≥65 Pneumococcal
- 18-64 Influenza
- 65 and Older Influenza
HPV Immunization Schedule Update

- ACIP recommends routine vaccination at age 11 or 12.
- ACIP approved a 2-dose Gardasil 9® schedule for individuals 9-14 years of age.
  - Dose two should be administered 6-12 months after dose one
  - If dose two is administered less than five months from dose one, a third dose should be administered at least 4 months after dose two.
- Adolescents ages 9-14 who have already received two doses in less than 5 months will require a third dose.
- Individuals 15 - 26 years should receive three doses at 0, 2 months, and 6 months.
HPV Parent/Patient Recommendation

Provide a strong recommendation

- “Now that your child is 11 (or 12) years old, they are due for three vaccines today to help protect them from meningitis, HPV cancers, and pertussis—or whooping cough.”

- If we start now, it’s one less thing for you to worry about. Also, your child will only need two doses of HPV vaccine at this age. If you wait, your child may need three doses in order to get complete protection. We’ll give the first shot today and then you’ll need to bring your child back in 6 to 12 months from now for the second dose.”

Meningococcal Conjugate (MenACWY)

- Routine immunization at 11 or 12 years of age
- Booster dose at 16-18 years of age
  - Protection from dose one wanes within five years. CDC survey shows less than one-third 17 year olds have received the second dose.
- Healthy persons who receive their first dose at 16 do not need a booster unless they become at increased risk.
- Routine vaccination of healthy persons who are not at increased risk is not recommended after age 21 years.
- A booster dose is not recommended for healthy persons 22 years of age or older even if the first dose was administered at 11 through 15 years of age.
- Although doses of MenACWY separated by 8 weeks can both be counted as valid, it is preferable to use a longer interval between doses, 3 to 5 years if possible.
Meningococcal B Vaccine

- October 19th ACIP recommended a two dose Trumenba® schedule
  - Children ages 10 to 18 years old in high-risk groups, including outbreak settings, should receive three doses (0, 1-2, and 6 months).
  - Healthy adolescents can receive two doses, six months apart.

- Bexsero® has a two dose schedule
  - The two doses have to be at least one month apart

- Bexsero® and Trumenba® are not interchangeable if; if the series is started with one brand it has to be finished with the same brand.

- The meningococcal B vaccine recommendation for healthy 16 - 23 year olds remains a provisional recommendation.
High Risk Adult Meningococcal Recommendation

- Meningococcal vaccination is recommended for persons 2-55 years of age at increased risk for meningococcal disease.
  - People age 2 months and older with functional or anatomic asplenia
  - People age 2 months and older who have persistent complement component deficiency
  - People younger than 22 years of age if they are or will be a first-year college student living in a residential hall
  - People age 2 months and older who are at risk during an outbreak caused by a vaccine serogroup
  - People age 2 months and older who reside in, or travel to certain countries in sub-Saharan Africa as well as other countries for which meningococcal vaccine is recommended (e.g., travel to Mecca, Saudi Arabia, for the annual Hajj)
  - Microbiologists who work with meningococcus bacteria in a laboratory
- Those who remain at high risk should receive a booster dose every 5 years.
NDIP conducted a statewide adult immunization survey
- Distribution 9/29
- Closed the survey 10/21
- 149 immunization sites responded
Adult Pneumococcal Vaccine in North Dakota

- Pneumococcal administration practices seem to be more effective in the 65+ population
- Common missed opportunities for the 18-64 age range
Adult Pneumococcal (PCV 13)

- Adults 65 years and older who have not previously received pneumococcal vaccine or whose previous vaccination history is unknown should receive a dose of PCV13.

- PCV and PPSV should not be administered simultaneously.
  - Minimum acceptable interval between PCV13 and PPSV23 is 8 weeks.

- Adults 65 years old or older who have previously received one or more doses of PPSV23 should receive a dose of PCV13 if they have not received it.

- A dose of PCV13 should be given one or more years after receipt of the most recent PPSV23 dose.
Adult Pneumococcal (PPSV23)

- Routinely recommended for adults 65 years of age and older, regardless of previous PCV receipt.
- Should be administered 6-12 months after PCV13.
- Should be considered for persons living in special environments or social settings with increased risk of pneumococcal disease or its complications, i.e. Alaska Native, Navajo, and Apache populations.
- Revaccination 5 years after the first dose of PPSV23 is recommended for:
  - Children and adults younger than age 65 years at highest risk for serious pneumococcal infection
  - Adults age 65 years and older who received their first dose for any indication when they were younger than age 65 years.
- Adults who receive PPSV23 at or after age 65 years should receive only a single dose.
Pneumococcal High Risk

- PCV13 should be administered prior to PPSV23.
- Adults with increased risk factors who have not previously received PPSV23 should receive a dose of PCV13 followed by a dose of PPSV23 at least 8 weeks later.
- Adults 19 years of age or older who are at increased risk that previously received one or more doses of PPSV23.
  - Should be given a dose of PCV13 one or more years after the last PPSV23 dose was received.
  - For those who require additional doses of PPSV23, the first dose should be given no sooner than 8 weeks after PCV13 and at least 5 years since the most recent dose of PPSV23.
- Immunocompromised persons 2 years of age and older who are at highest risk of pneumococcal disease or its complications should be vaccinated. Persons immunosuppressed from chemotherapy or high-dose corticosteroid therapy (14 days or longer) should be vaccinated.
- Persons who are 19-64 who have asthma or smoke cigarettes.
Tetanus, Diptheria, Pertussis

- Administer one dose to everyone \( \geq 11 \) years of age
- Administer one dose during each pregnancy at 27-36 weeks gestation
- October 19, 2016 ACIP approved adding a statement for preferable vaccine administration to occur at 27-32 weeks gestation
Birth dose Hepatitis B

- ACIP strengthened the language for Hepatitis B birth dose. All infants weighing >2,000 grams should receive the Hepatitis B birth dose within 24 hours of birth.

- Dose two should be administered at age 1 or 2 months with a minimum interval of at least four weeks from dose one.

- Dose three should be administered at 6-18 months of age.
  - At least 8 weeks after the second dose
  - AND At least 16 weeks after the first dose
  - AND should be at least 24 weeks of age when dose three is administered

- A total of 4 doses of Hepatitis B vaccine is permitted when a combination vaccine containing Hepatitis B is administered after the birth dose.
Herpes Zoster Vaccine in North Dakota

- Herpes zoster vaccination is recommended for all adults ≥60 years whether or not they report a prior episode of herpes zoster.
- Vaccine has FDA approval persons 50 years and older.
- ACIP recommends everyone ≥60 years should receive a dose of the vaccine.
  - Except for individuals who are immunosuppressed, receiving high dose corticosteroids therapy.

Herpes zoster vaccination was determined by asking respondents ≥50 years of age if they had ever received a shingles or zoster vaccine.
High Risk Populations

- Ensure high risk patients are immunized appropriately
  - Pregnant women
  - Immunocompromised
  - Adults traveling outside of the U.S.
  - Adults in contact with children at high risk
    - Screening immunization records of parents during pregnancy
    - Screening immunization records of parents during infant well child checks
    - Screening immunization records during flu shot appointments
Healthcare Personnel

- Implement immunization policies for healthcare workers
- Early season flu vaccination coverage was higher among HCP whose employers required (87.2%) or recommended (61.9%) vs. employers that did not have a requirement or recommendation for flu vaccination (39.4%)
  - Physicians 87.5%
  - NP/PA 81.8%
  - Nurses 77.1%
  - Pharmacists 76.8%
  - Other clinical professionals 72.6%
  - Administrative and non-clinical support staff 62.8% and assistants and aides 55.4%
Increasing Adult Immunization Rates

- **Implement immunization quality improvement projects**
  - Ideally healthcare providers should consider immunization quality improvement projects that:
    - Implement measurable increases in adult immunization rates
    - Bring about measurable increases in vaccination rates of pregnant women, specifically against influenza and pertussis, and/or
    - Reduce disparities in immunization rates, whether associated with race, ethnicity, lack of insurance coverage or any other factor resulting in less-than-optimal rates

- **Provide strong recommendations to adult patients**
  - Physician recommendations are critical in whether patients receive vaccines that they need
  - Most adults believe vaccines are important and are likely to receive them if recommended by their healthcare professionals

- **Implement reminder recall systems**

- **Implement vaccination strategies for high-risk adults**

- **Use forecaster to ensure all patients receive all recommended vaccines**
Improve Your Immunization Practices

- Ensure staff are educated on immunization recommendations.
- Implement standard screening workflows.
- Utilize NDIIS to screen, forecast, or validate immunization records.
- Identify tools and opportunities that increase immunization screening effectiveness.
Record Assessment

- Routinely assess adult immunization records to:
  - Determine site or provider immunization rates
  - Determine level of missed opportunities
  - Determine the reason for missed opportunities
  - Determine invalid dose of vaccine
  - Determine the reason for invalid doses of vaccine

- Develop and implement immunization workflows for key staff.
  - Immunization education
  - Develop site specific best practice workflows
  - Development of standing orders
Increase Access

- Offer convenient immunization services
- Establish immunization standing orders for adults, adolescent, and childhood immunizations
- Offer Immunization only appointments
- Expand immunization services to include family members

Does your site have standing orders in place for adult immunizations?

- Yes 82%
- No 18%
Screen and offer immunizations during all patient visits

- Offer all age relevant immunizations at your facility
- Screen immunization records prior to each patient
- Offer all immunizations during flu shot appointments or clinics
- Expand flu shot appointments to include family immunizations
- Utilize a forecaster to ensure all immunizations are offered
Utilize the Immunization Registry

- 2015 89% of adults 19+ have at least on vaccine in NDIIS
- Q3 2016 there were 241,361 doses entered into NDIIS

**Benefits of NDIIS**

- Can be utilized to track inventory of privately purchased vaccines
- Provides a guide for non clinical staff who screen immunization records
- Provides a lifetime immunization record for patients
- Can be utilized to perform forecasting and reminder recall

North Dakota Immunization Registry

- 4,914,112 adult doses of vaccine
- 644,413 adults in NDIIS

31 Sending Flat Flies

306 Interoperable sites

1,259 Participating Sites
Reminder/Recall

- Enter administered adult immunization data into NDIIS
- Utilize NDIIS or EMR forecasting tools to generate immunization reminders based on age or antigen
- Include immunization reminders in flu shot messaging

Does your Site Send Immunization Reminders to Adult Patients

- Yes: 28%
- No: 72%
Facility Quality Improvement (Sanford)

**HPV QI Project**
Focusing on a no missed opportunities environment
- Face-to-Face clinician education conducted by the Immunization Coordinator and a pharmaceutical company
- Run initial reports for each provider to determine rates and missed opportunities

**Follow-Up Reports**
- Reports for each provider’s rates and missed opportunity
- Provide follow-up education
- Client reminder/recall phone calls and reminder letters are distributed

**Review Missed Opportunities**
- Chart audit of missed opportunities
- Review documentation of why HPV was not administered.
  - If parent education and parent refusal are documented then the missed opportunity is not counted
- This project will become routine practice and the organization will move to another vaccine specific QI project in 2017.
North Dakota Quality Improvement Projects

Quality Health Associates
Focus on improving influenza and pneumococcal immunization rates
- Implement evidence-based practices and systems changes to improve:
  - routine assessment of patients’ immunization status
  - improve immunization rates especially in minority and underserved populations
  - increase documentation of Medicare beneficiary immunization status in immunization information systems

Flu Fit
- Target colorectal screening for patients receiving flu vaccine
- Provide general immunization screening and education

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National Learning Collaborative

- National Improvement Partnership Network and the Academic Pediatric Association are collaborative on a national practice-based quality improvement initiative.
- Improve adolescent HPV immunization rates by reducing missed opportunities and strong provider recommendations.
- Earn credit towards professional certifications (ABP, Part 4 MOC, ABFM Part IV MC-FP and Performance Improvement CME).
- Receive QI coaching and support assessing HPV vaccine delivery, recognize barriers, and select evidence-based strategies.
- Monthly feedback reports tracking progress.
- Increase knowledge and skills on topics such as, provider recommendations for HPV vaccine, reducing missed opportunities.
- Raise the HPV series completion rate.

**Enrollment Phase (1 hour)**
- Project Overview
- Practice Teams Established
- Contact Information Form

**Pre-Intervention Phase (8.5 hours over 2 months)**
- Pre-project surveys: Readiness Assessment & Office Systems Inventory (1 hour)
- Baseline Chart Reviews (16/month for 3 months) (6 hours)
- Baseline HPV Vaccination Rate Data (2 hours)
- Project & Data Orientation (2 hours)
- Practice Strategy Selection (0.5 hours)

**Learning Collaborative Implementation Phase (2.5 hours/month)**
- Strategy Implementation
- Monthly Learning Collaborative Webinars (1 hour)
- Monthly PSA Self Assessments (0.5 hour)
- Monthly Chart Reviews (16/month for 6 months) (1 hour)
- Staff Impact Survey (Midpoint) (15 minutes)

**Wrap Up Phase (2.25 hours)**
- Post HPV Vaccination Rate Data (2 hours)
- Staff Impact Survey (Endpoint) (5 minutes)
- Office Systems Inventory (0.5 hour)
- Project Evaluation (10 minutes)
National Learning Collaborative

For more information contact:
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Phone: (802) 656-9025
National Quality Improvement Project

**AMGA - The Adult Immunization Best Practices Learning Collaborative**

- Designed for organizations striving to improve adult immunization rates
- Participating groups identified optimal and efficient ways to improve adult immunization rates

**Project Measures**

- Measure 1: Pneumococcal immunization for adults age 65 and older
- Measure 2: Pneumococcal immunization for adults age 19-64, who have a high-risk condition
- Optional Measure 2a: Pneumococcal immunization for adults age 19-64, who also have an at-risk condition

For more information: Daniel Casanova
Email: dcasanova@amga.org

[AMGA website link]

**NORTH DAKOTA DEPARTMENT OF HEALTH**

# North Dakota Immunization Program

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