Massachusetts Department of Public Health
Massachusetts Immunization Program (MIP)

MODEL STANDING ORDERS

Inactivated Seasonal Influenza Vaccine (TIV)

Trivalent Types A and B

These model standing orders are current as of August 2010. They should be reviewed carefully against the most current recommendations and may be revised by the clinician signing them.

Annual influenza vaccination is recommended for everyone 6 months of age and older.

It is especially important that people in the following groups receive annual influenza vaccination.

- **People at Increased Risk for Influenza-Related Complications:**
  1. All children 6 months through 4 years of age.
  2. All persons ≥ 50 years of age.
  3. People 6 months - 18 years of age who are receiving long-term aspirin therapy.
  4. Women who will be pregnant during influenza season and postpartum women.
  5. People ≥ 6 months of age who have:
     - Chronic pulmonary (including asthma), cardiovascular (except hypertension), renal, hepatic, neurological, hematologic, or metabolic disorders, including diabetes;
     - Immunosuppression (including immunosuppression caused by medications or HIV);
     - 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 of aspiration.
  6. Residents of nursing homes and other chronic-care facilities.

New!

  7. American Indians/Alaska Natives.

New!

  8. People who are morbidly obese (BMI ≥ 40).
- **Persons Who Can Transmit Influenza to Persons at High Risk:**
  1. Health care personnel, employees of assisted living facilities, people who provide home care to persons at risk, medical emergency response workers, and students in these professions.
  2. Household contacts (including children) and caregivers of:
     - Children younger than age 5 years and adults aged 50 years and older, and
     - People with medical conditions that put them at risk for severe complications from flu.
- **Persons at increased risk of exposure to influenza:**
  1. Persons who provide essential community services.
  2. Students and other persons in institutional settings (e.g., dormitories).
  3. Certain travelers.

ORDER:

1. Provide patient, parent or legal representative with a copy of the Vaccine Information Statement (VIS) and answer any questions. VIS's in English and other languages are available online at http://www.immunize.org/vis.

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2. Screen for contraindications according to Table 2.
3. Administer TIV intramuscularly (IM), according to the recommended age-specific dose and schedule (Table 3). Administer IM vaccines at a 90^0 angle with 22-25-gauge needle. The needle length for IM injections depends upon the age, gender, and/or weight of the vaccine recipient (see Table 1 below). **Always check the package insert prior to administration of any vaccine.**

Table 1. Needle Length and Injection Site for IM Injection

6 month – 18 Years of Age		
Age	**Needle Length**	**Injection Site**
Infants (6 - 12 months)	1”	Anterolateral thigh
Toddlers (12 months – 35 months)	1” – 1¼ ”	Anterolateral thigh (preferred)
	5/8” – 1”	Deltoid
Children (3 – 18 y/o)	5/8”* – 1”	Deltoid (preferred)
	1” – 1¼ “	Anterolateral thigh
Adults 19 Years of Age and Older		
Sex/Weight	**Needle Length**	**Injection Site**
Male and female < 130 lbs (< 60 kg)	1”	Deltoid
Female 130 – 200 lbs (60-90 kg)	1” – 1 ½ “	Deltoid
Male 130 – 260 lbs (60 – 118 kg)	1½”	Deltoid
Female > 200 lbs (>90 kg)	1½”	Deltoid
Male > 260 lbs (> 118 kg)	1½”	Deltoid

* A 5/8” needle may be used only if the skin is stretched tight, the subcutaneous tissue is not bunched, and the injection is made at a 90-degree angle.

4. Shake the vial well before withdrawing and shake the prefilled syringe well before administering.
5. Administer inactivated seasonal influenza vaccine simultaneously with, or any time before after, all other live and inactivated vaccines indicated.
6. If possible, observe patient for an allergic reaction for 15 - 20 minutes after administering vaccine.
7. Facilities and personnel should be available for treating immediate hypersensitivity reactions.
8. Report administration errors to the Institute for Safe Medical Practices (ISMP) via the Medication Error Reporting Program (MERP)website: http://www.ismp.org
9. Report clinically significant adverse events to the Vaccine Adverse Event Reporting System (VAERS) at 1-800-822-7967 or http://www.vaers.hhs.gov/.
10. See *General Protocols for Vaccine Storage, Administration, Standing Orders and Mass Immunization Clinics* *http://www.mass.gov/Eeohhs2/docs/dph/cdc/immunization/mso_protocols_general.pdf*

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Table 2. Contraindications and Precautions to Inactivated Influenza Vaccine

Valid Contraindications for Inactivated Influenza Vaccine	Invalid Contraindications (Give Inactivated Influenza Vaccine)
Anaphylactic reaction to a previous dose of influenza vaccine; chicken eggs[1] or any other component of the vaccine (see package insert for specific components)[2]	Mild illness with or without fever
	Non-anaphylactic allergy to any component of the vaccine
Precaution to influenza vaccine:	HIV infection[4]
Moderate to severe acute febrile illness (temporary precaution).	Pregnancy[5] or breast feeding
Guillain-Barré syndrome (GBS) ≤ 6 weeks of receiving a dose of influenza vaccine.[3]	Treatment with warfarin (Coumadin), theophylline, phenytoin, or aminophylline[6]
	Anticoagulation or bleeding disorder[7]

[1] Asking people if they can eat eggs without adverse effects is a reasonable way to determine who might be at risk for an allergic reaction.

[2] Refer persons with a history of anaphylaxis to a vaccine component, but who are at risk for complications from influenza, to their health care provider for evaluation, desensitization and possible administration of influenza vaccine. Protocols have been developed for safely administering influenza vaccine to persons with egg allergies.

[3] It may be prudent to avoid influenza vaccination of persons who are not at high risk of complications from influenza and who have experienced GBS within 6 weeks of a previous dose of influenza vaccine. As an alternative, consider antiviral chemoprophylaxis for these persons.

[4] Influenza vaccination will benefit many HIV-infected patients, including HIV-infected pregnant women, but may not induce protective antibodies in patients with advanced disease. A second dose during the same flu season *does not* improve immune response in these patients.

[5] Pregnant and postpartum women have an increased risk for complications from flu. No adverse fetal effects have been associated with flu vaccine. **Administer TIV in any trimester**.

[6] Although flu vaccine can inhibit the clearance of warfarin, theophylline, phenytoin, and aminophylline, studies show no adverse clinical effects. High-risk patients who take these medications *should* receive flu vaccine.

[7] Minimize the risk of bleeding after an IM injection in these patients by administering the vaccine immediately after the patient's receipt of replacement factor. Use a 23-gauge (or smaller) needle and immediately apply direct pressure to the vaccination site for ≥ 2 minutes.

Table 3. Inactivated influenza vaccine dosage, by age group - United States

Age Group	Dose	No. of Doses
6 – 35 months	0.25 mL	1 or 2[1]
3 – 8 years	0.5 mL	1 or 2[1]
≥ 9 years	0.5 mL	1

[1] See **Guide for determining number of 2010--2011 seasonal influenza vaccine doses** below.

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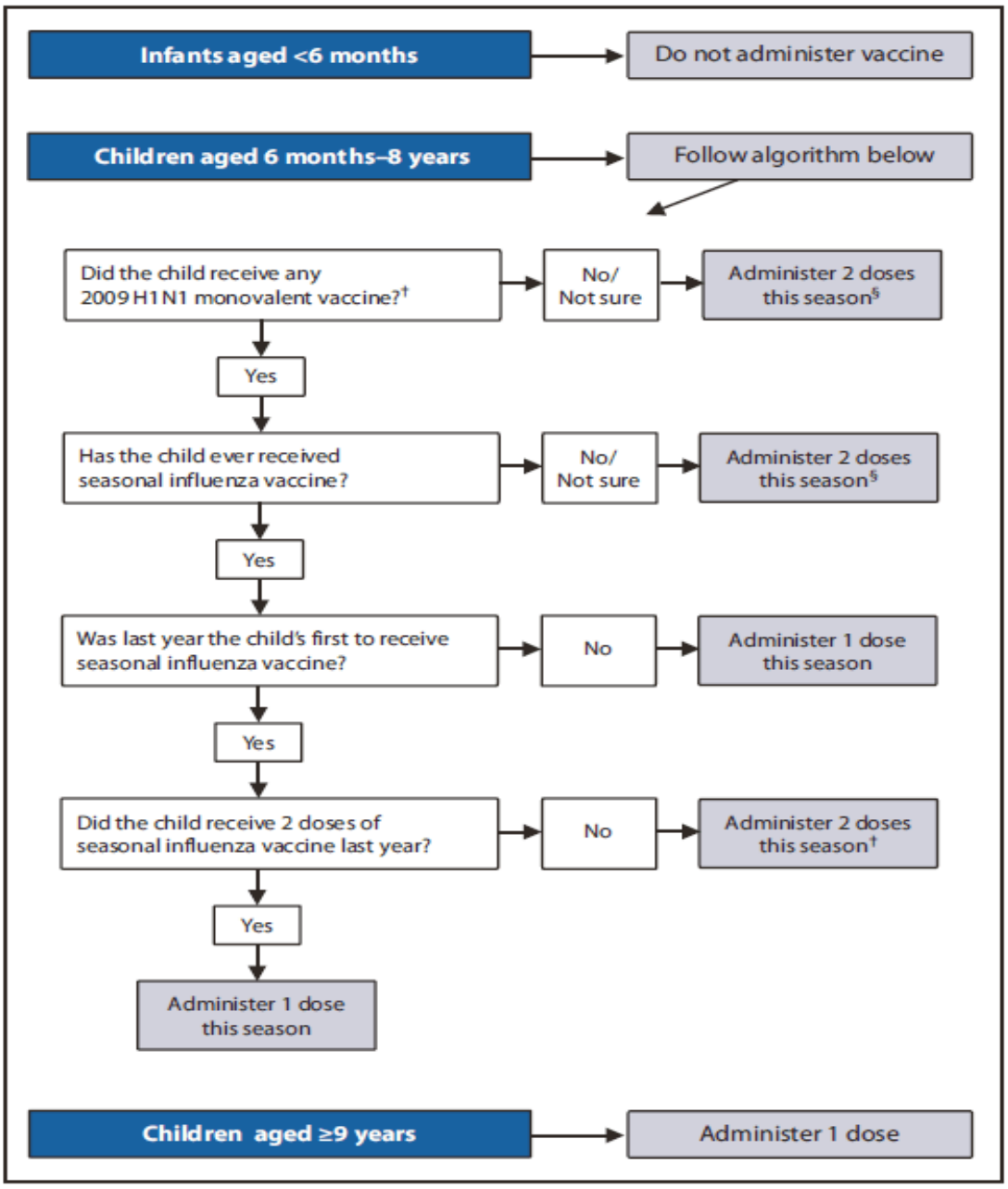
Dosing recommendations for children younger than 9 years of age:

- Children < age 9 years who have had at least 2 doses of seasonal flu vaccine in their lifetime **and** at least one dose of pandemic H1N1 vaccine need only one dose of flu vaccine this season.
- All other children < age 9 years, including those with an uncertain flu vaccine history, should received 2 doses of seasonal flu vaccine, ≥ 4 weeks apart.

Guide for Determining Number of 2010--2011 Seasonal Influenza Vaccine Doses Recommended for Children



- More guidance on determining the appropriate number of doses is available at www.mass.gov/flu.

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Table 4. Approved Inactivated Influenza Vaccines (TIV) for Different Age Groups

Manufacturer	Trade Name	Dose/ Presentation	Thimerosal (mcg Hg/0.5 mL dose)	Age Group
sanofi pasteur 800-822-2463 https://www.vaccineshoppe.com/	Fluzone® Inactivated	0.25 mL prefilled syringe	0	6 – 35 mos
		0.5 mL prefilled syringe	0	≥ 36 mos
		0.5 mL vial	0	≥ 36 mos
		5.0 mL multidose vial	25	≥ 6 mos
	New formulation! Fluzone® High-Dose	0.5 mL prefilled syringe	0	≥ 65 yrs
Novartis 800-244-7668 https://www.novartisvaccinesdirect.com/index	Fluvirin® Inactivated	0.5 mL prefilled syringe	≤ 1.0	≥ 4 yrs
		5.0 mL multidose vial	25	≥ 4 yrs
	New vaccine! Agriflu, Inactivated	0.5 mL prefilled syringe	0	≥ 18 yrs
GlaxoSmithKline 866-475-8222 https://www.gskvaccinesdirect.com/gsk/en/US/adirect/gsk	Fluarix®, Inactivated	0.5 mL prefilled syringe	0	New age! ≥ 3 yrs
	FluLuval™, Inactivated	5.0 mL multidose vial	25	≥ 18 yrs
CSL Biotherapies 888-435-8633	Afluria®, Inactivated	0.5 mL prefilled syringe	0	New age! ≥ 9 yrs[1]

Based upon available information to date, the ACIP recommends the following:

- Do not use Afluria in children aged 6 months through 8 years.
- Use other age-appropriate, licensed seasonal influenza vaccine formulations to prevent influenza in children aged 6 months through 8 years.
- If no other age-appropriate, licensed seasonal influenza vaccine is available for a child aged 5 years through 8 years who has a medical condition that increases their risk for influenza complications, Afluria may be given. Discuss the benefits and risks of influenza vaccination with the parents or caregivers before administering Afluria.

Resources:

CDC. Prevention and control of influenza with vaccines: recommendation of the ACIP, 2010. MMWR Early Release 2010;59 July 29, 2010:1-62. http://www.cdc.gov/mmwr/pdf/rr/rr59e0729.pdf

Package inserts for all 2010-2011 flu vaccine formulations: www.immunize.org/fda/pa_influenza.asp

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