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Seasonal Influenza Fall 2013

New York State Department of Health

Immunize NY!

Bureau of Immunization

Immunize NY!
Seasonal Influenza 2013-2014 Special Edition

In this issue:

Frequently Used Abbreviations:

ACIP:	Advisory Committee on Immunization Practices
CDC:	U.S. Centers for Disease Control and Prevention
FDA:	U.S. Food and Drug Administration
HA:	Hemagglutinin
IIV:	Inactivated influenza vaccine
LAIV:	Live, attenuated influenza vaccine
MMWR:	Morbidity and Mortality Weekly Report
NYSDOH:	New York State Department of Health
RIV:	Recombinant HA influenza vaccine
VAERS:	Vaccine Adverse Event Reporting System

CDC'S Recommendations for Prevention and Control of Seasonal Influenza

On September 20, the CDC published the MMWR *Prevention and Control of Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices (ACIP), United States, 2013–14 Influenza Season* (www.cdc.gov/mmwr/preview/mmwrhtml/rr6207a1.htm?s_cid=rr6207a1_w).

This report provides updated guidance for the use of influenza vaccines in the United States for the 2013-2014 influenza season. Key highlights contained within the report include:

- CDC recommends an annual influenza vaccine, for everyone 6 months of age and older, as the optimal way to protect against influenza. This recommendation is the same regardless of vaccine composition from the previous season.
- 2013-2014 U.S. trivalent influenza vaccines will contain an A/California/7/2009 (H1N1)-like virus, an H3N2 virus antigenically like the cell-propagated prototype virus A/Victoria/361/2011, and a B/Massachusetts/2/2012-like virus. Quadrivalent vaccines will include an additional vaccine virus, a B/Brisbane/60/2008-like virus.
- A summary of revised abbreviations to refer to currently available influenza vaccines:
  - The former abbreviation TIV (Trivalent Inactivated Influenza Vaccine, previously used for inactivated influenza vaccines) has been replaced with the new abbreviation IIV (Inactivated Influenza Vaccine). For 2013-2014, IIVs as a class will include:
    - Egg-based and cell culture-based trivalent inactivated influenza vaccines (IIV3), and
    - Egg-based quadrivalent inactivated influenza vaccine (IIV4).
  - RIV refers to recombinant HA influenza vaccine, available as a trivalent formulation (RIV3) for 2013-2014.
  - LAIV refers to live, attenuated influenza vaccine available only as a quadrivalent formulation (LAIV4) for 2013-2014.
  - When it is necessary to refer specifically to cell culture-based vaccine, the prefix "cc" is used (e.g., "ccIIV3").

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- Several new, recently licensed vaccines will be available for the 2013-2014 season. Within approved indications and recommendations, no preferential recommendation is made for any type or brand of licensed influenza vaccine over another.
  - A quadrivalent live attenuated influenza vaccine (LAIV4; FluMist® Quadrivalent [MedImmune]) has replaced the trivalent (LAIV3) formulation.
  - A quadrivalent inactivated influenza vaccine (IIV4; Fluarix® Quadrivalent [GlaxoSmithKline]) is available, in addition to the previous trivalent formulation.
  - A quadrivalent inactivated influenza vaccine (IIV4; Fluzone® Quadrivalent [Sanofi Pasteur]) is available in addition to the previous trivalent formulation.
  - A quadrivalent inactivated influenza vaccine (IIV4; Flulaval® Quadrivalent [ID Biomedical Corporation of Quebec/GlaxoSmithKline]) is available, in addition to the previous trivalent formulation.
  - A trivalent cell culture-based inactivated influenza vaccine (ccIIV3; Flucelvax® [Novartis]).
  - A recombinant hemagglutinin (HA) vaccine (RIV3; FluBlok® [Protein Sciences]).
- An updated vaccination schedule for children aged 6 months through 8 years is discussed on page 4.
- An update to considerations regarding vaccination of persons with egg allergies is discussed on page 5.

Seasonal Influenza Vaccine Should Be Given Now to Pregnant, Post-Partum Women

Early vaccination reduces the burden of influenza disease in pregnant and postpartum women and in infants who are less than 6 months old. Since 2010 the American Congress of Obstetricians and Gynecologists (ACOG) Committee on Obstetric Practice Opinion has voiced support of CDCs recommendation of influenza vaccination for all women who will be pregnant through the influenza season. A 2011 study published in the *Archives of Pediatrics and Adolescent Medicine* (Angelia A. Eick; Timothy M. Uyeki; Alexander Klimov; Henrietta Hall; Raymond Reid; Mathuram Santosham; Katherine L. O'Brien *Arch Pediatr Adolesc Med. 2011;165(2) 104-111)* showed that babies whose mothers were vaccinated during pregnancy had a 41 percent lower risk of contracting influenza infection and a 39 percent lower risk of requiring hospitalization from flu-like illness compared to babies whose mothers were not vaccinated.

To read the committee opinion, *Influenza Vaccination During Pregnancy*, visit www.acog.org/Resources_And_Publications/Committee_Opinions/Committee_on_Obstetric_Practice/Influenza_Vaccination_During_Pregnancy.

On September 27, the CDC published the MMWR *Influenza Vaccination Coverage Among Pregnant Women — United States, 2012-2013 Influenza Season*. During the 2012-2013 influenza season, only 50.5 percent of pregnant women surveyed reported they received influenza vaccination before or during pregnancy. Rates of vaccination among pregnant women need to improve. This study also indicates that health care providers should continue to use every opportunity to recommend and offer vaccination, if appropriate. This report can be found at: www.cdc.gov/mmwr/preview/mmwrhtml/mm6238a3.htm?s_cid=mm6238a3_e.

Influenza Vaccination Coverage Among Health Care Personnel

Vaccination of health care personnel (HCP) against influenza has been shown to reduce illness and absenteeism and to reduce transmission of influenza to HCP, their families, and their patients. ACIP and the Healthcare Infection Control Practices Advisory Committee recommend that all HCP be vaccinated annually against influenza.

On September 27 the CDC published the MMWR *Influenza Vaccination Coverage Among Health-Care Personnel — United States, 2012–13 Influenza Season*. As reported, the overall HCP influenza vaccination coverage estimate from this survey for the 2012-2013 season was 72.0 percent, an increase from 66.9 percent vaccination coverage during the 2011-2012 season. To increase HCP vaccination coverage and minimize the risk for influenza illnesses acquired in medical settings, widespread implementation of comprehensive HCP influenza vaccination strategies is needed. This report can be found at: www.cdc.gov/mmwr/preview/mmwrhtml/mm6238a2.htm?s_cid=mm6238a2_e.

2013-2014 Preservative-Free Influenza Seasonal Vaccine Supply Determination as Required by Public Health Law §2112

New York State Public Health Law (PHL) §2112 prohibits the administration of vaccines containing more than trace amounts of thimerosal, a mercury-containing preservative, to children less than 3 years of age and women who know they are pregnant, with certain exceptions.

The Commissioner of Health has determined that for the 2013-2014 influenza season there will be an adequate supply of thimerosal-free seasonal influenza vaccine for vaccination of pregnant women and children under the age of 3 years. **Therefore, health care providers (physicians, nurse practitioners, physician assistants, nurse midwives) providing influenza vaccinations to pregnant women and children under 3 years of age, should purchase sufficient supplies of seasonal influenza vaccine that comply with PHL §2112.**

For more information, please see the PHL §2112 advisory released on August 15 which can be found on the NYSDOH website: www.health.ny.gov/diseases/communicable/influenza/seasonal/providers/commissioner_declaration_phl_2112.htm.

Seasonal Influenza Vaccine Safety Data

Guillain-Barre Syndrome (GBS). The estimated risk for GBS is low after influenza vaccine. However, temporally associated GBS cases following influenza vaccination have been reported. In the 2010-2011, 2011-2012, and 2012-2013 influenza seasons, there was no disproportionate reporting of GBS following TIV or LAIV in the Vaccine Adverse Event Reporting System (VAERS) data. In addition, no elevated risk of GBS has been found in the Vaccine Safety Database, a surveillance system of automated data from electronic medical records, for the 2010-2011, 2011-2012, and 2012-2013 influenza seasons. As a precaution, persons generally should not be vaccinated if they are not at high risk for severe influenza complications, and are known to have experienced GBS within six weeks of receipt of an influenza vaccine. However, the established benefits of vaccination may outweigh the risks for many persons who have a history of GBS and who also are at high risk for severe complications from influenza. For more information, visit: www.cdc.gov/mmwr/pdf/rr/rr5908.pdf.

High-Dose TIV. This influenza season will be the fourth in which high-dose TIV has been available. To date, no additional safety concerns have been identified.

Intradermal TIV. This season is the third for intradermal TIV. To date, no additional safety concerns have been identified.

NYSDOH Looking for Providers for Its Influenza Surveillance Network

The NYSDOH is recruiting providers to participate in the Outpatient Influenza-like Illness Surveillance Network (ILINet). In collaboration with CDC, ILINet providers are part of a national network of more than 3,000 health care providers who conduct surveillance for influenza-like illness (ILI).

ILINet surveillance consists of reporting the total number of patient visits and the total number of patient visits with ILI (fever of at least 100 degrees F with a cough or sore throat) by age group each week. Reports are sent via the Internet or fax and typically take less than 30 minutes of effort per week. Data reported by ILINet providers, in combination with other influenza surveillance data, provide a local, state and nationwide picture of influenza activity.

ILINet providers submit patient specimens to the NYSDOH Wadsworth Center for viral testing and sub-typing **free of charge**.

Providers (physicians, physician assistants, nurses and nurse practitioners) of any specialty and practice type are invited to enroll. ILINet providers receive feedback on the data submitted; summaries of regional, statewide and national influenza data; and free subscriptions to CDC's *Morbidity and Mortality Weekly Report* and *Emerging Infectious Diseases Journal*.

For more information about the ILINet Surveillance program: **NYSDOH Program Coordinator** Donna Gowie, 518-473-4439, dlg04@health.ny.gov and in New York City, **New York City Department of Health and Mental Health Program Coordinator** Beth Nivin, 347-396-2616, bnivin@health.nyc.gov .

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Cell-Based Influenza Vaccine

Cell-based influenza vaccines differ from egg-based influenza vaccines, in that the influenza A and B viruses included in the cell-based vaccine are grown in cultured cells of mammalian origin instead of in hens' eggs.

Cell culture technology has already been used to produce other U.S.-licensed vaccines, including: rotavirus, polio, smallpox, hepatitis, rubella and varicella vaccines.

A major advantage of cell culture technology includes the potential for a faster start-up of the vaccine manufacturing process in the event of a pandemic, since it does not rely on an adequate supply of eggs.

General reactions to cell-based influenza vaccines are typical of those seen with egg-based influenza vaccines. These include: pain, redness and soreness at the injection site, headache and fatigue.

Recombinant Influenza Vaccine

Recombinant influenza vaccines are made by producing an influenza virus protein within an insect cell line. This type of cell-based influenza vaccine is developed through a different manufacturing process than the traditional egg-based manufacturing process that is used to develop influenza vaccines, in that no eggs or whole influenza viruses are used in production.

Recombinant influenza vaccine manufacturing technology allows for production of large quantities of the influenza virus protein, hemagglutinin (HA) – the active ingredient in all inactivated influenza vaccines that is essential for entry of the virus into cells in the body. The majority of antibodies that prevent influenza virus infection are directed against HA. While the technology is new to influenza vaccine production, it is used to make vaccines that have been approved by the FDA to prevent other infectious diseases such as the human papilloma virus and hepatitis B vaccines.

A major advantage of recombinant technology includes the potential for a faster start-up of the vaccine manufacturing process in the event of a pandemic, since it does not rely on an adequate supply of eggs. It is also the only currently available influenza vaccine that is 100 percent egg-free, and therefore a viable option for egg-allergic patients who have experienced anaphylaxis from eggs previously.

The most commonly reported adverse events include pain at the site of injection, headache, fatigue and muscle aches, events also typical for conventional egg-based, inactivated influenza vaccines.

Influenza Vaccination Schedule for Children Aged 6 Months Through 8 Years

Experts have known for some time that children aged 6 months through 8 years require 2 doses of influenza vaccine during their first season of vaccination (administered a minimum of 4 weeks apart) to optimize immune response. The first dose should be given as soon as vaccine becomes available.

Two approaches for determining the number of doses for the 2013-2014 season are recommended and acceptable.

First approach

For the sake of simplicity, this first approach takes into consideration only doses of seasonal influenza vaccine received since July 1, 2010.

See Page 7 for an influenza vaccine dosing algorithm illustrating this approach. *Continued on Page 5*

Did You Know?

You can't get influenza from the influenza vaccine!
It takes about two weeks **after** vaccination
for antibodies to develop in the body and provide protection
against influenza virus infection.

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Influenza Vaccination Schedule for Children Aged 6 Months Through 8 Years

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Second approach

The second approach to dosing takes into consideration doses of seasonal influenza vaccine received prior to July 1, 2010.

Dosing algorithm #2 for children in this age group:

- One dose of 2013-2014 influenza vaccine is needed if they have received any of the following:
  - 2 or more doses of seasonal influenza vaccine before July 1, 2010 and 1 or more doses of monovalent 2009 (H1N1) vaccine or;
  - 1 or more doses of seasonal influenza vaccine before July 1, 2010 and 1 or more doses of seasonal influenza vaccine since July 1, 2010
- Children 6 months through 8 years of age for whom one of these conditions is not met require 2 doses in 2013-2014.

Information on these two approaches is available in the MMWR *Prevention and Control of Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices (ACIP), United States, 2013–14 Influenza Season (*www.cdc.gov/mmwr/preview/mmwrhtml/rr6207a1.htm?s_cid=rr6207a1_w*).*

Egg Allergy and Influenza Vaccination

Since the 2011-2012 influenza season, ACIP has recommended that individuals with mild egg-allergies, particularly hives, should receive the IIV, with appropriate safety measures in place. According to data from the VAERS, this modification has not affected the rate of allergic reactions during the 2011-2012 and 2012-2013 seasons.

For the 2013-2014 season:

- Egg-allergic people who have experienced mild reactions to egg, specifically those who have experienced only hives, can and should receive the influenza vaccine, either IIV or RIV. RIV is egg-free and may be used for persons aged 18-49 years who have no other contraindications. However, IIV (egg- or cell-culture based) may also be used with the following additional safety measures:
  - Vaccine should be administered by a health care provider who is familiar with the potential manifestations of egg allergy; and
  - Vaccine recipients should be observed for at least 30 minutes for signs of a reaction after administration of each vaccine dose.
- Persons who report having had reactions to egg involving such symptoms as angioedema, respiratory distress, lightheadedness, or recurrent emesis; or who required epinephrine or another emergency medical intervention may receive RIV3, if aged 18-49 years and no other contraindications exist.
- Some persons who report allergy to egg might not be egg-allergic. Egg allergy can be confirmed by a consistent medical history of adverse reactions to eggs and egg-containing foods, plus skin and/or blood testing for immunoglobulin E antibodies to egg proteins.
- For individuals who have no known history of exposure to egg, but who are suspected of being egg-allergic on the basis of previously performed allergy testing, consultation with a physician with expertise in the management of allergic conditions should be obtained prior to vaccination. Alternatively, RIV3 may be administered if the recipient is aged 18-49 years and no other contraindications exist.

Page 8 of this newsletter has an algorithm to use with persons who report egg allergy. More information on this algorithm is available in the MMWR *Prevention and Control of Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices (ACIP), United States, 2013-14 Influenza Season* (www.cdc.gov/mmwr/preview/mmwrhtml/rr6207a1.htm?s_cid=rr6207a1_w).

Receive email notification when new or updated influenza information is available.

Subscribe to the CDC's free email subscription service:
www.cdc.gov/emailupdates/index.html
Click on *Subscribe*, then click on all. immunization topics of interest, including *Seasonal Influenza*!

Seasonal Influenza Resources for Providers

NYSDOH, Seasonal Influenza Information for Health Care Providers
http://www.health.ny.gov/diseases/communicable/influenza/seasonal/providers/

NYSDOH *Immunization Update* webinars are available for viewing at your convenience:
1. *Influenza Vaccine for the 2013-2014 Season: What You Need to Know*
2. *Influenza Vaccine Production: From Egg to Cell Culture and Beyond*

www.health.ny.gov/prevention/immunization/providers/webinar_series.htm

CDC, Seasonal Influenza Vaccination Resources for Health Professionals
www.cdc.gov/flu/professionals/vaccination/index.htm

CDC, Patient and Provider Education Free Resources www.cdc.gov/flu/freeresources/

CDC, Vaccine Information Statements www.cdc.gov/vaccines/pubs/vis/default.htm#flu

Immunization Action Coalition (IAC): www.immunize.org/

IAC, 2013-2014 influenza vaccine pocket guides **for providers only**; no cost: www.immunize.org/pocketguides/

American Academy of Pediatrics, Just for Pediatricians
www2.aap.org/immunization/pediatricians/pediatricians.html

American Congress of Obstetricians and Gynecologists, Immunization for Women—Immunization Information for OB/GYNs and Their Patients www.immunizationforwomen.org/

Vaccine Adverse Event Reporting System (VAERS): Report all significant health events that may have been related to a dose of vaccine, particularly those that lead to hospitalization, disability, or death.
http://vaers.hhs.gov or call 800-822-7967

Seasonal Influenza Resources for Patients

NYSDOH, Seasonal Influenza www.health.ny.gov/diseases/communicable/influenza/seasonal/

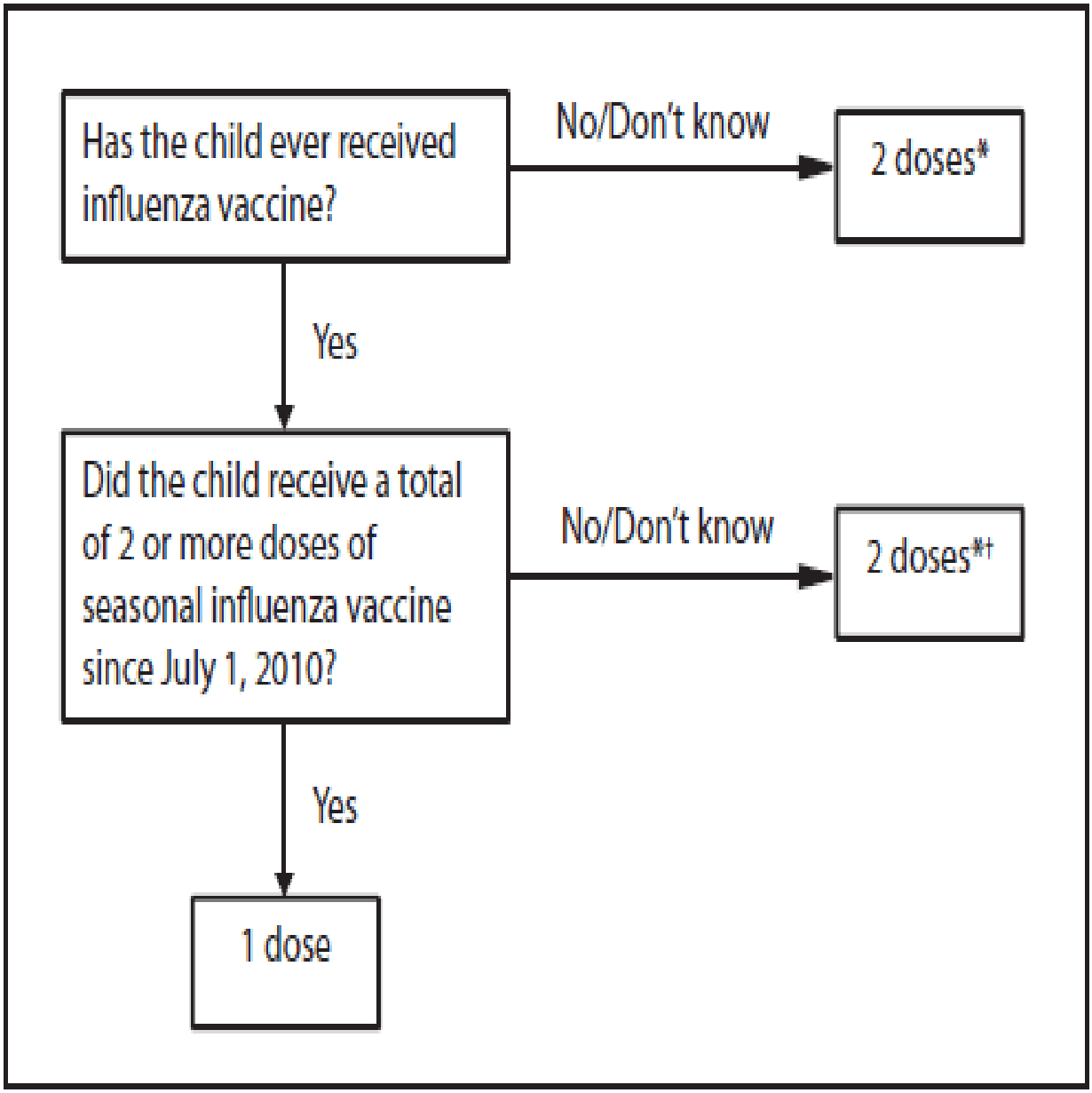
CDC, Seasonal Influenza www.cdc.gov/flu/index.htm

CDC, Patient and Provider Education Free Resources www.cdc.gov/flu/freeresources/

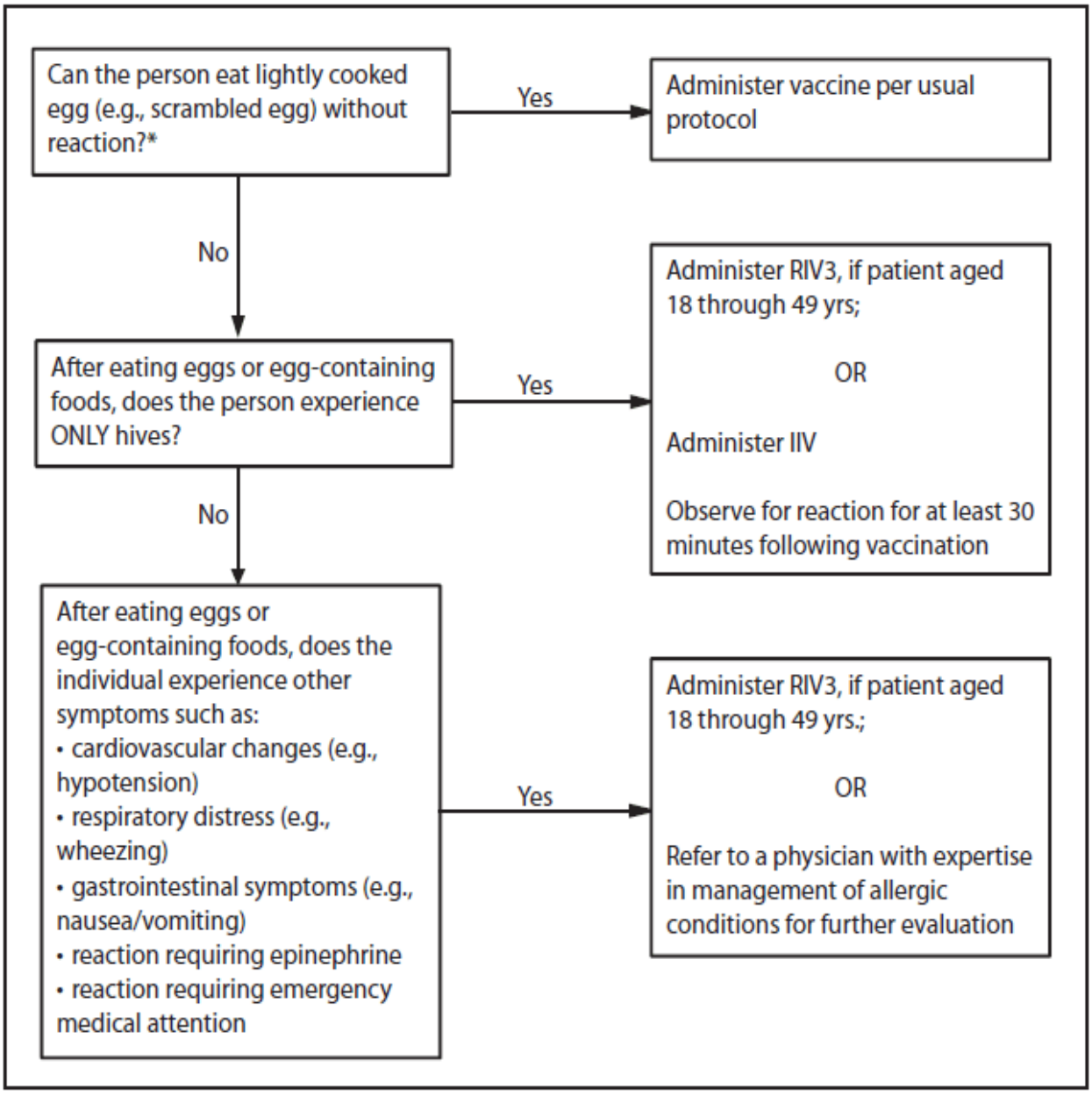
American Academy of Pediatrics, Just for Families www2.aap.org/immunization/families/families.html

CDC, Pregnant Women & Influenza (Flu)
www.cdc.gov/flu/protect/vaccine/pregnant.htm

Influenza Vaccine Dosing Algorithm for Children Aged 6 Months Through 8 Years
Advisory Committee on Immunization Practices, United States
2013-2014 Influenza Season
www.cdc.gov/mmwr/preview/mmwrhtml/rr6207a1.htm?s_cid=rr6207a1_w



Recommendations Regarding Influenza Vaccination of Persons Who Report Allergy to Eggs, Advisory Committee on Immunization Practices, United States 2013-2014 Influenza Season
www.cdc.gov/mmwr/preview/mmwrhtml/rr6207a1.htm?s_cid=rr6207a1_w



Did you know?

All significant health events that may have been related to a dose of vaccine, particularly those that lead to hospitalization, disability, or death, should be reported to the Vaccine Adverse Event Reporting System (VAERS).

Health care providers do not need to be certain the event was vaccine related in order to report it. It is not necessary to report minor adverse reactions, such as local reactions or low-grade fever.

For more information about VAERS visit http://vaers.hhs.gov or call 800-822-7967.

NYSDOH Bureau of Immunization

Phone: 518-473-4437 email: immunize@health.state.ny.us
Website: http://www.health.ny.gov/prevention/immunization/

For further information, please contact your local health department or your regional NYSDOH Bureau of Immunization:

Western Regional Office
Buffalo/Rochester: 716-847-4501

Central New York Regional Office
Syracuse: 315-477-8164

Capital District Regional Office
518-474-4578

Metropolitan Area Regional Office
New Rochelle: 914-654-7149
Central Islip: 631-851-3096
Monticello: 845-794-5627

Providers and facilities in New York City should contact the New York City Department of Health and Mental Hygiene at 347-396-2400.

Email the NYSDOH Bureau of Immunization to receive this e-newsletter directly if you did not.