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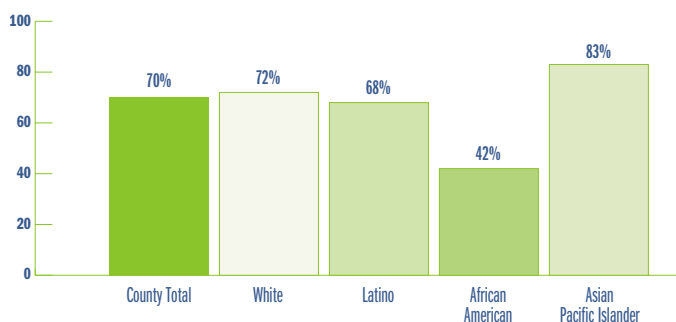
# INFLUENZA VACCINATION

Much of influenza-related illness is preventable with flu vaccination each fall season. Influenza is responsible for an estimated 36,000 deaths and 110,000 to 200,000 hospitalizations in the United States each year, depending on the severity of the seasonal epidemic. In Los Angeles County, the annual number of influenza-related deaths ranged from 1,300 to 2,100 between 1992 and 1998.<sup>1</sup> Groups that are at especially high risk of severe illness from influenza include the elderly, infants, and persons with chronic medical conditions such as heart disease, diabetes, and asthma.

The Healthy People 2010 goal is to increase annual influenza vaccination to at least 90% of adults ages 65 years and older.

Results of the 2002-2003 Los Angeles County Health Survey (LACHS) indicate that only 70% of older adults (those ages 65 years and older) have received the flu vaccine in the past year, similar to the rates reported for California (69%) and the nation (66%) in 2001.

**FIGURE 1** Percentage of Adults (65+ Years) Who Were Vaccinated for Influenza in the Past 12 Months by Race and Ethnicity, 2002



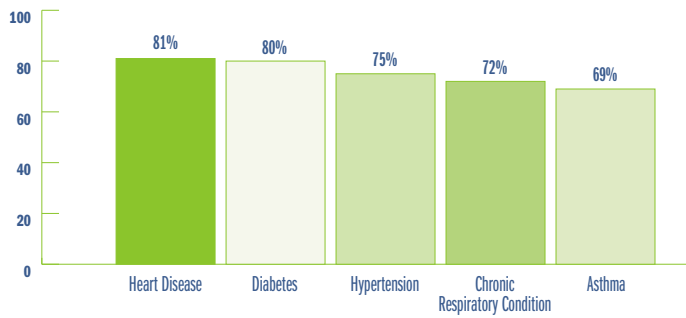
**TABLE 1** Percentage of Adults (65+ Years) Who Were Vaccinated for Influenza in the Past 12 Months by Selected Characteristics

L.A. County	Percent	Estimated #
Influenza Vaccination	70%	706,000
<b>Gender</b>		
Male	72%	305,000
Female	68%	402,000
<b>Federal Poverty Level</b>		
0-99% FPL	70%	94,000
100%-199% FPL	66%	196,000
200%-299% FPL	71%	201,000
300% or above FPL	72%	215,000
<b>Service Planning Area</b>		
Antelope Valley	59%	17,000
San Fernando	73%	168,000
San Gabriel	73%	148,000
Metro	69%	75,000
West	66%	47,000
South	48%	39,000
East	73%	100,000
South Bay	73%	112,000

Vaccination rates were even lower for African-American older adults (42%) (Figure 1). The percentage vaccinated was also slightly lower among females (68%) than males (72%), and was lowest in the South (48%) and Antelope Valley (59%) Service Planning Areas (SPAs) (Table 1).

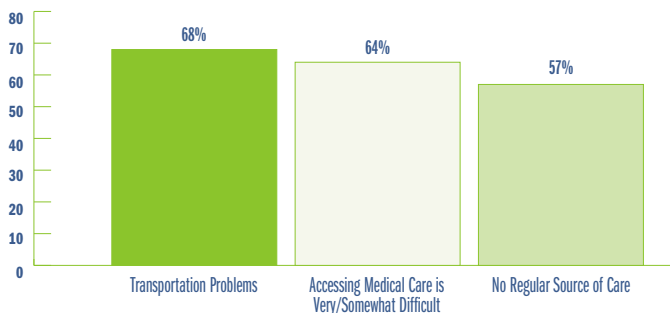
1. Glaser, CA, et al. Medical Care Capacity for Influenza Outbreaks, Los Angeles. *Emerging Infectious Diseases*. 2002; 8 (6): 569-574.

**FIGURE 2** Percentage of Adults (65+ Years) with Selected Health Conditions Who Were Vaccinated for Influenza in the Past 12 Months, 2002



Results from the survey indicate that many older adults with chronic illnesses were not vaccinated for influenza in the past year. (Figure 2). The highest vaccination rates were among adults with heart disease (81%) and diabetes (80%), and lower for adults with asthma (69%) and other chronic respiratory conditions (72%) such as emphysema and chronic bronchitis (Figure 2). Among those who described their health as poor or fair, only 73% had been vaccinated.

**FIGURE 3** Percentage of Adults (65+ Years) with Barriers to Accessing Health Care Who Were Vaccinated for Influenza in the Past 12 Months, 2002



Many older adults who experience barriers to accessing health care are not vaccinated annually for influenza (Figure 3). For example, only 57% of older adults without a regular source of care were vaccinated. Although the percentage of adults ages 65 and older without a regular source of care is quite small (6%), the total estimated number of seniors without a regular source of care that are not vaccinated is sizeable—approximately 25,000 persons. Among those who reported difficulty getting needed medical care (approximately 12% of adults ages 65 and older) only 64% were immunized for influenza.

No local data are available on influenza vaccination rates among adults ages 50 to 64. Nationally, only 37% of adults ages 50 to 64 received the influenza vaccine.<sup>2</sup>

## What Can be Done?

### Preparing for the Upcoming Cold and Flu Season

Vaccination on an annual basis is the most effective means of preventing influenza and reducing the severity of influenza illness. The optimal time to receive influenza vaccine is October and November.

The U.S. Centers for Disease Control and Prevention (CDC) recommends that all adults age 50 and older receive the vaccine. In addition, it is recommended that any person with a chronic health condition who is at least 6 months of age receive the flu vaccine each fall. The CDC also encourages that healthy children ages 6 to 23 months be vaccinated.<sup>3,4</sup>

The CDC has determined that vaccine production and distribution schedules will allow for a sufficient supply of influenza vaccine during the 2003-04 season, unlike in past years where shortages determined the need to prioritize higher risk groups.<sup>5</sup> Information about free or low-cost vaccination as well as additional recommendations for vaccination can be found by using Internet links to the CDC and other organizations (see “on the web” section on page 3).

Influenza vaccination results in significant cost savings to society through substantial reductions in hospitalization and death among adults ages 65 and older.<sup>6,7</sup> Among younger adults, those under age 65, vaccination reduces both health-care costs and productivity losses associated with influenza illness, for example, 34% to 44% reductions in physician visits and 32% to 45% fewer lost workdays.<sup>8,9</sup>

Results from the survey indicate the need to improve influenza vaccination levels for all older adults in the County, especially those with chronic health conditions, African-Americans, and adults in the South and Antelope Valley Service Planning Areas. Continual education of providers and the community is needed to increase awareness of and demand for adult immunization services. Successful vaccination programs

2. Preliminary Data from the 2003 National Health Interview Survey. <http://www.cdc.gov/nchs/data/nhis/earlyrelease/earlyrelease200309.pdf>

3. CDC. Using live, attenuated influenza vaccine for prevention and control of influenza: supplemental recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR* 2003;52 (No. RR-13).

4. CDC. Prevention and Control of Influenza. Recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR* 2003; 52 (No. RR-8). *MMWR* Vol. 52 (RR-8). April 25, 2003.

5. CDC. Supplemental Recommendations about the Timing of Influenza Vaccination, 2003-04 Season. *MMWR* 2003; 52: 796-7.

6. Office of Technology Assessment. Cost effectiveness of influenza vaccination. Washington, DC: US Congress, 1981.

7. Mullooly, JP, et al. Influenza vaccination programs for elderly persons: cost-effectiveness in a health maintenance organization. *Annals of Internal Medicine* 1994;121:947-52.

8. Nichol, KL, et al. Effectiveness of vaccination against influenza in healthy, working adults. *New England Journal of Medicine* 1995;333:889-93.

9. Bridges, CB, et al. Effectiveness and cost-benefit of influenza vaccination of healthy working adults: a randomized controlled trial. *JAMA* 2000;284:1655-63.

include the following components: a plan for identifying persons at high risk, publicity to promote vaccination, education for potential vaccine recipients and health-care workers, and efforts to remove administrative and financial barriers that prevent persons from receiving the vaccine.

Results from the survey show that most (73%) older adults were vaccinated in private doctor's offices, another 7% in County or community clinics, and 6% in hospital outpatient clinics (Figure 4). Vaccination against influenza should be offered to persons during hospitalizations or routine health-care visits before the influenza season so that special visits to physician's offices or clinics can be avoided. In these settings, "reminder" systems designed to inform health care providers who administer vaccinations when individual clients are due (reminder) or overdue (recall) for specific vaccinations have been documented to be very successful in improving vaccination coverage in adults. Measurement and feedback about providers' performance in delivering vaccines has been documented to enhance coverage rates as well, either by changing provider knowledge, attitudes, and behaviors or by stimulating changes in the vaccine delivery system.<sup>10</sup>

Approximately 14% of older adults reported that they were vaccinated in non-medical settings. These community venues represent important opportunities to improve coverage rates. In addition, many opportunities to vaccinate adults exist, but are often missed. For example, vaccination in emergency departments is likely to be effective in reaching select populations that may be difficult to vaccinate in provider's offices. Increasing vaccination rates among residents and staff in nursing homes and chronic care facilities can reduce the risk for outbreaks. Finally, vaccination of health-care workers and

**Centers for Disease Control and Prevention National Immunization Program (NIP)** provides leadership for the planning, coordination, and conduct of immunization activities nationwide. NIP provides information on vaccine-preventable diseases, the recommended immunization schedules, the importance of immunizations, vaccine safety, and data on immunization coverage levels.

<http://www.cdc.gov/nip/default.htm>

**County of Los Angeles Department of Health Services Immunization Program** coordinates efforts to improve immunization coverage levels and reduce the occurrence of vaccine-preventable diseases in Los Angeles County. The Immunization Program provides information on vaccine-preventable diseases and immunization coverage levels in Los Angeles County and a listing of clinics that provide free and low-cost immunizations.

<http://lapublichealth.org/ip/index.htm>

The **Advisory Committee on Immunization Practices** provides general, annually updated information regarding control and prevention of influenza.

<http://cdc.gov/nip/publications/ACIP-list.htm>

The mission of the **National Partnership for Immunization** is to encourage greater acceptance and use of immunization for all ages through partnerships with public and private organizations.

<http://www.partnersforimmunization.org>

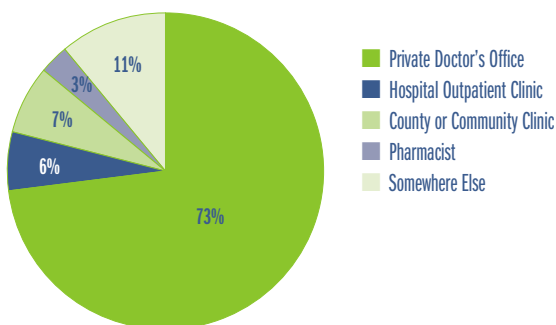
The **National Coalition for Adult Immunizations** was formed to make the most efficient use of public and private resources to achieve Healthy People national goals for adolescent and adult immunization.

<http://www.nfid.org/ncai/index.html>

The **National Institute of Allergy and Infectious Diseases (NIAID)** is a component of the National Institutes of Health (NIH). NIAID conducts and supports research to understand, treat, and ultimately prevent infectious, immunologic, and allergic diseases.

<http://www.niaid.nih.gov/publications/flu.htm>

**FIGURE 4** Where Older-Age Adults Received their Flu Shots, 2002



10. U.S. Centers for Disease Control and Prevention (CDC). Vaccine-Preventable Diseases: Improving Vaccination Coverage in Children, Adolescents, and Adults. MMWR 1999; 48(No. RR-8).

other persons who have close contact with persons at increased risk for severe influenza illness is an important component of controlling the spread of influenza.

While influenza vaccination is the single most effective strategy to prevent influenza illness, there are other steps that can be taken to reduce the transmission of influenza. Because influenza is extremely contagious, people with flu-like symptoms—fever, muscle ache, and fatigue—should stay home during the first three days of their illness to avoid



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exposing others to the virus. Aspirin and cold medications containing acetylsalicylic acid (major ingredient in aspirin) should never be taken for symptoms of possible influenza since this increases the risk of a rare but potentially fatal liver disease

called Reye syndrome, especially in children and young adults. Covering your mouth when you sneeze and cough, and washing your hands frequently with soap and water are common sense, but can also prevent the spread of colds and the flu.

The Los Angeles County Health Survey is a periodic, population-based telephone survey that collects information on sociodemographic characteristics, health status, health behaviors, and access to health services among adults and children in the county. The 2002-2003 survey collected information on a random sample of 8,167 adults and 5,995 children. Interviews were offered in English, Spanish, Cantonese, Mandarin, Korean, and Vietnamese. The most recent survey was supported by grants from First 5 LA, the California Department of Health Services through grants to the Family Health, Tobacco Control and Prevention, and Alcohol and Drug Programs, and the Public Health Response and Bioterrorism Preparedness federal grant. The survey was conducted for the Los Angeles County Department of Health Services between October 2002 and March 2003 by Field Research Corporation.

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**For additional information about the  
L.A. Survey: [www.lapublichealth.org/ha](http://www.lapublichealth.org/ha)**