

2009-2010 Seasonal Influenza Vaccination Protocol

**New Mexico Department of Health
Public Health Division
Immunization Program
August 2009 (Revised)**

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ATTENTION!
[H1N1 Influenza (pandemic flu) has a separate protocol]

NEW MEXICO DEPARTMENT OF HEALTH (NMDOH) 2009 SEASONAL INFLUENZA VACCINE PROTOCOL (2009-2010 Influenza (Flu) Season)

INTRODUCTION

Influenza: A highly infectious viral illness. Three types of influenza virus are recognized: A, B, and C. Subtypes of type A include hemagglutinin H1, H2, and H3, that have a role in virus attachment to cells, and neuraminidase N1 and N2, that have a role in virus penetration. Type A causes moderate to severe illness. Type B has been associated with milder disease, primarily affecting children. Type C has been associated with sporadic cases and minor local outbreaks.

Typical influenza illness: Characterized by abrupt onset of fever, myalgia, sore throat, and nonproductive cough. Influenza can cause severe malaise lasting several days.

Complications include primary influenza viral pneumonia, secondary bacterial pneumonia, myocarditis and Reye syndrome (almost always in children). Increased mortality results not only from influenza and pneumonia, but also from cardiopulmonary and other chronic diseases exacerbated by influenza. Death is reported in 0.5-1 per 1000 cases.

Transmission: Airborne spread and respiratory droplet, although spread through direct contact is a less important mode of transmission.

Incubation period: Average 2 days. Range 1-5 days.

Communicability: Starting 1-2 days before onset and 4-5 days after symptoms resolve. Children may pass the virus for longer than 7 days.

SERVICE POPULATION

CDC RECOMMENDED PRIORITY GROUPS

Yearly seasonal influenza vaccination is recommended for populations who either have a high risk of suffering severe complications of influenza infection or who are more likely to transmit the infection to high-risk groups. These groups are listed below.

- All children 6 months through 18 years of age.

Children at the greatest risk of complications from influenza should continue to be a focus of vaccination efforts. This includes those children:

- Ages 6-59 months;
- Who are receiving long-term aspirin therapy and, therefore, might be at risk for experiencing Reye syndrome after influenza infection;
- Who have certain chronic medical disorders of the pulmonary or cardiovascular systems, including asthma;
- Who have required regular medical follow-up or hospitalization during the preceding year because of chronic metabolic diseases (including diabetes mellitus), renal dysfunction, hemoglobinopathies, or immunodeficiency (including that caused by HIV);

- Who have any condition (e.g., cognitive dysfunction, spinal cord injuries, seizure disorders, or other neuromuscular disorders) that can compromise respiratory function or the handling of respiratory secretions, or that can increase the risk for aspiration;

Other priority groups:

- Household and other close contacts of infants under 6 months
- Pregnant women;
- Persons age > 50 years;
- Adults with certain chronic medical disorders of the pulmonary or cardiovascular systems, including asthma (hypertension is not considered a high-risk condition);
- Adults who have required regular medical follow-up or hospitalization during the preceding year because of chronic metabolic diseases (including diabetes mellitus), renal dysfunction, hemoglobinopathies, or immunodeficiency (including that caused by HIV);
- Adults who have any condition (e.g., cognitive dysfunction, spinal cord injuries, seizure disorders, or other neuromuscular disorders) that can compromise respiratory function or the handling of respiratory secretions, or that can increase the risk for aspiration;
- Residents of long-term care facilities, and other chronic-care facilities;
- Caregivers at long-term care facilities and other chronic care facilities;
- Household contacts or caregivers of persons at high-risk for influenza-related complications, including healthy household contacts and caregivers of children aged 0-59 months;
- Healthcare workers.
- NMDOH staff that interact with patients, including health care providers and clerical staff. *This includes staff from other divisions and facilities that have direct contact with clients or provide essential services on which we depend (i.e., laboratory services).*

NMDOH TARGET POPULATION

NM public health offices should vaccinate persons from the above high-risk groups as vaccine supplies allow. Persons who have insurance or ability to pay for their vaccine should be served by their primary care provider or a mass immunization clinic (retail clinics). Persons with no other source of care, whose provider does not have the vaccine, or who have Medicare can be served with NMDOH vaccine. Pregnant women seen in DOH public health clinics should be vaccinated with thimerosal-free vaccine if that vaccine is available at the time that the patient presents. Vaccination should not be postponed if thimerosal-free vaccine is not available.

METHODOLOGY

Vaccine

Contains 3 virus strains representing the influenza viruses most likely to circulate in the U.S. in the upcoming winter. The 2009-2010 trivalent influenza vaccine for the United States will contain:

- A/Brisbane/59/2007 (H1N1)-like antigens;

- A/Brisbane/10/2007 (H3N2)-like antigens;
- B/Brisbane/60/2008-like antigens

Trivalent Inactivated Influenza Vaccine (TIV), administered by IM injection, is made from highly purified, egg-grown viruses made non-infectious (inactivated). It cannot cause influenza. The nasal spray flu vaccine is a live-attenuated influenza vaccine (LAIV) does contain live, egg-grown, viruses. However, the viruses are attenuated (weakened) and cannot cause flu illness. The weakened viruses are cold-adapted, which means they are designed to only cause infection at the cooler temperatures found within the nose. The viruses cannot infect the lungs or other areas where warmer temperatures exist.

VACCINE MANUFACTURERS/FORMULATIONS (2009-2010 NMDOH VACCINE)

VFC Flu Vaccine – Exclusively for use with children 6 months-18 yrs of age:

Fluzone® PF, Pediatric dose for **ages 6-35 months**; preservative-free split-virus product by SanofiPasteur in single-dose syringes.

Fluzone® PF, For **ages 36 months - 18 years**; preservative-free split virus product by Sanofi Pasteur, comes in single-dose vials or single-dose syringes.

Fluzone®: For **ages 6 months to 18 years**; preservative-containing split-virus product by Sanofi Pasteur; comes in multi-dose (10-dose) vials.

Flumist®; For **healthy, non-pregnant ages 2 years to 18 years**; intranasal, preservative-free, live attenuated split virus vaccine (LAIV) by MedImmune.

For adults:

Fluarix®: Licensed for **adults 18 years of age and older (priority for this product is pregnant women: do not defer if unavailable)**: A preservative-free split virus product by GlaxoSmithKline; comes in single-dose pre-filled syringes.

Flulaval®: Licensed for **adults 18 years of age and older**: A preservative-containing split virus product by GlaxoSmithKline comes in multi-dose (10-dose) vials.

Fluzone®: Licensed for ages **6 months and above**: A preservative-containing split-virus product by Sanofi Pasteur; comes in multi-dose (10-dose) vials.

Fluzone® PF, For **pregnant women**; preservative-free split virus product by Sanofi Pasteur, comes in single-dose vials or single-dose syringes.

Administration

- For TIV administer intramuscularly (IM) with 22 to 25 gauge needles into deltoid muscle of adults, adolescents, and older children and into the antero-lateral thigh of infants and young children who do not have adequate deltoid mass.
- Needle length for adult, adolescents and older children IM injections: ≥ 1 inch
- Needle length for children with adequate deltoid mass IM injections: ≥ 7/8 – 1 inch
- Needle length for infants and young children in anterolateral thigh: 7/8-1 inch.
- May be administered simultaneously with other vaccines, using a separate syringe at a different anatomical site.

- For LAIV, nasal spray vaccine: Each sprayer contains a single dose of FluMist; approximately one-half of the contents (0.1 mL) is administered into each nostril. With the recipient in an upright position, insert the tip of the sprayer just inside the nose and rapidly depress the plunger until the dose-divider clip stops the plunger. The dose-divider clip is removed from the sprayer to administer the second half of the dose (0.1 mL) into the other nostril. Once FluMist has been administered, the sprayer should be disposed of according to the standard procedures for medical waste (e.g., sharps container or biohazard container).

Vaccine schedule and dosage

Seasonal Influenza vaccine is administered beginning in the Fall when it is received (usually about October 1) through March 31.

Age	Vaccine	Dosage form & Strength	Doses	Notes
6mos-35mos	Fluzone	0.25 ml prefilled syringe, no preservative (preferred) OR 0.25 ml from a multidose vial	1 or 2*	
36 mos-and older	Fluzone	0.5 ml prefilled syringe, no preservative (preferred for young children) OR 0.5 ml single dose from a multidose vial	1 or 2*	
2-18 years	Flumist Nasal Spray	0.2 ml— administer 0.1 ml in each nostril	1 or 2*	Contains no preservative
≥19 years or Pregnant Women	Fluarix (prefilled syringe)	0.5ml	1	Contains no preservative
≥19 Years	Fluzone Flulaval	0.5ml	1	Can be given to pregnant women. Do not delay vaccination due to no preservative-free vaccine available.

*For children 6 months to 8 years of age receiving seasonal influenza vaccine for first time, give **2 doses at least 1 month apart**. Children 6 months to 8 years of age who

received only one dose of seasonal influenza vaccine in the first year of vaccination, should receive 2 doses the following year. All other children need only one dose.

Contraindications to ANY seasonal influenza vaccination:

(Who should **not** receive any flu vaccine?)

- **Babies less than 6 months of age**

Anyone with

- an allergy to any component of the vaccine (such as MSG, arginine, gentamicin, and gelatin)
- a severe allergy to eggs
- a known anaphylactic hypersensitivity to a previous dose of influenza vaccine, or to any component of the vaccine (e.g. thimerosal, eggs)
- a history of Guillain-Barré Syndrome after receiving flu vaccination

Specific Contraindications to nasal spray Live Attenuated Vaccine (LAIV)

(Who should **not** receive the nasal spray flu vaccine?)

- Pregnant women
- Children younger than 2 years of age

Anyone with

- an allergy to any component of the vaccine (such as MSG, arginine, gentamicin, and gelatin)
- a severe allergy to eggs
- asthma, reactive airway disease, other chronic lung or heart disease
- diabetes
- kidney disease or renal dysfunction
- abnormal hemoglobins (such as sickle cell anemia)
- immunosuppressive states (such as receiving chemotherapy)
- a history of Guillain-Barré Syndrome after receiving flu vaccination
- close contact with a person with a severely weakened immune System

- Children/adolescents on aspirin or other salicylates
- Children ages 2-4 years who had wheezing or asthma in the last 12 months

Relative Contraindication

- Moderate or severe acute febrile illness- do not administer

Notes

Note: *Minor illness with or without fever should not be considered a contraindication, particularly among children with mild upper respiratory tract infection or allergic rhinitis.*

Note: Pregnancy and breastfeeding are not contraindications to receiving inactivated influenza vaccine unless contraindicated because of other medical conditions.

Note: Pregnant women should be vaccinated with thimerosal-free vaccine if that vaccine is available at the time that the patient presents. Vaccination should not be postponed if thimerosal-free vaccine is not available.

Note: FluMist is approved for healthy non-pregnant adults up to the age of 49 years, however the NM Department of Health has reserved its supply of FluMist for children < 19 years of age only. Adults who request FluMist should be informed of this and offered the injection vaccine. If they decline the injection give them a referral to another vaccine provider to obtain FluMist.

Remember: Do not administer any influenza vaccine to children less than 6 months of age.

Options for patients with contraindications to vaccine:

Refer these patients to their primary care physician for advice about chemoprophylaxis options available to them.

Protective efficacy: Most children and young adults develop high post-vaccination antibody titers that are protective against illnesses caused by virus strains similar to those in the vaccine. The vaccine is 90% efficacious in healthy young persons in preventing illness (for vaccine strains matched by the vaccine), but among the elderly the vaccine is only 30%-40% efficacious preventing illness and 50%-60% in preventing flu-related hospitalization. This is one of the reasons why priority immunization of patient care providers is so important to prevent transmission to at-risk populations.

Although data are limited, recently published studies indicate that when young children receive only 1 dose of TIV in each of their first 2 seasons of being vaccinated, they have lower antibody levels, are less likely to have protective antibody titers (Englund, 2006), and have reduced protection against influenza-like illness compared with children who receive their first 2 doses of vaccine in the same season (Allison, 2006; CDC, 2007). Because of this, it is recommended that children 6 months to 8 years of age who received only one dose of influenza vaccine in the first year of vaccination, receive 2 doses the following year.

Adverse Reactions

- Soreness, erythema, induration at injection site lasting up to 2 days is reported in 15%- 20% of those vaccinated.
- Fever, malaise, myalgia, and other systemic symptoms beginning 6-12 hours after vaccination, persisting 1-2 days is reported in less than 1% of those vaccinated.
- Immediate hypersensitivity reactions presumably to egg component.
- After LAIV: runny nose, nasal congestion, headache, sore throat

Storage and Handling

TIV and LAIV: Store and ship at 35° to 46° F DO NOT FREEZE

For handling of wasted vaccine: refer to the DOH 2009 NM Department of Health Immunization Protocols
<http://www.immunizenm.org/Provider/documents/DOH2009IZProtocols.pdf>

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PUBLIC HEALTH DIVISION
CLINICAL PROTOCOL/MANUAL APPROVAL SHEET

PROGRAM: Immunization Program, Infectious Disease Bureau

CLINICAL PROTOCOL/MANUAL TITLE: Seasonal Influenza Protocol 2009-2010

Reviewed by: (Must have a signature from at least one clinical user of the Clinical Protocol.)

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