**Protocol for Administration of**

**Inactivated Influenza Vaccine (IIV)**

**All Local Health Department staff who administer influenza immunizations should review the package label and the package insert for influenza vaccines in stock to assure that influenza vaccine for the current influenza season is being administered.**

* **Administer influenza vaccines as soon as locally available.**
* **Continue to offer influenza vaccine until the vaccine expiration date.**

**During annual influenza vaccination campaigns, please review the pneumococcal vaccine status for all adults & children, aged 2 years and older, with medical conditions that put them at higher risk for invasive pneumococcal disease or its complications. Review the protocols for pneumococcal vaccines (i.e., PCV13 and PPSV23) in the Core Clinical Services Guide and administer recommended age-appropriate pneumococcal vaccine doses, when indicated.**

**Indications and Usage**

Inactivated influenza vaccines (IIVs) will be available in both trivalent (IIV3) and quadrivalent (IIV4) formulations. IIV is indicated for active immunization of persons against influenza disease caused by influenza A subtype viruses and type B viruses contained in the vaccine.

* Brands of IIV are FDA licensed for particular age groups. See the package insert for the IIV brands being used in the Local Health Department to determine the FDA licensed age groups for each brand of IIV.

**Summary of Influenza Vaccination Recommendations**

* All persons aged 6 months and older who do not have contraindications should be vaccinated annually.
* An age-appropriate formulation of IIV should be used.
* Protection of persons at higher risk for influenza-related complications should continue to be a focus of vaccination efforts as providers and programs transition to routine vaccination of all persons aged 6 months and older.
* When IIV supply is limited, influenza vaccination efforts should focus on delivering vaccination to persons who do not have contraindications and who:
  + are aged 6 months through 59 months;
  + are aged 50 years and older;
  + have chronic pulmonary (including asthma and cystic fibrosis), or cardiovascular (except isolated hypertension), renal, hepatic, neurologic, hematologic, or metabolic disorders (including diabetes mellitus);
  + are immunosuppressed (including immunosuppression caused by medications or by human immunodeficiency virus or HIV infection);
  + are or will be pregnant during the influenza season;
  + are aged 6 months through 18 years and receiving long-term aspirin therapy and who therefore might be at risk for experiencing Reye syndrome after influenza virus infection;
  + are residents of nursing homes and other long-term care facilities;
  + are American Indians/Alaska Natives;
  + are extremely obese (i.e., body mass index or BMI is 40 or greater);
  + are health-care personnel, including physicians, nurses, and other workers in inpatient and outpatient-care settings, medical emergency-response workers (e.g., paramedics and emergency medical technicians), employees of nursing home and long-term care facilities who have contact with patients or residents, and students in these professions who will have contact with patients.;
  + are household contacts (including children) and caregivers of children aged less than 59 months (i.e., aged less than 5 years) and adults aged 50 years and older, particularly contacts of children aged less than 6 months; and
  + are household contacts (including children) and caregivers of persons with medical conditions that put them at high risk for severe complications from influenza.

**Dosage and Route (See package insert). Dosage is brand-specific.)**

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| --- | --- | --- |
| **Age Group** | **Dose** | **No. of Doses** |
| 6 months through 35 months | See package insert | 1 or 21 |
| 6 months through 8 years | See package insert | Only 1 dose of influenza vaccine is required if previously vaccinated with  > 2 total doses of trivalent or quadrivalent influenza vaccine before July 1 of a year IIV is being administered for the current influenza season1.  If no previous history of ≥2 total doses of trivalent or quadrivalent influenza vaccine before July 1 of a year IIV is being administered for the current influenza season, then 2 doses should be administered this season. The interval between the 2 doses should be at least 4 weeks. |
| 3 through 8 years | See package insert | 1 or 21 |
| 9 years and older | See package insert | 1 |

Note: 1The two or more previous doses need not have been received during the same season or consecutive seasons

**Anatomical Site**

* Intramuscular injection, dosage specific for age group. As with other intramuscular injections, use with caution in patients on anticoagulant therapy.
* Adults and older children should be vaccinated in the deltoid muscle.
* Infants and young children should be vaccinated in the anterolateral aspect of the thigh.
* Consult “Epidemiology and Prevention of Vaccine-Preventable Diseases” (The Pink Book), Chapter 6: Vaccine Administration, for information about appropriate needle sizes and lengths for administering vaccines.

**Contraindications**

* History of severe allergic reaction to any component of the vaccine or after previous dose of any influenza vaccine.
* History of severe allergic reaction (e.g., anaphylaxis) to egg is a labeled contraindication to the use of IIV.
* ACIP recommendations about the administration of influenza vaccine in persons with a history of egg allergy differ from the contraindications listed in an IIV package insert. However, **DO NOT administer IIV at a Local Health Department to persons with a history of egg allergy**.
  + ACIP recommends that persons with a history of egg allergy who have experienced only hives after exposure to egg should receive influenza vaccine. Refer these persons to their health care provider for evaluation and possible administration of influenza vaccine.
  + ACIP recommends that persons who report having had reactions to egg involving symptoms other than hives, such as angioedema, respiratory distress, lightheadedness, or recurrent emesis; or who required epinephrine or another emergency medical intervention, may receive any licensed and recommended influenza vaccine that is otherwise appropriate for the recipient’s age and health status. The selected vaccine should be administered in an inpatient or outpatient medical setting (including but not necessarily limited to hospitals, clinics, and physician offices). Vaccine administration should be supervised by a health care provider who is able to recognize and manage severe allergic conditions.   
    Refer these persons to their health care provider for evaluation and possible administration of influenza vaccine.
* Anaphylactic reaction to latex: The syringe tip cap of some brands of influenza vaccines packaged as single-dose prefilled syringes may contain natural rubber latex, while other brands do not. Check about latex information in the package insert specific to the IIV brands being used in Local Health Departments.
* Providers should consider observing all patients for 15 minutes after vaccination to decrease the risk for injury should they experience syncope, per the ACIP General Recommendations on Immunizations.

**Precautions**

* Moderate to severe illness with or without fever.
* History of Guillain-Barré syndrome within 6 weeks of receipt of influenza vaccine.

**Adverse Events**

See the product’s package insert.

**Storage and Handling**

Store between 35o - 46oF (2° **-** 8°C).  **DO NOT FREEZE.** See the product’s package insert.

**Other Important Notes**:

* A quadrivalent intradermally administered IIV preparation is indicated for persons aged 18 through 64 years. The vaccine is administered intradermally via a single-dose, prefilled microinjection syringe. The preferred site for administration is over the deltoid muscle. The most common adverse reactions include injection-site erythema, induration, swelling, pain, and pruritus. With the exception of pain, these reactions occurred more frequently than with intramuscular vaccine, but generally resolved within 3-7 days. This vaccine is an alternative to other IIV preparations for those in the indicated age range, with no preferential recommendation.
* Routine annual influenza vaccination is recommended by ACIP for all persons aged 65 years and older who do not have contraindications. No preference is expressed for any age-appropriate IIV formulation (e.g., standard-dose or high-dose, trivalent or quadrivalent, unadjuvanted or adjuvanted), or for any other influenza vaccine licensed for use in persons aged 65 years and older.
* **IIV formulations in multidose vials contain the vaccine preservative thimerosal. Preservative-free single dose preparations are available.**

**References:**

Annual updates of the Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices posted online by CDC on the ACIP Website, <https://www.cdc.gov/vaccines/hcp/acip-recs/index.html>.

Centers for Disease Control and Prevention. Epidemiology and Prevention of Vaccine-Preventable Diseases. Hamborsky J, Kroger A, Wolfe S, eds. 13th ed. Washington D.C. Public Health Foundation, 2015.

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