County of San Diego

PHYSICIANS' BULLETIN

Health and Human Services Agency ◆ P.O. Box 85222, San Diego, CA ◆ 92186-5222 ◆ www.co.san-diego.ca.us/cnty/cntydepts/health

October 2008 **No. 462**

Influenza Immunization Recommendations for 2008-2009

Note: Medicare B reimburses for influenza vaccines.

Influenza is a viral respiratory illness which is mainly spread through sneezing and coughing. Each year in the United States about 5%-20% of the population contracts influenza, more than 200,000 people are hospitalized from the disease and its complications, and about 36,000 people die. Administration of influenza vaccine is the most effective method for preventing flu and its severe complications. Both the injectable, trivalent inactivated influenza vaccine (TIV) and the nasal live, attenuated influenza vaccine (LAIV) can be used to reduce the risk of influenza.

Extensive information on influenza disease and vaccine is available on the Internet at www.cdc.gov/flu and in print in the Centers for Disease Control and Prevention (CDC) National Immunization Program, *Prevention and Control of Influenza, Recommendations of the Advisory Committee on Immunization Practices,* MMWR 2008;Vol. 57:RR-7. (**http://www.cdc.gov/mmwr/pdf/rr/rr5707.pdf**)

The 2008 recommendations include five principal changes or updates:

- Beginning with the 2008–09 influenza season, annual vaccination of all children aged 6 months–18 years (even if healthy) is recommended. Annual vaccination of all children aged 6 months–18 years should begin as soon as vaccine is available during the 2008–09 influenza season, if feasible, but no later than during the 2009–10 influenza season.
- Children and adolescents at high risk for influenza complications should continue to be a focus of vaccination efforts as providers and programs transition to routinely vaccinating all children (please see **Persons at Risk for Medical Compications or More Likely to Require Medical Care** in next column).
- *Either TIV or LAIV can be used when vaccinating healthy persons aged 2–49 years. Children aged 6 months–8 years should receive 2 doses of vaccine if they have not been vaccinated previously at any time with either LAIV or TIV (doses separated by >4 weeks); 2 doses are required for protection in these children. Children aged 6 months– 8 years who received only 1 dose in their first year of vaccination should receive 2 doses the following year. LAIV should not be administered to children aged <5 years with possible reactive airways disease, such as those who have had recurrent wheezing or a recent wheezing episode. Children with possible reactive airway disease, persons at higher risk for influenza complications because of underlying medical conditions, children aged 6–23 months, and persons aged >49 years should receive TIV.* ***(Please see Figure 1 on p. 6: Flu Immunization Memory Aid for Children, Adolescents and Adults.)***
- The 2008–09 trivalent vaccine virus strains are A/Brisbane/59/2007 (H1N1)-like, A/Brisbane/10/2007 (H3N2)-like, and B/Florida/4/2006-like antigens.
- Oseltamivir-resistant influenza A (H1N1) strains have been identified in the United States and some other countries. However, oseltamivir or zanamivir continue to be the recommended antivirals for treatment of influenza because other influenza virus strains remain sensitive to oseltamivir, and resistance levels to other antiviral medications remain high.

Target Groups for Vaccination 2008-2009

Influenza vaccine should be provided to all persons who want to reduce the risk of becoming ill with influenza or of transmitting it to others. However, emphasis on providing routine vaccination annually to certain groups at higher risk for influenza infection or complications is advised, including all children aged 6 months-18 years, all persons aged >50 years, and other adults at risk for medical complications from influenza or more likely to require medical care. In addition, all persons who live with or care for persons at high risk for influenza-related complications, including contacts of children aged <6 months should receive influenza vaccine annually. Approximately 83% of the U.S. population is included in one or more of these target groups. However, in 2007-2008, <40% of the U.S. population received an influenza vaccination.

Persons at Risk for Medical Complications or More Likely to Require Medical Care

Vaccination with TIV is recommended for the following persons who are at increased risk for severe complications from influenza, or at higher risk for influenza-associated clinic, emergency department, or hospital visits:

- all persons aged ≥50 years;
- all children aged ≥6–59 months (i.e., 6 months-4 years--this age group would actually be part of the "all children 6 months to 18 years" recommendation stated earlier)

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(Children aged 6 months-8 years who have not been vaccinated previously or who were vaccinated for the first time during the previous season and received only 1 dose should receive 2 doses of vaccine. See *MMWR Recommendations and Reports, Vol. 57, RR-7, pp.9-11,13.*);

- women who will be pregnant during the influenza season;

  (NOTE: California law prohibits flu vaccine with >1mcg mercury per 0.5mL for pregnant women or children under 3 years old. See Table 1.)
- children and adolescents (aged 6 months–18 years) who are receiving long-term aspirin therapy and, therefore, might be at risk for experiencing Reye syndrome after influenza infection;
- adults and children who have chronic pulmonary (including asthma), cardiovascular (except hypertension), renal, hepatic, hematological or metabolic disorders (including diabetes mellitus);
- adults and children who have immunosuppression (including immunosuppression caused by medications or HIV);
- adults and children who have 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 for aspiration; and
- residents of nursing homes and other chronic-care facilities.

Persons Who Live With or Care for Persons at High Risk for Influenza-Related Complications

To prevent transmission to persons identified above, vaccination with TIV or LAIV (unless contraindicated) also is recommended for the following persons:

- healthy household contacts (including children) and caregivers of children aged <5 years and adults aged ≥50 years, with particular emphasis on vaccinating contacts of children aged <6 months; and
- healthy household contacts (including children) and caregivers of persons with medical conditions that put them at higher risk for severe complications from influenza.

Health Care Professionals (HCPs)

All HCPs, as well as those in training for health-care professions, should be vaccinated annually against influenza. This would include:

- physicians, nurses, and other workers in both hospital and outpatient-care settings;
- medical emergency-response workers (e.g., paramedics and emergency medical technicians); and
- employees of nursing home and chronic care facilities who have contact with patients or residents.

Facilities that employ HCPs should provide vaccine to workers by using approaches that have been demonstrated to be effective in increasing vaccination coverage. Health care administrators should consider the level of vaccination coverage among HCP to be one measure of a patient safety quality program and obtain signed declinations from personnel who decline influenza vaccination for reasons other than medical contraindications. Studies have demonstrated that organized campaigns can attain

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Table 1: Approved Influenza Vaccines For Different Age Groups

Vaccine	Trade name	Manufacturer	Presentation	Mercury content*** (mcg Hg/0.5 mL dose)	Age group	No. of doses	Route
TIV*	Fluzone	sanofi pasteur	0.25 mL pre-filled syringe	0	6–35 mos	1 or 2†	Intramuscular§
			0.5 mL pre-filled syringe	0	≥36 mos	1 or 2†	Intramuscular§
			0.5 mL vial	0	≥36 mos	1 or 2†	Intramuscular§
			5.0 mL multi-dose vial	25	≥6 mos	1 or 2†	Intramuscular§
TIV*	Fluvirin	Novartis Vaccine	5.0 mL multi-dose vial	24.5	≥4 yrs	1 or 2†	Intramuscular§
			0.5 mL pre-filled syringe	<1.0	≥4 yrs	1 or 2†	Intramuscular§
TIV*	Fluarix	GlaxoSmithKline	0.5 mL pre-filled syringe	<1.0	≥18 yrs	1	Intramuscular§
TIV*	FluLuval	GlaxoSmithKline	5.0 mL multi-dose vial	25	≥18 years	1	Intramuscular§
TIV*	Afluria	CSL Biotherapies	0.5 mL pre-filled syringe	0	≥18 years	1	
			5.0 mL multi-dose vial	25	≥18 years	1	Intramuscular§
LAIV¶	FluMist**	MedImmune	0.2 mL sprayer	0	2–49 yrs	1 or 2††	Intranasal

* Trivalent inactivated vaccine (TIV). A 0.5-mL dose contains 15 mcg each of A/Brisbane/59/2007 (H1N1)-like, A/Brisbane/10/2007 (H3N2)-like, and B/Florida/4/2006-like antigens.

† Two doses administered at least 1 month apart are recommended for children aged 6 months–8 years who are receiving TIV for the first time and those who only received 1 dose in their first year of vaccination should receive 2 doses in the following year.

§ For adults and older children, the recommended site of vaccination is the deltoid muscle. The preferred site for infants and young children is the anterolateral aspect of the thigh.

¶ Live attenuated influenza vaccine (LAIV). A 0.2-mL dose contains $10^{6.5–7.5}$ fluorescent focal units of live attenuated influenza virus reassortants of each of the three strains for the 2008–09 influenza season: A/Brisbane/59/2007(H1N1), A/Brisbane/10/2007(H3N2), and B/Florida/4/2006.

** FluMist is shipped refrigerated and stored in the refrigerator at 2°C to 8°C after arrival in the vaccination clinic. The dose is 0.2 mL divided equally between each nostril. Health-care providers should consult the medical record, when available, to identify children aged 2–4 years with asthma or recurrent wheezing that might indicate asthma. In addition, to identify children who might be at greater risk for asthma and possibly at increased risk for wheezing after receiving LAIV, parents or caregivers of children aged 2–4 years should be asked: "In the past 12 months, has a health-care provider ever told you that your child had wheezing or asthma?" Children whose parents or caregivers answer "yes" to this question and children who have asthma or who had a wheezing episode noted in the medical record during the preceding 12 months, should not receive FluMist.

†† Two doses administered at least 4 weeks apart are recommended for children aged 2–8 years who are receiving LAIV for the first time, and those who only received 1 dose in their first year of vaccination should receive 2 doses in the following year.

***Note that California law requires a preservative-free vaccine for those under 3 years of age and pregnant women.

Source: CDC. Prevention and Control of Influenza: Recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2008;Vol. 57, RR-7 (Aug. 8, 2008):13.

higher rates of vaccination among HCP with moderate effort and using strategies that increase vaccine acceptance.

The Joint Commission on Accreditation of Health Care Organizations has approved an infection control standard that requires accredited organizations to offer influenza vaccinations to staff, including volunteers and licensed independent practitioners with close patient contact. This is an accreditation requirement.

According to California Health and Safety Code Section 1288.7, the State Department of Health Services requires that each general acute care hospital, in accordance with the CDC guidelines, annually offer onsite influenza vaccinations, if available, to all hospital employees at no cost to the employee. Each general acute care hospital shall require its employees to be vaccinated, or if the employee elects not to be vaccinated, to declare in writing that he or she has declined the vaccination.

Additional Target Groups for Vaccination

- Persons who provide essential community services to minimize disruption of essential activities during outbreaks;
- Students or other persons in institutional settings (e.g., those who reside in dormitories); and
- All persons, including school-aged children, who want to reduce the risk of becoming ill with influenza or of transmitting influenza to others.

San Diego County Influenza Coverage Rates In Adult Populations

The San Diego HHSA Immunization Branch regularly monitors influenza immunization coverage rates in San Diego County (see Figure 2 on p. 7). Coverage rates for all adult age groups indicate that large numbers of individuals for whom influenza vaccination is recommended do not receive it. Coverage rates for seniors (65 years of age and above) remain around 70% and have not increased significantly in recent years. Efforts to reach all adults for whom influenza immunization is recommended should be increased.

Major Differences Between TIV and LAIV

TIV contains killed viruses and thus cannot cause influenza. TIV is approved for use among persons ≥aged 6 months, including those who are healthy and those with chronic medical conditions. TIV is administered intramuscularly by injection. TIV should be stored at 35ºF-46ºF (2ºC-8ºC) and should not be frozen. TIV that has been frozen should be discarded.

LAIV contains live, attenuated viruses and therefore has the potential to produce mild signs or symptoms related to attenuated influenza virus infection. LAIV is administered intranasally by sprayer. Use of LAIV is encouraged for eligible persons (see below) and this may increase the availability of the inactivated influenza vaccine (TIV) for those in the other target groups.

LAIV may be administered at any time to:

- nonpregnant healthy persons aged 2-49 years.

This can include most HCP, most persons in close contact with groups at high risk, many of those providing essential community services, and many of those in dormitory-type settings. The new formulation of LAIV is shipped to end users at 35ºF-46ºF (2ºC-8ºC). LAIV should be stored at 35ºF-46ºF (2ºC-8ºC) upon receipt and can remain at that temperature until the expiration date is reached.

Side Effects and Adverse Reactions

Possible side effects of TIV are soreness, redness or swelling at the injection site, as well as fever and aches. When educating patients regarding potential side effects, clinicians should emphasize that 1) TIV cannot cause influenza; and 2) coincidental respiratory disease unrelated to influenza vaccination can occur after vaccination. Side effects of LAIV can include runny nose, congestion, weakness and headache. The Vaccine Information Statements (VISs), *Inactivated Influenza Vaccine, What You Need to Know, 2008-2009,* and *Live, Attenuated Intranasal Vaccine, What You Need to Know, 2008-2009* (available at: **www.immunize.org**) can be effective tools to educate about the risks and benefits of the vaccine and side effects. **Federal law requires that VISs are to be given to patients to read before administering flu vaccine.**

Precautions and Contraindications

Minor illnesses with or without fever do not contraindicate use of influenza vaccine. Persons with moderate to severe acute febrile illness usually should not be vaccinated until their symptoms have abated. Also, if nasal congestion is present that might impede delivery of the LAIV to the nasopharyngeal mucosa, deferral of administration should be considered until resolution of the illness.

Health care professionals should promptly report all clinically significant adverse events after influenza vaccination to Vaccine Adverse Event Reporting System (VAERS) (**http://vaers.hhs.gov**), even if they are not certain that the vaccine caused the event.

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The *Physicians' Bulletin* is published on an as-needed basis by the County of San Diego Health and Human Services Agency to provide updated information on health issues of concern to San Diego County's medical community.

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- Since 1978 Guillain-Barre Syndrome (GBS) has not been clearly linked to flu vaccine. Clarification about GBS and flu vaccine can be found on pages 15-16 of the *MMWR 2008;Vol. 57:RR-7*. GBS within 6 weeks following a previous dose of TIV is considered to be a precaution for use of TIV.
- TIV or LAIV should not be administered to persons known to have anaphylactic hypersensitivity to eggs or other components of the influenza vaccine. Although current influenza vaccines, including both the LAIV and the TIV, contain only a limited quantity of egg protein, this protein can induce immediate hypersensitivity reactions among persons who have severe egg allergy. See *MMWR Recommendations and Reports, Vol. 57, RR-7, p.15* referencing protocols to safely administer influenza vaccine to persons with egg allergies.

Influenza Vaccine and Thimerosal

California law prohibits the administration of influenza vaccine which contains more than 1 mcg of mercury (in the vaccine preservative thimerosal) per 0.5mL of vaccine to pregnant women and children under three years old.

Thimerosal-free flu vaccine is available for children aged 6 months through 35 months and for women who are pregnant. See Table 1 for details on dosages and thimerosal content.

Thimerosal, a mercury-containing compound, has been used as a preservative in vaccines for many years. Although no scientific evidence indicates that thimerosal in vaccines leads to serious adverse events in vaccine recipients, in 1999 the U.S. Public Health Service and other organizations recommended that efforts be made to eliminate or reduce the thimerosal content in vaccines to decrease total mercury exposure, chiefly among infants.

Timing of Vaccinations

Based on both the ACIP/CDC and California State Immunization Branch recommendations, providers can begin providing influenza immunizations as soon as they have vaccine available. Vaccine-induced immunity is expected to last throughout the influenza season even if vaccination occurs in September. Influenza vaccine supplies for the 2008-2009 season appear to be adequate to support widespread immunization to reach all groups for whom vaccine is recommended.

Vaccination efforts should be structured to ensure the vaccination of as many persons as possible over the course of several months, with an emphasis on vaccinating as many persons as possible before influenza activity in the community begins. Even if vaccine distribution begins before October, distribution probably will not be completed until December or January. The following recommendations reflect this phased distribution of vaccine.

In any given year, the optimal time to vaccinate patients cannot be determined because influenza seasons vary in their timing and duration, and more than one outbreak might occur in a single community in a single year. In the United States, localized outbreaks that indicate the start of seasonal influenza activity can occur as early as October. Vaccination efforts should continue throughout the season because the duration of the influenza season varies and influenza might not appear in certain communities until February or March. **Vaccine administered in December or later, even if influenza activity has already begun, is likely to be beneficial in the majority of influenza seasons.**

CDC plans National Influenza Vaccination Week (NIVW) from December 8 through December 14, 2008. The goals of NIVW are to generate vaccine demand, encourage anyone in the general population who wants to be protected against influenza to be vaccinated,and to continue to work toward changing public and provider attitudes and behaviors related to vaccination in December, January, and beyond, with the message "It's not too late to vaccinate!"

Change in Second Dose for Children 6 Months Through 8 Years of Age

Children aged 6 months-8 years who have not been vaccinated previously or who were vaccinated for the first time during the previous season and received only 1 dose should receive 2 doses of vaccine. These children should receive their first dose as soon after vaccine becomes available as is feasible, so both doses can be administered before the onset of influenza activity. As noted in Table 1 in the Physicians Bulletin, TIV and LAIV doses are separated by >4 weeks. (*Please see graphic on page 6: "Influenza Vaccination for Children 6 Months through 8 Years of Age"*.)

Recommendations for Using Antiviral Agents for Influenza

Although annual vaccination is the primary and most effective strategy for preventing complications of influenza virus infections, antiviral medications with activity against influenza viruses can be effective for the chemoprophylaxis and treatment of influenza. Four licensed influenza antiviral agents are available in the United States: amantadine, rimantadine, zanamivir, and oseltamivir. Influenza A virus resistance to amantadine and rimantadine can emerge rapidly during treatment. Because antiviral testing results indicated high levels of resistance **neither amantadine nor rimantadine should be used for the treatment or chemoprophylaxis of influenza in the United States during the 2008-09 influenza season**. Surveillance demonstrating that susceptibility to these antiviral medications has been reestablished among circulating influenza A viruses will be needed before amantadine or rimantadine can be used for the treatment or chemoprophylaxis of influenza A. Oseltamivir or zanamivir can be prescribed if antiviral treatment of influenza is indicated. Oseltamivir is approved for treatment of persons aged ≥1 year, and zanamivir is approved for treating persons aged ≥7 years. Oseltamivir and zanamivir can be used for chemoprophylaxis of influenza; oseltamivir is licensed for use as chemoprophylaxis in persons aged ≥1 year, and zanamivir is licensed for use in persons aged ≥5 years. See Table 2 on page 5 for a summary of treatment and chemoprophylaxis dosing.

Role of Laboratory Diagnosis

The accuracy of clinical diagnosis of influenza on the basis of symptoms alone is limited because symptoms from illness caused by other pathogens can overlap considerably with

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influenza. Because testing all patients who might have influenza is not feasible, influenza surveillance by state and local health departments and CDC can provide information regarding the presence of influenza viruses in the community.

Physicians and laboratories are encouraged to report positive influenza detections to the County of San Diego Public Health Laboratory by phone (619-692-8500) or fax (619-692-8558) and when possible, to submit specimens for viral culture and isolate subtyping. Surveillance data is available at **www.emansandiego.com**.

Appropriate treatment of patients with respiratory illness depends on accurate and timely diagnosis. Influenza surveillance information and diagnostic testing can aid clinical judgment and help guide treatment decisions. For example, early diagnosis of influenza can reduce the inappropriate use of antibiotics and provide the option of using antiviral therapy. However, because certain bacterial infections can produce symptoms similar to influenza, bacterial infections should be considered and appropriately treated, if suspected. In addition, bacterial infections can occur as a complication of influenza.

Providing Other Needed Adult Vaccines

Seniors and others at high risk of complications from influenza visit medical care providers each fall to receive influenza vaccine.

Medical care providers should use this opportunity to evaluate these adults for other needed vaccines as well.

Vaccines are listed below:

1. Pneumococcal polysaccharide vaccine (PPV-23);
2. Tetanus, diphtheria and acellular pertussis (Tdap) vaccine; and
3. For females 11-26 years of age, the Human Papilloma Virus vaccine (HPV) series should be considered.

Additional vaccines for consideration if medically and/or occupationally indicated:

4. Hepatitis A vaccine;
5. Hepatitis B vaccine;
6. Measles, mumps and rubella combination vaccine (MMR);
7. Varicella vaccine;
8. Meningococcal vaccine; and
9. Zoster (shingles) vaccine.

Physicians are urged to capitalize on office visits by those at risk for influenza to provide all needed vaccines.

Influenza and Immunization Resources

The CDC 2008 report, *Prevention and Control of Influenza, Recommendations of the Advisory Committee on Immunization Practices (ACIP)*, (Vol. 57, RR-7, Aug. 8, 2008) includes information on the disease, vaccine, target groups, strategies and the use of antiviral agents in preventing and/or treating influenza. **For a copy of this report, please go to the CDC website noted below.**

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Table 2: Recommended Daily Dosage of Influenza Antiviral Medications for Treatment and Prophylaxis

See also section titled *Recommendations for Using Antiviral Agents for Influenza 2008* on p. 35

Antiviral agent	Age group (yrs) 1–6	7–9	10–12	13–64	≥65
Zanamivir*					
Treatment, influenza A and	NA	10 mg (2 inhalations) twice daily	10 mg (2 inhalations) twice daily	10 mg (2 inhalations) twice daily	10 mg (2 inhalations) twice daily
	1–4	**5–9**			
Chemoprophylaxis, influenza A and	NA	10 mg (2 inhalations) once daily	10 mg (2 inhalations) once daily	10 mg (2 inhalations) once daily	10 mg (2 inhalations) once daily
Oseltamivir					
Treatment† influenza A and B	Dose varies by child's weight§	Dose varies by child's weight§	Dose varies by child's weight§	75 mg twice daily	75 mg twice daily
Chemoprophylaxis, influenza A and B	Dose varies by child's weight¶	Dose varies by child's weight¶	Dose varies by child's weight¶	75 mg/day	75 mg/day

NOTE: Zanamivir is manufactured by GlaxoSmithKline (Relenza® — inhaled powder). Zanamivir is approved for treatment of persons aged ≥7 years and approved for chemoprophylaxis of persons aged ≥5 years. Oseltamivir is manufactured by Roche Pharmaceuticals (Tamiflu® — tablet). Oseltamivir is approved for treatment or chemoprophylaxis of persons aged ≥1 year. No antiviral medications are approved for treatment or chemoprophylaxis of influenza among children aged <1 year. This information is based on data published by the Food and Drug Administration (FDA), which is available at http://www.fda.gov.

* Zanamivir is administered through oral inhalation by using a plastic device included in the medication package. Patients will benefit from instruction and demonstration of the correct use of the device. Zanamivir is not recommended for those persons with underlying airway disease.

† A reduction in the dose of oseltamivir is recommended for persons with creatinine clearance <30 mL/min.

§ The treatment dosing recommendation for children who weigh ≤15 kg is 30 mg twice a day. For children who weigh >15–23 kg, the dose is 45 mg twice a day. For children who weigh >23–40 kg, the dose is 60 mg twice a day. For children who weigh >40 kg, the dose is 75 mg twice a day.

¶ The chemoprophylaxis dosing recommendation for children who weigh ≤15 kg is 30 mg once a day. For who weigh >15–23 kg, the dose is 45 mg once a day. For children who weigh>23–40 kg, the dose is 60 mg once a day. For children who weigh >40 kg, the dose is 75 mg once a day.

Source: CDC. Prevention and control of influenza: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2008;Vol. 57, RR-7 (Aug. 8, 2008):42.

The following is a list of World Wide Web sites for accessing information and promotional materials on influenza, influenza vaccine and related topics:

www.cdc.gov/flu: This is the CDC flu site, and contains information about vaccine supply, flu treatment and management, a weekly flu activity report, and other items. There will be a gallery of patient educational materials developed for the 2008-2009 flu season. The gallery will contain downloadable master copies suitable for an office photocopier, and other masters intended for reproduction by commercial printers.

In addition to the CDC's influenza reports mentioned above, this site contains pneumococcal vaccine educational materials and a wide variety of links to other sites with fact sheets for providers and patients.

www.sdchip.org: This site is maintained by Community Health Improvement Partners (CHIP)**,** a collaboration of health care organizations, providers and community groups working in San Diego County to increase awareness of and responsiveness to community health needs. When vaccine becomes available, this web site will feature a list of more than 300 public and private locations in San Diego County where flu shots will be offered. Also, the site has downloadable influenza and pneumococcal information in English and seven other languages, and links to other immunization-related web sites. Flu shot clinic information is also available through the CHIP toll-free number at 1-877-FLU-0202 (1-877-358-0202).

www.sdiz.org: The San Diego Immunization Coalition website contains immunization information specifically for local health care providers, including general immunization recommendations for children and adults, vaccine safety issues, the San Diego Immunization Registry, flu information, as well as the flu shot clinic schedule (when available) at the County Public Health Centers. There are also links to other websites, such as the CDC influenza information site.

www.immunize.org: The Immunization Action Coalition has a wealth of print materials that can be downloaded and reproduced. Included are childhood and adult materials and official Vaccine Information Statements including, *"Influenza Vaccine, What You Need To Know"* in many languages. Federal law requires that the VIS be given to patients to read before flu vaccine is administered.

www.getimmunizedca.org: The California Department of Public Health has downloadable materials including public service announcements; the VIS for inactivated and live attenuated influenza vaccine in English and Spanish with consent portion attached; and links to CDC and others.

www.cms.hhs.gov/AdultImmunizations/: This is the Centers for Medicare and Medicaid Services (CMS) website and has information on how to bill Medicare for influenza and pneumonia vaccine, the 2008 reimbursement rates for vaccines, and general information on prevention.

www.nfid.org: This is the web site of the National Foundation

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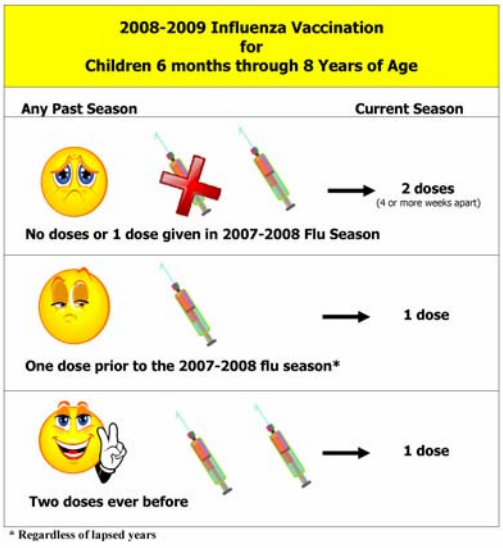
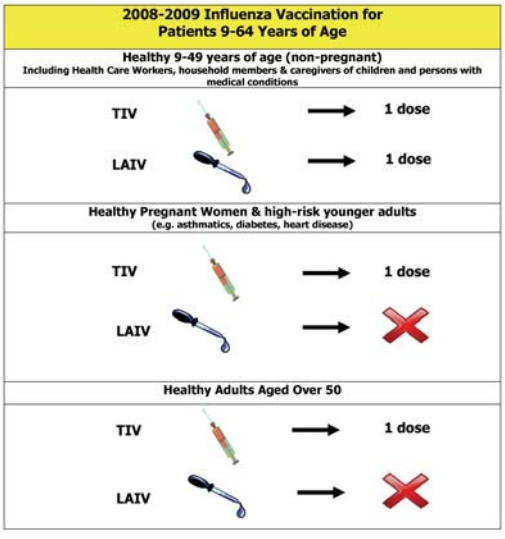
Figure 1: Flu Immunization Memory Aid For Children, Adolescents and Adults.

For an informal memory aid addressing the recommendations for influenza vaccination for children, adolescents and adults, please go to: http://www.sd-immunization/healthcare/eng/hot_topics/HC-Flu-2008-09-Update.html and see this document: **Flu_IZ_Memory_Aid_child_adol_adult_sep_08.pdf**
Please note that the child schedule for 6 months to 8 years applies to both TIV and LAIV, with the exception that LAIV is not recommended for children under two years of age.





for Infectious Diseases (NFID), which has timely and helpful resources with strategies on increasing influenza immunization rates in infants and children and in HCPs. A special project is Call To Action: Influenza and Children with Asthma at **http://www.nfid.org/library/asthma.html.**

www2.sdcounty.ca.gov/hhsa/ServiceDetails.asp?ServiceID=698 This is the County of San Diego Health and Human Services Agency website, which has location and contact information for clinics that provide low-cost childhood and adult immunizations. *(Please note that influenza immunization clinic information will probably not be available at this site until early October, when the specifics of the flu shot clinics are finalized.)*

http://vaers.hhs.gov: This is the website for The Vaccine Adverse Event Reporting System (VAERS). Health care providers and manufacturers are required by law to report suspect reactions to vaccines listed in the Vaccine Injury Table and are encouraged to report even if the vaccines are not listed. VAERS forms are available at 1-800-822-7967 or online at this site.

www.lungusa.org: This is the American Lung Association website, which has flu information and a flu clinic locator feature (**www.flucliniclocator.org**).

2008-2009 Influenza Vaccine Manufacturers/ Distributors

sanofi pasteur (***Fluzone***®) 1-800-VACCINE (1-800-822-2463)

Novartis Vaccine (***Fluvirin***®) 1-800-244-7668

GlaxoSmithKline (***Fluarix***® and ***FluLaval***™) 1-888-825-5249

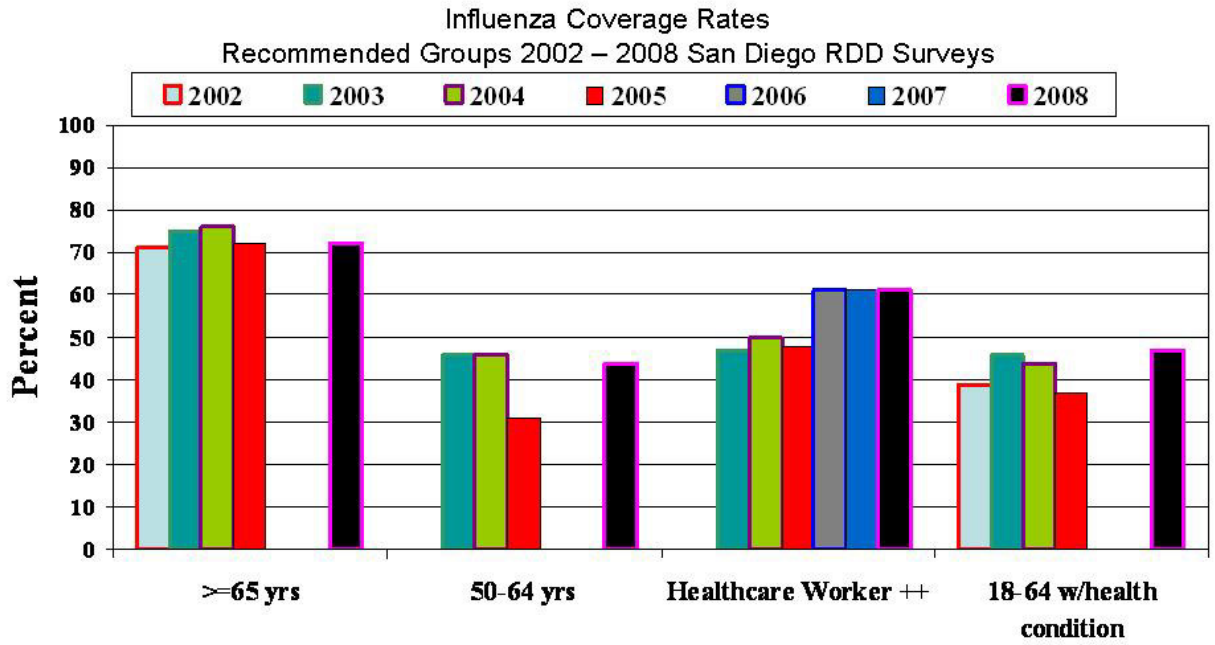
MedImmune (***FluMist***®) 1-877-633-4411

CSL Biotherapies (*Afluria*®) 1-888-4FLU-OFF (1-888-435-8633)

Sources

1. Advisory Committee on Immunization Practices, National Immunization Program, Centers for Disease Control and Prevention. *Recommended Childhood and Adolescent Immunization Schedule, United States, 2008.*
2. CDC. Prevention and control of influenza: *Recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2008;Vol. 57, RR-7 (Aug. 8, 2008):37.*
3. National Foundation for Infectious Diseases. *Influenza Immunization Among Health Care Workers, Call To Action* and *Increasing Influenza Immunization Rates in Infants and Children: Putting Recommendations Into Practice.* Both are available at: www.nfid.org.
4. Centers for Disease Control and Prevention. *Inactivated Influenza Vaccine, What You Need To Know.*
5. Centers for Disease Control and Prevention. *Live, Intranasal Influenza Vaccine, What You Need To Know.*

Figure 2: Influenza Coverage Rates in San Diego



The following have a statistically significant difference: >=65 yrs: 2004 & 2008; 50-64 yrs: 2005 & 2008; Healthcare Workers: RDD 2008, 2003 & 2008, 2004 & 2008, 2005 & 2008 (note: hospital based HCW – not shown here – does have a statistically significant difference between 2006 and 2008); 18-64 w/health condition: & RDD 2008, 2002 & 2008, 2005 & 2008.

•Coverage rate for healthcare worker is from 2005-2006 flu season; others are 2006-2007 flu season

+ One dose coverage

++ 2003 – 2005 age limit set to 18-49. No age limit set other years