

Immunization Newsletter

National Infant Immunization Week

During National Infant Immunization Week, April 20-27, 2013, the North Dakota Department of Health (NDDoH) reminded parents of the importance of protecting infants from vaccine-preventable diseases.

National Infant Immunization Week 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 also everyone in their community by preventing and reducing the spread of infectious diseases.

“The recommended immunization schedule is designed to offer protection early in life,” said State Health Officer Dr. Terry Dwelle. “This is important because it protects babies when they are vulnerable and before it’s likely they will be exposed to diseases.”

Public health and medical experts base their vaccine recommendations on many factors. They study information about diseases and vaccines very carefully to decide which vaccines kids should get and when they should get them for best protection.

Although the number of vaccines a child needs in the first two years may seem like a lot, doctors know a great deal about the human immune system, and they know that a healthy baby’s immune system can handle getting all vaccines when they are recommended.



“There is no known benefit to delaying vaccination. In fact, it puts

babies at risk of getting sick because they are left vulnerable to catch serious diseases during the time they are not protected by vaccines,” said Dr. Dwelle. “When parents choose not to vaccinate or to follow a delayed schedule, children are left unprotected against diseases that still circulate in this country, like measles and whooping cough.”

In 2010, more than 27,000 cases of pertussis (whooping cough) were reported nationally with 27 deaths – 25 of which were infants. Last year in North Dakota there were 215 cases of pertussis, which is three times as many cases as in 2011. Of these cases, 39 were in children younger than two and eight of these cases were hospitalized.

“Vaccines have been so successful at preventing disease that many people may not have heard of some of today’s vaccines or the diseases they are designed to prevent even though they are still prevalent in other parts of the world,” said Janna Pastir with the Immunization Program in the Department of Health. “These diseases still exist and can be especially serious for infants and younger children.”

Inside this issue:

2011 National Adult Immunization	2
Mandatory Influenza Vaccine in N.D. Health-care Workers	3
VFC Program Requirements Reminder	3
H7N9 Influenza	4
<i>Streptococcus Pnuemoniae</i> Cases in North Dakota	5
New Recommendations for PCV13	5
NDIIS FAQ	6
“Too Many Vaccines Too Soon?”	7
Real-world Results of HPV Vaccine	8
Adolescent Recall	8
Pediarix Supply	9
Vaccine Transport	9
2013-2014 Flu Vaccine Abbreviations	10

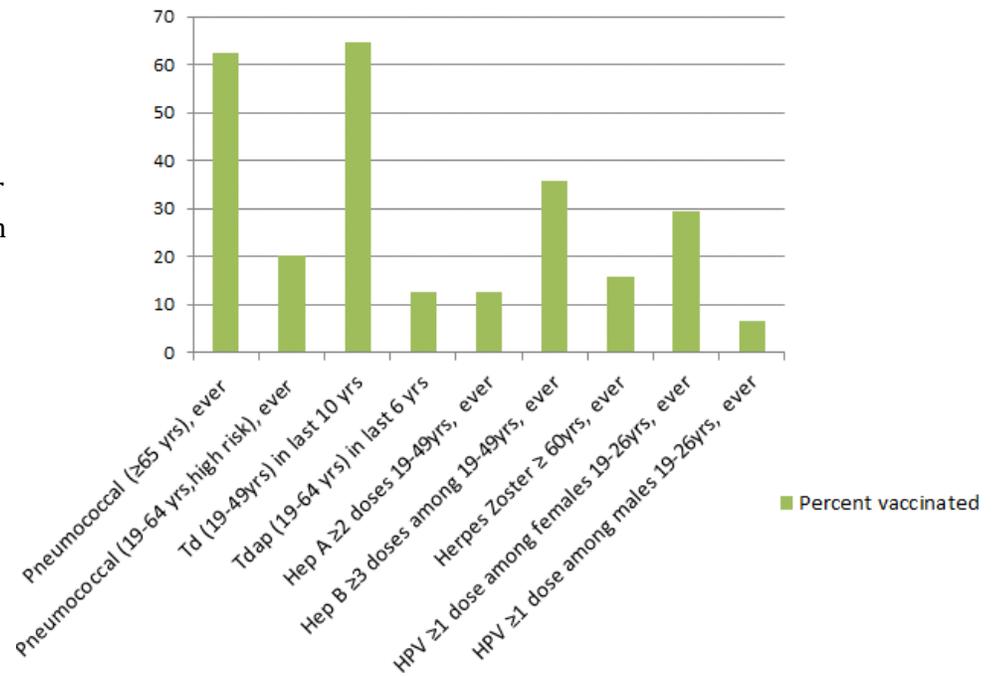


2011 National Adult Immunization Rates

In January the Centers for Disease Control and Prevention (CDC) released 2011 adult immunization rates for the United States. The vaccines summarized in the report include pneumococcal vaccine, tetanus toxoid-containing vaccine (including tetanus and diphtheria [Td] with acellular pertussis [Tdap]), and hepatitis A, hepatitis B, herpes zoster (shingles), and human papillomavirus (HPV) vaccines. When the data was compared to the 2010 data, a modest increase was indicated in Tdap vaccination for 19 to 64 year olds and HPV vaccination among women, but only little improvement in the other vaccines. The data was collected using the National Health Interview Survey (NHIS) interviews conducted in respondent's homes by the U.S. Census Bureau for CDC's National Center for Health Statistics. Certain age and ethnic groups had higher and lower rates than the total population for Tdap. HPV vaccine rates for women have been increasing slowly. The largest increase in 2011 for HPV vaccine is 14.9 percentage points in women ages 19 to 21 years. It may reflect increased knowledge, attitude, and practices of health-care providers of young women; social norms of young women and perceptions of vaccination intentions; or receipt of the vaccine when eligible for the VFC Program, though children younger than 19 years were not included in the survey group.

The CDC has a new Adult Immunization Schedule by age group and by medical or other indications available on their website for print or copy to provider websites.

2011 United States Adult Immunization Rates



VACCINE ▼	AGE GROUP ►	19-21 years	22-26 years	27-49 years	50-59 years	60-64 years	≥ 65 years
Influenza ^{2,*}		1 dose annually					
Tetanus, diphtheria, pertussis (Td/Tdap) ^{3,*}		Substitute 1-time dose of Tdap for Td booster; then boost with Td every 10 yrs					
Varicella ^{4,*}		2 doses					
Human papillomavirus (HPV) Female ^{5,*}		3 doses					
Human papillomavirus (HPV) Male ^{5,*}		3 doses					
Zoster ⁶						1 dose	
Measles, mumps, rubella (MMR) ^{7,*}		1 or 2 doses					
Pneumococcal polysaccharide (PPSV23) ^{8,9}		1 or 2 doses					1 dose
Pneumococcal 13-valent conjugate (PCV13) ¹⁰		1 dose					
Meningococcal ^{11,*}		1 or more doses					
Hepatitis A ^{12,*}		2 doses					
Hepatitis B ^{13,*}		3 doses					

Mandatory Influenza Vaccine in Health Care



In a recent survey from the NDDoH, the status of mandatory influenza vaccine for health-care workers in North Dakota was assessed. Fifty-one facilities completed the survey capturing the immunization status for 24,775 health-care workers. The survey showed that only 16.1 percent of facilities in the state require influenza vaccination of employees. For the 2012-2013 influenza season, 80.55 percent of health-care employees were vaccinated against influenza. The coverage rate for employees was 97.27 percent in facilities that require vaccination compared to only 72.81 percent for facilities that did not require it. The majority of facilities, 61.8 percent, did not implement infection control measures for employees that did not receive the influenza vaccine. For facilities that are looking to implement mandatory influenza vaccination for employees, the NDDoH will be creating a best practices example from policies of facilities already requiring the vaccine. Employees that are vaccinated help to stop the spread of influenza to other employees, patients and the community. Vaccination reduces sick days, extended hospital stays and hospital acquired influenza and is strongly encouraged for people that will routinely be exposed to the virus.

Two doses of MMR vaccine are required for anyone working in health care and Hepatitis B, Tdap/TD, and varicella vaccine (for those without a reported history of disease), are also recommended. Like influenza vaccine, staff should be protected against the diseases they may be exposed to and could potentially expose patients to.

Vaccines For Children Program Reminders

In 2013 there have been many changes to VFC requirements, but some requirements remain the same. Calibration certificates for all thermometers must be available for VFC coordinators and must be current. If the certificates cannot be found, a copy can be requested by calling the number on the current blue sticker.

Additionally, temperature logs should indicate the actual temperature recorded. The freezer now has a minimum temperature requirement of -58°F or -50°C .

Borrow and Return Reports that are required to be completed when borrowing and returning of vaccine occurs must also be on hand for a minimum of three years. The state-supplied Borrow and Return Form must be completed for all transactions.

There are new requirements for the Vaccine Management Plan Template, including transporting products, storage unit model information and a storage and handling education log. Any Lunch and Learns, Immunization

presentations, VFC site visits and immunization netconferences may be recorded in the education portion of the template. If you are still using the state-supplied 2012 Vaccine Management Template, it should be replaced with the 2013 edition that was included with the enrollment packet. If providers create their own, it must contain all of the same fields as the 2013 state-supplied template.

Copies of all of these forms are available at www.ndhealth.gov/immunize/providers/forms.

Avian Flu (H7N9)

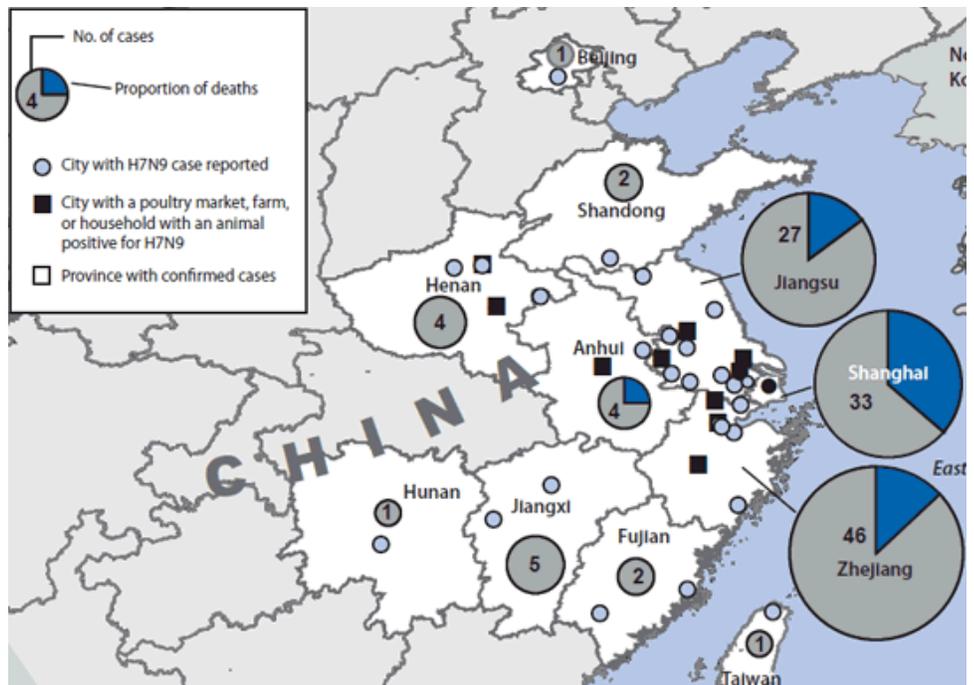
In April 2013 a type of flu only previously seen in birds was identified in a number of people living in China. The symptoms of this flu include fever, cough and shortness of breath and is resulting in severe respiratory illnesses and in some cases death. The CDC is following the situation closely and is currently taking routine preparedness measures, including developing a candidate vaccine virus to be used in manufacturing vaccine if that becomes necessary.

There is no evidence yet of person-to-person transmission, but investigations into the epidemiology of this virus under still underway. One Taiwanese man working in eastern China was confirmed to have H7N9. There are 128 confirmed infections and 26 deaths from this flu as of May 3. Travelers to China are encouraged to avoid live poultry markets that have already been widely closed down in the interim, not to touch any animals (alive or dead), eat only fully cooked poultry or eggs that are not runny, and avoid eating from street vendors. Providers should educate any of their patients that will be traveling to the high-risk area of southeast China.

Health-care personnel should adhere to current infection control practices in their daily operations to prevent any spread of infection. Those that are treating suspect or confirmed cases are encouraged to wear gloves, gowns, eye and respiratory protection, practice hand hygiene and place confirmed or probable cases in Airborne Isolation Rooms. These are all precautions for the safety of medical staff and other patients. Providers should encourage traveling patients to follow common sense infection prevention methods like keeping good hygiene and monitoring their health during and after their trip.

Patients that meet the clinical and epidemiological criteria should be tested using the CDC Human Influenza Virus Real-Time RT-PCR Diagnostic Panel-Influenza A/H7 Assay. Although there has not been a decision to initiate vaccination with H7N9 vaccine, the CDC and its partners are taking steps to develop an H7N9 candidate vaccine virus and planning of clinical trials has begun. Studies of the virus have so far shown the ability to replicate the virus in eggs and cell culture for the purpose of developing a vaccine, treatment methods and the understanding of the epidemiology of the H7N9 influenza. The CDC recommends that providers review their pandemic influenza plans to identify any operational gaps and ensure administrative readiness for an influenza pandemic and vaccination should the need arise.

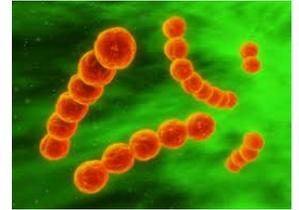
The CDC will continue to update the H7N9 page as more is known about the virus, transmission, or need for vaccination at www.cdc.gov/flu/avianflu/h7n9-infection-control.htm.



Streptococcus Pneumoniae Cases in North Dakota

So far this year, North Dakota has seen five cases of invasive *Streptococcus pneumoniae* in children younger than 5 years. The number of cases this year is greater than the number in past years; in 2012 there was one case of *S. pneumoniae* in children younger than 5 and in 2011 there were four cases. None of the cases reported this year had any immunocompromising conditions and none of the cases were linked. North Dakota has received serotyping information for all five cases. Four the serotypes identified are not included in the PCV13 vaccine but are included in the PPSV23 vaccine. One of

the serotypes identified is included in the PCV13 vaccine; however, the child had only received one dose and was not fully protected. It is extremely important that children receive all doses of PCV13 on time in order to prevent infection. All children are recommended to receive 4 doses of PCV13 at ages 2, 4, 6 and 12 to 15 months.



New Recommendations for PCV13

In February 2013 the Advisory Committee on Immunization Practices approved recommendations to use PCV13 in high-risk children ages 6 to 18 years. It now appears in the footnotes of the CDC Immunization schedule for birth to 18 years. A single dose of PCV13 should be administered to previously unvaccinated children ages 6 to 18 years who have anatomic or functional asplenia, HIV infection of an immunocompromising condition, cochlear implant or cerebrospinal fluid leak. Children 2 years or older with certain underlying medical conditions should receive a dose of PPSV23 at least eight weeks after the last dose of PCV13.

Pneumococcal conjugate vaccine (PCV13) is routinely administered in children at 2, 4, and 6 months with a booster at 12 to 15 months. Children between 14 and 59 months that received their series of PCV7 are boosted with a supplemental dose of 13-valent PCV. Healthy children ages 24 to 59 months that are not completely vaccinated for their age also should receive a single dose of PCV13 to catch up.

In June 2012 the ACIP recommended routine use of PCV13 for adults 19 years and older with immunocompromising conditions, asplenia, CSF leaks, or cochlear implants. It is to be administered in these adults in addition to Pneumovax (PPSV23). The combination of pneumococcal vaccines will help prevent invasive pneumococcal disease in high-risk adult populations.

Adults with one or more previous doses of PPSV23 should receive one dose of PCV13 one or more years after the last PPSV23 dose. Those requiring additional doses of PPSV23 should receive it no sooner than eight weeks after PCV13 or five years since the last dose of PPSV23.

High-risk adults with no previous doses of PCV13 or PPSV23 should receive one dose of PCV13 followed by one dose of PPSV23 a minimum of eight weeks after the first dose. Subsequent doses of PPSV23 should follow current recommendations of five years after the previous dose of PPSV23.

State-supplied Pneumovax is available for use in uninsured or underinsured adults that meet the high-risk conditions criteria. State supplied PCV13 is not available for use in adults.

Ordering Vaccine in NDIIS

Providers began ordering in the North Dakota Immunization Information System (NDIIS) on February 11, 2013. While many phone calls for assistance were received in the first couple of weeks following, it now appears that most providers are using it well. Some important things to remember are that if you are submitting an order and check the box that the temperature logs have been submitted but they have not, your order may be held until they are received, as that is required to be submitted monthly.



Q. Why can't I type in the ordering table?

A. The edit button to the left of each vaccine was added and must be selected for each vaccine being ordered. This change was made so that providers know what each field is. The way it was set up during the trainings, providers would scroll down the page and the names of the fields were not stationary causing confusion about what information needed to go in which field. Now that is done without scrolling up and down for each vaccine.

Q. Why does ordering take so long?

A. By adding the edit button, there is not a measurable difference in the amount of time the ordering takes. It will think for 3 to 5 seconds after a provider enters their doses on hand to calculate the ordering minimum and maximum suggestions. When orders were submitted online in the past, it was not actually placing an order with the CDC. The NDDoH staff would review the order and enter it manually and it was not the fastest method for providers to receive vaccine quickly. The ordering module speeds up receiving, approving and submitting times for a faster turn around between order submissions and receipt of vaccine.

Q. Why can't I see the whole ordering table or scroll?

A. Some computers have been set at a resolution that the program is not compatible with. Changing the resolution for providers that reported this viewing problem appears to resolve the issue.

Q. How do I know the NDDoH received my order when nobody contacts me?

A. In the past providers were not contacted when orders were received unless there were questions. In the ordering module, providers can review their orders and see the status of it. It will say "Submitted to NDDoH," after selecting "Submit." When it is approved it will show as "Approved by NDDoH," and when it is uploaded to VTrckS it will read, "Submitted to CDC." Providers can now view the status of their orders in real time.

Q. Do I still have to call the NDDoH when frozen vaccine is received?

A. Frozen vaccines received after February 11, 2013, should automatically show up in your lot numbers the day it is received. If a state-supplied lot number is not there, contact the NDDoH.

Too Many Vaccines Too Soon?

A brand new study titled, "Increasing Exposure to Antibody-stimulating Proteins and Polysaccharides in Vaccines is Not Associated with Risk of Autism," was published in the March edition of the Journal of Pediatrics.



As many providers in North Dakota know, a primary concern of parents is that children are receiving too many vaccines in the first 2 years of life and potential side effects. Approximately one-third of parents in the U.S. continue to express concern that vaccines cause autism and nearly 1 in 10 parents refuse or delay vaccinations because they believe it to be safer than following the recommended schedule. This study concluded that there is no association between receiving too many vaccines too soon and autism. While the current immunization schedule for young children does contain more vaccines than past decades, the number of antigens in the vaccines and the removal of whole cell pertussis vaccines has decreased the number of antigens a child is exposed to substantially, according to the new study. The maximum number of antigens that a child could be exposed to by age two in 2012 was 315, compared with several thousand in the late 1990s.

The study focused on three age groups and evaluated the association between total cumulative exposure to antibody-stimulating proteins and polysaccharides from childhood

immunizations from childhood vaccinations and three outcomes of Autism Spectrum Disorder (ASD), autistic disorder (AD), and ASD with regression. In addition to the cumulative exposure, maximum exposures in a single day were also examined and exhibited a bimodal distribution of antigen exposure dependent on the receipt of whole cell pertussis or typhoid vaccines, and no child in the birth to 7 month age range was exposed to more than 3,320 antigens in one day. There was no increase in ASD diagnosis in children in the three studied age groups.

The conductors of the study quote Dr. Paul Offit who said, "Beginning at birth an infant is exposed to hundreds of viruses and other antigens, and it has been estimated that an infant theoretically could respond to thousands of vaccines at once."

Evidence from the study shows no causal relationship between increasing exposures to antibody-stimulating proteins and polysaccharides and an increased risk of autism. For full study details, the article is now printed and available online for review.

["Increasing exposure to antibody-stimulating proteins and polysaccharides in vaccines is not associated with risk of autism."](#) by Frank DeStefano, MD, MPH, Cristofer S. Price, ScM, and Eric S. Weintraub, MPH, appears in The Journal of Pediatrics (www.jpeds.com), DOI



Real-world Results of HPV Vaccine

Six years ago Australia launched a nationwide HPV vaccination for girls and young women campaign and as of 2010 the country had an 83 percent coverage rate for the first dose, 80 for the second, and 73 for the third and final dose of the series. HPV vaccine is free in Australia for girls ages 12 to 13 and catch up doses for women younger than 26 years. The program in Australia has not been met with the same resistance found in the United States and has had staggering results. Cases of genital warts are down 70 percent in women ages 21 to 30 years compared to the rates three to four years prior to the vaccine being available. In addition, there is a 50 to 80 percent decrease in the incidence of genital warts among heterosexual boys and young men. The proportion of women with genital warts decreased from 9.6 percent in 2007 to 2.7 percent in 2011. When the ages are narrowed to only women younger than 21 years, the incidence decreased to 0.85 percent.

Beginning February 2013, boys ages 12 and 13 will be able to receive the HPV vaccine at school and boys ages 14 and 15 years will receive the vaccine as part of the catch up program. The steep decline in

genital warts in the population demonstrates the vaccine has high efficacy outside of trial settings. The decline in male genital warts prior to the new male HPV program is attributed to herd immunity.

This is encouraging information for what could be in the United States with the coordinated efforts of providers and immunization programs to increase the HPV vaccination rate as the U.S. struggles with accepting widespread use of the vaccine.

The only FDA approved vaccine for males and females is Gardasil, which is available from the VFC program including Cervarix, licensed only for females who are VFC eligible children younger than 18 years and insured children may receive vaccine from local public health units that are universal. State-supplied vaccine may be used for adults ages 19 to 26 years that are uninsured or underinsured. Adults ages 19 to 21 who are enrolled in Medicaid must be vaccinated with private stock and Medicaid should be billed. Those ages 22 to 26 enrolled in Medicaid are considered uninsured and may receive state-supply HPV vaccine.

Adolescent Recall



On April 18, 2013, the first adolescent recall automated phone call went out to parents of adolescents across the state. The phone call states that the 13 to 18 year old is past due for immunization and should contact their immunization provider to make an appointment.

The vaccines that were called for were Tdap, MCV4, varicella or HPV (if the series was started). In an effort to increase adolescent immunization rates in North Dakota, the NDDoH will also send postcards in summer 2013.

Keeping demographics up to date in NDIIS is integral in this activity succeeding. Providers are encouraged to use the forecaster when receiving inquiries from parents and making appointments for these past due adolescents. The NDDoH Immunization Program would like to thank providers for their cooperation and assistance in reaching our immunization goals for the state of North Dakota.

Pediarix® Supply Temporarily Moves to Allocations



Due to the increased use of Pediarix® nationwide as a result of the Pentacel® shortage, GlaxoSmithKline (GSK) has implemented allocations by state for Pediarix® that went into effect on April 19, 2013. The NDDoH decided that to manage the allocation for the duration, only a one-month supply will be able to be ordered at a time. The NDDoH encourages providers to order timely and use the suggested minimum ordering amount that the North Dakota Immunization Information System (NDIIS) ordering table indicates based on doses administered and inventory on hand. The Pentacel® shortage was initially thought to be ending in March, but providers were informed that it would be extended until September. GSK believed that there would be a large enough supply to fulfill orders of Pentacel® with Pediarix®, but is now finding with the extended shortage that this would not be the case. GSK does state that there is ample stock of single antigen DTaP and Hepatitis B vaccine in addition to Sanofi Pasteur's supply of IPV.

Vaccine Wastage and Transport Survey Results

The Immunization Program conducted a survey on vaccine wastage and transfer in N.D. Of the 73 vaccine providers that participated in the survey, 72 percent had vaccine wastage in the past 12 months. The most common cause for vaccine wastage was expiration of vaccines.

Providers can avoid vaccine wastage due to expiration using three approaches. First, by ordering only a one to three months supply to ensure use and reduce waste by expiration. Second, they can plan ahead and determine if they have vaccines they do not anticipate using by the expiration date and transfer them to providers who can use them. The Immunization Program has developed a listserv for vaccine transfer to help facilitate the transfer of vaccines from providers that have excess to providers in need. Providers can contact the Immunization Program when they have VFC vaccines they do not anticipate using by the expiration date and the Immunization Program contacts providers that may need the vaccines. Third, providers can conduct a reminder/recall for the vaccine, which will help to use it up prior to expiration and increase the immunization rates for that provider. Can you imagine? One dose of HPV vaccine costs \$116 dollars! It is more cost effective to transfer vaccine to providers who need it or use

reminder/recall then to waste vaccine.

According to the survey, most providers in N.D. transport vaccines. **Sadly, 38 percent of them were not monitoring**

vaccine temperature during transport. The Immunization Program recommends that providers monitor temperature during transport to maintain vaccine potency. The use of a min/max or continuous recording thermometer provides temperature monitoring during transport.

Some providers used coolers to transport varicella containing vaccines. The manufacturer does not recommend transportation of varicella containing vaccines. If the vaccines need to be transported, the use of a portable freezer is recommended. If your vaccines are not transported at the appropriate temperature, using appropriate equipment, your vaccines may not be potent and may not protect people from the diseases they are designed to. Be sure to use the right equipment for vaccine storage and transport, and temperature monitoring!





NORTH DAKOTA
DEPARTMENT of HEALTH

Division of Disease Control
Immunization Program



2635 E. Main Ave.
P.O. Box 5520
Bismarck, N.D. 58506-5520

Phone: 701.328.3386
Toll-Free: 800.472.2180
Fax: 701.328.2499

[www.ndhealth.gov/
immunize](http://www.ndhealth.gov/immunize)

Reminder!!!

The State Immunization Conference is held every other year. The next conference will be held July 15-16, 2014, in Bismarck, North Dakota. Ideas for speakers and topics are welcome and may be e-mailed to any of the Immunization Program employees listed to the right!



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

Abbi Pierce, MPH
Vaccines for Children Manager
apierce@nd.gov

Amy Schwartz, MPH
Immunization Surveillance Coordinator
amschwartz@nd.gov

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

Janna Pastir, MPH
VFC/AFIX Coordinator (West)
jlpastir@nd.gov

Stacy Lovelace
VFC/AFIX Coordinator (East)
slovelace@nd.gov

Rahel Gemmeda, MPH
Quality Assurance Coordinator
rgemmeda@nd.gov

Teri Arso
Administrative Assistant
tarso@nd.gov

2013-2014 Influenza Vaccine

Abbreviations Reminder!

Influenza vaccine abbreviations are changing for the 2013-2014 flu season. The change will not affect historic doses and the previous abbreviations will still be visible for entering historic doses of vaccine. Be on the look out for more information from the Immunization Program as the season approaches! The following abbreviations will be visible in NDIIS once the vaccine is available this summer.

IIV3: Inactivated Influenza Vaccines that are trivalent and were previously abbreviated "TIV."

IIV4: Inactivated Influenza Vaccine Quadrivalent

RIV3: Recombinant Influenza Vaccine Trivalent a completely egg free vaccine.

CCIV3: Cell Culture Inactivated Influenza Vaccine: It is not 100% egg free because the reference strain is grown in eggs.

LAIV4: Live Attenuated Influenza Vaccine Quadrivalent: Flumist will only be offered in quadrivalent form.

Terry Dwelle, MD, MPHTM
State Health Officer

Kirby Kruger
Chief, Medical Services Section
Director, Disease Control

Tracy Miller, MPH
State Epidemiologist
Deputy Division Director

Molly Howell, MPH
Immunization Program Manager