Immunization Newsletter

Immunization Program

Division of Disease Control

Summer 2011

North Dakota Reports First Case of Measles in 24 Years

The North Dakota Department of Health (NDDoH) reported its first case of measles in the state since 1987. The case occurred in an unvaccinated male in his 50s who likely contracted measles on a domestic flight. He was not in North Dakota while contagious.

Measles is a virus that causes rash, cough, runny nose, eye irritation and fever. It can lead to ear infection, pneumonia, seizures, brain damage and death. All children are recommended to be vaccinated against measles at ages 12 to 15 months and 4 to 6 years. All adults born in 1957 or later should have at least one dose of MMR vaccine. All health-care workers should have two doses of MMR vaccine, regardless of date of birth.

During 2001 to 2008, the United States had about 58 cases of measles reported annually. Between Jan. 1 and May 20, 2011, 118 cases of measles already were reported in the United States. Almost 90 percent of cases have occurred in people who have not been vaccinated. Forty percent of cases have required hospitalization.

Measles is a disease that reappears when immunization coverage rates fall. It is extremely contagious and requires high rates of immunization in the community to prevent disease.

Health-care providers should educate patients and their families on the signs and symptoms of measles. Symptomatic patients, especially those who have traveled recently, should consult their health-care provider prior to visiting a clinic or hospital. Airborne and contact precautions should be taken when measles is suspected.

This case serves as a reminder that measles can and still does occur in the United States and even in North Dakota. All suspected cases of measles must be reported immediately to NDDoH by calling 800.472.2180 or 701.328.2378.

Inside this issue:

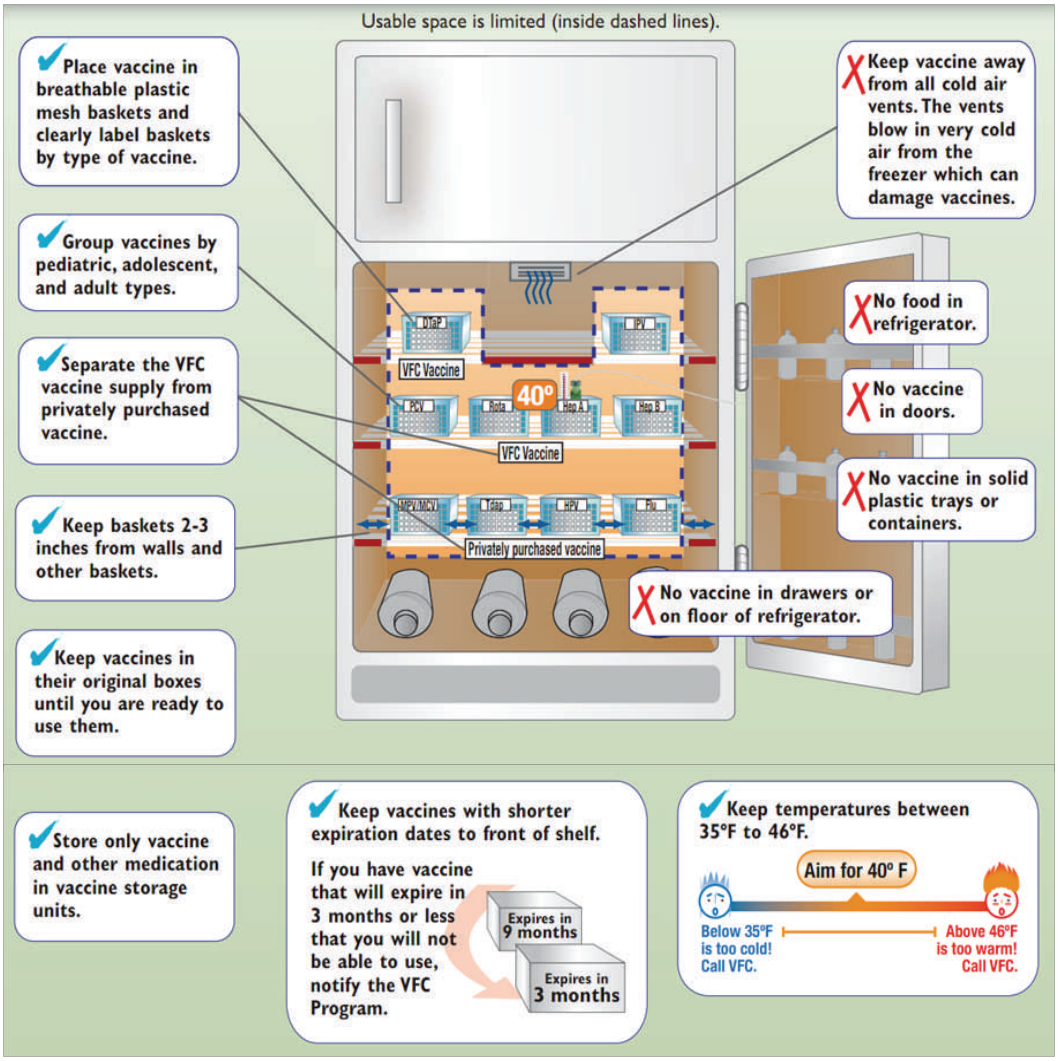
Did you know? The Immunization Program has 8 educational presentations available for continuing education credits!

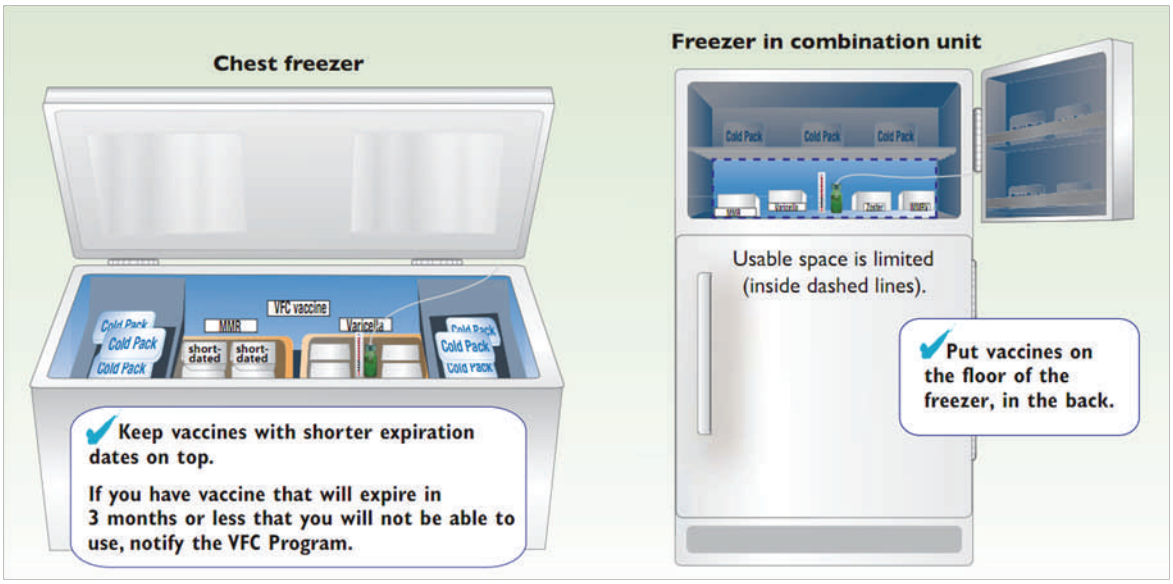
Check Your Vaccine Storage Units!

Unlike refrigerator-only units, dual-zone (household) refrigerators have a limited space for proper storage of vaccines. Check your fridge with the picture to the right to be sure your vaccine is being stored correctly.

Freezers should be set up like the pictures below.

If your vaccine isn't being stored according to the guidelines pictured here, your vaccine supply is not being stored properly. If you think your vaccine storage practices are okay but you're not sure, contact the Immunization Program at 701.328.3386 or 800.472.2180.



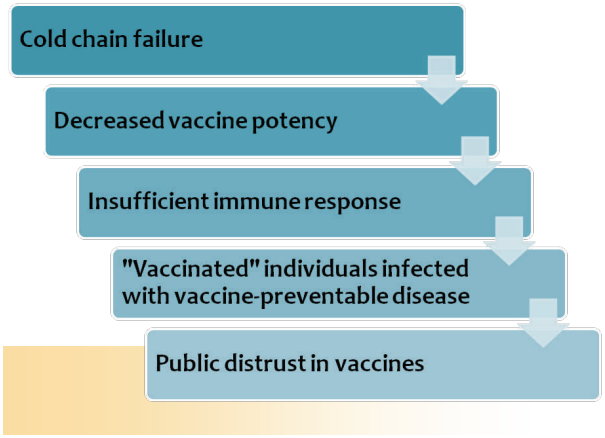


Pictures adapted with permissions from the California Department of Public Health, Immunizations Branch.

Vaccines: Not Your Average Refrigerator Tenant

Think about this scenario: *For Nurses' Day this year, your significant other gave you the most beautiful diamond jewelry. You couldn't believe it, especially since you caught a glimpse of the receipt and noticed a shocking five figures! Your normal jewelry box had been just fine for your other items, but you purchased a safe to keep your new jewelry secure. After spending all that money, you wanted to safeguard the investment!*

Blink back into reality! As a person responsible for the proper management of vaccines in your facility, this should sound familiar. Fridges that are normally adequate for the storage of other items are not always best for vaccine storage. Unfortunately, vaccines are extremely fragile. While it might not seem like a big deal to find the refrigerator temperature has dipped down to 34°F (or 1°C), it could mean that the viability of the vaccines inside is compromised. **It is better to not vaccinate than to give a dose of damaged vaccine.**



Review the list below to see where you can make improvements in your vaccine management practices.

- ☐ We have a primary vaccine coordinator and at least one back-up coordinator in charge of vaccine handling and storage at our facility.
- ☐ We have detailed, up-to-date, written policies for general vaccine management, including policies for routine activities and an emergency relocation plan for power outages and other problems.

Think writing up a vaccine management plan is too much of a hassle? Ask any provider from a clinic evacuated due to flooding: when you are dealing with an emergency, it's best to have a policy already in place.

- ☐ We do NOT use a combination refrigerator/freezer unit with a freezer compartment inside the refrigerator to store vaccines.
- ☐ We have a "Do Not Unplug" sign next to the electrical outlets for the refrigerator and freezer and a "Do Not Disconnect" warning label by the circuit breaker for the electrical outlets.
- ☐ We keep extra containers of water in the refrigerator (i.e., in the door, on the floor of the unit where the vegetable bins were located) to help maintain cool temperatures.
- ☐ We keep ice packs or ice-filled containers in the freezer to help maintain cold temperatures.
- ☐ We store vaccines in the middle of the refrigerator or freezer (never in the doors) with room for air to circulate.
- ☐ If out-of-range temperatures occur in the storage unit, we document actions that were taken, even if the temperature was simply rechecked after a certain amount of time.
- ☐ We call vaccine manufacturers to determine the viability of vaccines after they have been exposed to inappropriate temperatures.

Patient Assistance Programs

With the exception of human papillomavirus (HPV) vaccine, starting Oct. 1, the North Dakota Department of Health (NDDoH) can no longer provide vaccines to underinsured and uninsured adults. Fortunately, in an effort to remove the financial barrier for people who would otherwise choose not be vaccinated, vaccine manufacturers have programs available to help.

Patient assistance programs are available from Merck, GlaxoSmithKline and sanofi pasteur. These programs have separate eligibility requirements. Generally, to qualify patients must be 19 or older without health insurance and have a household income less than a monthly or yearly limit. Verify the eligibility requirements for each program before offering vaccine to patients.

Merck uses a process where submitted applications rapidly are approved with the intent of vaccine administration at the same office visit. Merck provides assistance for Gardasil®, MMR®, Pneumovax® 23, Recombivax HB®, Vaqta®, Varivax® and Zostavax®. For more information on the Merck Vaccine Patient Assistance Program, visit www.merck.com/merckhelps/vaccines/home.html.

GlaxoSmithKline's Vaccine Access Program has prescribers complete a one-time registration for the program. Providers can then submit a patient application for approval and subsequent dose authorization requests for patients already enrolled. The program provides assistance for Boostrix®, Cervarix, Havrix®, Engerix-B® and Twinrix®. For more information, visit www.gsk-vap.com/index.html.

Sanofi pasteur provides assistance for Adacel®, Menactra®, Menomune® and Decavac®. Providers submit the lot number of private vaccine to be used and receiver per-dose credit. A contact number for more information and the program application can be found here: www.pparx.org/en/prescription_assistance_programs/list_of_participating_programs#S.

Documentation of VFC Eligibility

It is a federal requirement of the Vaccines For Children (VFC) program to screen and document VFC eligibility at every immunization encounter. The Prevention Partnership Provider Enrollment, signed annually by providers, states that this screening information is to be documented on a vaccine administration record (VAR) or Patient Eligibility Screening Form **and** in the North Dakota Immunization Information System (NDIIS).

All office staff must be responsible for and mindful of the data that is being entered into NDIIS. For example, if a child is given VFC vaccine but "Not Eligible" is selected for VFC eligibility in NDIIS, it appears as if VFC vaccine was used for a child who is not eligible for the federal program. This could potentially be considered fraud and abuse, according to the program requirements and the NDDoH Immunization Program Fraud and Abuse Policy.

If, due to an emergency or other unforeseen circumstance, VFC vaccine is used for insured children, private vaccine must be used to replace the state-supplied stock. A borrow-return function must be completed in NDIIS.

Contact the Immunization Program with questions at 701.328.3386 or toll-free at 800.472.2180.

Why do patients need to be screened at every visit? Health insurance status may change from one week to the next.

Vaccine with Diluents: How to Use Them

Some vaccines require reconstitution before they can be given to a patient. Reconstitution means that the lyophilized (freeze-dried) vaccine powder or wafer in one vial must be mixed (reconstituted) with the diluents (liquid) in another vial. Use the table below for guidance on reconstituting vaccines.

Vaccine	Lyophilized vaccine (powder)	Liquid diluent (may contain vaccine)	Time allowed between reconstitution and use§	Diluent storage environment
ActHIB	ActHIB	0.4% sodium chloride	24 hours	Refrigerator
Hiberix	Hib	0.9% sodium chloride	24 hours	Refrigerator or room temperature
MMR	MMR	Sterile water	Immediately	Refrigerator
Menveo	MenA	MenCWY	8 hours	Refrigerator
Pentacel (DTaP-IPV/Hib)	ActHIB	DTaP-IPV	Immediately†	Refrigerator
ProQuad (MMRV)	MMRV	Sterile water	30 minutes	Refrigerator or room temperature
Rotarix	RV1	Sterile water, calcium carbonate and xanthan	24 hours	Room temperature
Varivax	VAR	Sterile water	30 minutes	Refrigerator or room temperature
Zostavax	ZOS	Sterile water	30 minutes	Refrigerator or room temperature

§ If the reconstituted vaccine is not used within this time period, it must be discarded.
† Within 30 minutes or less.

Q: We mistakenly gave a child the DTaP-IPV component of Pentacel without realizing it was intended to be mixed with the Hib component. Are these valid doses of DTaP and IPV? Can we reconstitute the unused Hib component and give it separately?

A: The DTaP-IPV component will count as valid doses of DTaP and IPV, but take measures to prevent this error in the future. The ActHIB component must only be reconstituted with the DTaP-IPV component or the specific ActHIB diluent. If you have ActHIB but neither diluent, contact the manufacturer (sanofi pasteur) to obtain ActHIB diluent.

Q: We have Kinrix (DTaP-IPV) and ActHIB on hand, but no Pentacel. Can we reconstitute the Kinrix and ActHIB together to "make" Pentacel?

A: No. Providers should never make their own combination vaccines.

Ask the Editor

Dear Editor,
We have been getting a lot of calls from people who saw or read in the news that with all of the flooding issues in North Dakota people should get a tetanus shot. Can you tell us more about this?

Sincerely,
Flooded (with questions)

Dear Flooded,
Imagine my surprise when, while enjoying my breakfast one morning, I saw a reporter reminding the good people of North Dakota to get a tetanus shot. *That's strange*, I thought. *Maybe I missed yesterday's news where they reminded everyone that they should have two doses of varicella and definitely a flu shot this fall.* Yes, North Dakota news has been peppered with recommendations from the media and others urging residents to be vaccinated against tetanus. No mention is made of another component of the recommended vaccine for adolescents and adults (Tdap): pertussis. Interestingly, our state has already reported 29 cases of pertussis this year, compared to zero cases of tetanus.

We'll take the positive press. Even though there is no added risk of diseases like tetanus and hepatitis A in floods and other natural disasters, it is always nice to have a reminder that everyone needs a tetanus booster (including a one-time dose of Tdap) every ten years.

With that being said, it is not wise to plan mass Tdap/Td vaccination clinics for the public during flooding situations. While people being vaccinated is a positive, people, time and resources are being pulled away from the flood fight, rescue efforts and/or cleanup.

Stay dry!

Dear Editor,
Please clear up the Td vs. Tdap issue. Should children ages 7 through 10 years get a tetanus vaccine? Can they only be given one brand? How about adults 65 and older?

Sincerely,
Tentative with Tetanus

Dear Tentative,
Children ages 7 through 10 years only need Tdap or Td if they were incompletely or not vaccinated with DTaP before turning 7. The primary series for these children is three doses, and any doses of DTaP can be counted. The first two doses should be separated by at least four weeks, and the third dose should be given 6 to 12 months after the second. The Advisory Committee on Immunization Practices (ACIP) recommends that one of these doses (preferably the first) be administered as Tdap.

Either Tdap vaccine (Adacel® or Boostrix®) may be used for patients 7 and older. This is an off-label recommendation made by the ACIP.

Adults 65 and older who have or anticipate having close contact with infants should receive a single dose of Tdap if they have not already received a dose. For other adults 65 and older, a single dose of Tdap may be given instead of Td for protection against pertussis.

Dear Editor,
We love having MOGE and Lost to Follow-up options for patient status in the NDIIS. Patients that we set as MOGE, however, keep showing up on our AFIX assessments. What's the deal?

Sincerely,
Lost in Follow-up

Dear Lost,
The AFIX Coordinators will continue to remove MOGE patients from rate assessments the "old-fashioned" way for the remainder of 2011. The good news is, if they are being marked as MOGE in NDIIS, that means you already have the documentation!

Immunization Websites

In our fast-paced, technology-savvy culture, many people get their news and information from the internet. A Google search for "vaccines" displays results from the Centers for Disease Control and Prevention (CDC), National Vaccine Information Center (NVIC), World Health Organization (WHO) and the Children's Hospital of Philadelphia's Vaccine Education Center. To the average parent, this looks like an impressive list of reliable sources. NVIC, however, is generally considered an anti-vaccine group. They describe their organization as "America's Vaccine Safety Watchdog" and have a Vaccine Cry for Freedom Wall, where readers can post a story by submitting a Vaccine Harassment Reporting Form.

It is very important to be an advocate for one's health. Fortunately, there are reliable sources and sites where parents can go for immunization information.

www.adolescentimmunization.org

www.adultimmunization.org

www.aap.org/immunization

www.aap.org/protecttomorrow

www.nfid.org

www.vaccinesforteens.net

www.ndhealth.gov/immunize

www.immunize.org

www.shotbyshot.org

www.vaccine.chop.edu

www.ecbt.org

www.cdc.gov/vaccines

www.whyichoose.org

New Packaging for Frozen Vaccines

Merck, the manufacturer of Varivax®, recently has changed the shipment packaging for frozen vaccines and issued new FDA-approved guidance regarding caution in the use of dry ice for storage of frozen vaccines.

Merck will no longer ship frozen vaccines to customers on dry ice as was done in the past. Water-based gel packs designed to maintain proper temperatures for three days from the shipment date will be placed in the container. The quantity of gel packs in the shipment will be determined based on the maximum temperature to which the container will be exposed, the time in transit and the need to keep the vaccine at an appropriate temperature during shipping.

The vaccine is located in the lower compartment of the shipping box. The container should be opened immediately upon receipt and the vaccine should be stored in the freezer. The diluent is located in the top compartment of the shipping box, underneath the cardboard cap. The diluent should be stored in a refrigerator or at room temperature.

The CDC and Merck do not recommend transport of frozen vaccine. If frozen vaccines must be transported, the CDC recommends transport with a portable freezer that is capable of maintaining adequate temperatures.

If a shipment is received after the three-day shipping time period, providers must contact Merck Order Management Center immediately for replacement instructions at 1.800.637.2579. Requests for replacement vaccine must be received by Merck within 15 days from the original shipment date.

Changes from 2011 Legislative Assembly

Effective Oct. 1, 2011, local public health units may order vaccines from the North Dakota Department of Health (NDDoH) for administration to insured children. **Both private providers and local public health units should continue to order vaccines for Vaccines For Children (VFC) eligible children.** The NDDoH will continue to supply the birth dose of hepatitis B for VFC eligible (regardless of state of residence) and insured North Dakota children. The NDDoH also will continue to supply human papillomavirus (HPV) vaccine for uninsured and underinsured North Dakota adults to all providers.

All "special" vaccine initiatives (i.e., Tdap, MMR and PPV23 for uninsured and underinsured adults, Tdap for new parents, MCV4 for college students, etc.) will be discontinued on Oct. 1, 2011. Vaccines for these programs may be ordered until Sept. 30, 2011, and must be administered by Dec. 31, 2011.

Legislation also was passed requiring the North Dakota Department of Health (NDDoH) to offer brand choice for all ACIP-recommended vaccines. There are currently 37 different brands/presentations available for order on the federal contract. Because the NDDoH is required by the Centers for Disease Control and Prevention (CDC) to predict which brands, presentations and number of doses providers will order each month, providers were required to complete a brand choice survey. Providers are committed to ordering only the brands selected on the survey for a period of six months. In January 2012, providers may choose to change brands. A copy of the completed survey should be kept on hand for reference when ordering vaccine. This piece of legislation went into effect on July 1, 2011.

During the legislative session, a change was made to the law that requires all health-care providers in North Dakota to enter childhood immunizations into the North Dakota Immunization Information System (NDIIS). Effective July 1, 2011, the law now requires all childhood doses (including influenza) to be entered into the NDIIS within four weeks of administration or the NDDoH shall report the appropriate health-care provider to their occupational licensing entity. The law also restricts health-care providers from ordering vaccines from the NDDoH if they are not complying with entering doses into the NDIIS within four weeks.

Lastly, legislation was passed allowing certified pharmacists to vaccinate children ages 5 years and older against influenza and ages 11 years and older for all other ACIP-recommended vaccines. The law requires the pharmacist to have an order by a physician, nurse practitioner or physician assistant. Any doses administered must be entered into the NDIIS. Previously, pharmacists only were able to vaccinate adults in North Dakota. This legislation goes into effect on Aug. 1, 2011.

Do you and your fellow nurses have a difficult time being able to read vaccine lot numbers that look like this: C389HBVA ? Here's an idea: when you receive vaccine shipments, print out mailing labels in larger print for each vaccine, including the vaccine name, lot number and expiration date. Either put a large mailing label on a box of vaccine or print out an entire sheet with the same label to put directly onto the patient's administration record.

Thanks to Danette Schmid from Lake Region District Health Unit - Eddy County for the idea!

Tetanus Vaccines and Wound Management

Use the table to the right to determine if and when a patient with an injury needs tetanus-containing vaccine and/or tetanus immune globulin (TIG).

	Clean, minor wounds		All other wounds	
Vaccination History	Tdap*	TIG	Tdap*	TIG
Unknown or less than 3 doses	Yes	No	Yes	Yes
3 or more doses	NoΩ	No	Noʃ	No

* Td may be substituted if the person previously has received Tdap

Ω Yes, if more than 10 years since last dose

ʃ Yes, if more than 5 years since last dose

Children younger than 7 who do not have documentation of three doses of a tetanus-containing vaccine should be given three doses of DTaP, separated by four weeks.

Adults who have received a three-dose primary series of tetanus toxoid-containing vaccine and whose last dose was less than five years ago do not require a dose of tetanus toxoid-containing vaccine for wound management.

Patients with unknown or uncertain tetanus vaccination history should be considered to have had zero doses of tetanus toxoid-containing vaccine.

Wounds that present the greatest risk of tetanus include, but are not limited to, wounds contaminated with dirt, feces, soil and saliva; puncture wounds; avulsions; and wounds resulting from burns, crushing, missiles or frostbite.

Entering Adult Immunizations in the NDIIS

State law requires providers to enter any vaccines given to children in North Dakota into the North Dakota Immunization Information System (NDIIS). As part of the agreement to participate in the Prevention Partnership Program, providers also are required to enter any doses of state-supplied vaccine given to eligible adults. Providers are not required by law to enter privately purchased vaccines given to adults.

With statewide flooding and misinformation associated with the perceived risks of vaccine-preventable diseases, local public health units and private providers have been overwhelmed with calls from people inquiring about their tetanus and hepatitis A vaccination status. Many adults are understandably frustrated about the lack of records available. Some patients remember the 10-year interval that they usually get their tetanus updated (i.e. 1995, 2005, 2015, etc.), but this is not reliable. Doses of Td or Tdap given in an emergency department, after the birth of a baby or at an employee immunization clinic are often forgotten about.

As a reminder, patients without appropriate documentation of immunization should be treated as if they have not been immunized.

Without documentation, it is impossible to be certain about a patient's immunization record. The North Dakota Department of Health (NDDoH) strongly encourages immunization providers to enter all doses administered to adults into the NDIIS.

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Immunization Program

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www.ndhealth.gov/Immunize

The *Immunization Newsletter* is a quarterly production distributed to Prevention Partnership Providers.

Check out the Immune Platoon on the CDC's Body and Mind (BAM!) page for kid-friendly health information: www.bam.gov

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Issue of Public Health Reports Dedicated to Immunizations

Volume 126, Supplement 2: Assessment of Vaccination Coverage can be accessed using this link: www.publichealthreports.org/archives/issuecontents.cfm?Volume=126&Issue=14. The issue focuses solely on immunizations, including pediatricians' experiences with parents who refuse vaccines, improving immunization rates and vaccine coverage for children and adolescents who are eligible for the Vaccines For Children (VFC) entitlement program.

"Using the North Dakota Immunization Information System to Determine Adolescent Vaccination Rates and Uptake," an article from the NDDoH authored by Keith LoMurray and Molly Sander of the North Dakota Immunization Program, is featured in this publication.

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