Invalid Doses

The North Dakota Department of Health (NDDoH) has discovered that some providers have been inadvertently vaccinating children with invalid doses of vaccine.

Invalid doses occur when immunizations are not administered in accordance with the Advisory Committee on Immunization Practices (ACIP) guidelines. The most commonly identified issue resulting in invalid vaccinations is vaccines administered at inappropriate ages.

The following guidelines are provided to assist providers to ensure that vaccines are administered appropriately.

- Measles, mumps and rubella (MMR) vaccine and varicella (chickenpox) vaccine should not be administered if the child is younger than one year of age.
- The minimum age for the third dose of the hepatitis B vaccine has been changed from 6 months to 24 weeks. The third dose of the hepatitis B vaccine should not be administered before the age of 24 weeks.

- PEDIARIX™ is not licensed for the fourth or fifth dose of the DTaP series. PEDIARIX™ should not be used for the birth dose of hepatitis B.
- All vaccines have a four-day grace period for minimum ages and intervals. However, the grace period should not be used to schedule immunizations. It should be used only in extreme circumstances.

If an invalid vaccine dose is administered, the doses must be entered into the North Dakota Immunization Information System (NDIIS) as "invalid." The parent/guardian of the child must then be notified and the child should be appropriately revaccinated.

A schedule showing the minimum ages and intervals for each vaccine can be found in appendix A of the Epidemiology and Prevention of Vaccine-Preventable Diseases Manual (“pink book”).
Shipping Vaccine

Vaccine will not be shipped to Prevention Partnership Providers if the outside temperature is below 0º Fahrenheit. Providers also should take the same shipping precautions when transferring vaccine to other clinics. Not shipping vaccine when it is too cold outside prevents vaccine wastage due to freezing. Please plan accordingly when ordering vaccine. Vaccine may be ordered once a month. A two-month supply always should be kept on hand.

New Varicella (Chickenpox) Vaccine Requirement

Effective Jan. 1, 2004, varicella (chickenpox) vaccine will be required for all children attending early childhood facilities in North Dakota. Parents/guardians or physicians may sign an exemption form if the child has a reliable history of chickenpox disease or if there is a medical, religious, moral or philosophical reason for exemption. Early childhood facilities will have until April 1, 2004, to have children meet the varicella vaccine requirement.

Effective for the 2004-2005 school year, varicella vaccine will be required for kindergarten entry, or first grade if the school does not have a kindergarten. Each subsequent year, the next higher grade will be included in the requirement. Exemption forms must be signed by a physician or parent/guardian and kept on file at the school.

“Epidemiology and Prevention of Vaccine Preventable Diseases” Broadcasts

“Epidemiology and Prevention of Vaccine Preventable Diseases” will be broadcasted live in February and March. These four-part broadcasts by the National Immunization Program (NIP) aim to improve immunization practices and inform providers about current issues in the field of immunizations. The broadcasts cover vaccine-preventable diseases, immunization recommendations and strategies to improve immunization rates. Continuing education credit is available for each session. Registration information is available at www.phppo.cdc.gov/phptnonline. The sessions are available via satellite broadcast or webcast. Contact your local public health unit regarding the availability of the live satellite broadcasts. All of the broadcasts are live from 11 a.m. to 2:30 p.m. central standard time. The broadcast dates are:

**Session One:** February 19  
**Session Two:** February 26  
**Session Three:** March 4  
**Session Four:** March 11
**Vaccine Expiration**

The following lots of vaccine have expired recently or will be expiring in the near future. Please be sure to return expired vaccine to the North Dakota Department of Health (NDDoH). Also, **please try to use vaccine that will be expiring soon**. If you know that you will not use all of the vaccine that will be expiring, notify the North Dakota Immunization Program. Another provider may be able to use the vaccine.

<table>
<thead>
<tr>
<th>Lot Number</th>
<th>Vaccine</th>
<th>Expiration</th>
</tr>
</thead>
<tbody>
<tr>
<td>0027 M</td>
<td>MMR</td>
<td>01/08/2004</td>
</tr>
<tr>
<td>ENG5338E9</td>
<td>HEPB</td>
<td>01/24/2004</td>
</tr>
<tr>
<td>UA684AA</td>
<td>HIB</td>
<td>02/03/2004</td>
</tr>
<tr>
<td>U0179-2</td>
<td>IPV</td>
<td>02/05/2004</td>
</tr>
<tr>
<td>UA691AA</td>
<td>HIB</td>
<td>02/06/2004</td>
</tr>
<tr>
<td>DTPA566A2</td>
<td>DTAP</td>
<td>02/11/2004</td>
</tr>
<tr>
<td>U0746AC</td>
<td>DT</td>
<td>02/19/2004</td>
</tr>
<tr>
<td>0635M</td>
<td>MMR</td>
<td>02/20/2004</td>
</tr>
<tr>
<td>U0522AA</td>
<td>TD</td>
<td>02/20/2004</td>
</tr>
<tr>
<td>DTPA567A2</td>
<td>DTAP</td>
<td>02/26/2004</td>
</tr>
<tr>
<td>ENG5361A2</td>
<td>HEPB</td>
<td>02/27/2004</td>
</tr>
<tr>
<td>489-587</td>
<td>PCV-7</td>
<td>02/28/2004</td>
</tr>
</tbody>
</table>

**Needle Length and Vaccine Administration**

When administering immunizations, it is important to use the correct size needle and the correct route of administration. If an incorrect method of administration is used, the dose is invalid and should be entered into NDIIS as so. The following table provides information regarding appropriate administration of vaccines.

**Intramuscular Injections (IM):** DTaP, DT, Td, Hib, hepatitis A, hepatitis B, influenza, PCV7, IPV, and PPV23

<table>
<thead>
<tr>
<th>Patient Age</th>
<th>Site</th>
<th>Needle Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infants (birth to 12 months)</td>
<td>Vastus lateralis muscle in anterolateral aspect of middle or upper thigh</td>
<td>7/8” to 1” needle, 23-25 gauge</td>
</tr>
<tr>
<td>Young children (12 to 36 months)</td>
<td>Vastus lateralis muscle preferred until deltoid muscle has developed adequate mass.</td>
<td>7/8” to 1” needle, 23-25 gauge</td>
</tr>
<tr>
<td>Older children (&gt;36 months) and adults</td>
<td>Thickest portion of deltoid muscle, above level of armpit and below acromion</td>
<td>1” to 2” needle, 23-25 gauge</td>
</tr>
</tbody>
</table>

**Subcutaneous Injections (SC):** MMR, varicella, meningococcal, IPV, and PPV23

<table>
<thead>
<tr>
<th>Patient Age</th>
<th>Site</th>
<th>Needle Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infants (birth to 12 months)</td>
<td>Fatty area of the thigh</td>
<td>5/8” to ⅜” needle, 23-25 gauge</td>
</tr>
<tr>
<td>Young children (12 to 36 months)</td>
<td>Fatty area of the thigh or outer aspect of upper arm</td>
<td>5/8” to ⅜” needle, 23-25 gauge</td>
</tr>
<tr>
<td>Older children (&gt;36 months) and adults</td>
<td>Outer aspect of upper arm</td>
<td>5/8” to ⅜” needle, 23-25 gauge</td>
</tr>
</tbody>
</table>
**Training Opportunities**

The North Dakota Immunization Program is offering on-site training to interested Prevention Partnership Members. The training will include vaccine schedules, Prevention Partnership Requirements, NDIIS and other issues as needed. Training may be scheduled to be held after Feb. 1, 2004, by calling the North Dakota Immunization Program at 701.328.3386 or toll-free at 800.472.2180.

**National Immunization Program Information**

The National Immunization Program (NIP) has a toll-free hotline available to answer immunization questions. If no one can be reached at the North Dakota Immunization Program, please call the NIP at 800.232.2522 with your questions. Questions also are answered via e-mail at NIPINFO@cdc.gov.

Please continue to call the North Dakota Immunization Program with any questions or concerns regarding vaccines or immunizations.

**Influenza Update**

For current information about influenza activity in North Dakota, visit the North Dakota Department of Health’s influenza website at [www.ndflu.com](http://www.ndflu.com). The Centers for Disease Control and Prevention (CDC) influenza website has up-to-date information about influenza activity throughout the United States, as well as information about influenza vaccine, vaccine shortages, testing, anti-viral medication and prevention. The CDC influenza website is available at [www.cdc.gov/flu](http://www.cdc.gov/flu).

**Adult Pneumococcal Vaccination and the Registry**

Pneumococcal polysaccharide vaccine (PPV-23) should be routinely administered to all adults age 65 and older. The vaccine also should be used for people age 2 and older who have chronic illnesses or are immunocompromised. One dose of PPV-23 should be administered to adults older than 65 and to people who have a chronic illness or who are immunocompromised. **Routine revaccination of immunocompetant individuals previously vaccinated with PPV-23 is not recommended.** High-risk individuals who received one vaccine dose before age 65 should receive one more dose after age 65. **The second dose should be given at least five years after the first dose.**

Prevention Partnership members should enter adult pneumococcal immunizations into NDIIS, as well as all vaccinations. Although people 65 and older need only one dose of PPV-23, many have received more than one dose because they did not recall receiving PPV-23.

**Entering PPV-23 and all other immunizations into the registry prevents the administration of extra doses of vaccine.** Eliminating unnecessary extra doses of vaccine not only saves money, but also prevents vaccine-adverse events from occurring due to unnecessary immunizations. Immunizations entered into NDIIS also are easily identified if a vaccine lot needs to be recalled.
Continuous Temperature Monitor Wheels

The North Dakota Immunization Program has received numerous calls from providers indicating that the continuous temperature monitor wheels sent to Prevention Partnership Providers in March are not working properly. If you have a problem with the monitor, please call the company at 800.323.2448. If your monitor is not working properly, continue to send in your manual temperature logs monthly. The Immunization Program is investigating another method of monitoring temperatures.

Congratulations to the following Prevention Partnership Providers for Outstanding Immunization Rates for the 4:3:1:3:3 Series in 2003

The following clinics or local public health units had immunization rates above 90 percent for 2003 as reported via AFIX results.

- Southeast Medical Center – Oakes
- Hazen Clinic – Hazen
- St. Alexius Missouri Slope Clinic – Beulah
  - West River Clinic – Bowman
- Washburn Family Clinic – Washburn
- Hettinger Clinic – Hettinger
- Meritcare Southpointe Family Practice – Fargo
- Lake Region District Health Unit- Ramsey County – Devils Lake
- Ransom County Health Department – Lisbon
- McIntosh District Health Unit – Ashley

The following clinics or local public health units had immunization rates above 80 percent for 2003 as reported via AFIX results.

- Medcenter One Clinic – Bismarck
- Johnson Clinic – Dunseith
- Altru Clinic – Northwood
- Meritcare Clinic Southwest Family Practice – Fargo
  - Grafton Family Clinic – Grafton
  - Family Medical Center North – Bismarck
- First District Health Unit- Burke County – Bowbells
- First District Health Unit- Ward County – Kenmare
  - Bismarck/Burleigh Public Health – Bismarck
- First District Health Unit- McLean County – Washburn
  - Steele County Health Department – Finley
  - Emmons District Health Unit – Linton
  - Spirit Lake Health Center – Fort Totten
Questions & Answers

1. If a child comes into the clinic two days early for an immunization, and he or she is younger than the minimum age for the vaccine, can I immunize the child?
   A. Yes. There is a four-day grace period for administering vaccines. However, immunizations may be given no earlier than four days before the minimum age.

2. What is the difference between the Evans and Aventis Pasteur brands of influenza vaccine?
   A. Evans brand influenza vaccine (Fluvirin™) is approved for use among people age 4 and older. Aventis Pasteur brand influenza vaccine (Fluzone™) is approved for use in people age 6 months and older.

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Dose</th>
<th>Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-35 months*</td>
<td>.25 mL</td>
<td>IM</td>
</tr>
<tr>
<td>3-8 years*</td>
<td>.50 mL</td>
<td>IM</td>
</tr>
<tr>
<td>9 years and older</td>
<td>.50 mL</td>
<td>IM</td>
</tr>
</tbody>
</table>

   * If a child is younger than age 9 and has never received a flu shot, two doses of influenza vaccine should be administered at least four weeks apart, if vaccine is available. Influenza vaccine should not be held for use as a second dose.

3. What should be done if a .50 mL dose of influenza vaccine is accidentally given to a child younger than age 3?
   A. A .25 mL dose should be given on schedule in four weeks if it is the child’s first influenza vaccination. A “double” dose should not be considered two doses. This is a medication administration error.

4. What should be done if an injection is given via the wrong route (IM instead of SC)?
   A. Vaccines should always be given by the route recommended by the manufacturer. However, the Advisory Committee on Immunization Practices (ACIP) recommends that vaccines given by the wrong route be counted as valid with two exceptions: hepatitis B or rabies vaccine given by any route other than IM should be considered invalid and should be repeated.

5. Would a dose of 1 mL of 10 mcg Engerix-B® (two vials of the pediatric dose) be the same as 1 mL of 20 mcg (one vial of the adult dose)?
   A. The pediatric formulation of Engerix-B® is not licensed by the Federal Drug Administration (FDA) for use in adults. Adults 20 years of age and older should receive 1 mL (10 mcg) of either the pediatric or adult formulation of Recombivax HB®.
Upcoming Events

- “Influenza and Beyond: Responding to Vaccine Preventable Diseases”
  - Jan. 30, 1 p.m. – 2 p.m.
- “Epidemiology and Prevention of Vaccine Preventable Diseases” Broadcasts (Parts 1-4)
  - Part 1 – Feb. 19, 1 p.m. – 4:30 p.m.
  - Part 2 – Feb. 26, 1 p.m. – 4:30 p.m.
  - Part 3 – Mar. 4, 1 p.m. – 4:30 p.m.
  - Part 4 – Mar. 11, 1 p.m. – 4:30 p.m.
- ACIP Meeting – Feb. 25 - 26
- 2004 National Infant Immunization Week – April 25 – May 1
- 38th National Immunization Conference in Nashville, Tenn.
  - May 11-14

Visit http://www.phppo.cdc.gov/PHTN for information about satellite broadcasts and webcasts. Some local public health units may be airing the satellite broadcasts.