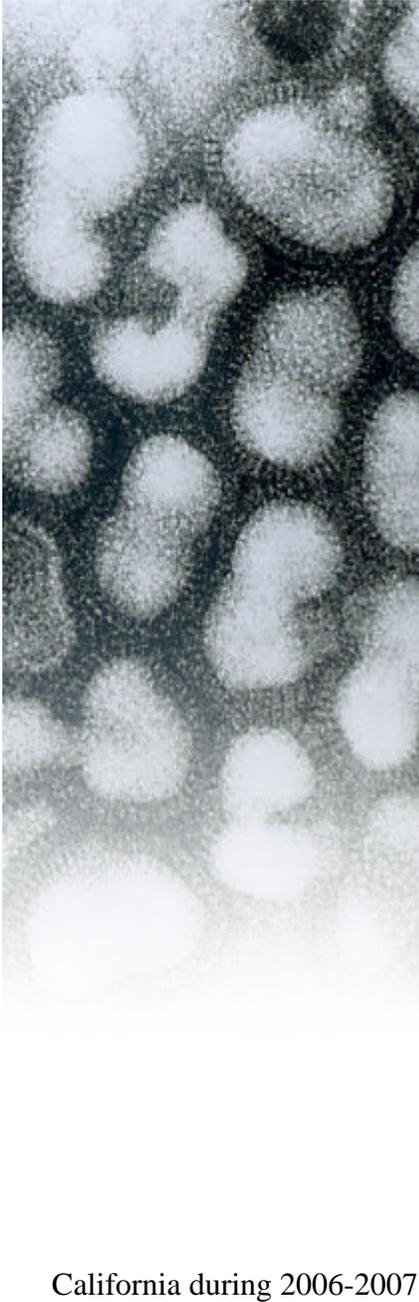


Sentinel Provider Program



The California Influenza Surveillance Project Sentinel Provider Surveillance

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California Sentinel Provider Surveillance

The California Sentinel Provider Influenza Surveillance Program is a partnership between clinicians, local health departments (LHDs), the California Department of Health Services (CDPH), and the federal Centers for Disease Control and Prevention (CDC) to conduct surveillance for influenza-like illness (ILI). Since its inception in 1998, the program has been contributing valuable information to state, national, and global influenza surveillance efforts.

The CDC recommends that there be one sentinel health care provider reporting ILI activity for every 250,000 residents in the state. The current estimated population of California is 36,143,950, requiring enrollment of a minimum of 145 sentinel providers. Enrollment fluctuated throughout the 2006-2007 season as new providers were recruited and others left the program. Recruitment efforts resulted in enrollment of 75 new providers, for a total of 206 surveillance sites by the end of the season.

The geographic distribution of sentinel surveillance sites in California during 2006-2007 is shown in Figure 1.

Links

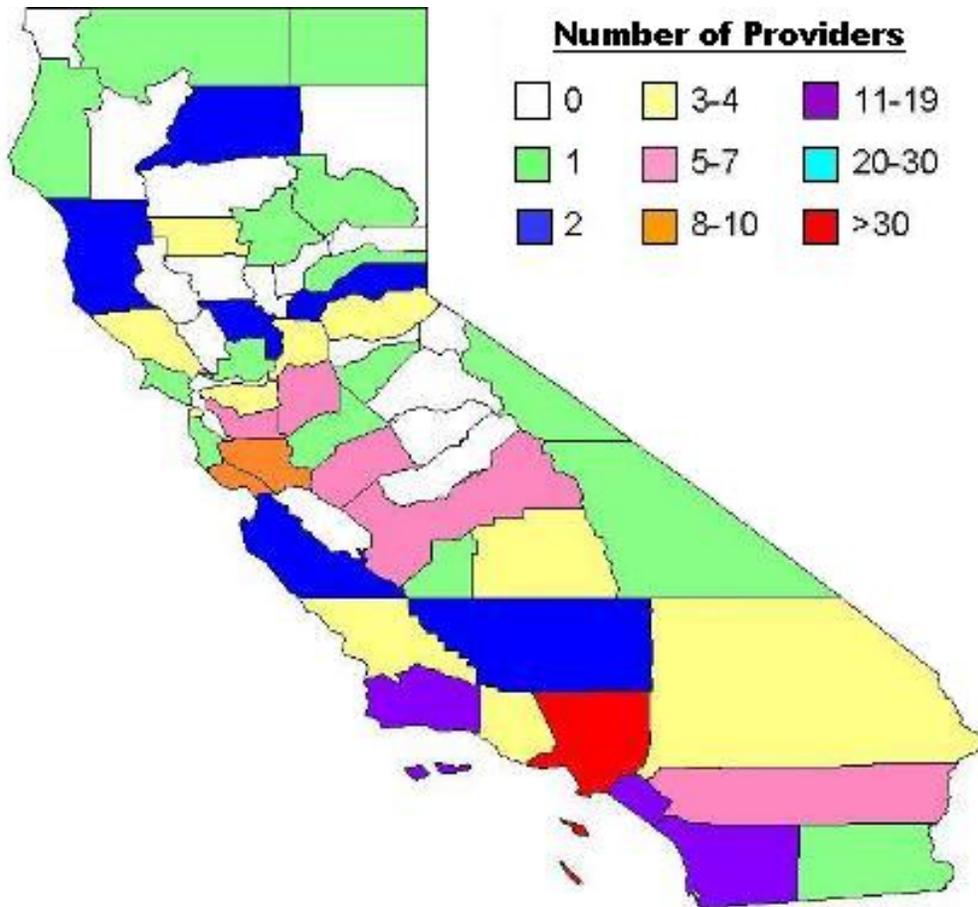
[California Department of Public Health \(CDPH\)](#)

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[Viral and Rickettsial Disease Laboratory Home Page \(VRDL\)](#)

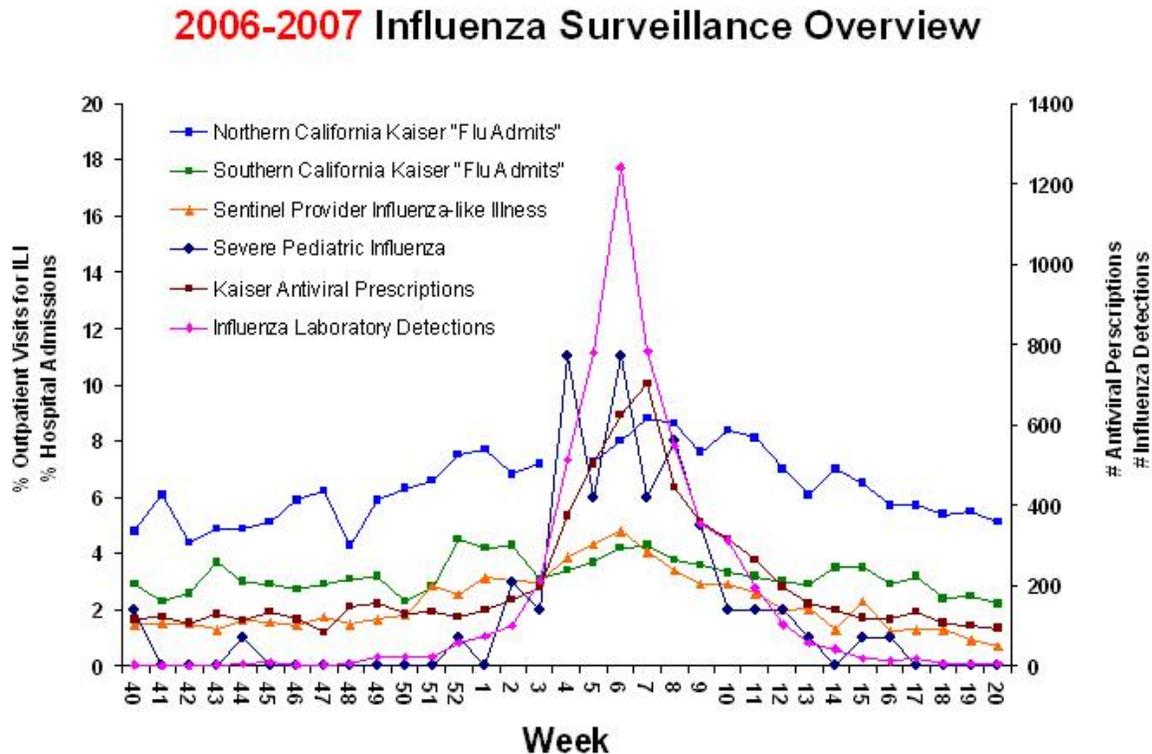
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Figure 1: Number of Providers per County 2006-2007



The information collected by California sentinel providers is combined with other influenza surveillance data on influenza-related hospitalizations, antiviral usage, severe pediatric influenza cases and positive laboratory detections from collaborating hospital, academic and public health laboratories throughout the state to monitor the timing, location, and impact of influenza viruses year-round (see Figure 2 below). Since 1998, the onset, peak, and duration of influenza-like illness activity provided by California sentinel providers has correlated well other influenza surveillance parameters utilized in California.

Figure 2: 2006-2007 Influenza Surveillance Overview



Influenza-like Illness Surveillance

The average weekly percentage of outpatient visits due to influenza-like illness (ILI) for the 33 weeks of flu season (October 1 ? May 19) was 2.6%. The initial percentage of outpatient visits due to ILI in week 40 was 1.5% and remained below baseline levels (2.2%) for the first 10 weeks of the flu season. ILI activity first rose above baseline levels during week 51 and continued to increase gradually thereafter until reaching peak levels during week 6 at 4.8%. After week 6, ILI activity steadily declined to a minimum of 0.73% during week 20.

The peak percentage for ILI visits during week 6 occurred much later than last season (2005-2006 peak occurred during week 51); however, the data from previous years show that peak ILI activity this year was similar to the 2002-2003 and 2004-2005 seasons.

Virologic Testing

A total of 500 specimens were submitted by sentinel providers to the state lab for testing. Of these, 316 (63%) were positive by culture. Of the 316 specimens that tested positive, 249 (79%) were influenza A virus, 44 (14%) were influenza B virus, 2 (1%) were respiratory syncytial virus (RSV), and 19 (6%) were other respiratory viruses.

All specimens collected by sentinel providers undergo culture and if influenza is grown, strain-typing. Additional testing that may be performed includes polymerase chain reaction to detect

other viruses and antiviral resistance testing. The most important information gleaned from virologic characterization is strain identification, which is used to judge the match between circulating influenza virus strains and those covered by the current vaccine, and assist the CDC and WHO in determining strains for inclusion in next year's vaccine. For example, in the 2004-05 season, the A/California/07/2004-like (H3N2) virus was detected in an isolate submitted to VRDL. By the end of the season, 71/81 (87.7%) of A/H3 isolates in California were characterized as A/California/07/04-like. Nationally the A/California/7/2004-like strain also predominated, accounting for over 70% of the influenza A(H3N2) isolates. The influenza A/California/7/2004-like (H3N2) strain was subsequently recommended by the World Health Organization to be a component of the 2005-06 influenza vaccine.

Why volunteer for the Sentinel Provider Surveillance Program?

Seasonal influenza is a significant cause of illness and death in California each year. Influenza viruses are constantly evolving and routine surveillance improves our ability to monitor the circulation of influenza virus strains in the community. The data collected by Sentinel Providers assist CDPH and CDC with developing influenza prevention and control strategies and with selecting the virus strains to be included as components of the vaccine. Surveillance for influenza aids with the detection of new subtypes and emerging strains of influenza viruses, which is an important element of preparedness for pandemic influenza.

Physicians, physician assistants, and nurse practitioners from any specialty and any practice type are invited to enroll. More sentinel sites are needed in all areas of the state, especially in the large cities and major metropolitan areas. Providers who specialize in geriatrics or whose patients are mainly in the > 65 years age group are under-represented among sentinel providers. More providers who see older patients are needed to reflect the age distribution of the population in the state.

Sentinel Providers report the number of patients seen with ILI in four age categories, and the total number of patients seen for any reason. Reports are submitted on a weekly basis to the CDC by fax or an internet based reporting system. Materials to collect and ship patient specimens to the Viral and Rickettsial Disease Laboratory (VRDL) at CDPH are provided with no cost to the provider. Rapid antigen or PCR testing, culture, typing and sub typing are performed by VRDL. Results from testing performed at VRDL are sent to the providers as soon as they are available.

Participating sentinel providers receive weekly updates on state and national influenza activity. Weekly updates of California influenza activity can also be accessed on the website for the [California Influenza Surveillance Project](#) (PDF, New Window)