Influenza

Boston Public Health Commission
Communicable Disease Control Division

Phone: 617-534-5611

Influenza

- Occurs every year in Boston
  - Usually November through March
- Each year in the United States
  - 36,000 deaths
- Caused by influenza viruses
- Spreads via infected droplets
- Symptoms include sudden fever, cough, muscle aches, headache, general weakness. Symptoms usually begin 1 to 3 days after breathing in the virus
- Infectious 1 day before symptoms until about a week afterwards (most often the first 4 days)

How does it spread?

- Droplet Transmission.
  - Most transmission is through the respiratory droplet route

- Influenza *may* also be transmitted through contact with contaminated surfaces, followed by eye, mouth or nose contact

Complications

- Complications can include
  - Pneumonia
  - Dehydration
- Exacerbation of underlying medical conditions

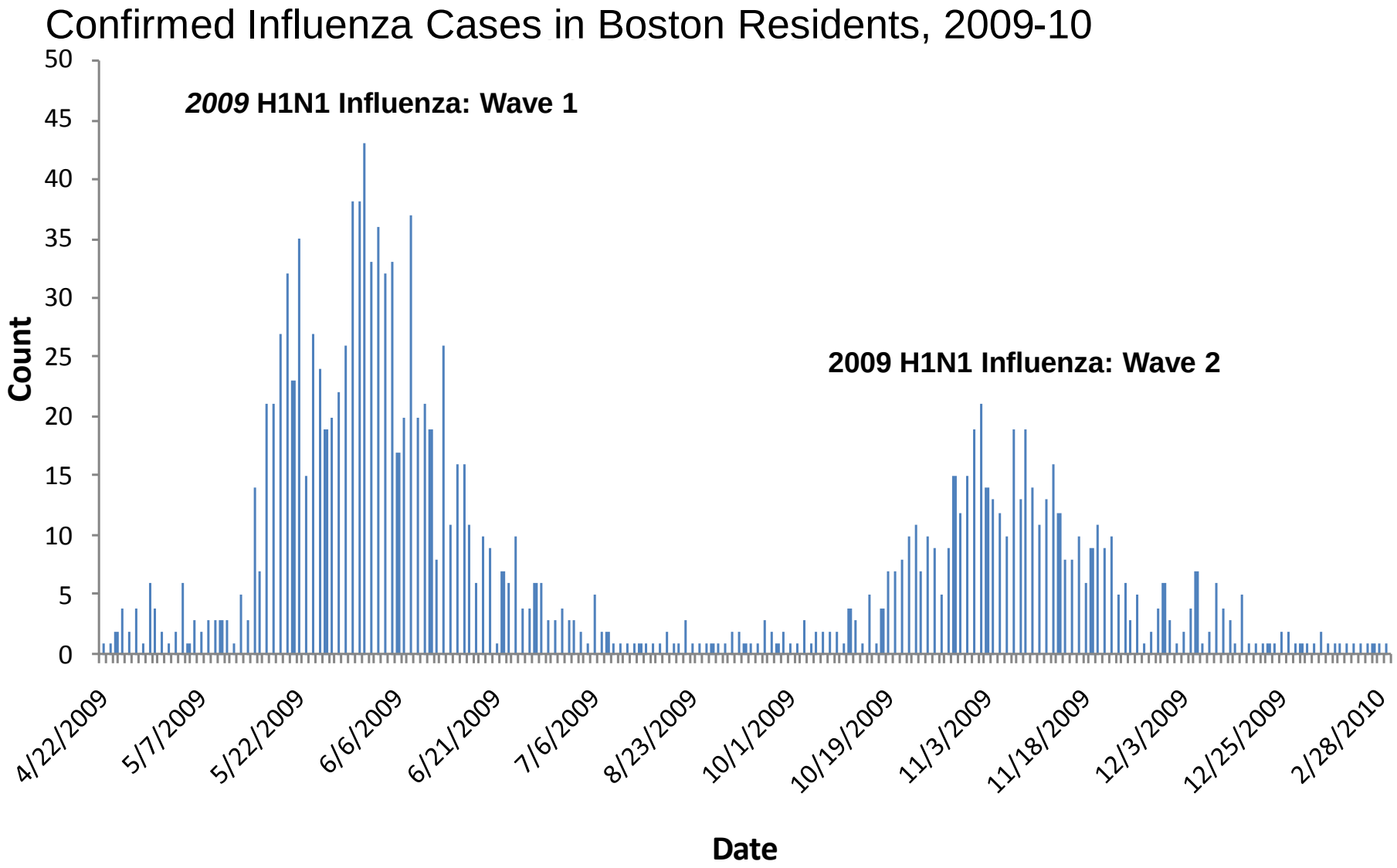
Treatment

- For most treatment is supportive with rest, fever reducing medicine, and fluids- "flu care at home"

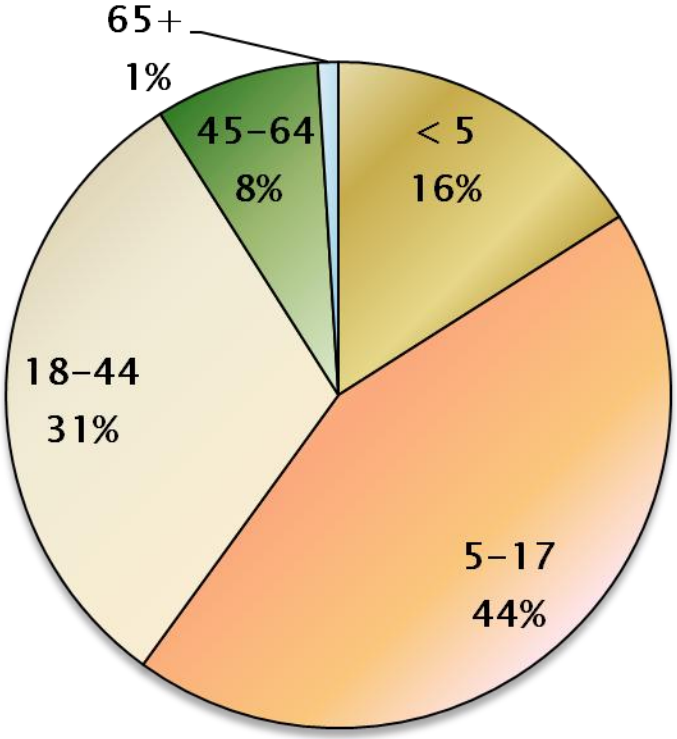
- Specific antiviral medications include
  - oseltamivir
  - zanamivir
  - Amantadine (not usually recommended due to resistance)
  - Rimantadine (not usually recommended due to resistance)

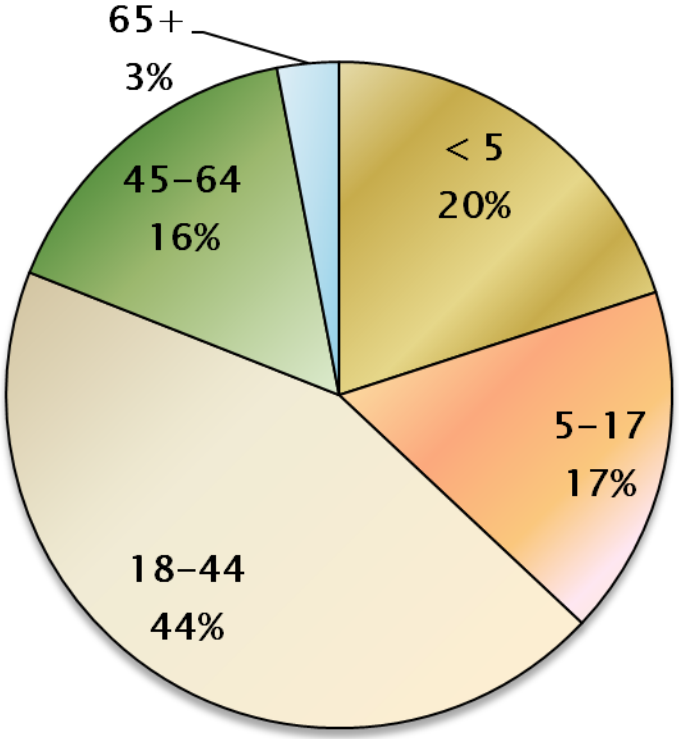
- Guidance for treatment is found at www.cdc.gov and MDPH website.

What happened in 2009-2010?



Age of Reported Influenza* Cases by Season: Boston, 2009-2010





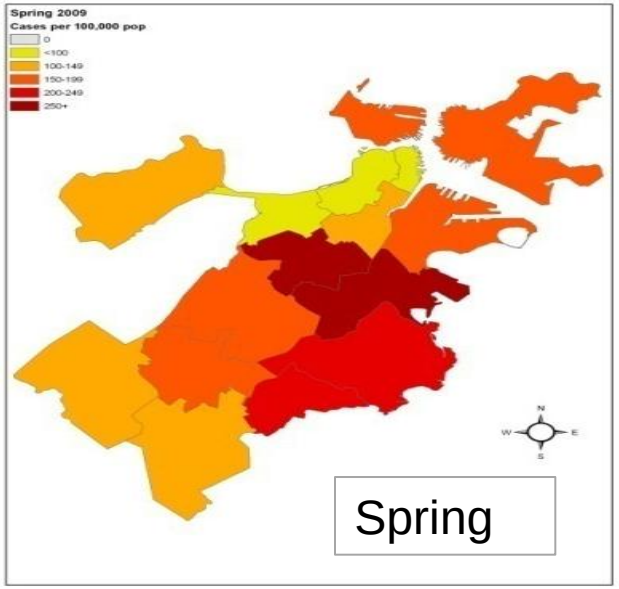
Spring : 4/16/2009-7/25/2009

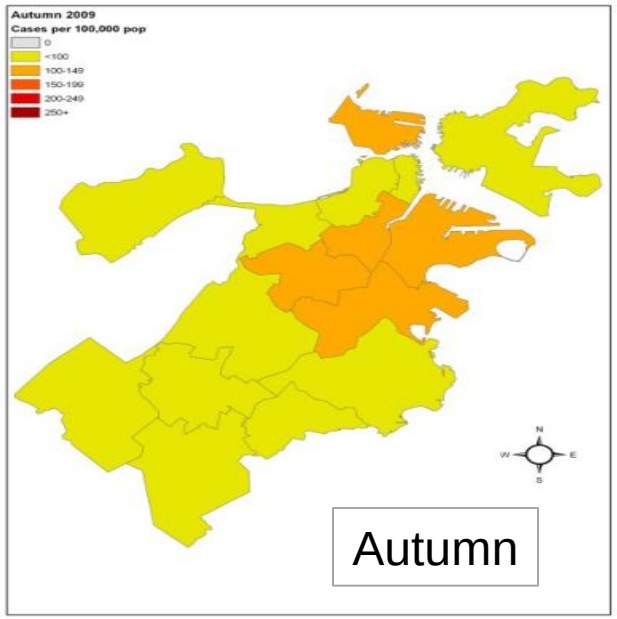
Autumn: 8/30/2009-12/12/2009

*Includes confirmed 2009 H1N1 and Non-specified Influenza A

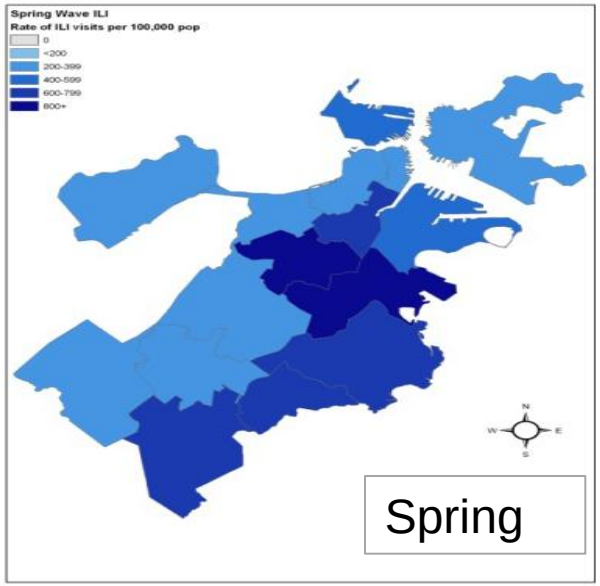
Neighborhood Distribution of Influenza: Boston, 2009

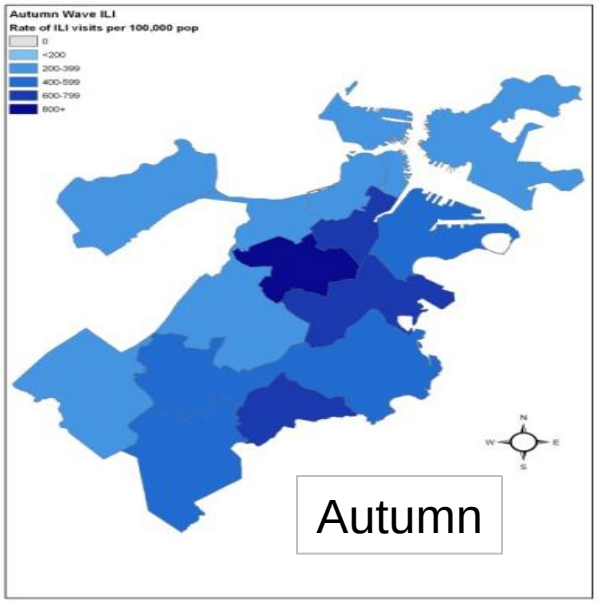
Confirmed Cases, per 100,000



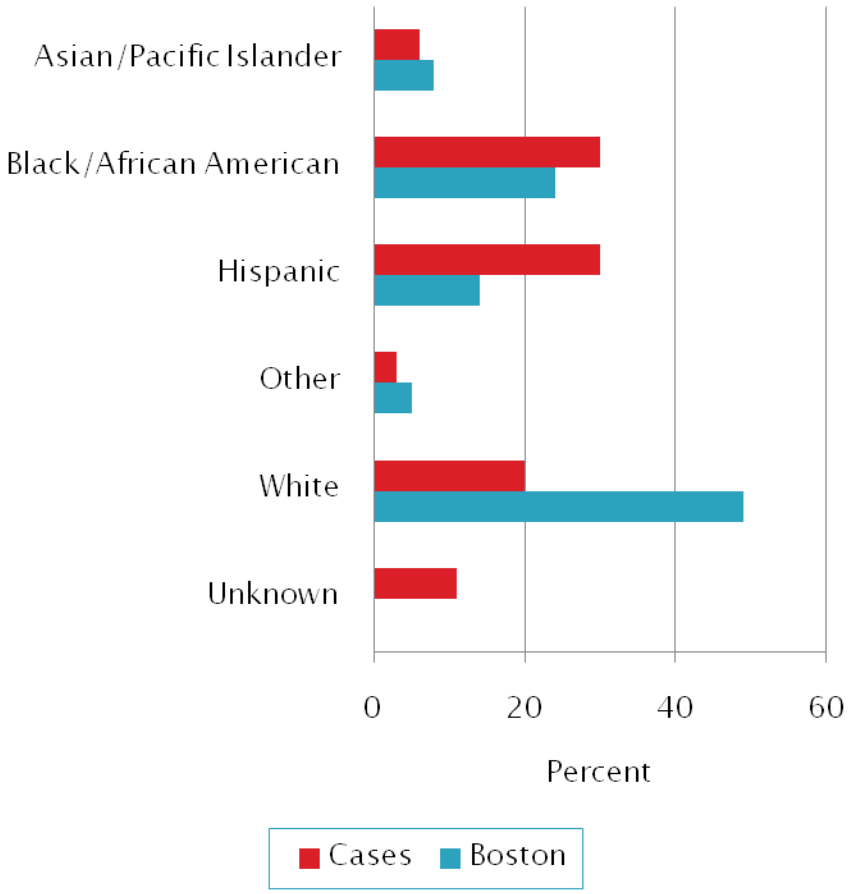


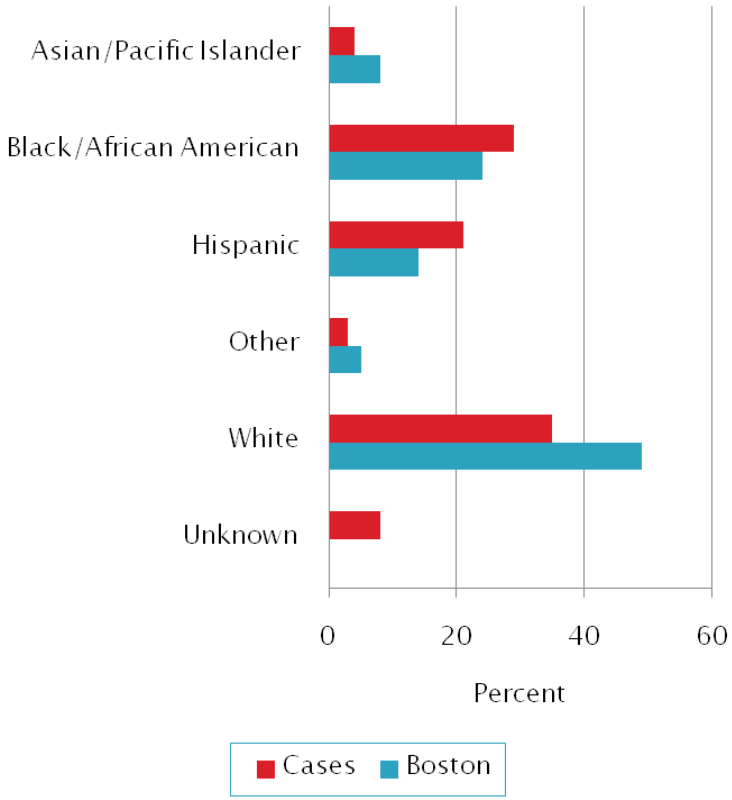
ED ILI Visits, per 100,000





Race/Ethnicity of Reported Influenza* Cases Compared to the Boston Population by Season





Spring : 4/16/2009-7/25/2009

Autumn: 8/30/2009-12/12/2009

*Includes confirmed 2009 H1N1 and Non-specified Influenza A

What is going to happen this year?

- Influenza is unpredictable
  - Some H3 strains are already circulating
  - No one knows how much 2009 H1N1 will re-appear

Prevention: Some Messages Never Change!

Influenza Vaccine

- Widely available!

- Vaccine will contain these antigens
  - A/California/7/2009 (H1N1)-like
  - A/Perth/16/2009 (H3N2)-like
  - B/Brisbane/60/2008-like

- Available as an injection or as a nose spray (for those in certain groups)

- Free flu clinics are available throughout Boston and will be advertised on www.bphc.org. We encourage you to open your clinic to the surrounding neighborhood and to provide information for the website.

Who gets which vaccine?

Flu Shot

- Everyone 6 months and older without an allergy to eggs or other part of the vaccine
- Have not had a serious reaction to a previous dose of flu vaccine
- Those with a history of Guillain-Barré should talk with their healthcare provider before getting a vaccine

Nasal Spray

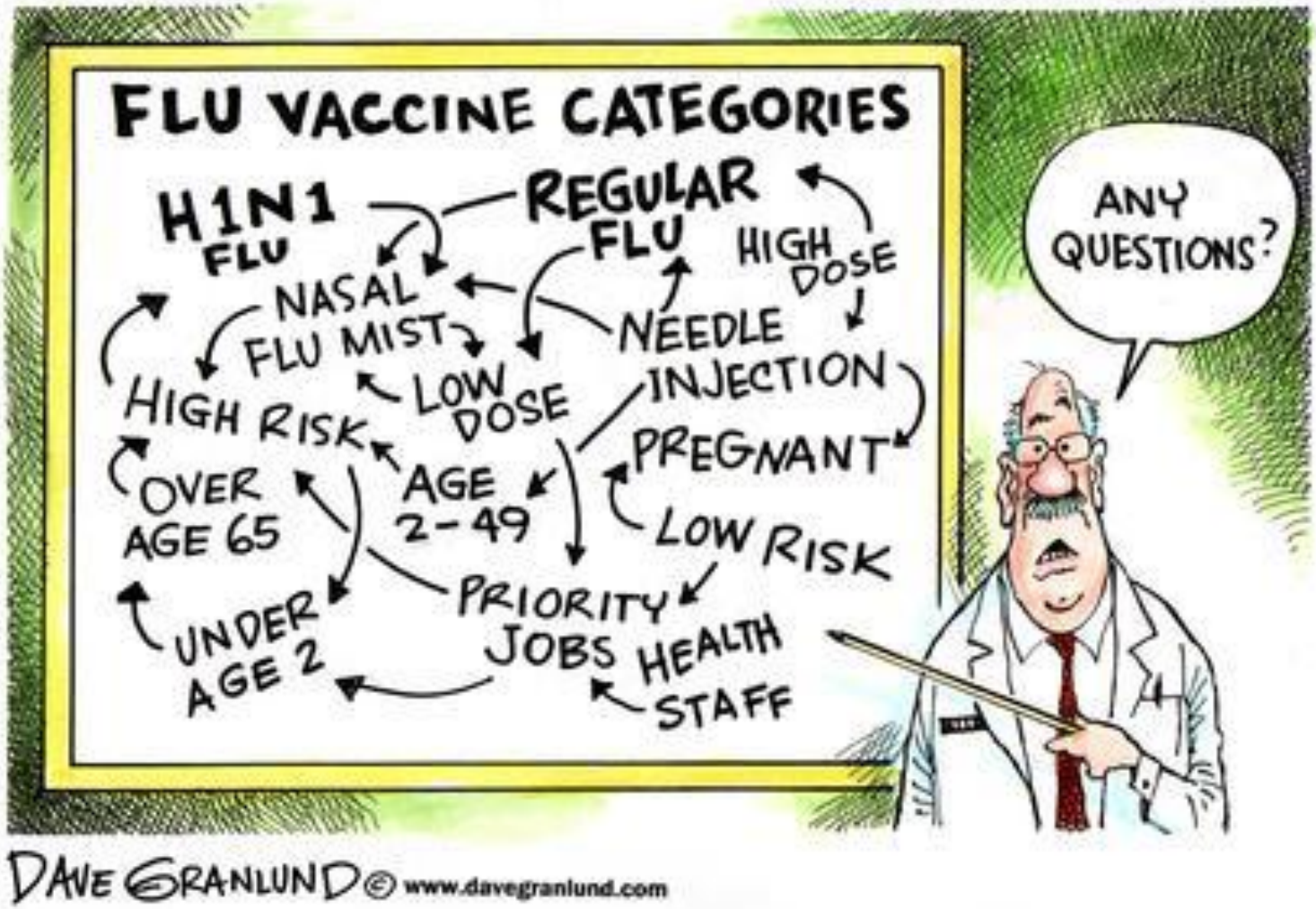
- Those who are 2 to 49 years old and are healthy*
- Not pregnant

How many doses of vaccine?

- 1 dose for everyone this year (the H1N1 strain is incorporated in the seasonal vaccine)

- Except children 6 months through 8 years who have received less than two doses of seasonal vaccine in their lifetime and did not receive at least one dose of 2009 H1N1 vaccine

Last year: Who should get the flu vaccine?



This year: Who should get the vaccine?

- It's Simple!
  - Everyone 6 months of age and older should get an influenza vaccine (This is a New Recommendation)

Especially: Those at highest risk

- **All children 6 months through 4 years of age**
- **All persons over 50 years of age**
- **People 6 months to 18 years of age who are receiving long-term aspirin therapy**
- **Women who will be pregnant or postpartum during influenza season**
- **Residents of nursing homes and long term care facilities**
- **American Indians/Alaska Natives**
- **People who are morbidly obese** (BMI $\geq$ 40)

- **Anyone with chronic conditions such as:**
  - Chronic pulmonary (including asthma), cardiovascular (except hypertension), renal, hepatic, neurological, hematologic, or metabolic disorders, including diabetes
  - Weakened immune system caused by medications or illness

- **Persons who can transmit influenza to those at high risk:**
  - Health care personnel
  - Household contacts and caregivers of children less than 5 years and adults older than 50 years of age, and of persons with medical conditions that put them at higher risk for severe complications from influenza.

- **Persons at increased risk of exposure to influenza:**
  - Travelers, persons who provide community services or student (esp. in dorms)

Flu Vaccine Administration

Screening Tool

- The screening tool can help determine the correct type of vaccine to provide
- Have the person sign the screening tool

Seasonal **Live Nasal Flu Spray** Vaccine Sign-Up

NAME: (last)	(First)	(M.I.)
ADDRESS		
CITY:	STATE:	ZIP:
PHONE:	DATE OF BIRTH:	AGE:

Please answer the following questions:

If you are a parent or guardian, answer questions as they apply to the person being vaccinated

	YES	NO
1. Are you sick today?	☐	☐
2. Have you ever had an allergy to eggs or to any other component of the flu vaccine?	☐	☐
3. Have you ever had a serious reaction to any flu vaccine in the past?	☐	☐
4. Are you under 2 years of age or older than 49 years old?	☐	☐
5. Do you have any of the following medical conditions:	☐	☐

- Lung disease including **asthma**, wheezing, or COPD (chronic obstructive pulmonary disease)
- Kidney or liver disease
- Heart disease
- Anemia or another blood disorder
- Metabolic disease (including diabetes)
- Nerve or muscle disorders (such as seizures or cerebral palsy)
- Have a weakened immune system
- Are in contact with someone who has a weak immune system so that they need a protected environment
- Are a child or teen on long term aspirin treatment

Seasonal Flu **Shot** Vaccine Sign-Up

NAME: (last)	(First)	(M.I.)
ADDRESS		
CITY:	STATE:	ZIP:
PHONE:	DATE OF BIRTH:	AGE:

Please answer the following question:

If you are a parent or guardian, answer questions as they apply to the person being vaccinated

	YES	NO
1. Are you sick today?	☐	☐
2. Do you have an allergy to eggs, gelatin, thimerosal, latex or to any other part of the flu vaccine?	☐	☐
3. Have you ever had a serious reaction to any flu vaccine in the past?	☐	☐
4. Have you ever had Guillain-Barré syndrome? (a severe paralytic illness)	☐	☐

I have received information about flu vaccine and have read *Influenza Vaccine: What you Need to Know*. I have had the opportunity to have my questions answered. I understand the risks and benefits and wish to receive the Influenza Vaccine.

X Signature: _____ Date: _____

Administration Site:

☐ Deltoid: Right Left

☐ Anterolateral thigh: Right Left

Vaccine

Expiration Date:

Date of Administration:

Clinic Location:

Lot Number:

Manufacture Company:

VIS Print Date: 8/10/2010

VIS given to client: ☐ YES

Signature of Nurse: _____ Date: _____

Two Types of Flu Vaccine

- Flu Shot (Trivalent Inactivated Vaccine, TIV):
  - A shot that is given in the arm and is an inactivated (dead) form of the influenza virus

- Nasal spray (Live Attenuated Influenza Vaccine, LAIV):
  - A spray this is administered in the nose and is made with live, weakened influenza viruses that do not cause the flu.

FLU SHOT

Flu Vaccine

- Who can get it
  - Just about anyone 6 months of age and older

- Who can't get it
  - Infants younger than 6 months of age
  - People who have had a severe allergic (anaphylactic) reaction to eggs, latex or any other component of the vaccine
  - People who have had a severe reaction to a previous dose of influenza vaccine

- Precautions (Refer to their Healthcare Provider)
  - People with a history of Guillain-Barré syndrome should talk to their healthcare provider before getting a flu shot.
  - People with moderate to severe acute febrile illness

Side Effects from Flu Shot

- Mild Problems
  - Soreness, redness or swelling where the shot was given, fever, aches, cough. In studies, these symptoms were no more common than in people who received a placebo.
  - These may begin soon after the shot and last 1-2 days

- Serious Problems
  - Life threatening allergic reactions from flu vaccine are rare and usually occur within a few minutes to a few hours. In 1976, GBS was associated with flu vaccine, but this has not been seen with subsequent flu vaccines. The risk is no more than 1 to 2 case per million people vaccinated.

Vaccine Administration

How to Administer Intramuscular (IM) Injections

Administer these vaccines by the intramuscular (IM) route: Diphtheria-tetanus (DT, Td) with pertussis (DTaP, Tdap); *Haemophilus influenzae* type b (Hib); hepatitis A (HepA); hepatitis B (HepB); human papillomavirus (HPV); inactivated influenza (TIV); meningococcal conjugate (MCV); and pneumococcal conjugate (PCV). Administer inactivated polio (IPV) and pneumococcal polysaccharide (PPSV) either IM or SC.

Patient age	Injection site	Needle size
Newborn (0–28 days)	Anterolateral thigh muscle	⅝"* (22–25 gauge)
Infant (1–12 months)	Anterolateral thigh muscle	1" (22–25 gauge)
Toddler (1–2 years)	Anterolateral thigh muscle	1–1¼" (22–25 gauge)
	Alternate site: Deltoid muscle of arm if muscle mass is adequate	⅝–1"* (22–25 gauge)
Children (3–18 years)	Deltoid muscle	⅝–1"* (22–25 gauge)
	Alternate site: Anterolateral thigh muscle	1–1¼" (22–25 gauge)
Adults 19 years and older	Deltoid muscle of arm	1–1½"†‡ (22–25 gauge)
	Alternate site: Anterolateral thigh muscle	1–1¼" (22–25 gauge)

*A ⅝" needle may be used only if the skin is stretched tight, the subcutaneous tissue is not bunched, and injection is made at a 90° angle.
†A ⅝" needle is sufficient in adults weighing <130 lbs (<60 kg); a 1" needle is sufficient in adults weighing 130–152 lbs (60–70 kg); a 1–1½" needle is recommended in women weighing 152–200 lbs (70–90 kg) and men weighing 152–260 lbs (70–118 kg); a 1½" needle is recommended in women weighing >200 lbs (>90 kg) or men weighing >260 lbs (>118 kg).

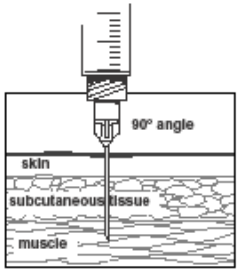
Needle insertion

Use a needle long enough to reach deep into the muscle.

Insert needle at a 90° angle to the skin with a quick thrust.

(Before administering an injection, it is not necessary to aspirate, i.e., to pull back on the syringe plunger after needle insertion.¶)

Multiple injections given in the same extremity should be separated by a minimum of 1", if possible.

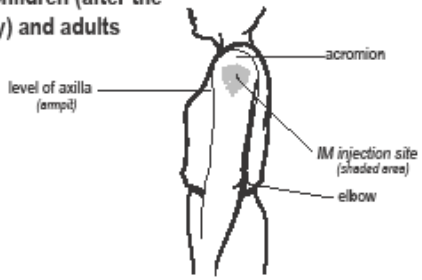


¶CDC. "ACIP General Recommendations on Immunization" at www.immunize.org/acip

IM site for infants and toddlers

Insert needle at a 90° angle into the anterolateral thigh muscle.

IM site for children (after the 3rd birthday) and adults



Insert needle at a 90° angle into thickest portion of deltoid muscle — above the level of the axilla and below the acromion.

Technical content reviewed by the Centers for Disease Control and Prevention, February 2009.

www.immunize.org/catg.d/p2020.pdf • Item #P2020 (2/09)

Immunization Action Coalition • 1573 Selby Ave. • St. Paul, MN 55104 • (651) 647-9009 • www.immunize.org • www.vaccineinformation.org • admin@immunize.org

Vaccine Administration Techniques in Children

- Techniques for vaccinating a child
- Landmarks for giving a shot
- Safety when giving a child a shot

Dosing for Flu Vaccine

Guide for determining the number of doses of influenza vaccine to give to children ages 6 months through 8 years during the 2010–11 influenza season

Did the child receive influenza vaccine prior to the 2009–10 season?	How many doses did the child receive in the 2009–10 season?		Number of doses recommended for the 2010–11 season
	H1N1[1]	Seasonal	
No, yes, or unknown	0 or unknown	0, 1, 2, or unknown	2[2]
No or unknown	1 or 2	0, 1, or unknown	
No or unknown	1 or 2	2	1
Yes	1 or 2	0, 1, or 2	1

1. Children who had a lab-confirmed 2009 H1N1 virus infection (e.g., reverse transcription-polymerase chain reaction or virus culture specific for H1N1 virus) are likely to be immune to this virus and can be considered to have a "1" in this column.
2. Give dose #2 a minimum of 4 weeks after dose #1. Children age 2 years or older can receive 2 injectable doses, 2 nasal-spray doses, or 1 of each.

Technical content reviewed by the Centers for Disease Control and Prevention, August 2010.

www.immunize.org/catg.d/p3093.pdf • Item #P3093 (8/10)

LAIV

LAIV

- Who can get it
  - Healthy people 2 through 49 years of age who are not pregnant.
- Who can't get it
  - Anyone with an anaphylactic reaction to a previous dose of influenza vaccine, or any component of the vaccine including eggs, gentamicin, gelatin or arginine
  - Anyone younger than 2 years or older than 49 years
  - Immunosuppressed persons
  - Anyone who has had another live vaccine within the past 4 weeks
  - Children age 2-17 years receiving aspirin therapy or other salicylates
  - Pregnant women
  - Household or other close contact of a person with severe immunosuppression requiring a protective environment
  - Anyone with the following underlying health conditions
    - Asthma, reactive airway disease
    - Wheezing episode in the previous 12 months for children age 2-4 years
    - Other chronic disorders of the pulmonary or cardiovascular system
    - Other underlying medication conditions, including metabolic diseases such as diabetes, renal dysfunction and hemoglobinopathies

Precautions for Giving LAIV

- Do not vaccinate when:
  - Someone is taking influenza antiviral medication
  - Someone has moderate or severe illness
- Refer to their healthcare provider:
  - Person with a history of Guillain-Barré syndrome within 6 weeks of previous dose of flu vaccine
- Defer administration of LAIV if severe nasal congestion is present

LAIV Vaccine Administration

- Any healthcare provider can **administer** LAIV. This includes persons at risk for influenza complications who cannot themselves receive LAIV and persons over 50 years of age. Those who are severely immunosuppressed or those with close contact with severely immunocompromised persons (who require a protective environment) should not administer LAIV.

Side Effects from Vaccine

- Mild problems
  - Some children and adolescents have reported runny nose, nasal congestion, cough, fever, wheezing, headaches, muscle aches, abdominal pain or occasional vomiting or diarrhea
  - Adults have reported runny nose, nasal congestion, cough, chills, tiredness/weakness, sore throat, headache

- Severe problems
  - Life threatening allergic reactions are rare and if they do occur happen within a few minutes to a few hours.

Administering Vaccine

Vaccine Products

Influenza Vaccine Products for the 2010–11 Influenza Season

Information about influenza vaccine products

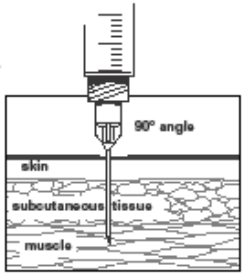
Manufacturer	Trade Name	How Supplied	Mercury Content (µg Hg/0.5mL)	Age Group	CPT Code[1]
CSL Biotherapies	Afluria (TIV)[2]	0.5 mL (single-dose syringe)	0	9 years & older[3]	90658
GlaxoSmithKline	Fluarix (TIV)	0.5 mL (single-dose syringe)	0	3 years & older	90658
ID Biomedical Corp of Quebec, a subsidiary of GlaxoSmithKline	FluLaval (TIV)	5.0 mL (10-dose vial)	25	18 years & older	90658
MedImmune	FluMist (LAIV)[2]	0.2 mL (single-use nasal spray)	0	2 through 49 years	90660
Novartis Vaccines	Fluvirin (TIV)	0.5 mL (single-dose syringe)	≤1	4 years & older	90658
		5.0 mL (10-dose vial)	25		90658
	Agriflu (TIV)	0.5 mL (single-dose syringe)	0	18 years & older	90658
sanofi pasteur	Fluzone (TIV)	0.25 mL (single-dose syringe)	0	6 through 35 months	90655
		5.0 mL (multi-dose vial)	12.5	6 through 35 months	90657
		0.5 mL (single-dose syringe)	0	36 months & older	90658
		0.5 mL (single-dose vial)	0	36 months & older	90658
		5.0 mL (multi-dose vial)	25	36 months & older	90658
	Fluzone High-Dose (TIV)	0.5 mL (single-dose syringe)	0	65 years & older	90662

1. Current Procedural Terminology (CPT) is a registered trademark of the American Medical Association (AMA); it is used here with AMA's permission.
2. TIV is the abbreviation for trivalent inactivated influenza vaccine (injectable); LAIV is the abbreviation for live attenuated influenza vaccine (nasal spray).
3. On August 6, 2010, ACIP recommended that Afluria not be used in children younger than age 9 years. If no other age-appropriate TIV is available, Afluria may be considered for a child age 5 through 8 years at high risk for influenza complications, after risks and benefits have been discussed with the parent or guardian. Afluria should not be used in children younger than age 5 years.

How to administer injectable and nasal spray influenza vaccines

Intramuscular injection of Trivalent Inactivated Influenza Vaccines (TIV)

1. Use a needle long enough to reach deep into the muscle. Infants age 6 through 11 mos: 1"; 1 through 2 yrs: 1–1¼"; children and adults 3 yrs and older: 1–1½".
2. With your left hand*, bunch up the muscle.
3. With your right hand*, insert the needle at a 90° angle to the skin with a quick thrust.
4. Push down on the plunger and inject the entire contents of the syringe. There is no need to aspirate.
5. Remove the needle and simultaneously apply pressure to the injection site with a dry cotton ball or gauze. Hold in place for several seconds.
6. If there is any bleeding, cover the injection site with a bandage.
7. Put the used syringe in a sharps container.



*Use the opposite hand if you are left-handed.

Intranasal administration of Live Attenuated Influenza Vaccine (LAIV)

1. FluMist (LAIV) is for intranasal administration only. Do not inject FluMist.
2. Remove rubber tip protector. Do not remove dose-divider clip at the other end of the sprayer.
3. With the patient in an upright position (i.e., head not tilted back), place the tip just inside the nostril to ensure LAIV is delivered into the nose. The patient should breathe normally.
4. With a single motion, depress plunger as rapidly as possible until the dose-divider clip prevents you from going further.
5. Pinch and remove the dose-divider clip from the plunger.
6. Place the tip just inside the other nostril, and with a single motion, depress plunger as rapidly as possible to deliver the remaining vaccine.
7. Dispose of the applicator in a sharps container.

Technical content reviewed by the Centers for Disease Control and Prevention, August 2010.

www.immunize.org/catg.d/p4072.pdf • Item #P4072 (8/20/10)

After Any Vaccine Has Been Administered

- If possible observe patient for 15-20 minutes after administering vaccine.
- Give the patient a vaccine immunization card and provide any follow-up instructions needed.
- Remind patient that it does take 2 week for vaccine to work so continue to use other prevention measures
- Personnel should be available for treating any reactions

Emergency Procedures

- Syncope
- Treatment for local reaction
- Treatment for mild symptoms of anaphylaxis
- Treatment for more severe or potentially life-threatening systemic anaphylaxis

Vaccine Adverse Event Reporting System (VAERS)

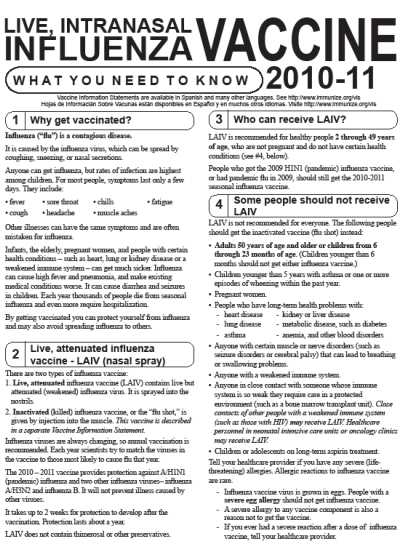
- Report any clinically significant adverse events to the Vaccine Adverse Event Reporting System (VAERS) at 1-800-822-7967 or on their website at http://www.vaers.hhs.gov.

Storage and Handling

- Maintain cold chain—see package insert
  - Keep cold at 35-46 degrees F (do not freeze!)
  - Use refrigerated or frozen packs depending on the time of the year and situation. Keep in insulated container in a cool place. Do not leave container unattended or in trunk of car.
  - Make sure vaccines are kept in their original boxes.
  - Good to place insulation (crumpled paper) between vaccine boxes and the frozen pack to prevent freezing or shifting of vaccine.
  - Can place thermometer in container to check appropriate cold chain management.
- See checklist (safe vaccine handling and storage)

Laws and Standing Orders

- Standing orders must be signed by a licensed MD prior to administering vaccine
  - Nurses who have been trained and are administering vaccine in a Boston site can use BPHC standing orders.
- A Vaccine Information Statement (VIS) (federal form) must given to [illegible] r regulations



LIVE, INTRANASAL INFLUENZA VACCINE

WHAT YOU NEED TO KNOW 2010-11

Vaccine Information Statements are available in Spanish and many other languages. See http://www.immunize.org/vis
Hojas de Información Sobre Vacunas están disponibles en Español y en muchos otros idiomas. Visite http://www.immunize.org/vis

1 Why get vaccinated?

Influenza ("flu") is a contagious disease.

It is caused by the influenza virus, which can be spread by coughing, sneezing, or nasal secretions.

Anyone can get influenza, but rates of infection are highest among children. For most people, symptoms last only a few days. They include:

• fever • sore throat • chills • fatigue
• cough • headache • muscle aches

Other illnesses can have the same symptoms and are often mistaken for influenza.

Infants, the elderly, pregnant women, and people with certain health conditions – such as heart, lung or kidney disease or a weakened immune system – can get much sicker. Influenza can cause high fever and pneumonia, and make existing medical conditions worse. It can cause diarrhea and seizures in children. Each year thousands of people die from seasonal influenza and even more require hospitalization.

By getting vaccinated you can protect yourself from influenza and may also avoid spreading influenza to others.

2 Live, attenuated influenza vaccine - LAIV (nasal spray)

There are two types of influenza vaccine:

1. **Live, attenuated** influenza vaccine (LAIV) contains live but attenuated (weakened) influenza virus. It is sprayed into the nostrils.
2. **Inactivated** (killed) influenza vaccine, or the "flu shot," is given by injection into the muscle. *This vaccine is described in a separate Vaccine Information Statement.*

Influenza viruses are always changing, so annual vaccination is recommended. Each year scientists try to match the viruses in the vaccine to those most likely to cause flu that year.

The 2010 – 2011 vaccine provides protection against A/H1N1 (pandemic) influenza and two other influenza viruses– influenza A/H3N2 and influenza B. It will not prevent illness caused by other viruses.

It takes up to 2 weeks for protection to develop after the vaccination. Protection lasts about a year.

LAIV does not contain thimerosal or other preservatives.

3 Who can receive LAIV?

LAIV is recommended for healthy people **2 through 49 years of age**, who are not pregnant and do not have certain health conditions (see #4, below).

People who got the 2009 H1N1 (pandemic) influenza vaccine, or had pandemic flu in 2009, should still get the 2010-2011 seasonal influenza vaccine.

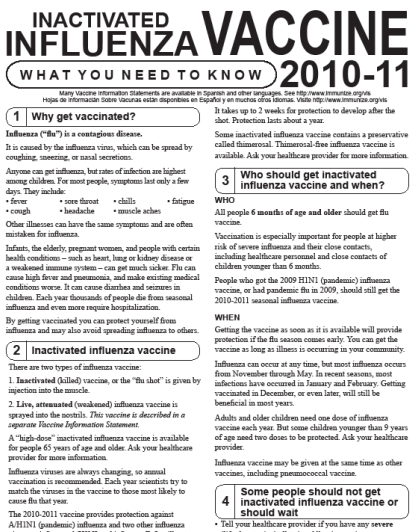
4 Some people should not receive LAIV

LAIV is not recommended for everyone. The following people should get the inactivated vaccine (flu shot) instead:

- **Adults 50 years of age and older or children from 6 through 23 months of age.** (Children younger than 6 months should not get either influenza vaccine.)
- Children younger than 5 years with asthma or one or more episodes of wheezing within the past year.
- Pregnant women.
- People who have long-term health problems with:
  - heart disease
  - kidney or liver disease
  - lung disease
  - metabolic disease, such as diabetes
  - asthma
  - anemia, and other blood disorders
- Anyone with certain muscle or nerve disorders (such as seizure disorders or cerebral palsy) that can lead to breathing or swallowing problems.
- Anyone with a weakened immune system.
- Anyone in close contact with someone whose immune system is so weak they require care in a protected environment (such as a bone marrow transplant unit). *Close contacts of other people with a weakened immune system (such as those with HIV) may receive LAIV. Healthcare personnel in neonatal intensive care units or oncology clinics may receive LAIV.*
- Children or adolescents on long-term aspirin treatment.

Tell your healthcare provider if you have any severe (life-threatening) allergies. Allergic reactions to influenza vaccine are rare.

- Influenza vaccine virus is grown in eggs. People with a **severe egg allergy** should not get influenza vaccine.
- A severe allergy to any vaccine component is also a reason not to get the vaccine.
- If you ever had a severe reaction after a dose of influenza vaccine, tell your healthcare provider.



INACTIVATED INFLUENZA VACCINE

WHAT YOU NEED TO KNOW 2010-11

Many Vaccine Information Statements are available in Spanish and other languages. See http://www.immunize.org/vis
Hojas de Información Sobre Vacunas están disponibles en Español y en muchos otros idiomas. Visite http://www.immunize.org/vis

1 Why get vaccinated?

Influenza ("flu") is a contagious disease.

It is caused by the influenza virus, which can be spread by coughing, sneezing, or nasal secretions.

Anyone can get influenza, but rates of infection are highest among children. For most people, symptoms last only a few days. They include:

• fever • sore throat • chills • fatigue
• cough • headache • muscle aches

Other illnesses can have the same symptoms and are often mistaken for influenza.

Infants, the elderly, pregnant women, and people with certain health conditions – such as heart, lung or kidney disease or a weakened immune system – can get much sicker. Flu can cause high fever and pneumonia, and make existing medical conditions worse. It can cause diarrhea and seizures in children. Each year thousands of people die from seasonal influenza and even more require hospitalization.

By getting vaccinated you can protect yourself from influenza and may also avoid spreading influenza to others.

2 Inactivated influenza vaccine

There are two types of influenza vaccine:

1. **Inactivated** (killed) vaccine, or the "flu shot" is given by injection into the muscle.

2. **Live, attenuated** (weakened) influenza vaccine is sprayed into the nostrils. *This vaccine is described in a separate Vaccine Information Statement.*

A "high-dose" inactivated influenza vaccine is available for people 65 years of age and older. Ask your healthcare provider for more information.

Influenza viruses are always changing, so annual vaccination is recommended. Each year scientists try to match the viruses in the vaccine to those most likely to cause flu that year.

The 2010-2011 vaccine provides protection against A/H1N1 (pandemic) influenza and two other influenza viruses – influenza A/H3N2 and influenza B. It will not prevent illness caused by other viruses.

It takes up to 2 weeks for protection to develop after the shot. Protection lasts about a year.

Some inactivated influenza vaccine contains a preservative called thimerosal. Thimerosal-free influenza vaccine is available. Ask your healthcare provider for more information.

3 Who should get inactivated influenza vaccine and when?

WHO

All people **6 months of age and older** should get flu vaccine.

Vaccination is especially important for people at higher risk of severe influenza and their close contacts, including healthcare personnel and close contacts of children younger than 6 months.

People who got the 2009 H1N1 (pandemic) influenza vaccine, or had pandemic flu in 2009, should still get the 2010-2011 seasonal influenza vaccine.

WHEN

Getting the vaccine as soon as it is available will provide protection if the flu season comes early. You can get the vaccine as long as illness is occurring in your community.

Influenza can occur at any time, but most influenza occurs from November through May. In recent seasons, most infections have occurred in January and February. Getting vaccinated in December, or even later, will still be beneficial in most years.

Adults and older children need one dose of influenza vaccine each year. But some children younger than 9 years of age need two doses to be protected. Ask your healthcare provider.

Influenza vaccine may be given at the same time as other vaccines, including pneumococcal vaccine.

4 Some people should not get inactivated influenza vaccine or should wait

- Tell your healthcare provider if you have any **severe** (life-threatening) allergies. Allergic reactions to influenza vaccine are rare.

Questions