2014-2015 Influenza (FLU) Vaccination Recommendations

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www.publichealth.lacounty.gov/ip
The speaker has disclosed that there is NO financial interests related to the content of this presentation (see Evaluation form)
Learning Objectives

1. Identify five high-risk persons who should be immunized with flu vaccine recommended by ACIP.
2. Describe the new LAIV (FluMist) vaccination recommendation for children 2-8 years of age.
3. Identify the guidelines for vaccinating persons with a history of egg allergy.
4. List two reasons pregnant women are recommended to receive the “flu shot” annually.
5. Identify the precautions associated with flu vaccination.
6. State the importance of annual flu vaccination for Healthcare Personnel (HCP) in Los Angeles County.
Adult Vaccine Recommendations

** Flu **
## 2014 Recommended Adult Immunization Schedule – United States

### 19 years of age and older

Flu Vaccination Recommendations!

and what is Influenza?

Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices (ACIP) — United States, 2014–15 Influenza Season

This report updates the 2013 recommendations by the Advisory Committee on Immunization Practices (ACIP) regarding use of seasonal influenza vaccines (1). Updated information for the 2014–15 influenza season includes 1) antigenic composition of U.S. seasonal influenza vaccines; 2) vaccine dose considerations for children aged 6 months through 8 years; and 3) a preference for the use, when immediately available, of live attenuated influenza vaccine (LAIV) for healthy children aged 2 through 8 years, to be implemented as feasible for the 2014–15 season but not later than the 2015–16 season. Information regarding issues related to influenza vaccination not addressed in this report is available in the 2013 ACIP seasonal influenza recommendations (1).

For recommendations pertaining to use of influenza vaccines in children, ACIP reviewed data on the relative efficacy and safety of LAIV and inactivated influenza vaccines (IIVs). An adapted version of the Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach was used to rate the quality of the evidence (2). Evidence summary tables and assessment of risk and benefits are available at http://www.cdc.gov/vaccine/ACIP/recs/grades/GRS_flu.html. Information in this report reflects discussion during public meetings of ACIP on February 26, 2014, and June 18, 2014. Meeting minutes, information on ACIP membership, and information on conflicts of interest are available at http://www.cdc.gov/vaccine/ACIP/meetings/meetings-info.html. Modifications were made during review at CDC to update and clarify wording. Any updates will be posted at http://www.cdc.gov/flu.

Groups Recommended for Vaccination and Timing of Vaccination

Routine annual influenza vaccination is recommended for all persons aged ≥6 months who do not have contraindications. Vaccination optimally should occur before onset of influenza activity in the community. Health care providers should offer vaccination soon after vaccine becomes available (by October, if possible). Vaccination should be offered as long as vaccine viruses are circulating. Children aged 6 months through 8 years who require 2 doses (see “Vaccine Dose Considerations for Children Aged 6 Months through 8 Years”) should receive their first dose as soon as possible after vaccine becomes available, and the second dose 4 weeks later. To avoid missed opportunities for vaccination, providers should offer vaccination during routine health care visits and hospitalizations when vaccine is available.

Antibody levels induced by vaccine decline postvaccination (3–6). Although a 2008 literature review found no clear evidence of more rapid decline among the elderly (7), a 2010 study noted a statistically significant decline in titer 6 months postvaccination among persons aged ≥65 years (although titers still met European Medicines Agency levels considered adequate for protection) (6). A case-control study conducted in Navarra, Spain, during the 2011–12 season revealed a decline in vaccine effectiveness primarily affecting persons aged ≥65 years (8). Although delaying vaccination might permit greater immunity later in the season, deferral might result in missed opportunities to vaccinate and difficulties in vaccinating a population within a limited time. Vaccination programs should balance maximizing likelihood of persistence of vaccine-induced protection through the season with avoiding missed opportunities to vaccinate or vaccinating after influenza virus circulation begins.

CDC webpage:
What You Should Know for the 2014-2015 Influenza Season

August 15, 2014
http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6332a3.htm

What Flu viruses does this season’s vaccine protect against?

• All of the 2014-2015 influenza vaccine is made to protect against the following three viruses (IIV3):
  – an A/California/7/2009 (H1N1)pdm09-like virus
  – an A/Texas/50/2012 (H3N2)-like virus
  – a B/Massachusetts/2/2012-like virus.

• Some of the 2014-2015 flu vaccine also protects against an additional B virus (B/Brisbane/60/2008-like virus) (IIV4)

2014-15 ACIP Flu Vaccination Recommendations

- All persons aged 6 months and older;
- All pregnant women;
- Healthcare personnel (HCP);
- Persons with chronic medical conditions (i.e. diabetes, kidney disease, heart, asthma, cancer, neurologic, etc.), severely immunocompromised, and those living in a protective environment;
- Household contacts (including children) and caregivers of children aged less than 59 months and adults aged 50 years and older,
- Persons who live with or have direct contact with children less than 6 months; and
- Household contacts (including children) and caregivers of persons with medical conditions that put them at higher risk for severe complications from influenza.
New ACIP Vaccination Recommendation for Children 2-8 years of age?

• ACIP voted in favor of using the inhaled live attenuated flu vaccine (LAIV) also called FluMist, for healthy children ages 2 through 8 years.
  – ACIP looked at a study indicating the nasal spray vaccine offers better protection than injected flu vaccine against laboratory-confirmed influenza.

• Children should be given the flu shot (IIV) if the nasal vaccine - LAIV (FluMist) is not available.

Is it important for persons who have direct contact with children through 18 years of age be vaccinated?

- YES!

While it is important for all persons aged 6 months and older to be vaccinated annually, emphasis should be placed on vaccination of persons who work with children and staff at Day Care Centers and Schools.
ACIP Recommends Annual Flu Vaccination for all HCP

- Research shows that HCP who get vaccinated annually help reduce:
  - Influenza-related morbidity and mortality that occurs in medical-care settings, especially those at high-risk for flu illness
  - transmission of influenza
  - staff illness and absenteeism
- Higher vaccination levels among staff have been associated with a lower risk of nosocomial infection
  - (hospital-acquired) influenza cases
- Outbreaks in hospitals/long-term care facilities have been attributed to low vaccination rates among HCP in those facilities. [www.cdc.gov/flu/healthcareworkers.htm](http://www.cdc.gov/flu/healthcareworkers.htm)
Pregnancy & Flu Vaccination
With a pertussis epidemic in progress and Flu season quickly approaching, ACIP/CDC recommends that all pregnant women receive:

- **Tdap** shot between 27 - 36 weeks gestation of each pregnancy
- **influenza shot** at any stage during their pregnancy
- Influenza is 5 times more likely to cause severe illness in pregnant women than non-pregnant women.
  - Changes in the immune system, heart, and lungs during pregnancy make pregnant women more prone to severe illness from influenza.
  - The risk of premature labor and delivery is increased in pregnant women with influenza.
  - Research shows that flu vaccination during pregnancy protects both mother/infant (*up to 6 months of age*) from influenza illness, hospitalizations and flu-related preterm birth.
LA County confirmed a flu death of a pregnant woman and her unborn baby from the South Bay area.
- influenza A (H1N1)

Pregnant and post partum women are at increased risk for severe illness and serious complications from flu infection.

2013-14 flu season was dominated by the Type A (2009 H1N1) strain resulting in moderately severe activity, locally/nationally.
- 101 deaths (4 pediatrics) as of July 26, 2014 (Influenza Watch)

The flu vaccine is recommended for everyone ≥6 mos of age and older, including pregnant women at any stage of pregnancy.

Influenza Watch Season Summary * 9/1/13 - 7/26/14
http://publichealth.lacounty.gov/acd/docs/IWcurrent201314.pdf
Guess who needs a flu shot?

You do!

Protect yourself.

Protect your baby.

Get your flu shot.

U.S. Department of Health and Human Services
Ira Dreyfuss, with Health Beat
ACIP recommends all persons 6 months of age and older receive flu vaccine. The principle of “herd immunity” is when a large percentage of the population is vaccinated; the spread of disease is limited. This indirectly protects unimmunized individuals, including those who cannot be immunized and those for whom vaccination was not successful.

The Flu Is Contagious

- Most healthy adults may infect others beginning 1 day before symptoms develop and up to 5 to 7 days after becoming sick.
- Children may spread the virus for longer than 7 days.  
  – Symptoms start 1 to 4 days after the virus enters the body. That means that you may be able to “spread” the flu to someone else before you know you are sick, as well as while you are sick.
- Some persons can be infected with the flu virus but have no symptoms.
- During this time, those persons may still spread the virus to others.
### Common Cold

- Rhinovirus, most common type of virus that causes Colds.
- Colds usually includes runny nose, sore throat, sneezing, and coughing, watery eyes, headache, mild body aches and these symptoms can last for up to 2 weeks.
- There's over 200 viruses that can cause the common cold.

### Flu

**The Flu - Incubation period 2 days (range 1-4 days)**

- Influenza disease is characterized by the **abrupt onset** of fever, myalgia, sore throat, nonproductive cough, and headache.
- The fever is usually 101°–102°F and accompanied by prostration. *It's important to note that not everyone with flu will have a fever!*

[www.cdc.gov/getsmart/antibiotic-use/uri/colds.html](http://www.cdc.gov/getsmart/antibiotic-use/uri/colds.html)
Preventing the Flu!

• Get a flu vaccination and keep your other immunizations up-to-date
• Stay home for 24 hours after fever ends
• Wash your hands with soap and water
• Cover coughs and sneezes
• Avoid touching your eyes, nose, and mouth
• Practice healthy habits:
  – Eating healthy foods
  – Getting enough sleep
  – Exercise to maintain a strong body that is able to fight germs
2013-2014
Influenza Watch Season Summary for LA County

Contact Information: fluwatch@listserv.ph.lacounty.gov
Acute Communicable Disease Control (213) 240-7941
www.publichealth.lacounty.gov/acd
Pneumococcal polysaccharide (PPSV23) Recommendations:

• ALL adults 65 years and older without history of vaccination.
• Persons 2-64 years of age who have chronic illness;
  • immunocompromising conditions;
  • functional or **anatomic asplenia**
    (e.g., sickle cell disease and other hemoglobinopathies, congenital or acquired asplenia, splenic dysfunction, or splenectomy)
  – i.e. healthy 32 year old man without a spleen
• Adults age 19-64 years who have asthma or smoke cigarettes
• **One-time revaccination 5 years after the first dose** is recommended for persons aged 19 through 64 years with
Flu Personal Story *

www.shotbyshot.org
Let’s Talk Flu Vaccines
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>TIV</strong> (Trivalent Inactivated Influenza Vaccine)</td>
<td>changed to <strong>IIV</strong> (Inactivated Influenza Vaccine):</td>
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<tr>
<td>- IIV refers to inactivated vaccines (egg and cell-culture based)</td>
<td></td>
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<tr>
<td>- Includes trivalent (IIV3) and quadrivalent (IIV4) vaccines;</td>
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<tr>
<td>- Cell-culture-based IIV is referred to as ccIIV/ccIIV3 (for 18 years and older)</td>
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</tr>
<tr>
<td><strong>RIV</strong> refers to recombinant hemagglutinin (HA) influenza vaccine (a Trivalent called RIV3):</td>
<td></td>
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<tr>
<td>- Egg-free; Aged 18-49 years</td>
<td></td>
</tr>
<tr>
<td><strong>LAIV</strong> refers to Live Attenuated Influenza Vaccine</td>
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<tr>
<td>- Quadrivalent (LAIV4)</td>
<td></td>
</tr>
<tr>
<td>- Intranasal spray</td>
<td></td>
</tr>
<tr>
<td>- For healthy persons <em>NOT pregnant</em> aged 2-49 years</td>
<td></td>
</tr>
<tr>
<td><strong>Intradermal (ID)</strong> for 18-64 yrs</td>
<td></td>
</tr>
<tr>
<td><strong>High-Dose</strong> for age 65 yrs/older</td>
<td></td>
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</table>
Some of my patients refuse influenza vaccination because they insist they "got the flu" after receiving the injectable vaccine (IIV) in the past. What can I tell them about this misconception?

1) **Less than 1% of people who are vaccinated with IIV develop flu-like symptoms.**
   - Mild fever and muscle aches, 6-12 hours after vaccination, can last up to 1-2 days. These side effects are *Not* the same as having influenza, but people confuse the symptoms.

2) **Protective immunity doesn't develop until 1–2 weeks after vaccination.** Some people who get vaccinated later in the season (December or later) may get influenza shortly afterward.
   - Late vaccinees develop flu because they're exposed to someone with the virus before they became immune. It is *Not* the result of the vaccination.

Can the flu vaccine give me the Flu? NO!

• Flu vaccine cannot cause flu illness.
• Vaccines administered with a needle are currently made in two ways. Either with:
  – flu vaccine viruses that have been ‘inactivated’ and are therefore not infectious, or
  – with no flu vaccine viruses at all (which is the case for recombinant influenza vaccine)
• The nasal spray (FluMist) does contain live viruses they are attenuated (weakened), and therefore 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.

http://www.cdc.gov/flu/protect/keyfacts.htm#side-effects
How Do Flu Vaccines Work?

• Flu vaccines cause protective antibodies levels to develop in the body by two weeks after vaccination.
  – *These antibodies provide protection against infection with the viruses covered by the vaccine.*

• This season’s flu vaccine protects against the influenza viruses that epidemiological data indicates will be most common during the upcoming season.
  – *Flu vaccines, are made to protect against: an influenza A (H1N1) virus, an influenza A (H3N2) virus, and an influenza B virus (and last year an additional B virus for IIV4)*

1. [http://www.cdc.gov/flu/protect/keyfacts.htm#benefits](http://www.cdc.gov/flu/protect/keyfacts.htm#benefits)
Before Flu Vaccination Screening.....
Always screen for any contraindications and precautions to vaccine:

- History of severe hypersensitivity to a prior dose
- Severe allergic reactions to vaccine component
- Moderate to severe acute illness

1. CDC Vaccine Contraindications and Precautions
   http://www.cdc.gov/vaccines/recs/vac-admin/contraindications.htm
2014 - 2015
ACIP recommendations regarding influenza vaccination of persons who report allergy to Eggs
Influenza vaccine dosing algorithm for children aged 6 months through 8 years — ACIP, U. S., 2014–2015 influenza season*

* For simplicity, this algorithm takes into consideration only doses of seasonal flu vaccine received since July 1, 2010 to determine the number of doses needed for the 2014–15 season.
Shannon is a 2 year-old girl who received only one dose of flu vaccine during the 2013-14 influenza season. How many doses should she receive during the 2014-15 season?

- One dose
- Two doses
1 dose

Since the strains contained in the 2014–15 seasonal influenza vaccines are identical to those contained in the 2013–14 vaccines, only 1 dose is required for any child aged 6 months through 8 years who previously received ≥1 dose of 2013–14 seasonal influenza vaccine.

1. MMWR / August 15, 2014 / Vol. 63 / No. 32
Kyle is a healthy 5 year-old boy who has never received flu vaccine. How many doses of flu vaccine should he receive during the 2014-15 season?

- One dose
- Two doses
2 doses

Children aged 6 months through 8 years require 2 doses of influenza vaccine (administered ≥4 weeks apart) during their first season of vaccination to optimize immune response.

ACIP recommends LAIV (FluMist) vaccine for healthy children ages 2 through 8 years.

Children should be given the flu shot (IIV) if LAIV is not available.

Don’t miss an opportunity to vaccinate!

1. MMWR / August 15, 2014 / Vol. 63 / No. 32
Let’s take a quick stretch break but please don’t leave!

Vaccine Administration & Flu Outreach Clinics
Flu Consents Forms **without** County Seals will be available on IP webpage:
- English
- Spanish
- Chinese
- Korean

*write legibly

publichealth.lacounty.gov/ip
Inactivated Influenza Vaccine (IIV)

Live Attenuated Influenza Vaccine (LAIV) aka FluMist

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It's a Federal Law to Provide the VIS!
Administration of Immunizations (Medication)

• The “Rights of Medication Administration” must be applied to each encounter when medications are administered:

1. the right **patient**;
2. the right **medication**;
3. the right **time**;
4. the right **dosage**;
5. the right **route** and technique;
6. the right **site**; and
7. the right **documentation**.

15 second scrub!
Friendly Reminder
No Immunizations Back Here!
Flu Vaccination Administration Routes

Deltoid Muscle IM injection

LAIV (FluMist) intranasal

Vastus Lateralis muscle

Intradermal (ID) flu injection given in the deltoid muscle for persons 18-64 years
To enroll in CAIR call the Help Desk 800-578-7889
Important Vaccine Considerations

• Emergency Procedures

• Vaccine Adverse Event Reporting System form (VAERS)
  www.vaers.hhs.gov

• Storage and Handling
  refrigerate between 35°F and 46°F

Aim for 40°F
Call 911 immediately!

- Administer epinephrine hydrochloride 1:1000 via IM into deltoid or vastus lateralis muscle
- Doses every 10 - 15 minutes up to 3 doses as needed to control symptoms and increase B/P
- Inject Epi into same site to slow absorption
- Monitor vital signs
- BCLS if necessary

### Age Group

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Epinephrine Dose</th>
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<tr>
<td>1-6 months</td>
<td>0.05 mL</td>
</tr>
<tr>
<td>7-36 months</td>
<td>0.10 mL</td>
</tr>
<tr>
<td>37-59 months</td>
<td>0.15 mL</td>
</tr>
<tr>
<td>5-7 years</td>
<td>0.20 - 0.25 mL</td>
</tr>
<tr>
<td>8-10 years</td>
<td>0.25 – 0.30 mL</td>
</tr>
<tr>
<td>11-12 years</td>
<td>0.35 – 0.40 mL</td>
</tr>
<tr>
<td>13 years and older</td>
<td>0.50 mL</td>
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</table>
Vaccine Error Reporting Program

ISMP National Vaccine Error Reporting Program

Please consider the following items when completing this online reporting form:

- Answer the questions as best you can.
- Tell us the story of what went wrong, any causes or contributing factors, how the event was discovered or intercepted, and the outcome of the patient(s) involved.
- Share your recommendations for error prevention.
- Provide any associated materials (e.g., product photographs, containers, labels, de-identified prescription order scans) that help support the information being submitted.

ISMP guarantees confidentiality of information received. ISMP is a federally certified patient safety organization (PSO), providing legal protection and confidentiality for submitted patient safety data and error reports. Click here to learn more about legal protection of patient safety information submitted to ISMP.

The report information will be forwarded, in confidence, to the Vaccine Adverse Event Reporting System (VAERS), a national vaccine safety surveillance program co-sponsored by the Centers for Disease Control and Prevention (CDC) and the Food and Drug Administration (FDA). When applicable, the report information will be forwarded to product vendors to inform them about vaccine labeling, packaging, and nomenclature issues that may foster errors by their design. Your name and contact information will not be shared unless you grant permission.

If you are reporting an unpreventable adverse reaction to a vaccine product, please visit VAERS (http://vaers.hhs.gov).

http://verp.ismp.org/
Anaphylaxis Reaction Documentation

**DPH Nurses**
Report Anaphylaxis reactions documentation to the University Health System Consortium, Patient Safety (UHC PSN) via internet.

Vaccine Storage & Handling

Recording Refrigerator Temperatures

- **MIN/MAX** numbers are important! They tell you if temperatures were ever in a DANGER Zone since you last checked them. (See Step 2 for example.)

- **MIN** shows the **coldest** temperature since the memory clear/reset button was pressed.

- **MAX** shows the **warmest** temperature since the memory clear/reset button was pressed.

**Step 1**
- Start a new log at the beginning of every month.
- Write the month, year, location of refrigerator, and VFC PIN.

**Step 2**
- Write your initials.
- Then write the a.m. or p.m. time.

<table>
<thead>
<tr>
<th>Staff Initials</th>
<th>AM/PM</th>
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<tbody>
<tr>
<td></td>
<td>AM</td>
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</table>

<table>
<thead>
<tr>
<th>Day of Month</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8:00 AM</td>
</tr>
</tbody>
</table>
Transporting Refrigerated Vaccines
Transporting Refrigerated Vaccines (1)

Pack vaccine and prepare for transport

1. **Cold packs**
   Spread conditioned cold packs to cover only half of the bottom of the cooler.

2. **Bubble wrap & Thermometer**
   Completely cover the cold packs with a 2-inch layer of bubble wrap. Then, place the thermometer/probe on top of the bubble wrap directly above a cold pack.

3. **Vaccine**
   Stack layers of vaccine boxes on the bubble wrap. Do not let the boxes of vaccine touch the cold packs.

4. **Bubble wrap**
   Completely cover the vaccine with another 2-inch layer of bubble wrap.

5. **Cold packs**
   Spread “conditioned” cold packs to cover only half of the bubble wrap. Make sure that the cold packs do not touch the boxes of vaccine.

6. **Form & display**
   Fill the cooler to the top with bubble wrap. Place the thermometer's digital display and the Refrigerated Vaccine Transport Log on top. It's okay if temperatures go above 46°F while packing.
Vaccine storage: Off-site Clinics (2)

- Do not place in vehicle trunk
- Deliver directly to facility or site
- When clinic starts, only remove one box of vaccine at a time
- Place vaccine back in unit when not being used
- Check temperatures minimally hourly
Refrigerator Recommendations (3)

- Stand-Alone refrigerator unit

- Maintain required storage temperatures between 35°F and 46°F - Know how to read min / max and current temps
- Do not store vaccine near visible cooling plates
- Provide enough space to store all vaccine properly
- Ensure the storage unit doors seal tightly and close
Resources
and other valuable
Immunization Information
Immunization Resources

- Immunization Program - [www.publichealth.lacounty.gov/ip/](http://www.publichealth.lacounty.gov/ip/)
  - General Information and Handouts
  - Vaccine Fact Sheets
    - B71 Recommendations (Info for Healthcare Providers)
    - Download forms (e.g. VIS, VAERs, etc.)
- EZIZ - [www.eziz.org](http://www.eziz.org)
- CDC - [www.cdc.gov/vaccines/](http://www.cdc.gov/vaccines/)
- ACIP Recommendations - [www.cdc.gov/vaccines/recs/acip/](http://www.cdc.gov/vaccines/recs/acip/)
- CA Dept. of Public Health [www.cdph.ca.gov/programs/immunize/Pages/default.aspx](http://www.cdph.ca.gov/programs/immunize/Pages/default.aspx)
- Merck Vaccines - [www.merckhelps.com](http://www.merckhelps.com)
- Needy Meds - [www.needymeds.com](http://www.needymeds.com)
- Epidemiology & Prevention of VPDs “Pink Book” [www.cdc.gov/vaccines/pubs/pinkbook/genrec.html](http://www.cdc.gov/vaccines/pubs/pinkbook/genrec.html)
Questions?

Please complete your Post-test & Evaluation......

Thank you for promoting “Flu Vaccinations Across the LifeSpan!”

IMMUNIZATION PROGRAM
www.publichealth.lacounty.gov/ip
(213) 351-7800 phone

* 2014-2015 Influenza (flu) Vaccination Recommendations Training Materials
http://publichealth.lacounty.gov/ip/trainconf.htm
After you have turned-in your post-test along with the evaluation we can review the post-test.

Thank you!