

# Immunization Newsletter

North Dakota Department of Health

Division of Disease Control

Summer 2005

## Tdap Recommendations

The incidence of pertussis in the United States more than doubled from 11,647 cases in 2003 to 25,827 cases in 2004. In North Dakota, 757 cases were reported. The greatest burden of pertussis is on adolescents, who account for almost 50 percent of pertussis cases in North Dakota. Adolescents and adults are the source of the disease in vulnerable infants. Two new tetanus, diphtheria and acellular pertussis (Tdap) vaccines were approved by the Food and Drug Administration in 2005. The first, by GlaxoSmithKline, is Boosterix®; the second, by sanofi pasteur, is Adacel™. Both vaccines are currently available for ordering from the manufacturers.

The Advisory Committee on Immunization Practices (ACIP) met in June to discuss recommendations for the use of Tdap vaccine. The following draft recommendations for the use of Tdap were made:

- Adolescents ages 11 to 12 should receive a single dose of Tdap instead of Td for booster immunization if they have previously completed the recommended childhood DTP/DTaP series and have not received Td.
- Adolescents ages 11 to 18 who received Td are encouraged to receive a single dose of Tdap to provide protection against pertussis if they have completed the

recommended childhood DTP/DTaP series.

- Vaccine providers should administer Tdap (or Td) and meningococcal vaccine during the same visit if both vaccines are indicated and available.
- Recommendations for use of Tdap in special circumstances (outbreaks, pregnancy, tetanus prophylaxis, incomplete vaccination history of pertussis, shortage of Tdap) are still being developed.
- Adult and pregnancy recommendations will be discussed at the October ACIP meeting.

Recommendations for the use of Tdap have not been finalized by the ACIP and the Centers for Disease Control and Prevention (CDC). The Tdap Vaccine Information Statement is not yet available. The North Dakota Department of Health (NDDoH) expects to receive funding for Tdap in early September. The NDDoH will notify providers when Tdap is available for ordering. Tdap from the NDDoH will be available only for Vaccines For Children (VFC) eligible children. To be eligible for the VFC program, the child must be Native American, be covered by Medicaid, be underinsured or have no insurance. Providers should order private supplies of Tdap for adolescents with insurance.

## Hepatitis B Birth Dose Recommendation Strengthened

In June, the ACIP strengthened the previous recommendations for the hepatitis B birth dose. The following draft recommendations were made:

- Standing orders should be in place in every nursery that states to give the birth dose to every infant before hospital discharge.
- Physicians may delay the birth dose on a case-by-case basis (in rare circumstances). If this is done, documentation of the serostatus of the mother must be in the chart, as well as the reason for deferral and that follow-up is required.
- The health-care provider must write an order to NOT give the birth dose to countermand the already existing standing orders that states to GIVE the birth dose.

The strengthened hepatitis B birth dose recommendations have not been published in the Morbidity and Mortality Weekly Report.



The NDDoH initiated the Perinatal Hepatitis B Vaccination Program in 1992. During the first year of the program, 77.5 percent of the neonates were reported to have received their first dose of HBV vaccine prior to hospital discharge. This rate remained relatively stable until 1999, when the number of neonates receiving the first dose of hepatitis B vaccine prior to hospital discharge dropped by approximately 30 percent compared to the first year of the program. This decline was due to various

birthing hospitals suspending the administration of the hepatitis B vaccine to all newborns due to the concern about the presence of the mercury-containing thimerosal used as a preservative in the vaccine. During the first week of December 1999, when thimerosal-free hepatitis B vaccine became available, the NDDoH recommended reimplementation of routine hepatitis B vaccination policies for all newborns in hospitals that had discontinued their newborn hepatitis B vaccination programs. A steady decline occurred after 1999 to peak once again at 77.5 percent in 2001. In the two years following, rates declined slightly to 66.0 percent in 2002 and 74.3 percent in 2003.

Screening all pregnant women for the presence of the hepatitis B surface antigen (HBsAg) plays an important role in controlling the spread of hepatitis B. Since the program was initiated in 1992, HBsAg testing has been offered at no charge through the NDDoH to any pregnant woman residing in North Dakota. **Pregnant women with hepatitis B infections should be reported to the NDDoH, regardless if they have previously been reported.** This allows them to be enrolled in the NDDoH Perinatal Hepatitis B Program. Infants born to HBsAg-positive mothers are provided both the vaccine and hepatitis B immunoglobulin (HBIG) at no charge. Follow-up testing of the infant for antibody to hepatitis B surface antigen (anti-HBs) to confirm immunity also is conducted and is important for the evaluation of the program. Surveillance of HBsAg-positive mothers and infants occurs following birth to ensure that all three doses of the vaccine are administered appropriately and that follow-up testing for anti-HBs is performed. Susceptible sexual and household contacts also are screened and offered vaccine at no charge.

## Varicella Recommendations

The following new recommendations were made for the use of varicella vaccine at the June ACIP meeting:

- Enforcing school and child-care requirements that students receive appropriate age-related varicella vaccine.
- A second dose of varicella vaccine should be used in outbreak situations. A minimum interval of three months should separate doses for children 12 months to 12 years of age. A minimum interval of four weeks should separate doses for people age 13 years and older.
- Two doses of varicella vaccine should be offered to all healthy people born since 1965 and older than 13 years of age without evidence of immunity.
- Pregnant women without evidence of immunity should receive the first dose of varicella vaccine immediately post partum and the second dose four to eight weeks later.
- Varicella vaccine should be given to HIV-infected children with CD4-lymphocyte counts of 15 percent or higher (the number was previously 25 percent). This is now similar to the recommendation for MMR.
- The definition for evidence of immunity also changed at the ACIP meeting. For people born between 1966 and 1997, a valid history of varicella disease based on healthcare provider diagnosis or self or parental reporting is acceptable. For people born during or after 1998, documentation of adequate vaccination, valid history of herpes zoster (shingles) based on health-care provider diagnosis or laboratory evidence of immunity to varicella virus is required.



As of the 2004-2005 school year, varicella vaccine is required for kindergarten entry. The vaccine also is required for day-care entry.

Chickenpox is a mandatory reportable condition in North Dakota. Chickenpox reporting is necessary for the following reasons:

- To determine the impact of the varicella vaccination program on the incidence and severity of disease
- To evaluate vaccine efficacy and track vaccine failures
- To determine which groups and areas are at the highest risk of disease so prevention efforts can be focused
- To prevent outbreaks from occurring
- To track and minimize the occurrence of complications from chickenpox infections

Chickenpox may be reported by private and public health professionals, laboratories, schools, day-cares, parents or by self-reporting. A laboratory confirmation is not required for reporting. To report cases of chickenpox contact 701.328.2378 or toll-free at 800.472.2180. Thank you to all of the providers who report chickenpox cases to the NDDoH.



## **North Dakota's Universal Status**

North Dakota has been a universal state for many years. Universal states provide all ACIP-recommended vaccines at no charge to all children in the state, regardless of VFC status. Only a handful of states have been able to remain universal. Due to an increase in the cost of vaccines, the number of recommended vaccines and the fact that North Dakota has received level funding from the CDC for non-VFC vaccine purchase, North Dakota's universal vaccine status may be in jeopardy. The NDDoH is currently looking at outside funding sources in an effort to remain a universal state. We are hopeful that we will be able to obtain funding in the near future, as vaccines are the most important way to protect the health of children in North Dakota. Non-universal states provide ACIP-recommended vaccines for free to VFC-eligible children only; private insurance covers vaccines for those children with insurance. When more information on this subject becomes available, the NDDoH will let providers know. Please contact the North Dakota Immunization Program at 701.328.2378 or toll-free at 800.472.2180 with any questions or concerns.

## **Vaccine Management Business Improvement Project (VMBIP)**

CDC is in the process of implementing the new Vaccine Management Business Improvement Project (VMBIP). VMBIP is a

new ordering and vaccine management program that will have a significant impact on how clinics order vaccine and manage inventories and doses administered. Clinics will be required to order NDDoH-supplied vaccine through VMBIP. The vaccine will no longer come directly from the NDDoH. The number of times providers may order depends on the size of the clinic; small clinics may not be able to order for several months. Orders will be based on doses administered at each clinic. A set amount of each type of vaccine will be available for order for each clinic. Providers will not be allowed to go above that set amount. The NDDoH will be required to approve orders above the set amount. Vaccine will be shipped to clinics from a third-party distributor. Shipping will not be able to be rushed, so providers will have to plan ahead of time and allow two to three weeks for vaccine shipments. VMBIP is not expected to be implemented in North Dakota until late 2006 or early 2007, but providers should get used to submitting monthly doses-administered reports and inventories. VMBIP will most likely be linked to the North Dakota Immunization Information System (NDIIS).



VMBIP is expected to save the federal government \$11 million to \$20 million in distribution and ordering costs. It is also supposed to allow CDC to monitor inventories more efficiently to ensure equitable product distribution.

## Temporary Shortage of Menactra™

Meningococcal conjugate vaccine (MCV-4), also known as Menactra™, is in temporary shortage. MCV4 vaccine is experiencing a high volume of demand. Vaccine is being allocated in the public and private sectors based on estimates of monthly needs as well as available supply. The supply and demand mismatch is expected to be short term. Updates on supply and allocations will be provided by the NDDoH when available.

Meningococcal polysaccharide vaccine (MPSV-4), Menomune®, may be used in place of MCV-4 for college freshman living in dormitories. MPSV-4 should not be used for the 11 to 12 and 15 to 16 age group recommendations. According to sanofi pasteur, the price for MPSV-4 has been temporarily lowered to \$63 per dose.

The NDDoH has also been affected by the shortage, so providers should be aware that MCV-4 orders may be delayed. As a reminder, the NDDoH is supplying MCV-4 to VFC-eligible children only.



## North Dakota Immunization Rates

National Immunization Survey (NIS) data was released in July. The NIS data is based on a national telephone-based survey. The 2004 NIS data is for children born between February 2001 and May 2003.

North Dakota's vaccination rate for children age 19 to 35 months for the 4:3:1:3:3 series is 82.0 percent  $\pm$  5.0. The 4:3:1:3:3 series includes four doses of DTaP, three doses of IPV, one dose of MMR, three doses of HIB and three doses of hepatitis B vaccine. This is above the national average of 80.9 percent  $\pm$  0.9 and puts North Dakota at 27<sup>th</sup> in the nation for immunization rates, with Massachusetts being first with a rate of 89.1 percent  $\pm$  3.7. The national average is above the Healthy People 2010 goal of 80 percent vaccination rates for the first time. North Dakota's varicella vaccination rate was well below the national average at 79.6 percent  $\pm$  5.2; the national average is 87.5 percent  $\pm$  0.7.

North Dakota's immunization rates are below most of the other universal states' rates. Generally, universal states have higher immunization rates than non-universal states because there are fewer barriers to immunization.



### **NDIIS Update**

The North Dakota Immunization Program is currently testing the new forecaster for the North Dakota Immunization Information System (NDIIS). The forecaster will determine which immunizations will be needed at the child's next visit and future visits. The forecaster also notifies the physician and/or nurse when a child is past due on immunizations. The forecasts are based on ACIP recommendations and take into consideration minimum ages and intervals for vaccination.

Once the forecaster is completed, the North Dakota Immunization Program will be able to implement the Reminder/Recall System, which will allow providers to print labels from the NDIIS to send postcards to patients reminding them of their next immunization visit. Reminder/Recall systems have been proven to raise immunization rates in practices and hopefully will be a useful tool for your clinic.

The North Dakota Immunization Program will be contacting clinics to set up training sessions for nurses and physicians on the forecaster and reminder/recall in the near future.

### **New NDIIS Brochures**

The North Dakota Immunization Program has created new brochures for clinics to give to their patients to explain what the NDIIS is and the benefits of the NDIIS. Brochures will be sent to clinics in the near future for use. The brochures also may be ordered from the Materials Order Form when available.

### **Influenza Vaccination of Children Age 6 to 23 months**

The CDC recommends that all children age 6 to 23 months be vaccinated with influenza vaccine because they are at high risk for complications from influenza. Rates of serious illness and death are highest among people older than 65 and younger than 2, and people with a medical condition that places them at high-risk for complications from influenza. Young children with influenza infection can have initial symptoms mimicking bacterial sepsis with high fevers; fewer than 20 percent of children hospitalized with influenza can have febrile seizures. Influenza vaccine will not be in shortage for this age group this season. Vaccination of children age 6 to 23 months should not be restricted only to children with high-risk conditions. Even healthy children in this age group are at high risk. Parents should be assured that the influenza vaccine for these children is safe as thimerosal has been removed from the vaccine. Children age 6 months to 9 years receiving influenza vaccine for the first time require two doses, at least a month apart. If the child was supposed to receive two doses last year, but only received one, then the child needs only one dose this year.



## **Influenza Vaccine Supply Update**

The influenza vaccine supply for the upcoming season is unknown at this time. Sanofi pasteur is expected to produce 50 million doses of vaccine. MedImmune, the manufacturer of Flumist®, is expected to produce three million doses. Chiron, which was in shortage last year, is expected to produce 18 to 26 million, but has not been approved for use in the United States yet. GlaxoSmithKline influenza vaccine has never been used in the United States before. The company applied for FDA approval this year and was approved on Aug. 31, 2005. GlaxoSmithKline is expected to produce 8 million doses. If all manufacturers are able to provide vaccine to the United State, there will not be a shortage. If Chiron is not approved, this season's influenza vaccine supply will be slightly greater than last year's, but still in shortage.

In case of a shortage, the CDC has created the Interim Guideline: Planning for a Possible U.S. Influenza Vaccine Shortage, 2005-2006 Season. CDC's plan is available online at [www.cdc.gov/flu/professionals/vaccination/pdf/vaccshortguide.pdf](http://www.cdc.gov/flu/professionals/vaccination/pdf/vaccshortguide.pdf). The NDDoH has established an Influenza Advisory Group that is currently planning in case of a shortage. The group consists of members from local public health, the North Dakota Medical Association, the Pharmacy Association, the Health Care Association, the Long-term Care Association, and the NDDoH. Regional influenza vaccine coordinators have been established and will be contacting providers for information regarding the amounts of influenza vaccine ordered and from which manufacturer. The coordinators also will be surveying providers throughout the influenza vaccination season for information regarding doses administered by priority group and inventories. This information is necessary in order to determine:

- Redistribution of influenza vaccine throughout the state.
- Progress in vaccinating priority groups throughout the state.
- When to move on to other priority groups, if necessary.

The surveys are also good practice for a possible pandemic influenza event, in which influenza vaccine will be strictly monitored. Your cooperation in submitting surveys to your regional coordinators is greatly appreciated.

The influenza vaccine regional coordinators are:

Grand Forks:	Danielle Kovarik	<a href="mailto:dkovarik@grandforksgov.com">dkovarik@grandforksgov.com</a>	787.8100
Fargo:	Ruth Bachmeier	<a href="mailto:Rbachmeier@cityoffargo.com">Rbachmeier@cityoffargo.com</a>	241.8193
Devils Lake:	Karen Halle	<a href="mailto:khalle@state.nd.us">khalle@state.nd.us</a>	662.7035
Jamestown:	Tami Dillman	<a href="mailto:tdillman@state.nd.us">tdillman@state.nd.us</a>	252.8130
Minot:	Penny Hamilton	<a href="mailto:phamilton@state.nd.us">phamilton@state.nd.us</a>	852.1376
Bismarck:	Paula Flanders	<a href="mailto:pflander@state.nd.us">pflander@state.nd.us</a>	222.6525
Williston:	Barbara Andrist	<a href="mailto:Bandrist@umdhu.org">Bandrist@umdhu.org</a>	965.6813
Dickinson:	Sherry Adams	<a href="mailto:sladams@state.nd.us">sladams@state.nd.us</a>	483.3792

The CDC also established guidelines for tiered use of inactivated influenza vaccine in the event of a vaccine shortage. The guidelines were published in the MMWR the week of Aug. 5, 2005 and are available at [www.cdc.gov/mmwr/preview/mmwrhtml/mm5430a4.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5430a4.htm). The following table is a summary of the guidelines.

**TABLE. Priority groups for vaccination with inactivated influenza vaccine and estimated vaccination coverage for 2003\***

Tier	Priority group <sup>†</sup>	Population in 2003 <sup>§</sup> (millions)	Estimated vaccination coverage (%)	Estimated no. of persons vaccinated (millions)
1	A Persons aged ≥65 years with comorbid conditions	18.2	70.9 <sup>¶</sup>	12.9
	Residents of long-term-care facilities	1.7	80.0 <sup>**</sup>	1.3
	<b>Total</b>	<b>19.9</b>	<b>71.4</b>	<b>14.2</b>
B	Persons aged 2–64 years with comorbid conditions	42.4	34.3 <sup>††</sup>	14.5
	Persons aged ≥65 years without comorbid conditions	17.7	60.8 <sup>¶</sup>	10.8
	Children aged 6–23 months	6.0	48.4 <sup>††</sup>	2.9
	Pregnant women	4.0	12.8 <sup>¶</sup>	0.5
	<b>Total</b>	<b>70.1</b>	<b>40.9</b>	<b>28.7</b>
C	Health-care personnel	7.0	40.1 <sup>¶</sup>	2.8
	Household contacts and out-of-home caregivers of children aged <6 months	5.0	17.3 <sup>††</sup>	0.9
	<b>Total</b>	<b>12.0</b>	<b>30.6</b>	<b>3.7</b>
2	Household contacts of children and adults at increased risk for influenza-related complications	70.3	18.2 <sup>††</sup>	12.8
	Healthy persons aged 50–64 years	17.7	29.8 <sup>¶</sup>	5.3
	<b>Total</b>	<b>88.0</b>	<b>20.6</b>	<b>18.1</b>
3	Persons aged 2–49 years without high-risk conditions	105.5	14.8 <sup>¶</sup>	15.6

\* Estimates are for 2003–04 season for most adult groups and the 2004–05 season for most pediatric groups because national influenza vaccination data on children were not available for 2003.

<sup>†</sup> Certain persons might be included in more than one group.

<sup>§</sup> Based on 2003 population estimates from the U.S. Census Bureau.

<sup>¶</sup> Based on the 2003 National Health Interview Survey (NHIS) for noninstitutionalized adults (CDC, unpublished data, 2005).

<sup>\*\*</sup> Based on the 1999 National Nursing Home Survey (CDC, unpublished data, 2003).

<sup>††</sup> Vaccination coverage for pediatric groups is based on estimates from the Behavioral Risk Factor Surveillance System (MMWR 2005;54:304–7). Vaccination coverage for adults is based on the 2003 NHIS.

For questions regarding the influenza vaccine supply for the upcoming season, contact the North Dakota Immunization Program at 701.328.2378 or toll-free at 800.472.2180.



## Vaccines and Thimerosal

The following information is from the U.S. Food and Drug Administration's Center for Biologics Evaluation and Research. Thimerosal is a mercury-containing organic compound. Since the 1930s, it has been widely used as a preservative in a number of biological and drug products, including many vaccines, to help prevent potentially life-threatening contamination with harmful microbes. Over the past several years, because of an increasing awareness of the theoretical potential for neurotoxicity of even low levels of mercury and because of the increased number of thimerosal-containing vaccines that had been added to the infant immunization schedule, concerns about the use of thimerosal in vaccines and other products have been raised. Indeed, because of these concerns, the FDA has worked with, and continues to work with, vaccine manufacturers to reduce or eliminate thimerosal from vaccines.

Thimerosal has been removed from or reduced to trace amounts in all vaccines routinely recommended for children age 6 and younger, with the exception of inactivated influenza vaccine (see table on page 10). A preservative-free version of the inactivated influenza vaccine (contains trace amounts of thimerosal) is available in limited supply at this time for use in infants, children and pregnant women. Some vaccines such as Td, which is indicated for older children ( $\geq 7$  years of age) and adults, are also now available in formulations that are free of thimerosal or that contain only trace amounts. Vaccines with trace amounts of thimerosal contain 1 microgram or less of mercury per dose.

The Institute of Medicine reported on this issue in 2004 and, after studying the subject, came to the following conclusions:

- Neither thimerosal-containing vaccines nor MMR vaccine are associated with autism.
- The hypotheses regarding a link between autism and MMR vaccine and thimerosal-containing vaccines lack supporting evidence and are only theoretical.

- Future research to find the cause of autism should be directed toward other promising lines of inquiry that are supported by current knowledge and evidence and offer more promise for providing an answer.

Thimerosal Content of Vaccines Routinely Recommended for Children Age 6 and Younger - (updated 7/18/2005)

Vaccine	Tradename (Manufacturer)*	Thimerosal Status Concentration**(Mercury)	Approval Date for Thimerosal Free or Thimerosal / Preservative Free (Trace Thimerosal)*** Formulation
DTaP	Infanrix (GSK)	Free	Never contained Thimerosal
	Daptacel (AP)	Free	Never contained Thimerosal
	Tripedia (AP)	Trace( $\leq 0.3 \mu\text{g Hg}/0.5\text{mL}$ dose)	03/07/01
DTaP-HepB-IPV	Pediarix (GSK)	Trace ( $< 0.0125 \mu\text{g Hg}/0.5\text{mL}$ dose)	Never contained more than a Trace of Thimerosal
Pneumococcal conjugate	Prevnar (WL)	Free	Never contained Thimerosal
Inactivated Poliovirus	IPOL (AP)	Free	Never contained Thimerosal
Varicella (chicken pox)	Varivax (M)	Free	Never contained Thimerosal
Mumps, measles, and rubella	M-M-R-II (M)	Free	Never contained Thimerosal

Hepatitis B	Recombivax HB (M)	Free	08/27/99
	Engerix B (GSK)	Trace (<0.5 µg Hg/0.5mL dose)	03/28/00
Haemophilus influenzae type b conjugate (Hib)	ActHIB (AP)/OmniHIB (GSK)	Free	Never contained Thimerosal
	PedvaxHIB (M)	Free	08/99
	HibTITER, single dose (WL) <sup>1</sup>	Free	Never contained Thimerosal
Hib/Hepatitis B combination	Comvax (M)	Free	Never contained Thimerosal
Influenza	Fluzone (AP)	0.01% (12.5 µg/0.25 mL dose, 25 µg/0.5 mL dose) <sup>2</sup>	
	Fluzone (AP) <sup>3</sup> (no thimerosal)	Free	12/23/2004
	Fluvirin (Chiron/Evans)	0.01% (25 µg/0.5 mL dose)	
	Fluvirin (Chiron/Evans) (Preservative Free)	Trace (<1ug Hg/0.5mL dose)	09/28/01
Influenza, live	FluMist <sup>4</sup> (MedImmune)	Free	Never contained Thimerosal

Manufacturer abbreviations:

GSK = GlaxoSmithKline; WL = Wyeth Lederle; AP = Aventis Pasteur; M = Merck.

\*\* Thimerosal is approximately 50% mercury (Hg) by weight. A 0.01% solution (1 part per 10,000) of thimerosal contains 50 µg of Hg per 1 mL dose or 25 µg of Hg per 0.5 mL dose.

\*\*\* The term "trace" has been taken in this context to mean 1 microgram of mercury per dose or less.

<sup>1</sup> HibTiITER was also manufactured in thimerosal-preservative containing multidose vials but these were no longer available after 2002.

2 Children 6 months old to less than 3 years of age receive a half-dose of vaccine, i.e., 0.25 mL; children 3 years of age and older receive 0.5 mL.

3 A trace thimerosal containing formulation of Fluzone was approved on 9/14/02 and has been replaced with the formulation without thimerosal.

4 FluMist is not indicated for children less than 5 years of age.



## Questions & Answers

1. **Why is the North Dakota Immunization Program no longer supplying DTaP/HIB (TriHIBit®)?**
  - A. The North Dakota Immunization Program is no longer supplying TriHIBit® because of confusion pertaining to the schedule and because doses were not given appropriately. TriHIBit® must not be used for the primary series of DTaP or Hib. Also, giving three doses of PedvaxHIB® is less expensive than giving three doses of ActHIB® and a dose of TriHIBit®.
2. **How long can multi-dose vials be used once opened?**
  - A. Multi-dose vials can and must be used until the expiration date of the vaccine. Multi-dose vials do not need to be thrown away after 30 days of being open. Multi-dose vials contain preservatives that allow the vaccine to be potent even after being open for more than 30 days.
3. **While giving an injection, a nurse had blood return in the syringe upon aspirating. What should she have done with the vaccine?**
  - A. Although aspiration is no longer recommended, if you do aspirate and get a flash of blood, then the procedure is to withdraw the needle and start over. The syringe, needle, and contaminated dose of vaccine should be discarded in a sharps container, and a new syringe and needle should be used to draw up and administer another dose of vaccine. This is a waste of expensive vaccine that could be avoided by simply not aspirating.
4. **If a dose of Menactra™ is given subcutaneously (SC) instead of intramuscularly (IM), does the dose need to be repeated?**
  - A. Yes. The dose needs to be repeated via the correct route, which is IM. The older meningococcal polysaccharide vaccine needs to be given SC, but if given IM, does not need to be repeated. Providers should make sure they are aware of which meningococcal vaccine they are using and what the correct route is. The meningococcal vaccines are expensive, so it is important to make sure that they are being administered correctly.
5. **Should a child be vaccinated with varicella vaccine if the child's mother is pregnant?**

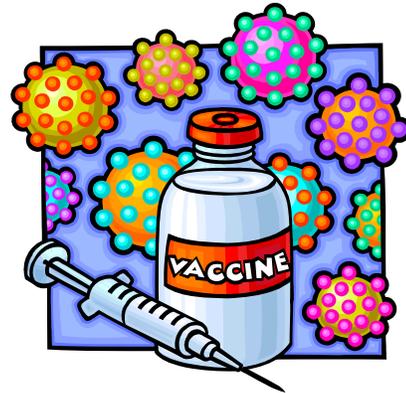
- A. Yes. The transmission of varicella vaccine virus is a rare event. The risk of varicella vaccine virus transmission is less than the risk of contracting the chickenpox virus naturally. Therefore, it is better for the child to be vaccinated than to possibly contract the virus naturally. Pregnant women should not be vaccinated with varicella vaccine.

**Upcoming Events:**



- National Adult Immunization Awareness Week: **September 25 – October 1, 2005**
- “Public Health Preparedness Pandemic Influenza Satellite Broadcast”: **October 6, 2005**
- ACIP Meeting: **October 26 – 27, 2005**
- National Viral Hepatitis Conference (Washington D.C.): **December 5 – 9, 2005**
- CDC/NIP Immunization Broadcast: **December 8, 2005**

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