

Immunization Newsletter

Spring 2018



NDIIS Updates

The North Dakota Immunization Information System (NDIIS) team has been working on several major projects over the last 18 months that are finally nearing completion. There has been a large effort to make changes to the guts of the system so that it is sustainable and can support new and changing technologies and functionality moving forward. Users won't notice a difference in the look or performance of the NDIIS because of this work.

Another major project has been the NDIIS school module. This work will make it possible for North Dakota schools to manage their student's immunization information in a single system, the NDIIS, and includes five different reports and a reminder/recall system specifically designed for school users. The reports will allow schools to run a list of their students to make sure they are all in the NDIIS, assess their school's exemption rates and coverage rates and run lists of students who are not

up-to-date with school-required immunizations. Additionally, school users will be given the ability to enter immunizations into the NDIIS. They will only be able to enter immunizations as historical, and the immunization program will be monitoring their data entry very carefully. The school module work has been completed and should be available for school users in the next few weeks. The plan is to have a small, select group of school nurses use the functionality when it is first available, with a complete roll-out to all schools with NDIIS access in the fall, prior to the start of the 2018-2019 school year. The immunization program will provide extensive training to school users prior to their use of the new NDIIS functionality.

Since 2011, the NDIIS has been establishing connections to provider electronic health record (EHR) systems for electronic immunization data exchange and Meaningful Use. Data exchange is

based on the standards set by the national HL7 Implementation Guide (IG) for Immunization Messaging. There are multiple versions of the HL7 IG, the most recent of which was published at the end of 2015. The NDIIS has been working on upgrading our electronic messaging system to be able to support the newest version of the HL7 implementation guide, which is required for Meaningful Use Stage 3. There is one outstanding issue that was found when we attempted to put our first provider connection in production with this upgrade version. The issue has been fixed and the final testing by the NDIIS technical team is in progress. Once the work on this issue has been completed, the NDIIS will be electronically connected to the Patagonia EHR product using this new version of HL7, and we will continue to connect new sites as well as upgrading previous connections to this new interface engine.



The NDIIS team is always working to correct issues and add new recommendations to the NDIIS immunization forecaster. Most recently, the NDIIS

forecaster was updated to include the new recommendations for herpes zoster vaccine. In October 2017, the Advisory Committee on Immunization Practice (ACIP) voted to routinely recommend recombinant zoster vaccine (RZV, HZ/su), brand name Shingrix[®], for all immunocompetent adults ages 50 and older. Additionally, Shingrix[®] vaccine is recommended for adults previously vaccinated with zoster vaccine live (ZVL), brand name Zostavax[®]. The NDIIS forecaster is now set up to specifically recommend Shingrix[®] vaccine to all NDIIS clients when they turn 50. Every adult who has already received a dose of Zostavax[®] is recommended to receive a dose of Shingrix[®] eight weeks later and after January 26, 2018. For all adults over the age of 50 who have never received a dose of zoster vaccine, the NDIIS forecaster will recommend Shingrix[®] starting January 26, 2018. Shingrix[®] is a 2-dose series, and the second dose is recommended at a minimum of 8 weeks after the first dose. It is also important to note that, since the NDIIS forecaster considers both Zostavax[®] and Shingrix[®] as part of the same vaccine family, it will show a 3-dose series for clients who have already received a dose of Zostavax[®]. If an adult has received a dose of Zostavax[®], their first forecasted dose of Shingrix[®] will show that it is dose number two. This is dose two in the zoster family, not the second dose of Shingrix[®]. If the patient is then given a dose of Shingrix[®], the forecaster will show dose three of Shingrix[®] needed.

Zoster Vaccine Uptake in North Dakota

Data from the NDIIS shows that health care providers in North Dakota are starting to administer Shingrix[®] vaccine. The first doses of Shingrix[®] administered were reported to the NDIIS in December 2017, and the number of doses has increased steadily since then. There has also been a decrease in the number of doses of Zostavax[®] vaccine being administered across the state. In February 2018, there were more doses of Shingrix[®] vaccine administered than doses of Zostavax[®].

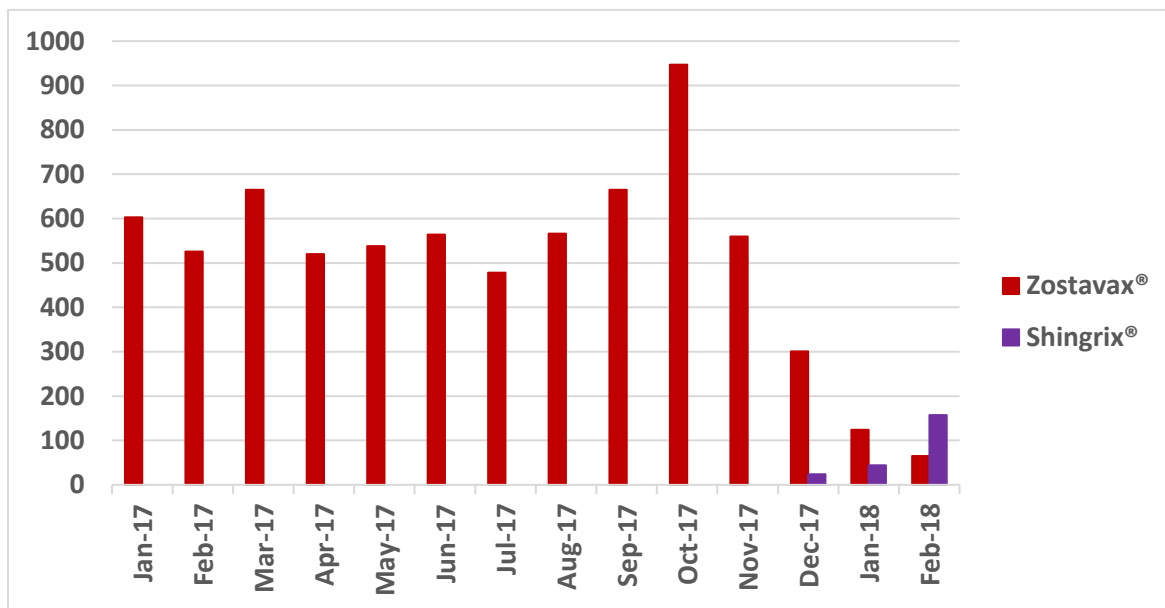


Figure 1. The total number of doses of herpes zoster vaccine by brand administered to adults 50 years of age and older by month according to the NDIIS.

Additionally, the majority of doses of Shingrix® vaccine are being administered by pharmacies. This is to be expected, since the administration of the vaccine to older adults is billed under Medicare Part D (prescription drug benefit).

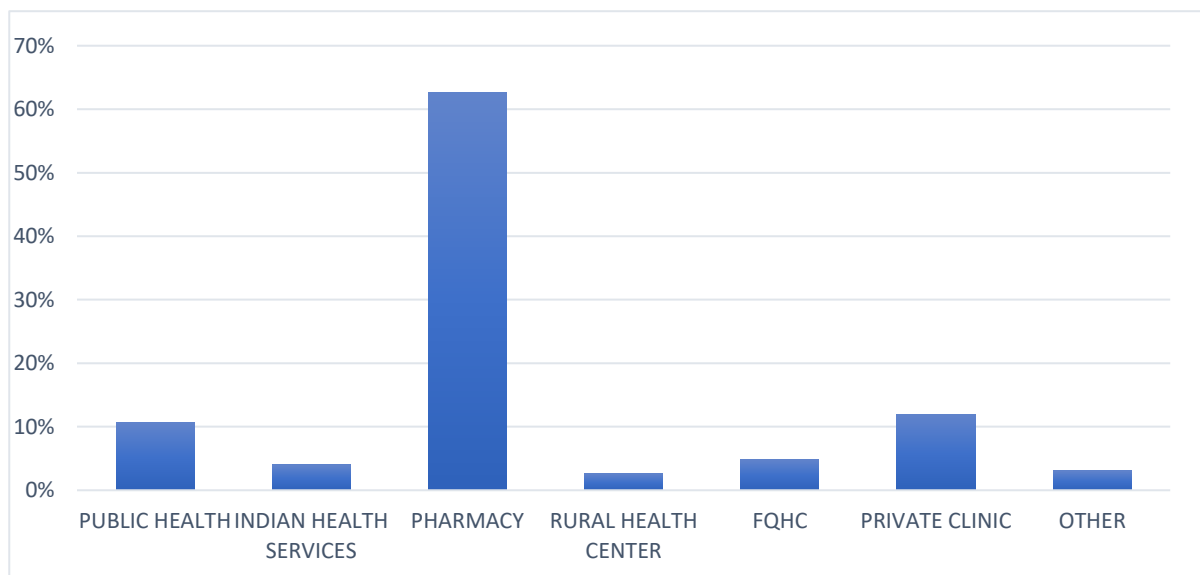


Figure 2. The percent of Shingrix® vaccine doses administered by different provider types according to the NDIIS.

It is important to note that the entry of adult vaccines into the NDIIS is not required in North Dakota, so there may be more doses of Shingrix® vaccine being administered that are just not entered in the NDIIS. However, 94 percent of North Dakota adults do have a record in the NDIIS and most immunization providers, including local public health units, pharmacies and private clinics, do report all doses administered to the NDIIS.

Billing and Insurance Coverage for Shingrix®

For people ages 65 and older, shingles vaccine is covered by Medicare Part D plans (prescription drug benefit). The shingles vaccine is not covered by Medicare Part B, like influenza and pneumococcal vaccines are. Providers are encouraged to tell their patients to contact their Medicare Part D plan prior to vaccination, as copays and deductibles may apply. Providers should continue to recommend shingles vaccination, regardless of out-of-pocket costs, as most people will reach their deductible at some point during the year through a combination of prescriptions and vaccination. Also, having a bout of shingles will be costlier than getting Shingrix® (\$280 for the series).

For people ages 50 and older, the Affordable Care Act mandates first dollar coverage for all ACIP



recommended vaccines, including Shingrix®. Most private insurance plans in North Dakota have already begun covering Shingrix® at the first dollar. Because there may be out-of-pocket costs when vaccinated at ages 65 and older, providers are encouraged to vaccinate as many adults as possible between the ages of 50 and 64, when insurance coverage is available.

Shingrix® Q&A

(adapted from the Immunization Action Coalition)

Storage and Handling

1. What are the storage and handling guidelines for Shingrix®?
 - a. Shingrix® must be stored in a refrigerator that will maintain temperatures between 36°F and 46°F (2°C and 8°C).
 - b. Reconstituted vaccine is stable for six hours if refrigerated between 36°F and 46°F (2°C and 8°C), and should be discarded after 6 hours.
2. If Shingrix® is inadvertently placed in the freezer, will the vaccine be viable?
 - a. No. Shingrix® must be discarded if frozen.
3. Should the Shingrix® adjuvant suspension be stored in the refrigerator or at room temperature?
 - a. Shingrix® adjuvant suspension should be stored in the refrigerator with the Shingrix® vaccine. If the adjuvant is stored in the freezer, it must be discarded.
4. If a patient receives a frozen dose of Shingrix®, do they need to be revaccinated?
 - a. If a patient receives a dose of frozen Shingrix®, the dose is not valid and should be repeated. The repeat dose can be administered immediately.

Shingrix® Administration

5. What route should be used when administering Shingrix®?
 - a. Shingrix® is to be administered intramuscularly (IM) only.
6. If Shingrix® is inadvertently administered subcutaneously (SC), is the dose valid or does it need to be repeated?
 - a. If Shingrix® is inadvertently administered SC, the dose is still valid and does not need to be repeated.
7. Can the varicella or MMR diluent be used to administer the Shingrix® vaccine?
 - a. No. The Shingrix® adjuvant suspension contains the AS01_B adjuvant that is specific to the Shingrix® vaccine.

8. What is the minimum interval between doses of Shingrix®?
 - a. The recommended interval between doses of Shingrix® is 2 to 6 months, and a minimum interval of 4 weeks between dose one and two.
9. If the second dose of Shingrix® is given less than four weeks from dose one, is the second dose valid?
 - a. No. If dose two is given less than 4 weeks after the dose one, the second dose should be repeated at least 8 weeks after the invalid dose.
10. If the second dose of Shingrix® is delayed more than 6 months after dose one, does the series need to be restarted?
 - a. No. The series does not need to be restarted if more than 6 months has elapsed since dose one.
11. Can someone with a history of shingles be vaccinated with Shingrix®?
 - a. Yes. Adults with a history of shingles should receive Shingrix®. If a person is experiencing an episode of shingles, vaccination should be delayed until the acute phase of the illness is over and symptoms abate.
12. Is it necessary to screen a patient's varicella (chickenpox) history prior to administering Shingrix®?
 - a. No. All persons 50 years of age or older should be given Shingrix® unless they have a medical contraindication to vaccination.
13. What are the precautions and contraindications for the Shingrix® vaccine?
 - a. Precaution to recombinant zoster vaccine:
 - The presence of a moderate or severe acute illness, including shingles. Vaccination should be deferred until the illness improves.
 - There is no available data to establish whether Shingrix® is safe in pregnant or lactating women and there is currently no ACIP recommendation for Shingrix® in this population. Consider delaying vaccination with Shingrix® in such circumstances.
 - b. Contraindication to recombinant zoster vaccine:
 - Severe allergic reaction to a vaccine component or following a prior dose
14. Should Shingrix® be given to people who have received Zostavax®? If so, what interval should separate Zostavax® and Shingrix®?
 - a. ACIP recommends that people who previously received Zostavax® receive two doses of Shingrix®. The first dose of Shingrix® should be given at least 2 months after Zostavax®.
15. What adverse reactions have been reported with Shingrix®?
 - a. In pre-licensure clinical trials of Shingrix® the most common adverse reactions were pain at the injection site (78 percent), myalgia (45 percent), and fatigue (45 percent). Grade 3 adverse events (reactions related to vaccination which were severe enough to prevent normal activities) were reported in 17 percent of vaccine recipients, compared with 3 percent of placebo recipients. Grade 3 injection-site reactions (pain, redness, and swelling) were reported by 9 percent of vaccine recipients, compared with 0.3 percent of placebo recipients. Grade 3 solicited systemic events (myalgia, fatigue, headache, shivering, fever, and gastrointestinal symptoms) were reported by 11 percent of vaccine recipients and 2.4 percent of placebo recipients. The occurrence of local grade 3 reactions did not differ by vaccine dose. However systemic grade 3 reactions were reported more frequently after dose 2.



Meningococcal Tabletop and Mass Vaccination Exercise



The NDDoH Divisions of Emergency Preparedness & Response and Disease Control hosted a tabletop exercise about meningococcal disease on February 21. Those in attendance included the ND University System, both public and private colleges and universities in the state, and local public health units. The tabletop focused on how an outbreak of meningococcal disease, caused by

serogroup B, would be handled in a university setting. Many universities, colleges, and local public health units attended and were able to discuss how a situation would be handled at their school.

In addition to the tabletop, a meningococcal serogroup B mass vaccination clinic was held at Minot State University on March 22. The NDDoH Divisions of Disease Control and Emergency Preparedness & Response, Minot State University, and First District Health Unit all worked to put the clinic on. Over the course of the clinic, 106 students were vaccinated with Bexsero®. Bexsero® protects against the B serogroup of *Neisseria meningitidis*. The vaccine is provisionally recommended for those 16-23 years old, ideally given at 16-18 years of age. The vaccine is a two-dose series given one month apart. Minot State University's student health center will be working to get the students who received their first dose back in to complete the series.

Meningococcal Booster School Requirement Reminder

A few changes have been made to North Dakota Administrative Rule 33-06-05 regarding school immunization requirements. Starting with the 2018-2019 school year, students will be required to have two doses of meningococcal conjugate vaccine (MCV4) to enter grades 11 and 12. Students entering grades seventh through 10 will need one dose of MCV4. This is a change from the previous requirement which stated one dose of MCV4 was required only for students entering seventh grade. This change was made to increase the rate of the second dose of MCV4 among adolescents. The booster dose is necessary, because immunity begins to wane five years post vaccination, leaving children vulnerable at ages 16-21 years when they



are at greatest risk for meningococcal disease. When seeing children for the booster dose of MCV4, please check their immunization records to see if they need to be caught up with other vaccines (i.e., HPV, varicella, Men B).

All students entering grades seventh through 12 will also need to have received one dose of Tdap

vaccine. Previously, the requirement was only students entering seventh grade.

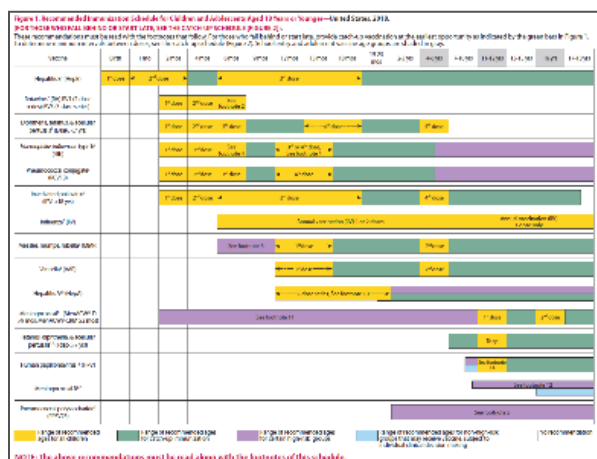
For the 2018-2019 school year, students must be compliant with requirements by October 1, 2018. Students who are not compliant by October 1, 2018 must be excluded from school. Previously, the rule stated students had 30 days to become compliant with requirements. Students enrolling in school after October 1 will have 30 calendar days to

become compliant with immunization requirements before they will need to be excluded from school.

History of disease exemptions were also added for all diseases that could potentially have an applicable history of disease, including hepatitis B, measles, mumps, or rubella. Previously, history of disease exemptions were only allowed for varicella. A physician's signature is required for a history of disease exemption.

2018 Immunization Schedules

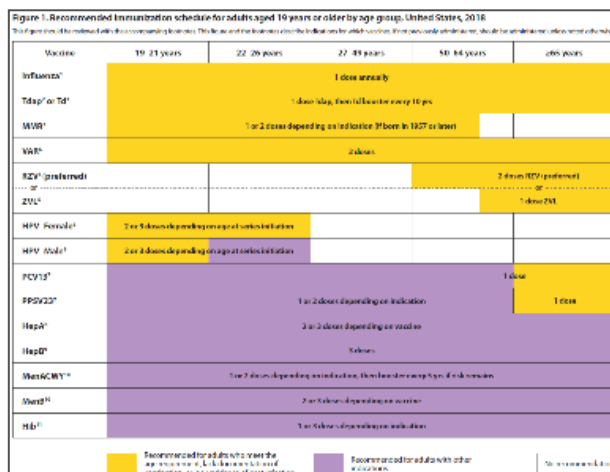
The CDC released the 2018 Child and Adolescent and Adult Immunization Schedules. Laminated versions of these schedules are available for order from the NDDoH at www.ndhealth.gov/immunize/order/.



Changes in the 2018 immunization schedule for adults include the new zoster vaccine recommendations and updated MMR recommendations.

For more information about the schedules, please visit www.cdc.gov/vaccines/schedules/hcp/.

Changes in the 2018 immunization schedules for children and adolescents ages 18 and younger include new or revised ACIP recommendations for poliovirus, influenza, and measles, mumps, and rubella (MMR) vaccines, and clarification of the recommendations for rotavirus and pneumococcal vaccines.



Adult Immunization Funding Opportunity Announcement

As a strategy to increase North Dakota's adult immunization rates, the North Dakota Immunization Program is seeking grant proposals for an adult immunization funding opportunity. Successful applicants will develop and implement immunization activities (i.e., community immunization clinics, worksite wellness, adult immunization reminder/recall services, community

and healthcare worker immunization educational activities) to increase local, regional, and/or statewide adult immunization rates.

Proposals must be emailed to Andy Noble at anoble@nd.gov by Friday, May 11, 2018 at 12 p.m. (CDT). For additional information, please visit www.ndhealth.gov/Immunize/.

Influenza Immunization Funding Opportunity Announcement

As a strategy to increase North Dakota's influenza immunization rates, the North Dakota Immunization Program is seeking grant proposals for an influenza immunization funding opportunity. Successful applicants will develop and implement new immunization activities (i.e., school-based immunization clinics, community influenza immunization clinics, worksite wellness, community and healthcare worker influenza immunization educational activities, collaborating with nontraditional influenza immunization providers) to increase local, regional, and/or statewide influenza immunization rates.



Proposals must be emailed to Andy Noble at anoble@nd.gov by Friday, May 11, 2018 at 12 p.m. (CDT). For additional information, please visit www.ndhealth.gov/Immunize/.

Influenza Vaccine Data Entry in NDIIS

When reviewing the entry of seasonal influenza vaccines in the NDIIS, the immunization program has noticed a high volume of duplicate doses entered into patient records. The trend appears to be due to a lag in entry of the influenza vaccine dose by the administering provider, and the patient seeing another provider in the interim, and that provider wanting the dose documented in the patient's history in the EHR. The duplicate doses are being entered with an "UNKNOWN" provider, an incorrect dose administration date and, at times, an incorrect influenza vaccine type. This is leading to a high number of invalid influenza doses in the NDIIS and a higher number of immunizations that must be reviewed and de-duplicated by immunization program staff. It is very important to make sure that providers and clinic staff are not taking a patient's self-report of immunization, but are using a reliable source of information, like the NDIIS or an official immunization record, that

includes the exact date of administration and the specific type of influenza vaccine.

It is also important to remember that North Dakota health care providers have up to four weeks after the administration of a vaccine to get it entered in the NDIIS and, with such a high volume of data entry required during flu season, it is not uncommon for a longer amount of time between administration and data entry. Having the correct vaccine administration information is incredibly important, even for influenza vaccine. Knowing the exact date of administration and the specific type of influenza vaccine administered may impact the type of vaccine or number of doses needed in subsequent flu seasons. In order for the NDIIS forecaster to make the correct recommendation for future doses and for health care providers to make accurate clinical decisions for their patients, they need correct and accurate information about the patient's vaccination history.

Interim Flu Vaccine Efficacy

The CDC published interim estimates of vaccine effectiveness data for the 2017-2018 seasonal influenza vaccine this past February. The overall adjusted vaccine effectiveness (VE) against influenza A and B virus infection was 36 percent (95 percent CI: 27 percent to 44 percent). This means that overall, the seasonal flu vaccine reduced the risk of getting sick and having to go to the doctor from flu by about one third. VE was 25 percent (95 percent CI: 13 - 36 percent) against illness caused by the most predominant strain this flu season, A(H3N2).



However, the VE was much higher in children 6 months through 8 years of age. In this age group, overall VE was 59 percent (95 percent CI: 44-69 percent). VE against other strains of flu virus was also higher than against A(H3N2). VE was 67 percent (95 percent CI: 54-76 percent) against influenza A(H1N1)pdm09 virus and 42 percent (95 percent CI: 25-56 percent) against influenza B viruses.

Creating an effective flu vaccine for A(H3N2) viruses has continued to be an issue. There are several hypotheses for why flu vaccines provide less benefit against H3N2 viruses. These involve issues such as how a person's unique immune system responds to vaccination or previous flu

infection, the unique characteristics of circulating H3N2 viruses and changes that occur in H3N2 viruses over time, and the issue of A(H3N2) viruses being difficult to grow in eggs.

Flu vaccine is still the best defense against flu infection and it is not too late to be vaccinated for this flu season. Everyone 6 months of age and older should receive the flu vaccine. It is especially important for young children, older adults, pregnant woman, people with chronic illness or compromised immune systems, and Alaskan Natives or American Indians.

As of April 20, flu activity in North Dakota is regional. It is likely that flu season peaked the week ending January 27.

2017 Vaccine Preventable Diseases Data

With the exception of influenza, chickenpox, pertussis and mumps are the most common vaccine preventable diseases (VPDs) seen in North Dakota. During 2017, 50 cases of pertussis were reported to the NDDoH. The ages of these cases ranged from younger than 12 months to older than 60 years, and cases were seen throughout the state. The number of cases reported in North Dakota have remained between 44 and 51 for the past four years. Pertussis outbreaks tend to occur every 3-5 years. The last major peak of pertussis in North Dakota was in 2012 with 214 pertussis cases.

There were 63 cases of chickenpox reported to the NDDoH in 2017. Very few of these cases were confirmed with a laboratory test. With the increase in vaccination, chickenpox is becoming more difficult to diagnose based on clinical symptoms. The NDDoH strongly recommends laboratory testing when chickenpox is

suspected. The majority of cases seen in 2017 were in children younger than 18, although the ages ranged from younger than 12 months to older than 60 years. The cases were seen throughout the state.

There were 10 confirmed or probable mumps cases in 2017. All the cases were in the eastern side of the state, and all were 18-24 years old. In addition to those ten cases, the NDDoH also follows up on all reports of suspect mumps cases. In 2017, there were 34 suspect mumps cases reported to the NDDoH.

Vaccine Information Statement (VIS) Dates

As 2018 VFC site visits begin, please take a moment to review your Vaccine Information Statements (VIS) and make sure that they are up to date. Some common VIS's were recently updated.

Adenovirus	6/11/2014	MMRV	2/12/2018
Anthrax	3/21/2018	Multi-vaccine	11/5/2015
Chickenpox	2/12/2018	PCV13	11/5/2015
Cholera	7/16/2017	PPSV	4/24/2015
DTaP	5/17/2007	Polio	7/20/2016
Hib	4/2/2015	Rabies	10/6/2009
Hepatitis A	7/20/2016	Rotavirus	2/23/2018
Hepatitis B	7/20/2016	Shingles-live	2/12/2018
HPV	12/2/2016	Shingles-Recombinant	2/12/2018
Influenza	8/7/2015	Smallpox	12/1/2015
J. encephalitis	1/24/2014	Tdap	2/24/2016
MCV4	3/31/2016	TD	4/11/2017
MenB	8/9/2016	Typhoid	5/29/2012
MMR	2/12/2018	Yellow Fever	3/30/2011

Offering a VIS for each vaccine at all immunization visits, including mass clinics, is federal law. A VIS can be printed and laminated for each room, as long as they are sterilized between patients, or paper copies can be provided at each immunization visit. The VIS must be offered prior to immunizations, not after. Check your VIS stock against this list. If you have outdated VIS forms, obtain the current version at www.cdc.gov/vaccines/hcp/vis/current-vis.html.

Vaccine Transport and Off-Site Storage

School clinics and power outages due to summer storms are just a couple reasons why vaccines may need to be transported. Vaccines should only be transported when absolutely necessary. Approved instances are mass vaccination clinics, in an emergency, or to send vaccine to a provider for use before doses would expire.

When transporting vaccine to an off-site location, certified transport coolers or pack outs and digital data logger thermometers need to be used. This will ensure that the vaccine is being transported correctly, and the cold chain is not interrupted. Vaccine should be kept in these transport coolers for no more than eight hours. Certified coolers should never be used as a backup storage unit in the event of a unit failure at your facility.

During transport, paper temperature logs need to be kept. Temperature documentation should occur every 30 minutes. Temperature documentation can be found on our website at www.ndhealth.gov/Immunize/Providers/Forms.aspx.

Once you are at your off-site location, it is recommended that if you are able, you place vaccine in an appropriate storage unit with a data logger at that facility. The data logger temperature log should be submitted monthly with provider monthly data logger temperature logs, paper temperature documentation does need to be kept for a minimum of three years and will be looked at during VFC site visits. In an emergency, if a certified transport cooler is not available, emergency packing procedures can be used. There are step-by-step directions that can be kept with the emergency plan www.cdc.gov/vaccines/hcp/admin/storage/downloads/emergency-transport.pdf.

If you have any questions or need to report a temperature excursion, please contact the NDDoH at 701.328.3386 or toll-free at 800.472.2180.

February ACIP Update

The ACIP met February 21st and 22nd. The agenda for the meeting can be found at www.cdc.gov/vaccines/acip/meetings/downloads/agenda-archive/agenda-2018-02-508.pdf. Below is brief information about recommendations made at the meeting. Official ACIP recommendations will be published in *Morbidity and Mortality Weekly Report* (MMWR).

Hepatitis B Vaccine:

- ACIP voted unanimously to add a new, two-dose, adjuvanted hepatitis B vaccine (Dynavax's HEPLISAV-B™) to current hepatitis B recommendations for adults ages 18 and older.
 - HEPLISAV-B™ is administered as a two-dose series over one month.
 - HEPLISAV-B™ results in high levels of seroprotection, including in patients with reduced immunogenicity to hepatitis B vaccination (diabetics, immunocompromised).
 - The MMWR recommendations are available at www.cdc.gov/mmwr/volumes/67/wr/mm6715a5.htm.



Live Attenuated Influenza Vaccine:

- ACIP voted to reinstate live attenuated influenza vaccine (LAIV) or Flumist® to the immunization schedule.
 - “For the 2018-2019 season, immunization providers may choose to administer any licensed, age appropriate, influenza vaccine (including LAIV, IIV and RIV). LAIV is an option for influenza vaccination for persons for whom it is otherwise appropriate.”
 - The manufacturer (AstraZeneca) changed the influenza A H1N1 strain in LAIV from Bolivia to Slovenia, which they believe will improve vaccine efficacy against the H1N1 strain.
 - The H1N1 Bolivia strain in LAIV was found to have poor replication.
 - The H1N1 Slovenia strain showed improved replication.
 - VFC providers have already pre-booked influenza vaccine for next season. Therefore, LAIV will most likely not be provided as an option for VFC children for the 2018 – 2019 season.

- Press release from AstraZeneca: www.astrazeneca-us.com/media/press-releases/2018/astrazeneca-announces-renewed-recommendation-and-availability-of-flumist-quadrivalent-vaccine-in-the-us-02212018.html

Hepatitis A Vaccine:

- ACIP voted to recommend that hepatitis A vaccine be administered to infants ages 6 – 11 months who are traveling internationally to countries where hepatitis A vaccination is recommended.
 - Previously IG (immune globulin) was recommended for these infants.
 - Because these infants most likely also need MMR for travel, and MMR and IG can't be administered at the same time, hepatitis A vaccine is recommended.
 - Infants who receive hepatitis A vaccine at ages 6 – 11 months for travel will still need two doses of hepatitis A vaccine at 12 months or older.
- ACIP voted to recommend that hepatitis A vaccine be administered for post exposure prophylaxis to anyone 12 months and older.
 - Previously, IG, not hepatitis A vaccine, was recommended for post exposure prophylaxis against hepatitis A virus in people older than 40.
 - Some individuals will also need IG, in addition to hepatitis A vaccine, for post exposure prophylaxis. This will be outlined in MMWR, but will most likely depend on the following:
 - Age: people older than 40
 - Health status: people with certain conditions (immunocompromised, chronic liver disease)
 - Exposure: high-risk (household or sexual contact) vs. low-risk (food handler)
 - Availability of IG

For more information about ACIP recommendations, please visit www.cdc.gov/vaccines/acip/.

Hepatitis B Vaccine Intermittent Shortage

The NDDoH received notification that the manufacturing issue related to the hepatitis B vaccine that Merck began experiencing in 2017 is expected to continue throughout 2018. As a result, Merck's supply of pediatric hepatitis B vaccine (Recombivax®) will be intermittent during 2018. GlaskoSmithKline has confirmed that it can continue to support full demand for pediatric hepatitis B vaccine in the United States throughout 2018, using a combination of the Engerix® vaccine and its DTaP-HepB-IVP pediatric combination vaccine (Pediatrix®).

To ensure that states have equal access to GlaskoSmithKline's hepatitis vaccines and related products, the NDDoH will be receiving monthly allocations of Engerix®. After April 1, 2018, providers may see vaccine orders being decreased, so that the NDDoH is able to stay within the monthly allocations and supply vaccine to all providers who request these particular vaccines. As a reminder, providers may only order vaccines from the NDDoH once per month.

High-Risk Immunization Recommendations

Adults with certain behaviors and health conditions, such as a weakened immune system; HIV; diabetes; kidney, heart, and lung disease; alcoholism; cigarette smoking; men who have sex with men (MSM) and injection drug use are at increased risk of VPDs and complications associated with VPDs. Due to the increased risk, people in these populations are recommended to receive immunizations, in addition to routinely recommended vaccines.

Strategies to increase immunization screening, vaccine administration, and immunization rates among high-risk adults include following the ACIP recommended immunization schedule, expanding access to immunization services, implementing provider or system interventions, standing orders, and assessment and feedback activities.

- Expanding Access - deliver immunizations in clinical settings where they were previously not offered (i.e., worksite wellness clinics, walk-in clinics, inpatient facilities, subspecialty clinics, after hours clinics).
- Provider or system interventions - primarily implemented through a healthcare system with the goal of reducing missed opportunities for immunizations. Provider or system interventions include, but are not limited to, provider education, provider reminders, and EHR prompts.
- Standing orders – allow professionals who are not physicians to prescribe and deliver immunizations without direct physician involvement.
- Assessment and Feedback – evaluating a provider’s performance in delivering all recommended immunizations simultaneously and providing feedback on strategies to reduce missed opportunities.

Additional resources for improving immunization coverage for high-risk patients:

- The Community Guide: www.thecommunityguide.org/sites/default/files/publications/vpd-AJPM-recs-targeted.pdf
- Vaccines and Immunizations for Specific Groups of People: www.cdc.gov/vaccines/spec-grps.html
- Vaccine Information for Adults: www.cdc.gov/vaccines/adults/rec-vac/index.html

National Infant Immunization Week

National Infant Immunization Week (NIIW) was April 21 – 28, 2018. The NDDoH reminded parents of the importance of protecting infants from vaccine-preventable diseases. NIIW is an annual observance that emphasizes the need to fully immunize children 24 months and younger against 14 vaccine-preventable diseases. Following the recommended immunization schedule not only protects the infant, but everyone in their community by preventing and reducing the spread of infectious diseases.

“Vaccines are among the most successful and cost-effective public health tools available for preventing disease and death,” said Molly Howell, Immunization Program Manager. “They not only help protect vaccinated individuals, but also help protect entire communities by preventing and reducing the spread of infectious diseases.”

According to the CDC), among children born during 1994-2016, vaccination will prevent an estimated 381 million illnesses, 24.5 million hospitalizations, and 855,000 deaths over the course of their lifetimes.

According to the National Immunization Survey, North Dakota’s infant immunization rate is 68.2 percent, which is below the national average of 70.7 percent. “About thirty percent of North Dakota infants are not fully vaccinated on time, leaving them vulnerable to diseases,” said Howell. Quarterly, the NDDoH sends letters to parents of infants who are 30 or more days past due for immunizations. “Parents should contact their primary care physician or local public health unit for vaccinations for their children as soon as they receive a letter.”

*Tyawna Ackerman
Jacobson Memorial Hospital Care Center*



As part of NIIW, the NDDoH recognized Tyawna Ackerman, registered nurse, from Jacobson Memorial Hospital Care Center in Elgin and Glen Ullin, N.D. Ackerman was chosen to receive the CDC Childhood Immunization Champion Award for North Dakota. The award recognized individuals who make a significant contribution toward improving public health through their work in childhood immunization.

For more information about NIIW, contact Molly Howell at 701.328.2378 or at 1.800.472.2180, or visit our website at www.ndhealth.gov/immunize.



NDIIS Data Quality Improvement Effort

During the first quarter of 2018, the immunization program continued its efforts to improve record data quality within the NDIIS. NDIIS records reviewed were identified as needing address updates, deduplication, or needing their record status marked as lost so follow-up can be done. This data clean-up effort was working to address the following four issues:

- **H1N1:** Due to the scanning of hand-written records of H1N1 pandemic influenza vaccine administered during the influenza pandemic of 2009- 2010, close to 6,000 records in the NDIIS contained only a single dose of influenza vaccine. A significant majority of these records were found to be duplicates and were able to be merged by program staff with their matching records.
- **Hepatitis B Vaccine:** Over 4,000 records of clients ages nine and older, with only a birth dose of hepatitis B vaccine recorded, were reviewed and consolidated, or marked as lost to follow-up. Duplicated records of the birth dose can be created, for example, due to the timing of the electronic receipt of newborn information from Vital Records into the NDIIS. These records can also belong to children born within North Dakota and living on one of the state's two U.S. Air Force Bases. The Air Force Bases do not report administered immunizations to the NDIIS. In other cases, children born in the state may have moved away prior to receiving further immunizations after the birth dose of hepatitis B.
- **No Immunizations in Five Years or More:** Almost 8,000 records belonging to adolescents ages 15-17 years with no record of immunization in greater than five years were marked "lost to follow-up" or deduplicated. Many of these records may be attributed to the increased movement of families with children in recent years in North Dakota, particularly within the oil-producing counties. If these adolescents had remained in North Dakota, they would have received reminder/recall notices from the NDDoH and likely have been immunized or had a record updated in the NDIIS to meet school requirements within the last five years e.g. for MCV4 and Tdap vaccines to enter seventh grade.
- **Invalid Doses:** In 2016 and 2017, the NDIIS team completed several major updates to the immunization forecaster. These changes led the team to update the forecaster for every single NDIIS client. Because of the updates and changes to the forecaster rules, there were a lot of doses in the NDIIS that said they were "invalid," but the forecaster was recognizing as a valid dose. The immunization program needed to review all of these incorrect invalid doses and manually change their dose status back to valid.

Overall, during the data cleanup project, roughly 17,000 client records were manually reviewed and updated and more than 17,000 invalid doses were updated back to valid by immunization program staff.

Improved data quality in the NDIIS has several benefits for both NDIIS users and for the public. Fewer duplicate records mean more patients are easily able to receive accurate forecasts and consolidated immunization records. Health care providers spend less time identifying and reporting records to the NDIIS for deduplication. In addition, records marked as moved or gone elsewhere (MOGE) and lost to follow-up are automatically excluded from provider reminder-recall lists and NDIIS reports, avoiding unnecessary postage, and improve the accuracy of immunization rate calculations. These records are also excluded from the quarterly reminder-recall mailings for infants, adolescents and adults that come from the immunization program. Providers are encouraged to assess their own patient records for data quality issues, and to follow the guidance on reporting and addressing duplicates, MOGEs and deceased records, available on the immunization program website www.ndhealth.gov/Immunize/NDIIS/.

State Immunization Conference Registration Now Available



The 2018 North Dakota State Immunization Conference will be held on July 17 – 18, 2018 in Bismarck.

Conference registration is open! The registration link can be found on the Immunization Program's website at www.ndhealth.gov/immunize/.

Participants and vendors can find more information on the registration website. Additional topics that have been added to the agenda include: reducing pain during injections, provider best practices, challenges and successes with vaccinating the American Indian population and much, much more! The entire agenda has been posted on the website.

Don't wait, get registered today!

American Cancer Society: Mission HPV Cancer Free

The American Cancer Society (ACS) is launching a new campaign on June 8, 2018 (the 12-year anniversary of the first FDA-approved HPV vaccine). This will include a public facing announcement from ACS and the launch of a national ad campaign from ACS. There will be two **core campaign goals**:

- **Increase HPV vaccination rates for preteens.**
 - Increase national HPV vaccination series completion rates among 13-year olds to at least 80 percent by June 8, 2026 (20 years after licensure of the first HPV vaccine).
 - Increase each state's HPV vaccination series completion rate among 13-17 year olds to their initiative rate of meningococcal ACWY vaccination among 13-17 year olds by June 8, 2026.
- **Eliminate gender disparity and reduce geographic disparities in HPV vaccination.**
 - Increase male HPV vaccination series completion rates among 13 year olds to that of females nationally and in each state by June 8, 2026.
 - Increase HPV vaccination rates in geographic locations lagging behind the national average.

Key audiences:

- **Providers & Health Systems**
- **Parents** – Parents/Guardians of 9 – 12 year olds, Parents/Guardians of teens; Family members who influence health decisions
- **Volunteers** – Clinical champions, HPV cancer survivors and caregivers, parent champions, existing ACS volunteers

Key Strategies:

- Strengthen provider recommendations
- Activate partners and stakeholders
- Know your data and track progress
- Implement EBI's and systems changes
- Increase parental knowledge

Available materials:

- [Mission: HPV Cancer Free Overview Video](#)
- [Mission: HPV Cancer Free](#)
- [Let's Talk About That: Addressing Concerns Video](#)
- [HPV Yoga Video](#)
- [Talking About HPV Vaccination Video](#)

Coming Soon:

- External launch kit (week of April 23rd)
- Communication kit

Calendar of Events



NDDoH Immunization Lunch and Learn, May 9, 2018

www.ndhealth.gov/Immunize/

National Immunization Conference, May 15 – 17, 2018 in Atlanta, GA,

www.cdc.gov/vaccines/events/nic/index.html

National Adult and Influenza Summit, May 17 – 18, 2018 in Atlanta, GA

www.izsummitpartners.org/summit/2018-naais/

NDDoH Immunization Lunch and Learn, June 13, 2018

www.ndhealth.gov/Immunize/

ACIP Meeting, June 20 – 21, 2018 in Atlanta, GA

www.cdc.gov/vaccines/acip/index.html

NDDoH Immunization Lunch and Learn, July 11, 2018

Cancelled due to ND Immunization Conference!

www.ndhealth.gov/Immunize/

North Dakota Immunization Conference, July 17 and 18, 2018 in Bismarck, ND

<https://und.edu/academics/extended-learning/conference-services/immunization>

Current Issues in Immunization Netconference, July 24, 2018

www.cdc.gov/vaccines/ed/ciinc/index.html

National Immunization Awareness Month, August 2018

www.cdc.gov/vaccines/events/niam.html

NDDoH Immunization Lunch and Learn, August 8, 2018

www.ndhealth.gov/Immunize/

Immunization Program

Molly Howell, MPH
Immunization Program Manager
mahowell@nd.gov

Abbi Berg, MPH
Vaccines for Children Manager
alberg@nd.gov

Miranda Baumgartner
VFC/AFIX Coordinator (West)
mlbaumgartner@nd.gov

Sherrie Meixner
VFC/AFIX Coordinator (East)
smeixner@nd.gov

Lexie Barber, MPH
Immunization Surveillance
Coordinator
abarber@nd.gov

Andy Noble
CDC Public Health Advisor
anoble@nd.gov

Mary Woinarowicz, MA
NDIIS Sentinel Site Manager
mary.woinarowicz@nd.gov

Dominick Fitzsimmons
NDIIS Coordinator
dfitzsimmons@nd.gov

Robin Wrightnour
Administrative Assistant
rwrightnour@nd.gov

www.ndhealth.gov/immunize
[www.facebook.com/
NDImmunization](https://www.facebook.com/NDImmunization)

Kirby Kruger
Chief, Medical Services Section
Director, Disease Control

Tracy K. Miller
State Epidemiologist

Molly Howell
Immunization Program Manager
Assistant Director, Disease Control
