

# **INFLUENZA VACCINATION AMONG EMPLOYEES IN CALIFORNIA GENERAL ACUTE CARE HOSPITALS FOR THE 2009- 2010 RESPIRATORY SEASON**

HEALTHCARE-ASSOCIATED INFECTIONS PROGRAM  
CENTER FOR HEALTH CARE QUALITY  
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH



## EXECUTIVE SUMMARY

Influenza is a significant cause of morbidity and mortality, especially among vulnerable populations.<sup>1</sup> In April 2009, which became the beginning of the 2009-2010 influenza season, a novel influenza A (H1N1) virus was identified. Signs and symptoms of 2009 influenza A (H1N1) infection were similar to those of seasonal influenza; however, rates of hospitalization and mortality differed: hospitalization rates due to 2009 influenza A (H1N1) were highest among children under 4 years of age, and mortality rates were highest among persons 50 to 64 years of age.<sup>2</sup> Those over 64 years of age, usually at high risk of complications of influenza, were relatively spared. In August 2009, the Advisory Committee on Immunization Practices (ACIP) recommended that healthcare personnel be one of five targeted groups to receive the 2009 influenza A (H1N1) vaccine.<sup>2</sup>

Healthcare personnel are an important source of transmission of the influenza virus in the health care setting. Evidence of 2009 influenza A (H1N1) transmission in healthcare settings was reported in 2009.<sup>7-10</sup> The most effective strategy for preventing influenza is annual vaccination. Vaccinating healthcare personnel is simple, safe, and cost effective; it reduces the risk of transmission to patients and other healthcare personnel and decreases absenteeism. Despite these compelling reasons for healthcare personnel vaccination, vaccination percentages remain low, usually below 45%.<sup>1</sup> Many healthcare personnel reported not being vaccinated due to unavailability of the 2009 influenza A (H1N1) vaccine or because they believed it was not worthy of additional time and expense.<sup>17</sup> The Healthy People 2010 target for seasonal influenza vaccination in healthcare personnel is 60%.<sup>13</sup>

In 2006, California became the first state to pass legislation mandating that general acute care hospitals implement influenza vaccination programs by offering free vaccine to all employees and requiring a signed declination for all refusals. Additionally, all general acute care hospitals are required to report on implementing Centers for Disease Control and Prevention (CDC) recommendations regarding influenza vaccination of healthcare personnel to the California Department of Public Health (CDPH).

Starting in 2009, CDPH required licensed California general acute care hospitals to submit influenza vaccination data via a paper-based passive surveillance system. Data elements included total number of hospital employees and non-employee healthcare personnel at the reporting hospital, total number of vaccinations at the hospital, total number of vaccinations outside of the hospital ("elsewhere"), and total number of declinations. CDPH implemented a retrospective quality control process in 2010 to identify and correct errors, identify data outliers, identify incomplete data, and follow up with hospitals for review and verification of these data. CDPH contacted hospitals through a listserv to indicate that not all hospitals had reported 2009-2010 data in June 2010 and allowed additional time to submit surveillance report forms. While hospitals reported the total number of hospital employees and non-employee healthcare personnel at the reporting hospital and total number of vaccinations and declinations, the data verification process revealed that hospitals used markedly different definitions for non-employee healthcare personnel to the extent that precluded meaningful interpretation. Thus, this report is for influenza vaccination of hospital employees only. Analyses included hospital-specific mean percentages of overall vaccination, vaccination acceptance, vaccination elsewhere and declination for hospital employees.

For 2009-2010, 377 general acute care hospital licensees in California were required to report influenza vaccination data; hospitals had the option of reporting as a single hospital or under a multi-hospital license. For the 2009-2010 respiratory season (October – May), CDPH received 310 (80.9%) influenza vaccination surveillance report forms on hospital employees from 383 reporting facilities. Large hospitals were more likely to report compared with small and medium hospitals ( $p < 0.05$ ).

For all reporting California general acute care hospitals, the mean hospital-specific vaccination percentage for seasonal influenza was 62.6% and ranged from 0% to 99.0%. The mean hospital-specific declination percentage was 23.8% and ranged from 0% to 77.8%. The unknown vaccination status was 13.6%. For all reporting hospitals, 194 (62.6%) met or exceeded the Healthy People 2010 target for seasonal influenza. For 2009 influenza A (H1N1), the mean hospital-specific vaccination percentage was 55.5% and ranged from 0% to 99.1%. The mean hospital-specific declination percentage was 27.7% and ranged from 0% to 83.3%. The unknown vaccination status was 16.8%.

Large single hospitals and pediatric single hospitals had a significantly higher mean hospital-specific vaccination percentage for seasonal influenza among hospital employees compared with small or medium single hospitals and single hospitals with mixed populations ( $p < 0.05$ , respectively). In pediatric single hospitals, the mean hospital-specific employee declination percentage for seasonal influenza was significantly lower than in hospitals with mixed populations ( $p < 0.05$ ). Finally, 173 (62.2%) single hospitals met the Healthy People 2010 target of 60%. Large and medium hospitals were more likely to meet or exceed the Healthy People 2010 target compared to small hospitals ( $p < 0.05$ ). As with seasonal influenza, large hospitals and pediatric single hospitals had a significantly higher mean hospital-specific vaccination percentage for 2009 influenza A (H1N1) among hospital employees compared with small or medium single hospitals and single hospitals with mixed populations ( $p < 0.05$ , respectively). In pediatric single hospitals, the mean hospital-specific employee declination percentage for 2009 influenza A (H1N1) was significantly lower than in hospitals with mixed populations ( $p < 0.05$ ). General acute care hospitals that operated under a multi-hospital license had similar results to single hospitals. Twenty-one (65.6%) multi-hospital licenses met the Healthy People 2010 target of 60% for seasonal influenza.

CDPH assessed strategies used to increase influenza vaccinations in healthcare personnel using a web-based pre- and post-season influenza vaccination survey. Hospital-specific vaccination percentages reported to CDPH were associated with influenza vaccination strategies reported in the pre- and post-season surveys via different mechanisms; strategies were not verified. It is notable that higher performing hospitals implemented vaccination campaigns that included free, available vaccine to all personnel, mobile vaccination carts, and required educational programs. Additionally, many hospitals with a vaccination percentage greater than 90% had mandatory vaccination and/or participation policies for the 2009-2010 season, which included a signed written declination and requirement to wear a mask if not vaccinated. These data should be used only as an indication of what strategies higher-performing hospitals utilized to increase their vaccination percentages.

The data from the 2009-2010 season for seasonal influenza vaccine show an improvement over vaccination percentages in hospital employees in California from the 2008-2009 influenza season. The mean hospital specific percentage increased from 55.3 to 62.6%. For the 2009-2010 season compared to 2008-2009, more hospitals increased their percentage of employees vaccinated than decreased; for example, 120 hospitals increased by at least 5% compared to 39 that decreased by at least the same amount. While comparisons must be made with caution, this improvement could be explained by several factors. For the 2009-2010 influenza season, hospitals reported separately on employees that were vaccinated elsewhere; these employees were included as declined rather than vaccinated in the 2008-2009 influenza season. Also, the increased awareness of influenza during the 2009-2010 season may have contributed to higher seasonal influenza vaccination percentages among hospital employees. Finally, hospitals may have implemented policies or additional strategies as part of their influenza vaccination campaigns to increase vaccination among employees.

As with any new public health surveillance system, these data have limitations. Similar to the 2008-2009 influenza season, there were misinterpretations of the definitions on the data collection forms, particularly for employees, non-employee healthcare personnel, and declinations. Reporting hospitals were unclear whether the definition for healthcare personnel included employees and non-employees or was exclusive of employees. Hospitals also were unclear who should be included in the non-employee healthcare personnel group. The definition of declination should have included only employees that refused to receive the vaccine. As a result, employees, non-employee healthcare personnel, declinations, and employees with unknown status may have been misclassified. While most hospitals received adequate supplies of both seasonal and 2009 influenza A (H1N1) vaccine, the initial shortage of 2009 influenza A (H1N1) vaccine may have resulted in employees seeking vaccination elsewhere. Hospitals may not have been able to collect and report accurate data on employees vaccinated elsewhere, or employees vaccinated later in the season. Therefore, these data should be viewed as estimates of influenza vaccination and declination percentages among employees in California hospitals in 2009-2010.

The findings presented here suggest that much more work is needed to improve influenza vaccination among hospital employees and non-employee healthcare personnel in California general acute care hospitals. CDPH has worked with infection preventionists, employee and occupational health experts, physicians, and hospital representatives to identify targeted non-employee healthcare personnel groups with clear definitions to be included on future data collection forms. For the 2010-2011 respiratory season, CDPH developed and pilot tested a standard data collection form with specific, standard definitions to ensure intended interpretation and implementation. Hospitals will be able to use future data to demonstrate compliance with the reporting mandate, monitor vaccination among hospital employees and targeted non-employee healthcare personnel, and implement targeted interventions. Large hospitals and pediatric hospitals may offer insight on how to improve vaccination rates. The benefits of mandatory declinations alone are difficult to evaluate from these data. CDPH will continue to work with hospitals to identify barriers for collecting influenza vaccination data with the goal of improving influenza vaccination among all hospital employees and non-employee healthcare personnel in California general acute care hospitals.

## INTRODUCTION

Infection with the influenza virus is a significant cause of morbidity and mortality, especially in the elderly, young children, and persons with underlying medical conditions.<sup>1</sup> In April 2009, a novel influenza A (H1N1) virus was identified in California. Signs and symptoms of 2009 influenza A (H1N1) infection were similar to those of seasonal influenza; however, rates of hospitalization and mortality attributed to each of these viruses differed.<sup>2</sup> Hospitalization and mortality rates due to seasonal influenza were highest among persons 65 years of age or older. Hospitalization rates due to 2009 influenza A (H1N1) were highest among children under 4 years of age, and mortality rates were highest among persons 50 to 64 years of age; those over 64 years of age, usually at high risk of complications of influenza, were relatively spared.<sup>3</sup> Therefore, groups targeted to receive the 2009 influenza A (H1N1) vaccine differed from those for seasonal influenza vaccine. In August 2009, the Advisory Committee on Immunization Practices (ACIP) recommended that healthcare personnel be one of five targeted groups to receive the 2009 influenza A (H1N1) vaccine.<sup>2</sup> Other targeted groups included pregnant women, persons in close contact with infants under six months of age, persons aged six months to 24 years, and persons 25 to 64 years of age with underlying medical conditions.<sup>2</sup>

Healthcare personnel are an important source of transmission of the influenza virus in the healthcare setting, especially given the predominance of asymptomatic infection and mild illness.<sup>4-6</sup> Additionally, healthcare personnel often work while they are ill due to worker shortages, need for compensation, and dedication to their patients.<sup>4-6</sup> Evidence of 2009 influenza A (H1N1) transmission in healthcare settings was reported in 2009, including among healthcare workers exposed to patients in the emergency room, intensive care unit, and other patient care units.<sup>7-10</sup> Acquisition of 2009 influenza A (H1N1) by healthcare personnel in community settings has also been identified, introducing the potential for transmission into the healthcare setting.<sup>11</sup>

The most effective single strategy for influenza prevention is annual vaccination.<sup>1,4</sup> Seasonal influenza vaccine effectiveness varies each respiratory season by patient characteristic and the extent of match between the circulating and vaccine strains.<sup>1</sup> The seasonal influenza vaccine is moderately effective for the elderly, infants, and persons who are immunocompromised, the same groups most at risk for complications from seasonal influenza and therefore with the most need for protection.<sup>1,6</sup> In contrast, the seasonal influenza vaccine is highly effective in healthy, younger adults, which include many healthcare personnel; therefore, vaccination campaigns in this group can be simple, safe, and cost effective.<sup>6</sup> Vaccination of healthcare personnel is recommended or endorsed by the Centers for Disease Control and Prevention (CDC) Advisory Committee for Immunization Practices,<sup>1</sup> the Society for Healthcare Epidemiology of America,<sup>4</sup> and the National Foundation for Infectious Diseases (NFID).<sup>12</sup> The Joint Commission implemented an accreditation requirement in January 2007 that hospitals offer influenza vaccine to staff, volunteers, and licensed independent practitioners.<sup>1</sup> The Healthy People 2010 target for seasonal influenza vaccination in healthcare personnel was 60%,<sup>13</sup> and the proposed 2020 target is 90% (CDC, personal communication, June 15, 2010). Despite these compelling reasons for healthcare personnel vaccination, national percentages remain low, usually below 45%.<sup>1</sup> Despite many

limitations affecting data accuracy and misclassification, the 2008-2009 seasonal influenza vaccination percentage among employees in California general acute care hospitals was 55%.<sup>14</sup> While this was higher than national estimates during the same time period, it still did not meet the Healthy People 2010 target for seasonal influenza in healthcare personnel.

More research is needed on the effectiveness of the 2009 influenza A (H1N1) vaccine, especially among healthy young adults, but immunogenicity with mild to moderate side effects has been demonstrated in adults.<sup>15</sup> Cross-reactivity between the seasonal influenza and 2009 influenza A (H1N1) vaccine in studies show that adults previously vaccinated with seasonal influenza more than doubled their cross-reactive antibody to 2009 influenza A (H1N1), from approximately 9% to 25%.<sup>16</sup> This demonstrates that vaccination with seasonal influenza vaccine in recent years did not provide adequate protection against 2009 influenza A (H1N1), which is further evidence that vaccination for the 2009 influenza A (H1N1) was extremely important.

In January 2010, the national coverage level for seasonal influenza vaccination in healthcare personnel was estimated at 62%, compared to the national coverage level for 2009 influenza A (H1N1) vaccination in healthcare personnel of 37%.<sup>2</sup> Relatively higher rates of seasonal influenza vaccination among healthcare personnel compared to previous years may have been attributed to increased attention to influenza during the 2009-2010 season. However, based on results of a monthly survey to monitor healthcare personnel influenza vaccination coverage throughout the 2009-2010 influenza season, almost 20% of respondents were not vaccinated due to unavailability of the 2009 influenza A (H1N1) vaccine.<sup>17</sup> Initial supplies of the 2009 influenza A (H1N1) vaccine were limited; local health departments determined distribution of the vaccine based on their allocation and the initial target groups recommended by ACIP. Despite healthcare personnel being one of the five target groups for vaccine, some hospitals received limited supply of vaccine for employees and healthcare personnel. Additionally, healthcare personnel reported that they believed the seasonal influenza vaccine to be safer and more worthy of time and expense compared to the 2009 influenza A (H1N1) vaccine.<sup>17</sup>

Three strategies have been identified to increase compliance among healthcare personnel with annual influenza vaccination: education combined with free and easily accessible vaccine, a mandatory signed declination statement acknowledging the benefits and risks of the vaccination, and mandatory vaccination with refusal enforced by respiratory masks, reassignment to non-patient care roles, or termination of employment.<sup>4,6,18</sup> In combination, these strategies have been shown to be effective in increasing compliance among healthcare personnel with annual influenza vaccination.<sup>4</sup> Mandatory vaccination alone has been proven as an effective strategy to increase healthcare worker vaccination percentages to more than 90%.<sup>1</sup> Although mandatory declination has not been proven effective as a stand-alone strategy, it has been a successful component of hepatitis B virus vaccination programs for healthcare personnel.<sup>4</sup> Vaccination programs for the 2009-2010 season had to include outreach for the 2009 influenza A (H1N1) vaccine as well, which required different strategies and compelling reasons for compliance, as indicated above. This report will characterize vaccination and declination percentages of paid employees in California general acute hospitals for the 2009-2010 seasonal influenza vaccine and the 2009 influenza A (H1N1) vaccine.

## BACKGROUND

In September 2006, California passed Senate Bill (SB) 739 and became the first state mandating general acute care hospitals to implement influenza vaccination programs that “offer onsite influenza vaccinations... to all hospital employees at no cost to the employee,” and require a signed declination for all refusals.<sup>19</sup> Additionally, beginning January 1, 2008, all general acute care hospitals are required to report “on influenza vaccination of...healthcare personnel” to the California Department of Public Health (CDPH) annually within 30 days of the end of the influenza season, which is April 30.<sup>19</sup> In turn, CDPH is required to post publically influenza vaccination and declination data within six months of the reporting deadline.

SB 739 also requires hospitals to submit data on implemented process measures to the National Healthcare Safety Network (NHSN) of the CDC. The CDPH Healthcare Associated Infections (HAI) Advisory Committee recommended that CDPH not require hospitals to report influenza vaccination data to NHSN because hospitals would have to enter data on individual healthcare workers in order to calculate influenza vaccination rates. CDPH provided hospitals with a combined 2009-2010 seasonal influenza and 2009 influenza A (H1N1) vaccine surveillance report form to comply with the reporting mandate.

The purpose of the influenza vaccination surveillance system, formally implemented in December 2009, is to collect and evaluate influenza vaccination data for hospital employees and non-employee healthcare personnel of general acute care hospitals in California. Hospitals should use this data as part of their program for improving the percentage of hospital employees and non-employee healthcare personnel that are vaccinated. CDPH uses the data to hold hospitals accountable for compliance with the mandates to offer vaccination, require declinations, and report their results. CDPH also uses the data to assess the affect of mandatory declination on influenza vaccination percentages among hospital employees and non-employee healthcare personnel in California general acute care hospitals.

## METHODS

For the 2009-2010 respiratory season (October – May), CDPH used a paper-based passive surveillance system for hospitals to submit influenza vaccination surveillance report forms via fax or email. CDPH created a surveillance report form specifically for the 2009-2010 season; however some hospitals reported 2009-2010 vaccination data on forms available from the two previous seasons. Hospitals that submitted data on previous years’ forms were contacted to resubmit data on the 2009-2010 surveillance report form. The 2009-2010 seasonal influenza/2009 influenza A (H1N1) surveillance report form included the following data elements:

- total number of seasonal and 2009 influenza A (H1N1) vaccine doses received by the facility
- total number of hospital employees and non-employee healthcare personnel
- total number of seasonal and 2009 influenza A (H1N1) vaccinations in these groups

- total number of seasonal and 2009 influenza A (H1N1) vaccinations received elsewhere in these groups
- total number of seasonal and 2009 influenza A (H1N1) declinations in these groups
- total number of laboratory-confirmed H1N1 infection prior to being offered 2009 influenza A (H1N1) vaccination and declined.

## Definitions

CDPH defined a general acute care hospital as any healthcare facility in California licensed as a general acute care hospital by the CDPH Licensing and Certification Program, with active acute care beds in 2009. Hospitals could report as a single hospital or under a multi-hospital license and for this analysis, CDPH categorized hospitals into two groups based on reporting category. A single hospital was any hospital that operated under a single license or any hospital that was part of a multi-hospital license but chose to report as a single hospital. Single hospitals also included general acute care hospitals that operated jointly with a non-acute care facility (such as a skilled nursing facility or an acute psychiatric hospital) but reported influenza vaccination data as a single general acute care hospital. We categorized hospitals that were licensed with one or more general acute care hospitals and reported combined influenza vaccination data for all hospitals under the license as multi-hospital licenses. We analyzed these multi-hospital licensed hospitals separately from single licensed hospitals. Facilities with a general acute care hospital license that did not operate any acute care beds in 2009 were not considered to be subject to the reporting requirements. The data and results presented in this report represent licensed hospitals as of 2009 that were open during the entire influenza season. Hospitals listed may no longer operate under a single license or they may have closed since the end of the reporting period for these data. Additionally, new hospitals may have become licensed since these data were submitted and analyzed.

CDPH defined the fields on the surveillance report form and instructions for completing the form included these definitions. We defined a hospital employee as any worker who collected his or her primary paycheck from the reporting hospital, whether or not he or she had patient contact. Examples provided on the form included administrative staff, dietary staff, and facilities management staff. Non-employee healthcare personnel was a mutually exclusive group from hospital employees, defined according to CDC guidelines as “all paid and unpaid persons working in a healthcare setting who have the potential for exposure to infectious materials including body substances, contaminated medical supplies and equipment, contaminated environmental surfaces, or contaminated air...”<sup>20</sup> 2009 Influenza A (H1N1) was a novel influenza virus that was declared a pandemic strain in 2009. H1N1 vaccine doses referred to doses of 2009 influenza A (H1N1) vaccine that contained live inactivated (injectable) or live attenuated (nasal spray mist) 2009 influenza A (H1N1). Seasonal vaccine doses referred to doses of 2009 seasonal influenza vaccine that contained live inactivated (injectable) or live attenuated (nasal spray mist) strains of: A/Brisbane/59/2007(H1N1)-like virus; A/Brisbane/10/2007 (H3N2)-like virus; and B/Brisbane 60/2008-like antigens. Vaccination was captured in two categories: number of staff who received a vaccine at the facility and number of staff who declined a vaccine because they were vaccinated elsewhere. Declined referred to the written declaration by a staff person



who elected to decline vaccination. The definition on the report form for declined included only those persons who were offered a vaccine and declined and did not include persons who wanted to be vaccinated but for whom supply was inadequate.

CDPH also obtained data from additional data sources on hospital demographics, including licensed bed size, rurality, patient population, and teaching status. We categorized hospitals as small (4-80 beds), medium (81-202 beds), or large (203 beds or more) so that each represented one-third of California hospitals. We defined rural hospitals based on the Rural Health Policy Council's definition as "a hospital located in an unincorporated place or census tract of 15,000 or less population according to the 1980 census."<sup>21</sup> We defined pediatric hospitals as any hospital having "children's hospital" in its name. Teaching hospitals were defined according to the Association of American Medical Colleges<sup>22</sup> for undergraduate medical facilities and the Accreditation Council for Graduate Medical Education<sup>23</sup> for graduate medical facilities.

## **Quality Assurance**

In 2010, CDPH implemented a retrospective quality assurance process to track and correct errors, identify data outliers, and follow up with hospitals for review and verification of data. A 15% random sample of surveillance report forms was identified for comparison between electronic data and data on the original form. To determine whether dual data entry was necessary, we calculated data entry error percentages for each data field on the form; an error percentage of at least 5% was an indicator for dual data entry. Corrections were made on hard copy screen shots of the database followed by corrections in the electronic database.

In June 2010, an email was sent to all hospitals via a voluntary CDPH infection control listserv notifying them that not all California hospitals had submitted an influenza vaccination surveillance report form to CDPH for the 2009-2010 influenza season. Hospitals also were notified that vaccination data for the 2009-2010 influenza season would be posted publicly. Hospitals were directed to submit a report or to resubmit a revised surveillance report form. All forms were due to CDPH by July 1, 2010.

Analysis of all numeric variables included frequency, mean, median, minimum, maximum and quartile values. We considered hospitals with calculated vaccination percentage values in the 10<sup>th</sup> and 90<sup>th</sup> percentiles as out-of-range. We contacted hospitals reporting data outside of the range to verify correct use of definitions and collection and reporting of vaccination data. We identified and investigated data fields and records with incomplete data and contacted hospitals to collect these data as available.

## **Calculations**

CDPH performed all of the following calculations for the seasonal influenza vaccine as well as for the 2009 influenza A (H1N1) vaccine based on the raw data submitted by each reporting facility. We calculated hospital-specific vaccination percentages as the number of vaccinations given by the hospital to employees divided by the total number of hospital employees. We also calculated hospital-specific employee vaccination acceptance

percentages as the number of vaccinations given to all employees in the hospital divided by the sum of vaccinations and declinations for all employees in the hospital.

CDPH calculated the percentage of employees vaccinated at the hospital as the number of employees vaccinated at the hospital divided by the total number of hospital employees, and the percentage of employees vaccinated outside the hospital as the number of employees vaccinated elsewhere divided by the total number of employees. We calculated hospital-specific employee declination percentages as the number of declinations received from all employees in the hospital divided by the sum of vaccinations and declinations for all employees in the hospital. Additionally, we calculated the percentage of hospital employees for which vaccination status was unknown as the sum of the mean hospital employee vaccination percentage and the mean hospital employee declination percentage subtracted from 100. Hospital-specific unknown percentages were not calculated because these data were not included on the surveillance report form. We calculated the 95% confidence interval (CI) for the hospital-specific vaccination and declination percentages using the binomial distribution where the observed proportion of influenza vaccination among hospital employees in California was used as an estimate of the true or expected proportion of influenza vaccination among employees:

$$p \pm \sqrt{\frac{p(1-p)}{n}}$$

We calculated outreach as the total number of vaccinations administered by the reporting hospital plus the number of vaccinations obtained elsewhere plus the number of declinations received by the hospital divided by the total number of employees at the reporting hospital. Because SB 739 requires hospitals to offer influenza vaccination to all employees, the target for outreach at each hospital was 100%.

We calculated mean hospital-specific seasonal influenza and 2009 influenza A (H1N1) vaccination and declination percentages for all reporting hospitals, single hospitals, and multi-hospital licenses. We calculated mean hospital-specific seasonal influenza and 2009 influenza A (H1N1) vaccination and declination percentages by hospital demographic for single hospitals only. We also calculated mean hospital-specific seasonal influenza and 2009 influenza A (H1N1) vaccine acceptance, vaccinated at hospital, and vaccinated elsewhere percentages for single hospitals and multi-hospital licenses.

Using total number of reported seasonal and 2009 influenza A (H1N1) vaccine doses received by their facility, we calculated the number and proportion of hospitals that received adequate vaccine supply to cover paid employees by the end of the reporting period (March 31, 2010). In order to surmise whether vaccine was available to hospital employees early on in the season, we calculated the vaccine supply proportion as the number of employees vaccinated at the hospital (as opposed to elsewhere) divided by the total number of employees.

We compared differences in hospital demographics, described above, between reporting and non-reporting general acute care hospitals and tested for statistical significance using a chi-

square test or Fisher's exact test. Mean hospital-specific vaccination and declination percentages were compared between reporting and non-reporting hospitals among the demographic groups using the independent samples t-test and ANOVA. We compared differences between vaccination and declination percentages for single hospitals and multi-hospital licenses using a chi-square test and independent samples t-test. For all comparisons, we used a p-value of less than 0.05 to determine statistical significance. We conducted all analyses using SAS version 9.1 (SAS Institute; Cary, NC, USA).

## **Exclusions**

CDPH excluded all data on non-employee healthcare personnel from this analysis. Many reporting hospitals misinterpreted the definition of healthcare personnel and did not separate data on non-employee healthcare personnel from data on hospital employees. Additionally, many hospitals reported limited or no systems in place to collect vaccination data on non-employee healthcare personnel. We excluded hospitals with declination percentages above 100 from the declination analysis only. We excluded outreach data from the analysis because when outreach was calculated as defined on the surveillance report form, many hospitals had outreach percentages greater than 100. It was unclear whether hospitals made errors in the reported number of vaccinations at either the hospital or elsewhere, or the reported number of declinations.

## **Multi-Hospital Licenses**

According to the CDPH Licensing and Certification Program, as of 2009, 40 consolidated licenses in California encompassed 86 hospitals. After determining whether each hospital reported influenza vaccination data as a separate hospital or if the hospital combined its data with data from other hospitals under the same license, CDPH analyzed hospitals reporting under a multi-hospital license as a group separate from single hospitals. We did not classify hospitals reporting under a multi-hospital license into demographic groups, i.e. rural or teaching, given the diversity of facilities operating under one license.

## **Healthy People 2010 Influenza Vaccination of Healthcare Personnel**

CDPH utilized the Healthy People 2010 target of 60% vaccination among healthcare personnel to dichotomize hospitals into those that met or exceeded this target and those that did not. We compared statistically significant differences among these groups using a chi-square test or Fisher's exact test.

## **Pre- and Post-Season Surveys**

In addition to influenza vaccination and declination data, CDPH collected a pre- and post-season survey via the Survey Monkey website regarding activities used to promote influenza vaccination in hospital employees and non-employee healthcare personnel. Survey questions included personnel targeted for the annual influenza vaccination program, types of employees included in the program, cost of the influenza vaccination, shifts during which influenza vaccination was offered, methods used to deliver influenza vaccination, strategies

to promote influenza vaccination, use and requirement of education programs on influenza vaccination, required documentation of off-site influenza vaccination, and required signed declination statements for refusal of influenza vaccination. We compared hospitals that responded to the surveys based on vaccination percentages among employees. We considered hospitals with a vaccination percentage in the 75<sup>th</sup> percentile or higher as high and hospitals with a vaccination percentage in the 25<sup>th</sup> percentile or lower as low.

## RESULTS

### Overall Reporting Percentages, All Reporting Hospitals

Figure 1 displays the total number of single and multi-hospital general acute care licenses in California as of 2009. There were 377 single- or multi-hospital licenses, 337 of which were single-hospital licenses and 40 of which were multi-hospital licenses. Among the multi-hospital licenses, 11 hospitals operating under five licenses chose to be considered as single hospitals for submitting influenza vaccination data for the 2009-2010 season and 75 hospitals operating under 35 licenses chose to be considered as a group of hospitals. For data analysis purposes, the 11 hospitals under a multi-hospital license that reported individually were considered as single hospitals. Therefore, there were a total of 348 reporting single hospitals and 35 reporting multi-hospital licenses, for an overall 383 reporting hospitals.

Table 1 displays the total number of influenza vaccination surveillance report forms received from single hospitals and hospitals operating under a multi-hospital license. The total number of seasonal influenza/2009 influenza A (H1N1) vaccination surveillance report forms received representing general acute care hospitals was 310. Of those, 278 (89.7%) were from single hospitals and 32 (10.3%) represented multi-hospital licenses. CDPH did not receive surveillance report forms from 73 general acute care hospitals, 70 (95.9%) of which were single hospitals and three (4.1%) of which were multi-hospital licenses.

Table 2 displays mean hospital-specific seasonal influenza vaccination and declination percentages for all reporting general acute care hospitals, single general acute care hospitals, and multi-license general acute care hospitals. For all reporting California general acute care hospitals, the mean hospital-specific vaccination percentage for seasonal influenza was 62.6% (standard deviation 16.0) and ranged from 0% to 99.0%. The mean hospital-specific declination percentage for seasonal influenza was 23.8% (standard deviation 12.7) and ranged from 0% to 77.8%. For single hospitals, the mean hospital-specific vaccination percentage for seasonal influenza among employees was 62.6% (standard deviation 16.1) and ranged from 0% to 99.0%. The mean hospital-specific declination percentage for seasonal influenza among employees in single hospitals was 23.9% (standard deviation 12.6) and ranged from 0% to 77.8%. For multi-hospital licenses, the mean hospital-specific seasonal influenza vaccination percentage among employees was 62.9% (standard deviation 15.9) and ranged from 8.1% to 90.4%. The mean hospital-specific declination percentage for seasonal influenza among employees in multi-hospital licenses was 23.2% (standard deviation 14.3) and ranged from 0% to 52.7%.

Table 2 also displays mean hospital-specific 2009 influenza A (H1N1) vaccination and declination percentages for all reporting general acute care hospitals, single general acute care hospitals, and multi-license general acute care hospitals. For all reporting California general acute care hospitals, the mean hospital-specific vaccination percentage for 2009 influenza A (H1N1) was 55.5% (standard deviation 17.0) and ranged from 0% to 99.1%. The mean hospital-specific declination percentage for 2009 influenza A (H1N1) was 27.7% (standard deviation 17.3) and ranged from 0% to 83.3%. For single hospitals, the mean hospital-specific vaccination percentage for 2009 influenza A (H1N1) among employees was 55.4% (standard deviation 17.2) and ranged from 0% to 99.1%. The mean hospital-specific declination percentage for 2009 influenza A (H1N1) among employees in single hospitals was 27.8% (standard deviation 17.4) and ranged from 0% to 83.3%. For multi-hospital licenses, the mean hospital-specific vaccination percentage for 2009 influenza A (H1N1) among employees was 56.9% (standard deviation 15.0) and ranged from 15.4% to 81.8%. The mean hospital-specific declination percentage for 2009 influenza A (H1N1) among employees in multi-hospital licenses was 26.9% (standard deviation 16.9) and ranged from 2.6% to 64.5%.

## Single Hospitals

### *Demographics*

Of the 348 California hospitals designated as single hospitals for influenza vaccination reporting purposes, bed size ranged from four beds to 907 beds. For the 2009-2010 reporting season, California hospitals were evenly distributed among 116 small (4-80 beds), 116 medium (81-204) and 116 large (>205 beds) hospitals (Table 3). Sixty-one (17.5%) single hospitals were designated as rural, 11 (3.2%) single hospitals were designated as children's hospitals, and 43 (12.4%) single hospitals were accredited as medical teaching facilities.

Among the 348 single general acute care hospitals, 278 (79.9%) submitted a report form. Large hospitals were more likely to report compared with small and medium hospitals; this difference was statistically significant. There were no statistically significant differences between reporting and non-reporting hospitals with respect to rurality, patient population, and teaching status.

### *Overall Vaccination Percentage – Seasonal Influenza*

The mean hospital-specific seasonal influenza vaccination percentage among employees in single hospitals was 62.6% (standard deviation 16.1) and ranged from 0% to 99.0% (Table 4). The first quartile for hospital-specific seasonal influenza vaccination percentages ranged from 0% to 54.1%; the second quartile ranged from 54.1% to 63.9%; the third quartile ranged from 63.9% to 72.7%; the fourth quartile ranged from 72.7% to 99.0%. Table 4 displays mean seasonal influenza vaccination percentages of single hospitals by hospital demographic including bed size, rurality, patient population, and teaching status. Mean hospital-specific vaccination percentages were higher in large hospitals (66.7%) compared with small (61.6%) and medium (59.0%) hospitals, and in pediatric hospitals (75.9%)

compared to hospitals with mixed populations (62.1%); these differences were statistically significant. Mean hospital-specific vaccination percentages were higher in rural and teaching hospitals; however, these differences were not statistically significant.

### *Overall Vaccination Percentage – 2009 Influenza A (H1N1)*

The mean hospital-specific 2009 influenza A (H1N1) vaccination percentage among employees in single hospitals was 55.4% (standard deviation 17.2) and ranged from 0% to 99.1% (Table 4). The first quartile for hospital-specific vaccination percentages ranged from 0% to 43.4%; the second quartile ranged from 43.4% to 56.2%; the third quartile ranged from 56.2% to 66.5%; the fourth quartile ranged from 66.5% to 99.1%. Table 4 displays mean 2009 influenza A (H1N1) vaccination percentages of single hospitals by hospital demographic including bed size, rurality, patient population, and teaching status. Mean hospital-specific vaccination percentages were higher in large hospitals (59.5%) compared with small (52.8%) and medium (53.3%) hospitals, and in pediatric hospitals (73.1%) compared to hospitals with mixed populations (54.7%); these differences were statistically significant. Mean hospital-specific vaccination percentages were higher in urban and teaching hospitals; however, these differences were not statistically significant.

### *Vaccine Acceptance, Vaccinated at Hospital and Elsewhere – Seasonal Influenza*

Table 5 displays the mean hospital-specific percentages for vaccine acceptance, vaccinated at hospital, and vaccinated elsewhere. The mean hospital-specific seasonal vaccine acceptance percentage among employees was 71.1% (standard deviation 14.9) and ranged from 0% to 100%. The mean hospital-specific vaccinated at hospital percentage was 57.3% (standard deviation 16.3) and ranged from 0% to 98.4%. The mean hospital-specific vaccinated elsewhere percentage was 5.3% (standard deviation 8.1) and ranged from 0% to 81.7%.

### *Vaccine Acceptance, Vaccinated at Hospital and Elsewhere – 2009 Influenza A (H1N1)*

Table 5 displays the mean hospital-specific percentages for vaccine acceptance, vaccinated at hospital, and vaccinated elsewhere. The mean hospital-specific 2009 influenza A (H1N1) vaccine acceptance percentage among employees was 65.8% (standard deviation 19.7) and ranged from 0% to 100%. The mean hospital-specific vaccinated at hospital percentage was 50.9% (standard deviation 17.0) and ranged from 0% to 98.4%. The mean hospital-specific vaccinated elsewhere percentage was 4.5% (standard deviation 7.6) and ranged from 0% to 82.9%.

### *Overall Declinations – Seasonal Influenza*

The mean hospital-specific seasonal influenza declination percentage among employees was 23.9% (standard deviation 12.6) and ranged from 0% to 77.8% (Table 6). The first quartile for hospital-specific declination percentages ranged from 0% to 15.9%; the second quartile ranged from 15.9% to 23.6%; the third quartile ranged from 23.6% to 31.4%; the fourth quartile ranged from 31.4% to 77.8%. Table 6 displays mean hospital-specific seasonal

declination percentages in employees of single-license hospitals by hospital demographic. The mean hospital-specific declination percentage was lower in pediatric hospitals (14.5%) compared to hospitals with mixed populations (24.2%); this difference was statistically significant. Mean hospital-specific declination percentages were lower in large, urban, and teaching hospitals; however, these differences were not statistically significant.

#### *Overall Declinations – 2009 Influenza A (H1N1)*

The mean hospital-specific 2009 influenza A (H1N1) declination percentage among employees was 27.8% (standard deviation 17.4) and ranged from 0% to 83.3% (Table 6). The first quartile for hospital-specific declination percentages ranged from 0% to 15.4%; the second quartile ranged from 15.4% to 27.5%; the third quartile ranged from 27.5% to 38.8%; the fourth quartile ranged from 38.8% to 83.3%. Table 6 displays mean hospital-specific declination percentages in employees of single-license hospitals by hospital demographic. The mean hospital-specific declination percentage was lower in pediatric hospitals (15.4%) compared with hospitals with mixed populations (28.2%); this difference was statistically significant. Mean declination percentages were also lower in medium, rural and teaching hospitals; however, these differences were not statistically significant.

#### *Unknown Vaccination Status – Seasonal Influenza and 2009 Influenza A (H1N1)*

The mean unknown seasonal vaccination status, calculated as  $100 - (62.6 \text{ (mean vaccination percentage)} + 23.9 \text{ (mean declination percentage)})$ , was 13.5%. The mean unknown 2009 influenza A (H1N1) vaccination status, calculated as  $100 - (55.4 + 28.1)$  was 16.5%.

#### *Vaccine Distribution*

Of the 278 reporting single general acute care hospitals in California, 255 (91.7%) hospitals reported data on number of seasonal influenza vaccine doses received. Of these, 251 (98.4%) hospitals reported having received an adequate supply of vaccine to cover their paid employees by March 31, 2010. As described above, the mean hospital-specific vaccinated elsewhere percentage for seasonal influenza was approximately 5% and ranged up to almost 82%. Two hundred fifty-four (91.4%) hospitals reported data on number of 2009 influenza A (H1N1) vaccine doses received. Of these, 250 (98.4%) reported having received an adequate supply of vaccine to cover their paid employees by March 31, 2010. The mean hospital-specific vaccinated elsewhere percentage for 2009 influenza A (H1N1) was nearly 5% and ranged up to almost 83%. For both seasonal influenza and 2009 influenza A (H1N1), hospitals with high percentages of employees that were vaccinated elsewhere did not report receiving an inadequate supply of vaccine.

### **Multi-Hospital Licenses**

Thirty-five multi-hospital licensees encompassing 75 hospitals opted to report as a group for influenza vaccination reporting purposes (Figure 1). CDPH received 32 (91.4%) seasonal influenza/2009 influenza A (H1N1) vaccination surveillance report forms representing 69

hospitals operating under a multi-hospital license (Table 1). No demographic analysis was done of these hospitals given the diversity of hospitals under one license.

### *Seasonal Influenza*

Table 7 displays the mean hospital-specific percentages for overall vaccination, vaccine acceptance, vaccinated at hospital, vaccinated elsewhere, and declination for multi-hospital licenses. The mean hospital-specific overall seasonal vaccination percentage was 62.9% (standard deviation 15.9) and ranged from 8.1% to 90.4%. The first quartile for hospital-specific seasonal vaccination percentages under multi-hospital licenses ranged from 0% to 55.3%; the second quartile ranged from 55.3% to 63.8%; the third quartile ranged from 63.8% to 73.2%; the fourth quartile ranged from 73.2% to 90.4%. The mean hospital-specific seasonal vaccine acceptance percentage among employees was 72.2% (standard deviation 17.0) and ranged from 16.4% to 100%. The mean hospital-specific seasonal influenza vaccinated at hospital percentage was 59.8% (standard deviation 15.2) and ranged from 3.4% to 88.6%. The mean hospital-specific seasonal influenza vaccinated elsewhere percentage was 3.1% (standard deviation 4.1) and ranged from 0% to 15.2%. The mean hospital-specific seasonal declination percentage was 23.2% (standard deviation 14.3) and ranged from 0% to 52.7%. The first quartile for hospital-specific declination percentages under multi-hospital licenses ranged from 0% to 12.8%; the second quartile ranged from 12.8% to 22.8%; the third quartile ranged from 22.8% to 33.0%; the fourth quartile ranged from 33.0% to 52.7%. The mean unknown vaccination status was 13.9%.

### *2009 Influenza A (H1N1)*

Table 7 displays the mean hospital-specific percentages for overall vaccination, vaccine acceptance, vaccinated at hospital, vaccinated elsewhere, and declination for multi-hospital licenses. The mean hospital-specific 2009 influenza A (H1N1) vaccination percentage was 56.9% (standard deviation 15.0) and ranged from 15.4% to 81.8%. The first quartile for hospital-specific seasonal vaccination percentages under multi-hospital licenses ranged from 15.4% to 47.5%; the second quartile ranged from 47.5% to 56.7%; the third quartile ranged from 56.7% to 69.21%; the fourth quartile ranged from 69.2% to 81.8%. The mean hospital-specific seasonal vaccination acceptance percentage was 72.2% (standard deviation 17.0) and ranged from 16.4% to 100%. The mean hospital-specific 2009 influenza A (H1N1) vaccinated at hospital percentage was 54.6% (standard deviation 15.0) and ranged from 6.1% to 77.5%. The mean hospital-specific 2009 influenza A (H1N1) vaccinated elsewhere percentage was 2.3% (standard deviation 3.0) and ranged from 0% to 9.3%. The mean hospital-specific 2009 influenza A (H1N1) declination percentage was 26.9% (standard deviation 16.9) and ranged from 2.6% to 64.5%. The first quartile for hospital-specific declination percentages under multi-hospital licenses ranged from 2.6% to 15.2%; the second quartile ranged from 15.2% to 23.9%; the third quartile ranged from 23.9 to 39.0%; the fourth quartile ranged from 39.0% to 64.5%. The mean unknown vaccination status was 16.2%.



## *Vaccine Distribution*

Of the 32 reporting multi-hospital general acute care licenses in California, 29 (90.6%) multi-hospital licenses reported data on number of seasonal influenza vaccine doses received. Of these, 27 (93.1%) multi-hospital licenses reported having received an adequate supply of vaccine to cover their paid employees by March 31, 2010. As described above, the mean hospital-specific vaccinated elsewhere percentage for seasonal influenza was approximately 3% and ranged up to 15%. Thirty (93.8%) of the 32 multi-hospital licenses reported data on number of 2009 influenza A (H1N1) vaccine doses received; all of those reported having received an adequate supply of vaccine to cover their paid employees by March 31, 2010. The mean hospital-specific vaccinated elsewhere percentage for 2009 influenza A (H1N1) was approximately 2% and ranged up to 9%. For both seasonal influenza and 2009 influenza A (H1N1), hospitals with high percentages of employees that were vaccinated elsewhere did not report receiving an inadequate supply of vaccine.

## **Single versus Multi-Hospital Licenses**

### *Seasonal Influenza*

The difference between the mean hospital-specific seasonal vaccination percentage for single hospitals (62.6%) compared with hospitals reporting under a multi-hospital license (62.9%) was not statistically significant ( $p = 0.92$ ). The difference between the mean hospital-specific seasonal declination percentage for single hospitals (23.9%) compared with hospitals reporting under a multi-hospital license (23.2%) also was not statistically significant ( $p = 0.76$ ). The difference between the percentage of single hospitals receiving adequate vaccine supply (98.4%) and the percentage of multi-hospital licenses receiving adequate vaccine supply (93.1%) was not statistically significant ( $p = 0.12$ ).

### *2009 Influenza A (H1N1)*

The difference between the mean hospital-specific 2009 influenza A (H1N1) vaccination percentage for single hospitals (55.4%) compared with hospitals reporting under a multi-hospital license (56.9%) was not statistically significant ( $p = 0.62$ ). The difference between the mean hospital-specific H1N1 declination percentage for single hospitals (27.8%) compared with hospitals reporting under a multi-hospital license (26.9%) also was not statistically significant ( $p = 0.78$ ). The difference between the percentage of single hospitals receiving adequate vaccine supply (98.4%) and the percentage of multi-hospital licenses receiving adequate vaccine supply (100%) was not statistically significant ( $p = 0.1$ ).

## **Hospitals Meeting the Healthy People 2010 Target of 60%**

### *Seasonal Influenza*

Table 8 displays the comparison between single hospitals at or above the Healthy People 2010 target of 60% influenza vaccination among healthcare personnel and those hospitals below the Healthy People 2010 target. For the 2009-2010 respiratory season, there were

173 (62.2%) hospitals that met or exceeded the Healthy People 2010 target; conversely, 105 (37.8%) reporting hospitals had a seasonal influenza vaccination percentage of 59% or lower. Large and medium hospitals were more likely to meet or exceed the Healthy People 2010 target compared to small hospitals ( $p = 0.029$  and  $0.026$ , respectively). Single hospitals that met or exceeded the target were not statistically significantly different compared to hospitals that were below the target with respect to rurality, population, or teaching status.

Among the 32 hospitals that operated under a multi-hospital license and submitted a report, there were 21 (65.6%) that met or exceeded the Healthy People 2010 target; 11 (34.4%) did not meet the target. Analysis was not performed on demographics of multi-hospital licenses above and below the Healthy People 2010 target given the diversity of facilities under the license.

Of all reporting hospitals, 194 (62.6%) met or exceeded the Healthy People 2010 target. For the 2009-2010 season compared to 2008-2009, more hospitals increased their percentage of employees vaccinated than decreased; for example, 120 hospitals increased by at least 5% compared to 39 that decreased by at least the same amount.

### **Hospital-Specific Report Status and Vaccination and Declination Percentages**

Table 9 displays seasonal influenza vaccination report status and hospital-specific employee seasonal influenza vaccination and declination percentages reported by single and multi-hospital license general acute care hospitals in California for the 2009-2010 respiratory season.

Tables 10 displays 2009 influenza A (H1N1) vaccination report status and hospital-specific employee 2009 influenza A (H1N1) vaccination and declination percentages reported by single and multi-hospital license general acute care hospitals in California for the 2009-2010 respiratory season.

### **Pre- and Post-Season Surveys**

Among all hospitals that responded to the pre-and post-season influenza vaccination program surveys, 190 hospitals responded to both surveys and 175 of these hospitals submitted influenza vaccination data. For seasonal influenza, there were 52 hospitals in the 25<sup>th</sup> percentile (less than or equal to 54.4%) and 41 hospitals in the 75<sup>th</sup> percentile (greater than or equal to 74.0%). Based on survey results, hospitals in each of these quartiles included all personnel, including full- and part-time employees and volunteers, in their vaccination programs. Hospitals in each of these quartiles also used peer vaccinators, vaccination at an occupational health clinic, and implemented a vaccination campaign. However, hospitals in the highest quartile included contractors in their influenza vaccination programs, and used several additional strategies. These hospitals offered vaccine at no cost and provided vaccine during all work shifts. Hospitals in the highest quartile used mobile vaccination carts, offered vaccine in congregate areas, and used reminders to promote vaccination as well as required educational programs on influenza and influenza vaccination.

More hospitals in the highest quartile required that employees provide documentation of vaccination status if they received vaccine off-site.

For 2009 influenza A (H1N1), there were 52 hospitals in the 25<sup>th</sup> percentile (less than or equal to 48.3%) and 41 hospitals in the 75<sup>th</sup> percentile (greater than or equal to 66.3%). Based on survey results, hospitals in each of these quartiles included full- and part-time employees in their vaccination programs, and used mobile carts, centralized mass vaccination fairs, and peer vaccinators. However, hospitals in the highest quartile included all personnel and contractors in their influenza vaccination programs, and used several additional strategies. These hospitals offered vaccine at no cost and provided vaccine during all work shifts. Hospitals in the highest quartile offered vaccine in congregate areas and occupational health clinics, used reminders and implemented campaigns to promote vaccination. Hospitals in the highest quartile conducted required educational programs on influenza and influenza vaccination. More hospitals in the highest quartile required that employees provide documentation of vaccination status if they received vaccine off-site.

## **LIMITATIONS**

As with any new public health surveillance system, these data have several limitations. These data are affected by self-report bias and issues surrounding data validity, data completeness, and misclassification bias.

Since CDPH collected the influenza vaccination data among hospital employees and non-employee healthcare personnel via a passive surveillance system, these data are subject to self-report bias. The accuracy of these data was dependent on what hospitals submitted. Additionally, hospitals with low vaccination percentages may have been less likely to report to CDPH and hospitals with high vaccination percentages more likely to report, skewing results to higher percentages.

There were several limitations regarding data quality and completeness. First, since the Healthcare-Associated Infections Program was not staffed until 2010, CDPH had a minimal system in place to receive the influenza surveillance report forms at the time of surveillance report and no data manager to manage the data. Additionally, CDPH had no quality assurance process in place to review and correct data errors and allow hospitals to verify their data close to the time of submission. The quality assurance process took place retrospectively, resulting in less time to investigate and correct data errors such as vaccination percentages over 100%. Although CDPH sent a mass email to remind hospitals to submit influenza data by an extended deadline in July 2010, many hospitals did not have the data at that time or could not reconstruct the data for resubmission. CDPH did not contact each hospital individually that did not submit a surveillance report form. Also, due to the limited availability of 2009 influenza A (H1N1) vaccine early in the influenza season, hospitals may not have collected final data on vaccinations and declinations among employees by the reporting deadline of April 30, 2010. As a result, data completeness was low for mandated reporting: only 80.9% of reporting general acute care hospitals submitted influenza vaccination data for the 2009-2010 respiratory season.

Hospitals were categorized into small, medium and large based on bed size, which referred to licensed beds as opposed to staffed beds. Using licensed beds, however, could be an overestimate of beds actually in use; therefore, a hospital could be misclassified as larger than it actually was. This also could indicate that a hospital is responsible for offering influenza vaccine or obtaining a signed declination for more employees than are actually working at the hospital.

Some hospitals significantly misinterpreted the definitions on the surveillance report forms, particularly for employees and non-employee healthcare personnel. The confusion with these definitions led hospitals to misclassify these groups in the data, since the groups may or may not have been counted as was intended on the surveillance report form. For example, it was unclear to reporting hospitals whether healthcare personnel included employees and non-employees or was exclusive of employees. It also was unclear who should be included in the non-employee healthcare personnel group, such as physicians, per-diem employees, and non-acute care employees; some hospitals may not have included these groups at all in their reports. Many hospitals do not collect data on influenza vaccination status of non-employee healthcare personnel. Additionally, many hospitals were not able to distinguish between employees that declined and employees that were vaccinated elsewhere. Finally, approximately 14% of employees had an unknown vaccination status for seasonal influenza, and approximately 17% of employees had an unknown vaccination status for 2009 influenza A (H1N1). Employees could have avoided reporting to employee health either because they did not want to be vaccinated and did not want to sign a declination, or because they were vaccinated elsewhere and did not view reporting as important. It is unclear how this high rate of unknown vaccination status might have biased results.

Results from the pre-and post-season influenza vaccination program surveys should be evaluated cautiously. The surveys did not include specific questions on vaccination percentages and strategies used to achieve high vaccination coverage among employees and non-employee healthcare personnel. The vaccination percentages and strategies utilized by hospitals to improve vaccination percentages were not obtained through the same data source. These data should be used only as an indication of what higher-performing hospitals are using to increase their vaccination percentages.

Finally, comparing 2009-2010 vaccination percentages to previous years should be done with caution. The surveillance report form for the 2009-2010 was different from the forms created for the 2008-2009 season; therefore, data could have been classified differently for each season. Also, the 2009-2010 influenza season was a pandemic influenza season; it is difficult to compare vaccination percentages to other seasons given the publicity surrounding the 2009 influenza A (H1N1) virus. Vaccine supply issues early in the 2009-2010 season were unique to the 2009-2010 season; this also may have impacted reporting of vaccination data by hospitals.

## **DISCUSSION**

The data and findings in this report provide an evaluation of the reporting requirement for influenza vaccination among employees in California general acute care hospitals for the

pandemic influenza season 2009-2010. The results also indicate that increased efforts are needed to institute systematic data collection, data quality assurance, and improved reporting in order to help monitor influenza vaccination among hospital employees and non-employee healthcare personnel in California general acute care hospitals. Furthermore, an intensive influenza campaign may be needed in order to convince healthcare personnel to become vaccinated.

Despite mandated reporting, influenza vaccination data was incomplete – only 80.9% of all reporting general acute care hospitals submitted influenza vaccination data for the 2009-2010 season. This was slightly lower than the response rate of 85.3% for the 2008-2009 season and could have resulted from CDPH not contacting each non-reporting hospital individually, as had been done for the 2008-2009 reporting season. Additionally, due to the limited availability of 2009 influenza A (H1N1) vaccine early in the influenza season, hospitals may not have collected final data on vaccinations and declinations among employees by the reporting deadline of April 30, 2010. As a result, initial surveillance reports submitted to CDPH may not have accounted for the vaccination or declination status of all employees. Furthermore, not all hospitals submitted revised reports to CDPH by the second deadline of July 1, 2010. Therefore, the results presented here may underestimate the true vaccination and declination percentages for employees in California general acute hospitals. A high rate of unknown vaccination status among reporting hospitals also affected the completeness of the data. Simple data collection and reporting tools are needed to improve hospital compliance with the reporting mandate. Additionally, CDPH must work with hospitals to identify barriers that prevent them from reporting and help resolve information and resource needs.

The lack of clear definitions along with the lack of a well-developed, real-time quality assurance process, made it difficult to determine the accuracy of the influenza vaccination percentages among employees in California general acute care hospitals. The true percentage of hospital employee vaccination for seasonal influenza and 2009 influenza A (H1N1) may be either higher or lower than 63% and 55%, respectively; these values should be considered estimates rather than precise measurements. Use of pilot-tested, prescriptive definitions in future years will help elucidate true vaccination percentages in hospital employees and non-employee healthcare personnel in California general acute care hospitals. A quality assurance process with systematic, real-time data verification will help improve data quality. Standard methods also will allow for comparability of vaccination data over several years, indicating whether vaccination percentages among California hospital employees and non-employee healthcare personnel are improving.

Large hospitals were more likely to report than small or medium hospitals operating under a single license. Large hospitals may have multiple departments with personnel that use administrative databases to collect and track influenza vaccination data among employees. Conversely, small and medium hospitals may have fewer personnel resources to track influenza vaccination among employees; influenza vaccination tracking may be under the purview of one person that is responsible for multiple job functions in infection control and employee health, making reporting difficult. Additionally, small and medium hospitals may not have administrative databases that allow for easy data collection and management.

Large hospitals also had significantly higher seasonal influenza and 2009 influenza A (H1N1) vaccination rates than small or medium hospitals. Large hospitals may have received early allotments of vaccine in order to cover a large number of hospital employees. Large hospitals also may have had more resources to vaccinate more employees, resulting in increased influenza vaccination percentages. Identifying vaccination strategies used by large hospitals may provide guidance to less successful hospitals on how to improve vaccination campaigns and increase vaccination coverage among employees. Data collected from hospitals in the pre- and post-season surveys did not include information on hospital demographics; therefore, data were not partitioned to evaluate strategies that may have been used by large hospitals to promote influenza vaccination among hospital employees.

Pediatric hospitals also had significantly higher vaccination percentages for both seasonal influenza and 2009 influenza A (H1N1) compared to hospitals with mixed populations. Pediatric hospitals also had lower 2009 influenza A (H1N1) declination percentages compared with hospitals with mixed populations. Because infants and young children are at increased risk for complications from influenza, pediatric hospitals may be more aggressive in their influenza vaccination programs. Identifying vaccination strategies used by pediatric hospitals in future years may provide important insight into successful influenza vaccination strategies.

Hospitals that operate under a multi-hospital license have the option to report influenza vaccination data as individual hospitals or under the multi-hospital license. Few of these multi-hospital licenses reported influenza vaccination data individually. Over the past two consecutive influenza seasons, there were no significant differences in mean hospital-specific vaccination and declination percentages between hospitals that reported individually and hospitals that reported as a multi-hospital license. Therefore, hospitals in a multi-hospital license should consider reporting as individual hospitals in future years, especially to better quantify hospital-specific vaccination percentages among employees and non-employee healthcare personnel.

The data from the 2009-2010 season show an improvement over vaccination percentages in hospital employees in California from the 2008-2009 influenza season. While the data should not be compared given the differences in the two seasons, this improvement could be explained by several factors. For 2009-2010, hospitals reported employees vaccinated elsewhere as a separate category from employees vaccinated at the hospital and employees that declined vaccination. It is possible that in the 2009-2010 data, these employees were included as vaccinated, whereas in the 2008-2009 data these employees may have been counted as declined. Additionally, the increased awareness of influenza and influenza-like illness during the 2009-2010 season may have contributed to the higher percentage of employees receiving seasonal influenza vaccine, especially considering that healthcare personnel thought seasonal vaccine was worth the additional time and expense compared to 2009 influenza A (H1N1) vaccine.<sup>17</sup> Furthermore, a significant percentage of employees may have developed an influenza-like illness or laboratory-confirmed 2009 influenza A (H1N1) prior to the availability of the 2009 influenza A (H1N1) vaccine, and elected not to be vaccinated on that basis.<sup>24</sup> Finally, some hospitals may have implemented additional

strategies or policies as part of their influenza vaccination campaigns to improve vaccination among employees.

It is interesting to note that hospitals with high employee vaccination percentages indicated they use free and easily accessible vaccine and mandatory written declination as part of their influenza vaccination campaigns, two strategies that have been shown to increase influenza vaccination among healthcare personnel. Additionally, hospitals with employee vaccination percentages 90% or higher described implementing a mandatory vaccination policy during the 2009-2010 influenza season. Most hospitals utilized a mandatory participation policy, where employees that chose to decline vaccine were required to sign a written declination and wear a mask while in patient care areas, during their shift, or during the entire time they were on the hospital campus, regardless of where they were working. Some hospitals implemented these policies for the duration of the influenza season only. All of the hospitals that implemented a mandatory vaccination participation policy noted an increase in their vaccination percentages in employees from previous years. Therefore, this strategy should be considered and utilized by other hospitals as a mechanism by which to improve healthcare personnel vaccination rates.

The mean hospital-specific seasonal vaccination percentage for reporting California general acute care hospitals was approximately 63%, which meets the Healthy People 2010 target of 60% vaccination among healthcare personnel<sup>10</sup> and is higher than percentages published in other studies.<sup>5, 25</sup> Additionally, 173 (62.2%) single hospitals and 21 (60.0%) multi-hospital licenses met the Healthy People 2010 target of 60% for seasonal influenza vaccination. All demographic groups except medium hospitals met or exceeded the Healthy People 2010 target of at least 60% for seasonal vaccination. The increased awareness of influenza and influenza-like illness during the 2009-2010 season likely contributed to the higher rate of seasonal influenza vaccination than in previous years and may not be sustained in upcoming seasons. 2009 influenza A (H1N1) was first identified in California. California hospitals were impacted earlier than in other states, with a greater degree of uncertainty as a result. The proposed Healthy People 2020 target for influenza vaccination among healthcare personnel is 90%. These data should help identify barriers to influenza vaccination among healthcare personnel, informing future vaccination efforts.

Although a comparison between the mean hospital-specific seasonal influenza and 2009 influenza A (H1N1) vaccination percentages was not performed, seasonal vaccination percentages were much higher than 2009 influenza A (H1N1) vaccination percentages for employees in California general acute care hospitals. This is consistent with results published from a national survey of healthcare personnel.<sup>17</sup> During a pandemic influenza season, it is ideal to achieve 100% vaccination among healthcare personnel in order to prevent transmission of the pandemic influenza virus in the healthcare setting. Additionally, it is thought that 90% vaccination among healthcare personnel achieves herd immunity;<sup>6</sup> therefore, this is the proposed target for Healthy People 2020. In employees in California general acute care hospitals, only approximately 55% of hospital employees were vaccinated against 2009 influenza A (H1N1), even at the end of the 2009-2010 influenza season when vaccine was highly available. This discrepancy could have resulted from a shortage of 2009 influenza A (H1N1) vaccination available early in the season, and a lack of confidence in the

safety of the 2009 influenza A (H1N1) vaccine since it was manufactured in a shorter timeframe than the seasonal influenza vaccine. Finally, mean hospital-specific percentages for both vaccines reported here are higher than national estimates assessed during the 2009-2010 influenza season.<sup>17</sup>

Few studies have examined whether mandatory declination increases vaccination compliance among healthcare workers. Published results show that use of declination statements paired with other strategies can increase influenza vaccination among healthcare workers.<sup>26, 27</sup> Other studies have shown that identifying and using appropriate resources such as support from department supervisors, competition between units and departments, real-time communication to leadership on vaccination coverage, easy access to vaccine, and education campaigns, can increase vaccination acceptance without use of mandatory declination.<sup>28, 29</sup> Evaluating the collective data from the CDPH 2008-2010 influenza seasons, it does not appear that mandatory declination alone is adequately increasing influenza vaccination of hospital employees in California. Influenza vaccination data collected in future years will provide additional information regarding the affect of mandatory declination; however, improving seasonal influenza percentages from 63% to 90% may require the use of strategies such as mandatory vaccination participation as outlined above, in addition to mandatory declination.

Approximately 14% of employees had an unknown seasonal vaccination status and approximately 17% of employees had an unknown 2009 influenza A (H1N1) vaccination status. Both of these percentages were lower than that published in a recent national study;<sup>5</sup> however, few other comparisons are available. This finding could be explained by many possibilities. Employees may have been vaccinated elsewhere and not counted by the reporting hospital, indicating misclassification. Medical exemptions may not have been reviewed and then counted as declinations. Pregnancy or an immunocompromised state was considered a medical exemption in some instances. Finally, employees may not have been vaccinated, which represents a significant gap in protection for these healthcare personnel and demonstrates the need for education. Hospitals with high unknown vaccination status percentages should implement measures to reduce this rate and assess the effectiveness of their vaccination programs.

More than 98% of hospitals that reported supply data received an adequate supply of seasonal influenza vaccine and 2009 influenza A (H1N1) vaccine to offer to paid employees by March 31, 2010. This indicates that most hospitals should have been able to offer vaccine to all of their employees for seasonal influenza and 2009 influenza A (H1N1) despite the shortage of 2009 influenza A (H1N1) vaccine early on in the season. However, many healthcare workers chose not to be vaccinated. Additionally, local health departments adjusted vaccine orders based on their vaccine allocation; therefore, some hospitals may not have received adequate vaccine doses to cover employees. It is interesting to note that for both seasonal influenza and 2009 influenza A (H1N1), hospitals with high percentages of employees that were vaccinated elsewhere did not report receiving an inadequate supply of vaccine. This could indicate that hospitals did not receive adequate vaccine early in the season, resulting in employees going elsewhere to be vaccinated. Furthermore, because of the limitations described above with definitions on the surveillance report form, these data



may not reflect how hospitals distributed vaccine within their facility and whether hospital employees and non-employee healthcare personnel were vaccinated appropriately.

Collecting influenza vaccination data among non-employee healthcare personnel presents a challenge. Hospital employee health services are generally responsible for both providing influenza vaccine to employees and for collecting data on employee influenza vaccination status. Non-employee healthcare personnel, including registry and contract personnel, are often employed or supervised by groups outside the hospital and are usually not the responsibility of hospital employee health services. Of 50 academic medical centers participating in a recent study of healthcare personnel influenza vaccination, only 34 vaccination programs included attending physicians, 16 included visiting physicians, 17 included medical students, 23 included agency nursing staff, 13 included nursing students, and 27 included volunteers.<sup>5</sup> A statewide surveillance system cannot collect data that hospitals do not collect. CDC recommends that “facilities that employ healthcare personnel should provide vaccine to workers by using approaches that have been demonstrated to be effective in increasing vaccination coverage.”<sup>1</sup> However, these recommendations fail to recognize that non-employee healthcare personnel are generally not provided vaccine by facilities at all. Many hospitals report legal barriers to collecting vaccination information from non-employee healthcare personnel, but should consider including this requirement when updating agreements with registry and contract agencies.

This evaluation did not focus on methods and strategies to improve influenza vaccination among employees. However, the pre- and post-season survey comparisons for hospitals with high and low vaccination percentages indicate that there are strategies hospitals with low vaccination percentages can use to more effectively promote influenza vaccination. Successful vaccination programs include targeting all personnel and all types of employees and using many delivery methods for vaccination. As seen in other studies, offering free, accessible vaccine is one of three proven strategies that increase influenza vaccination among healthcare personnel. Hospitals with high vaccination percentages also used reminders and educational programs. Documentation of off-site vaccination and mandatory signed declination are two other strategies that hospitals with a low vaccination percentage could consider adding to their influenza vaccination programs.

Hospitals should use the data collected by this influenza surveillance system to ensure that all employees are offered influenza vaccine, identify groups of hospital employees and non-employee healthcare personnel at highest risk for developing and transmitting influenza infection, eliminate barriers to vaccination, and implement targeted educational strategies. Best practices should be identified that will help improve influenza vaccination among hospital employees and non-employee healthcare personnel in California general acute care hospitals. CDPH should use these data to hold hospitals accountable for their compliance with the reporting mandate and to assess mandatory declination of influenza vaccination among hospital employees and non-employee healthcare personnel in California general acute care hospitals. Hospitals should use this report to continue and re-energize vaccination campaigns as many healthcare workers remain unvaccinated and pose a risk to themselves and their patients.

## RECOMMENDATIONS

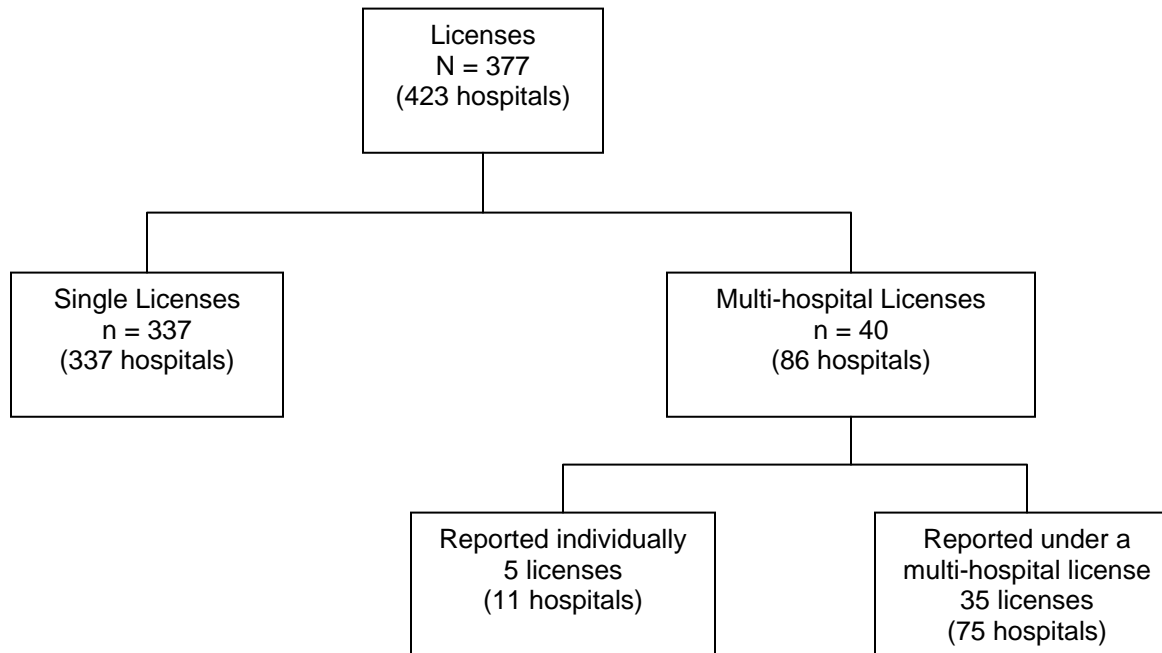
Given the limitations with the 2009-2010 data, CDPH has already implemented changes in the influenza vaccination surveillance system in California general acute care hospitals for the 2010-2011 influenza season. For the 2010-2011 respiratory season, CDPH developed a standard surveillance report form with specific, standard definitions and pilot tested it in a subset of hospitals to ensure intended interpretation and implementation. CDPH has also developed and begun to implement a campaign to increase vaccination percentages among hospital employees and non-employee personnel. This includes issuing a letter to California hospitals reminding them of the reporting mandate and challenging them to improve their vaccination rates. The letter will include a reminder that not reporting influenza vaccination data is a violation of state law, which can result in the issuance of a deficiency by the CDPH Licensing and Certification program. The letter also will include a description of CDC recommendations for improving healthcare personnel vaccination rates, with a reminder that implementation of all of these recommendations is a requirement of SB 739.

Implementation of the following recommendations could improve collection and reporting of influenza vaccination data and increase influenza vaccination percentages among hospital employees and non-employee healthcare personnel in California general acute care hospitals.

- CDPH will work with hospitals to identify barriers to reporting and develop simple reporting methods to eliminate those barriers.
- CDPH will develop and implement a real-time quality assurance process with data verification for the 2010-2011 influenza season.
- CDPH will conduct a post-2010-2011 influenza season assessment to identify best practices and correlate hospital-specific vaccination percentages with specific strategies utilized.
- CDPH should continue collecting influenza data to assess the affect of mandatory declination on influenza vaccination percentages among hospital employees and non-employee healthcare personnel.
- CDPH should work with CDC and other stakeholders to develop a method for hospitals to report aggregate employee and non-employee healthcare personnel influenza vaccination data via NHSN.
- Hospitals should consider assessing influenza vaccine requirements for each influenza season in winter of the preceding influenza season, and order vaccine by late spring of the preceding influenza season.
- Hospitals should consider ordering vaccine from several manufacturers to minimize inadequate supply related to problems affecting one manufacturer.
- Hospitals should consider identifying barriers to vaccination and developing methods to eliminate those barriers.
- Hospitals should consider developing a system to account for the vaccination status of all registry and contract personnel.
- Hospitals should consider how to better characterize vaccination and declination percentages among hospital employees to minimize unknown vaccination percentages.

- Hospitals should consider evaluating their influenza vaccination programs to identify best practices and strategies that enhance vaccination among hospital employees and non-employee healthcare personnel.

**Figure 1. Categorization of general acute care hospitals by license status and seasonal influenza and 2009 influenza A (H1N1) vaccination report status, California, 2009.**



Source: Influenza Vaccination among Employees in California General Acute Care Hospitals for the 2009-2010 Respiratory Season, California Department of Public Health, December 2010.

**Table 1. Employee seasonal influenza and 2009 influenza A (H1N1) vaccination response percentages for single and multi-hospital-license general acute care hospitals, California, 2009-2010.**

	<b>Total n</b>	<b>Reporting n (%)</b>	<b>Non-reporting n (%)</b>
Single hospitals	348	278 (79.9)	70 (20.1)
Multi-hospital licenses	35	32 (91.4)	3 (8.6)

Source: Influenza Vaccination among Employees in California General Acute Care Hospitals for the 2009-2010 Respiratory Season, California Department of Public Health, December 2010.

**Table 2. Employee seasonal influenza and 2009 influenza A (H1N1) mean hospital-specific vaccination and declination percentages for all reporting general acute care hospitals (n=383), single general acute care hospitals (n=348), and multi-license general acute care hospitals (n=35), California, 2009-2010.**

	Seasonal		2009 Influenza A (H1N1)	
	Mean hospital-specific vaccination % $\pm$ standard deviation	Mean hospital-specific declination % $\pm$ standard deviation	Mean hospital-specific vaccination % $\pm$ standard deviation	Mean hospital-specific declination % $\pm$ standard deviation
All reporting hospitals	62.6 $\pm$ 16.0	23.8 $\pm$ 12.7	55.5 $\pm$ 17.0	27.7 $\pm$ 17.3
Single hospitals	62.6 $\pm$ 16.1	23.9 $\pm$ 12.6	55.4 $\pm$ 17.2	27.8 $\pm$ 17.4
Multi-hospital licenses	62.9 $\pm$ 15.9	23.2 $\pm$ 14.3	56.9 $\pm$ 15.0	26.9 $\pm$ 16.9

Source: Influenza Vaccination among Employees in California General Acute Care Hospitals for the 2009-2010 Respiratory Season, California Department of Public Health, December 2010.

**Table 3. Demographics of single, general acute care hospitals (n=348) by reporting and non-reporting hospitals for employee seasonal influenza and 2009 influenza A (H1N1) vaccination, California 2009-2010.**

	Total	Reporting n (%)	Non-reporting n (%)	p-value <sup>†</sup>
Bed size**				
Small (4-80)	116 (33.3)	87 (75.0)	29 (25.0)	0.11
Medium (81-204)	116 (33.3)	89 (76.7)	27 (23.3)	0.30
Large (205+)	116 (33.3)	102 (87.9)	14 (12.1)	0.0082*
Rural	61 (17.5)	44 (72.1)	17 (27.9)	0.096
Urban	287 (82.5)	234 (81.5)	53 (18.5)	
Pediatric	11 (3.2)	10 (90.9)	1 (9.1)	0.23
Mixed	337 (96.8)	268 (79.5)	69 (20.5)	
Teaching	43 (12.4)	37 (86.1)	6 (13.9)	0.28
Non-teaching	305 (87.6)	241 (79.0)	64 (21.0)	

<sup>†</sup>p-value was obtained using a chi-square test; \*p<0.05 was considered statistically significant

\*\*Licensed beds from Licensing and Certification data, February 2010

Source: Influenza Vaccination among Employees in California General Acute Care Hospitals for the 2009-2010 Respiratory Season, California Department of Public Health, December 2010.

**Table 4. Employee seasonal influenza and 2009 influenza A (H1N1) mean hospital-specific vaccination percentages in single, general acute care hospitals (n=278) by hospital demographic, California 2009-2010.**

	Seasonal		2009 Influenza A (H1N1)	
	Mean hospital-specific % ± standard deviation	p-value <sup>‡</sup>	Mean hospital-specific % ± standard deviation	p-value <sup>‡</sup>
Single hospitals	62.6 ± 16.1	--	55.4 ± 17.2	--
Bed size**				
Small (4-80)	61.6 ± 16.8	0.0032*	52.8 ± 18.8	0.0097*
Medium (81-204)	59.0 ± 17.1		53.3 ± 17.2	
Large (205+)	66.7 ± 13.6		59.5 ± 15.0	
Rural	63.6 ± 12.0	0.65	51.8 ± 15.6	0.13
Urban	62.4 ± 16.8		56.1 ± 17.4	
Pediatric	75.9 ± 16.1	0.0076*	73.1 ± 18.8	0.0008*
Mixed	62.1 ± 15.9		54.7 ± 16.8	
Teaching	66.8 ± 14.8	0.087	58.0 ± 14.8	0.31
Non-teaching	62.0 ± 16.2		55.0 ± 17.5	

<sup>‡</sup>p-value was obtained using independent samples t-test or ANOVA for hospital-specific percentages

\*p<0.05 was considered statistically significant

\*\*Licensed beds from Licensing and Certification data, February 2010

Source: Influenza Vaccination among Employees in California General Acute Care Hospitals for the 2009-2010 Respiratory Season, California Department of Public Health, December 2010.



**Table 5. Employee seasonal influenza and 2009 influenza A (H1N1) mean hospital-specific vaccine acceptance, vaccinated at hospital, and vaccinated elsewhere percentages in single, general acute care hospitals (n=278), California 2009-2010.**

	<b>Seasonal</b>	<b>2009 Influenza A (H1N1)</b>
	<b>Mean hospital-specific % ± standard deviation</b>	<b>Mean hospital-specific % ± standard deviation</b>
Vaccine Acceptance	71.1 ± 14.9	65.8 ± 19.7
Vaccinated at Hospital	57.3 ± 16.3	50.9 ± 17.0
Vaccinated Elsewhere	5.3 ± 8.1	4.5 ± 7.6

Source: Influenza Vaccination among Employees in California General Acute Care Hospitals for the 2009-2010 Respiratory Season, California Department of Public Health, December 2010.

**Table 6. Employee seasonal influenza and 2009 influenza A (H1N1) mean hospital-specific declination percentages in single, general acute care hospitals (n=278) by hospital demographic, California 2009-2010.**

	Seasonal		2009 Influenza A (H1N1)	
	Mean hospital-specific % ± standard deviation	p-value <sup>‡</sup>	Mean hospital-specific % ± standard deviation	p-value <sup>‡</sup>
Single hospitals	23.9 ± 12.6	--	27.8 ± 17.4	--
Bed size**				
Small (4-80)	24.5 ± 14.3	0.76	28.7 ± 20.1	0.67
Medium (81-204)	24.1 ± 11.8		26.5 ± 16.2	
Large (205+)	23.2 ± 11.7		28.1 ± 15.9	
Rural	25.1 ± 12.9	0.49	27.7 ± 19.5	0.98
Urban	23.7 ± 12.5		27.8 ± 17.0	
Pediatric	14.5 ± 8.9	0.016*	15.4 ± 12.4	0.022*
Mixed	24.2 ± 12.6		28.2 ± 17.4	
Teaching	22.6 ± 11.9	0.51	27.0 ± 17.3	0.77
Non-teaching	24.1 ± 12.7		27.9 ± 17.4	

<sup>‡</sup>p-value was obtained using independent samples t-test or ANOVA for hospital-specific percentages

\*p<0.05 was considered statistically significant

\*\*Licensed beds from Licensing and Certification data, February 2010

Source: Influenza Vaccination among Employees in California General Acute Care Hospitals for the 2009-2010 Respiratory Season, California Department of Public Health, December 2010.

**Table 7. Employee seasonal influenza and 2009 influenza A (H1N1) mean hospital-specific vaccination, vaccine acceptance, vaccinated at hospital, vaccinated elsewhere and declination percentages in multi-hospital license, general acute care hospitals (n=32), California 2009-2010.**

	<b>Seasonal</b>	<b>2009 Influenza A (H1N1)</b>
	<b>Mean hospital-specific % ± standard deviation</b>	<b>Mean hospital-specific % ± standard deviation</b>
Overall Vaccination	62.9 ± 15.9	56.9 ± 15.0
Vaccine Acceptance	72.2 ± 17.0	68.2 ± 17.6
Vaccinated at Hospital	59.8 ± 15.2	54.6 ± 15.0
Vaccinated Elsewhere	3.1 ± 4.1	2.3 ± 3.0
Declinations	23.2 ± 14.3	26.9 ± 16.9

Source: Influenza Vaccination among Employees in California General Acute Care Hospitals for the 2009-2010 Respiratory Season, California Department of Public Health, December 2010.

**Table 8. Demographics of single, general acute care hospitals (n=278) above and below the Healthy People 2010 target of 60% for employee seasonal influenza vaccination, California 2009-2010.**

	Total	At or above 60% (n=173)	Below 60% (n=105)	p-value <sup>†</sup>
Bed size**				
Small (4-80)	87 (31.3)	54 (62.1)	33 (37.9)	0.97
Medium (81-204)	89 (32.0)	47 (52.8)	42 (47.2)	0.026*
Large (205+)	102 (36.7)	72 (70.6)	30 (29.4)	0.029*
Rural	44 (15.8)	27 (61.4)	17 (38.6)	0.90
Urban	234 (84.2)	146 (62.4)	88 (37.6)	
Pediatric	10 (3.6)	8 (80.0)	2 (20.0)	0.14
Mixed	268 (96.4)	165 (61.6)	103 (38.4)	
Teaching	37 (13.3)	27 (73.0)	10 (27.0)	0.15
Non-teaching	241 (86.7)	146 (60.6)	95 (39.4)	

<sup>†</sup>p-value was obtained using chi square; \*p<0.05 was considered statistically significant

\*\*Licensed beds from Licensing and Certification data, February 2010

Source: Influenza Vaccination among Employees in California General Acute Care Hospitals for the 2009-2010 Respiratory Season, California Department of Public Health, December 2010.

**Table 9. Employee seasonal influenza vaccination report status and hospital-specific employee seasonal influenza vaccination and declination percentages in single and multi-hospital licenses, general acute care hospitals, California 2009-2010.**

HOSPITAL NAME	REPORT STATUS	EMPLOYEE SEASONAL INFLUENZA VACCINATION PERCENTAGE	EMPLOYEE SEASONAL INFLUENZA DECLINATION PERCENTAGE
ADVENTIST HEALTH SYSTEMS Hanford Community Medical Center Selma Community Hospital	Report	47.3	52.7
AHMC ANAHEIM REGIONAL MEDICAL CENTER	Report	58.1	16.8
ALAMEDA COUNTY MEDICAL CENTER Alameda County Medical Center Fairmont Campus	Report	63.6	30.5
ALAMEDA HOSPITAL	Report	75.0	25.0
ALHAMBRA HOSPITAL MEDICAL CENTER	Report	67.4	24.4
ALTA LOS ANGELES HOSPITALS, INC. Los Angeles Community Hospital Norwalk Community Hospital	Report	8.1	17.4
ALVARADO HOSPITAL, LLC Alvarado Hospital – 6645 Alvarado Rd San Diego Alvarado Hospital – 6655 Alvarado Rd San Diego	Report	81.0	19.7
ANAHEIM GENERAL HOSPITAL	Report	16.3	36.2
ANTELOPE VALLEY HOSPITAL	Report	60.8	16.7
ARROWHEAD REGIONAL MEDICAL CENTER	Report	44.7	31.1
ARROYO GRANDE COMMUNITY HOSPITAL	Report	74.7	22.3
BAKERSFIELD HEART HOSPITAL	Report	76.3	16.4

HOSPITAL NAME	REPORT STATUS	EMPLOYEE SEASONAL INFLUENZA VACCINATION PERCENTAGE	EMPLOYEE SEASONAL INFLUENZA DECLINATION PERCENTAGE
BAKERSFIELD MEMORIAL HOSPITAL	Report	52.8	13.7
BALLARD REHABILITATION HOSPITAL	Report	68.8	23.1
BANNER LASSEN MEDICAL CENTER	No Report	.	.
BARLOW RESPIRATORY HOSPITAL	Report	47.3	25.3
BARSTOW COMMUNITY HOSPITAL	No Report	.	.
BARTON MEMORIAL HOSPITAL	Report	61.2	14.3
BEAR VALLEY COMMUNITY HOSPITAL	Report	59.3	14.4
BELLFLOWER MEDICAL CENTER	Report	29.4	0.0
BEVERLY HOSPITAL	Report	60.2	43.4
BIGGS GRIDLEY MEMORIAL HOSPITAL	No Report	.	.
BROTMAN MEDICAL CENTER	Report	52.0	45.3
CALIFORNIA HOSPITAL MEDICAL CENTER - LOS ANGELES	Report	38.5	28.4
CALIFORNIA MEDICAL FACILITY	Report	6.1	0.0
CALIFORNIA MENS COLONY	Report	32.5	0.0
CALIFORNIA PACIFIC MEDICAL CENTER - ST. LUKE'S CAMPUS	Report	40.8	47.1
CASA COLINA HOSPITAL FOR REHABILITATIVE MEDICINE	Report	54.8	0.0
CATALINA ISLAND MEDICAL CENTER	No Report	.	.
CATHOLIC HEALTHCARE WEST – Santa Cruz	Report	70.2	16.1
Dominican Hospital – Frederick St			
Dominican Hospital – Soquel Dr			
CATHOLIC HEALTHCARE WEST – Bakersfield	Report	63.1	44.2
Mercy Hospital			
Mercy Southwest Hospital			

HOSPITAL NAME	REPORT STATUS	EMPLOYEE SEASONAL INFLUENZA VACCINATION PERCENTAGE	EMPLOYEE SEASONAL INFLUENZA DECLINATION PERCENTAGE
CEDARS-SINAI MEDICAL CENTER	Report	69.9	28.6
CENTINELA HOSPITAL MEDICAL CENTER	Report	36.1	29.7
CENTRAL VALLEY GENERAL HOSPITAL	Report	60.0	40.0
CHAPMAN MEDICAL CENTER	Report	67.0	32.2
CHILDREN'S HOSPITAL AT MISSION	Report	73.0	22.3
CHILDREN'S HOSPITAL CENTRAL CALIFORNIA	Report	71.8	22.0
CHILDREN'S HOSPITAL OF ORANGE COUNTY	Report	98.3	1.7
CHILDRENS HOSPITAL AND RESEARCH CENTER AT OAKLAND	Report	67.5	14.6
CHILDRENS HOSPITAL OF LOS ANGELES	Report	56.1	14.6
CHINESE HOSPITAL	No Report	.	.
CHINO VALLEY MEDICAL CENTER	Report	48.7	31.4
CITRUS VALLEY MEDICAL CENTER, INC. Citrus Valley Medical Center IC Campus – Covina Citrus Valley Medical Center QV Campus – West Covina	Report	67.2	32.5
CITY OF HOPE HELFORD CLINICAL RESEARCH HOSPITAL	Report	54.1	47.3
CLOVIS COMMUNITY MEDICAL CENTER	Report	63.8	34.5
COALINGA REGIONAL MEDICAL CENTER	No Report	.	.
COAST PLAZA HOSPITAL	Report	48.4	32.4
COASTAL COMMUNITIES HOSPITAL	Report	49.3	44.3
COLLEGE HOSPITAL COSTA MESA	Report	36.2	17.3
COLORADO RIVER MEDICAL CENTER	No Report	.	.
COLUSA REGIONAL MEDICAL CENTER	Report	79.5	19.3
COMMUNITY AND MISSION HOSPITAL OF HUNTINGTON PARK	No Report	.	.

HOSPITAL NAME	REPORT STATUS	EMPLOYEE SEASONAL INFLUENZA VACCINATION PERCENTAGE	EMPLOYEE SEASONAL INFLUENZA DECLINATION PERCENTAGE
COMMUNITY HOSPITAL OF LONG BEACH	Report	65.5	23.9
COMMUNITY HOSPITAL OF SAN BERNARDINO	Report	45.6	49.9
COMMUNITY HOSPITAL OF THE MONTEREY PENINSULA	Report	64.2	35.2
COMMUNITY MEMORIAL HOSPITAL - SAN BUENAVENTURA	Report	60.5	20.0
COMMUNITY REGIONAL MEDICAL CENTER	Report	55.1	42.3
CONTRA COSTA REGIONAL MEDICAL CENTER	Report	45.0	13.5
CORCORAN DISTRICT HOSPITAL	No Report	.	.
COUNTY OF VENTURA	Report	44.2	8.6
Ventura County Medical Center			
Ventura County Medical Center – Santa Paula Hospital			
DAMERON HOSPITAL	Report	72.1	27.7
DELANO REGIONAL MEDICAL CENTER	No Report	.	.
DESERT REGIONAL MEDICAL CENTER	No Report	.	.
DESERT VALLEY HOSPITAL	Report	54.7	33.3
DOCTORS HOSPITAL OF MANTECA	Report	75.0	17.1
DOCTORS HOSPITAL OF WEST COVINA, INC.	No Report	.	.
DOCTORS MEDICAL CENTER	No Report	.	.
DOCTORS MEDICAL CENTER - SAN PABLO	Report	38.3	6.0
DOWNEY REGIONAL MEDICAL CENTER	Report	71.0	20.6
EARL & LORAIN MILLER CHILDREN'S HOSPITAL	Report	87.3	7.2
EAST LOS ANGELES DOCTORS HOSPITAL	No Report	.	.
EAST VALLEY HOSPITAL MEDICAL CENTER	No Report	.	.
EASTERN PLUMAS HEALTH CARE	Report	70.1	20.5



HOSPITAL NAME	REPORT STATUS	EMPLOYEE SEASONAL INFLUENZA VACCINATION PERCENTAGE	EMPLOYEE SEASONAL INFLUENZA DECLINATION PERCENTAGE
EDEN MEDICAL CENTER Eden Medical Center San Leandro Hospital	Report	60.3	17.8
EISENHOWER MEDICAL CENTER	No Report	.	.
EL CAMINO HOSPITAL	Report	60.7	23.6
EL CAMINO HOSPITAL LOS GATOS	No Report	.	.
EL CENTRO REGIONAL MEDICAL CENTER	Report	83.6	11.1
EMANUEL MEDICAL CENTER INC.	Report	72.2	18.8
ENCINO HOSPITAL MEDICAL CENTER	No Report	.	.
ENLOE MEDICAL CENTER Enloe Medical Center – Cohasset Enloe Medical Center – Esplanade Enloe Rehabilitation Center	Report	62.1	30.1
FAIRCHILD MEDICAL CENTER	Report	60.7	35.4
FAIRVIEW DEVELOPMENTAL CENTER	Report	73.3	31.6
FALLBROOK HOSPITAL DISTRICT	Report	79.4	19.4
FEATHER RIVER HOSPITAL	Report	72.5	27.5
FOOTHILL PRESBYTERIAN HOSPITAL-JOHNSTON MEMORIAL	Report	77.0	29.2
FOUNTAIN VALLEY REGIONAL HOSPITAL & MED CENTER Fountain Valley Regional Hospital and Med Center – Euclid Fountain Valley Regional Hospital and Med Center – Warner Ave	Report	50.6	0.0
FRANK R. HOWARD MEMORIAL HOSPITAL	Report	63.0	26.4
FRENCH HOSPITAL MEDICAL CENTER	Report	69.5	15.6
FRESNO HEART AND SURGICAL HOSPITAL	Report	69.1	30.9

HOSPITAL NAME	REPORT STATUS	EMPLOYEE SEASONAL INFLUENZA VACCINATION PERCENTAGE	EMPLOYEE SEASONAL INFLUENZA DECLINATION PERCENTAGE
FRESNO SURGICAL HOSPITAL	Report	52.7	47.3
GARDEN GROVE HOSPITAL AND MEDICAL CENTER	Report	51.4	48.6
GARFIELD MEDICAL CENTER	Report	66.9	23.0
GEORGE L. MEE MEMORIAL HOSPITAL	Report	55.6	8.4
GLENDALE ADVENTIST MEDICAL CENTER	Report	60.6	37.2
GLENDALE MEMORIAL HOSPITAL AND HEALTH CENTER	Report	58.4	18.3
GLENN MEDICAL CENTER	Report	52.4	47.6
GOLETA VALLEY COTTAGE HOSPITAL	Report	73.8	24.7
GOOD SAMARITAN HOSPITAL	Report	60.6	30.2
GOOD SAMARITAN HOSPITAL	No Report	.	.
GOOD SAMARITAN HOSPITAL, LP – San Jose	Report	75.3	3.2
Good Samaritan Hospital			
Mission Oaks Hospital			
GREATER EL MONTE COMMUNITY HOSPITAL	No Report	.	.
GROSSMONT HOSPITAL	Report	71.3	22.0
HAZEL HAWKINS MEMORIAL HOSPITAL	Report	52.5	26.0
HEALDSBURG DISTRICT HOSPITAL	Report	84.1	15.9
HEALTHBRIDGE CHILDREN'S HOSPITAL - ORANGE	No Report	.	.
HEALTHSOUTH BAKERSFIELD REHABILITATION HOSPITAL	Report	67.3	32.7
HEALTHSOUTH TUSTIN REHABILITATION HOSPITAL	Report	43.1	59.0
HEMET VALLEY MEDICAL CENTER	Report	59.4	19.0
HENRY MAYO NEWHALL MEMORIAL HOSPITAL	Report	47.4	6.9
HI-DESERT MEDICAL CENTER	Report	79.5	16.2

HOSPITAL NAME	REPORT STATUS	EMPLOYEE SEASONAL INFLUENZA VACCINATION PERCENTAGE	EMPLOYEE SEASONAL INFLUENZA DECLINATION PERCENTAGE
HOAG HOSPITAL IRVINE	No Report	.	.
HOAG MEMORIAL HOSPITAL PRESBYTERIAN	Report	58.0	12.2
HOLLYWOOD COMMUNITY HOSPITAL OF HOLLYWOOD	No Report	.	.
HOLLYWOOD PRESBYTERIAN MEDICAL CENTER	Report	59.1	43.0
HUNTINGTON BEACH HOSPITAL	Report	40.0	20.9
HUNTINGTON MEMORIAL HOSPITAL	No Report	.	.
JEROLD PHELPS COMMUNITY HOSPITAL	Report	46.2	46.2
JOHN C. FREMONT HEALTHCARE DISTRICT	Report	72.2	26.9
JOHN D KLARICH MEMORIAL HOSPITAL, CSP-CORCORAN	Report	30.9	0.0
JOHN F. KENNEDY MEMORIAL HOSPITAL	Report	48.8	29.9
JOHN MUIR MEDICAL CENTER- WALNUT CREEK CAMPUS	Report	57.6	3.2
JOHN MUIR MEDICAL CENTER-CONCORD CAMPUS	Report	60.5	7.3
KAISER FOUND. HOSPITAL & REHAB. CENTER - VALLEJO	No Report	.	.
KAISER FOUNDATION HOSPITAL - ANTIOCH	Report	63.6	32.7
KAISER FOUNDATION HOSPITAL - BALDWIN PARK	Report	72.7	27.3
KAISER FOUNDATION HOSPITAL - ORANGE COUNTY	Report	63.1	36.9
Kaiser Foundation Hospital Anaheim			
Kaiser Foundation Hospital Irvine			
KAISER FOUNDATION HOSPITAL - PANORAMA	Report	69.2	30.8
KAISER FOUNDATION HOSPITAL - REDWOOD CITY	Report	72.4	27.4
KAISER FOUNDATION HOSPITAL - SAN DIEGO	Report	76.1	23.9
KAISER FOUNDATION HOSPITAL - SAN FRANCISCO	No Report	.	.
KAISER FOUNDATION HOSPITAL - SAN RAFAEL	No Report	.	.

HOSPITAL NAME	REPORT STATUS	EMPLOYEE SEASONAL INFLUENZA VACCINATION PERCENTAGE	EMPLOYEE SEASONAL INFLUENZA DECLINATION PERCENTAGE
KAISER FOUNDATION HOSPITAL - SANTA ROSA	Report	62.2	37.8
KAISER FOUNDATION HOSPITAL - SOUTH BAY	Report	69.3	30.7
KAISER FOUNDATION HOSPITAL - SOUTH SAN FRANCISCO	Report	81.6	18.4
KAISER FOUNDATION HOSPITAL -- FRESNO	Report	67.5	32.1
KAISER FOUNDATION HOSPITAL FONTANA	Report	71.9	28.1
KAISER FOUNDATION HOSPITAL SUNSET	Report	61.0	39.0
KAISER FOUNDATION HOSPITAL, RIVERSIDE	Report	67.9	32.1
KAISER FOUNDATION HOSPITAL, WOODLAND HILLS	Report	72.9	27.1
KAISER FOUNDATION HOSPITAL-DOWNEY	Report	65.6	34.4
KAISER FOUNDATION HOSPITAL-MORENO VALLEY	No Report	.	.
KAISER FOUNDATION HOSPITAL-SACRAMENTO/ROSEVILLE	Report	64.4	34.3
KAISER FOUNDATION HOSPITAL-SACRAMENTO/ROSEVILLE	Report	57.0	36.4
KAISER FOUNDATION HOSPITAL-SAN JOSE	Report	72.7	27.9
KAISER FOUNDATION HOSPITAL-SANTA CLARA	Report	78.5	20.2
KAISER FOUNDATION HOSPITAL-SOUTH SACRAMENTO	Report	53.5	37.8
KAISER FOUNDATION HOSPITAL-WALNUT CREEK	Report	74.0	23.7
KAISER FOUNDATION HOSPITAL-WEST LA	Report	55.7	44.3
KAISER FOUNDATION HOSPITALS - EAST BAY	Report	59.7	38.8
Kaiser Foundation Hospital Oakland/Richmond			
Kaiser Foundation Hospital Richmond			
KAISER FOUNDATION HOSPITALS - HAYWARD/FREMONT	Report	71.9	26.4
Kaiser Foundation Hospital Hayward/Fremont			
Kaiser Foundation Hospital Fremont			

HOSPITAL NAME	REPORT STATUS	EMPLOYEE SEASONAL INFLUENZA VACCINATION PERCENTAGE	EMPLOYEE SEASONAL INFLUENZA DECLINATION PERCENTAGE
KAISER FOUNDATION HOSPITALS - MANTECA/MODESTO Kaiser Foundation Hospital Manteca Kaiser Foundation Hospital Modesto	Report	66.5	33.5
KAWEAH DELTA MEDICAL CENTER	Report	48.9	18.3
KENTFIELD REHABILITATION & SPECIALTY HOSPITAL	No Report	.	.
KERN MEDICAL CENTER	Report	69.4	20.4
KERN VALLEY HEALTHCARE DISTRICT	No Report	.	.
KINDRED HOSPITAL - LA MIRADA	Report	44.3	30.8
KINDRED HOSPITAL - LOS ANGELES	Report	5.0	0.0
KINDRED HOSPITAL - SACRAMENTO	Report	66.7	32.2
KINDRED HOSPITAL - SAN DIEGO	Report	65.2	13.2
KINDRED HOSPITAL - SAN FRANCISCO BAY AREA	Report	89.8	10.2
KINDRED HOSPITAL - SAN GABRIEL VALLEY	Report	59.8	22.8
KINDRED HOSPITAL - SANTA ANA	Report	38.0	0.0
KINDRED HOSPITAL BREA	No Report	.	.
KINDRED HOSPITAL ONTARIO	Report	50.9	23.3
KINDRED HOSPITAL WESTMINSTER	Report	64.4	35.6
KINGSBURG MEDICAL CENTER	No Report	.	.
LA PALMA INTERCOMMUNITY HOSPITAL	Report	62.2	37.3
LAC+USC MEDICAL CENTER	No Report	.	.
LAC/HARBOR-UCLA MEDICAL CENTER	Report	61.9	29.3
LAC/RANCHO LOS AMIGOS NATIONAL REHABILITATION CTR	Report	48.2	44.7
LAGUNA HONDA HOSPITAL & REHABILITATION CENTER	Report	68.0	3.7

HOSPITAL NAME	REPORT STATUS	EMPLOYEE SEASONAL INFLUENZA VACCINATION PERCENTAGE	EMPLOYEE SEASONAL INFLUENZA DECLINATION PERCENTAGE
LAKEWOOD REGIONAL MEDICAL CENTER	Report	91.1	20.0
LANCASTER COMMUNITY HOSPITAL	No Report	.	.
LANTERMAN DEVELOPMENTAL CENTER	Report	42.3	22.7
LODI MEMORIAL HOSPITAL ASSOCIATION, INC. Lodi Memorial Hospital – West Lodi Memorial Hospital	No Report	.	.
LOMA LINDA UNIVERSITY MEDICAL CENTER Loma Linda University Medical Center Loma Linda University Medical Center East Campus Hospital Loma Linda University Heart and Surgical Hospital	Report	74.0	12.4
LOMPOC VALLEY MEDICAL CENTER	Report	67.6	24.2
LONG BEACH MEMORIAL MEDICAL CENTER	No Report	.	.
LOS ALAMITOS MEDICAL CENTER	No Report	.	.
LOS ANGELES COUNTY OLIVE VIEW-UCLA MEDICAL CENTER	Report	60.5	31.7
LOS ANGELES METROPOLITAN MEDICAL CENTER	Report	24.6	29.7
LOS ROBLES REGIONAL MEDICAL CENTER Los Robles Hospital and Medical Center Los Robles Hospital and Medical Center East Campus	Report	90.4	2.1
LUCILE SALTER PACKARD CHILDREN'S HOSP AT STANFORD	Report	82.8	15.2
MAD RIVER COMMUNITY HOSPITAL	Report	67.3	32.7
MADERA COMMUNITY HOSPITAL	No Report	.	.
MAMMOTH HOSPITAL	Report	56.4	1.7
MARIAN MEDICAL CENTER	Report	74.7	22.4
MARIN GENERAL HOSPITAL	Report	69.9	24.8

HOSPITAL NAME	REPORT STATUS	EMPLOYEE SEASONAL INFLUENZA VACCINATION PERCENTAGE	EMPLOYEE SEASONAL INFLUENZA DECLINATION PERCENTAGE
MARINA DEL REY HOSPITAL	No Report	.	.
MARK TWAIN ST. JOSEPH'S HOSPITAL (4RH)	No Report	.	.
MARSHALL MEDICAL CENTER (1-RH)	No Report	.	.
MAYERS MEMORIAL HOSPITAL	No Report	.	.
MEMORIAL HOSPITAL LOS BANOS	Report	79.5	27.4
MEMORIAL HOSPITAL OF GARDENA	Report	52.9	31.6
MEMORIAL MEDICAL CENTER	Report	52.6	24.6
MENDOCINO COAST DISTRICT HOSPITAL	Report	58.3	37.0
MENIFEE VALLEY MEDICAL CENTER	Report	45.4	16.6
MENLO PARK SURGICAL HOSPITAL	No Report	.	.
MERCY GENERAL HOSPITAL	Report	72.4	27.1
MERCY HOSPITAL OF FOLSOM	Report	72.1	25.0
MERCY MEDICAL CENTER MERCED - COMMUNITY CAMPUS	No Report	.	.
MERCY MEDICAL CENTER MT. SHASTA	Report	67.2	32.8
MERCY MEDICAL CENTER REDDING	Report	59.4	16.9
MERCY SAN JUAN MEDICAL CENTER	Report	61.6	33.3
METHODIST HOSPITAL OF SACRAMENTO	Report	68.6	31.4
METHODIST HOSPITAL OF SOUTHERN CALIFORNIA	Report	63.3	29.9
MILLS-PENINSULA HEALTH SERVICES	Report	70.3	23.8
Mills Health Center			
Peninsula Medical Center			
MIRACLE MILE MEDICAL CENTER	Report	93.9	6.1
MISSION COMMUNITY HOSPITAL - PANORAMA CAMPUS	Report	64.2	17.4

HOSPITAL NAME	REPORT STATUS	EMPLOYEE SEASONAL INFLUENZA VACCINATION PERCENTAGE	EMPLOYEE SEASONAL INFLUENZA DECLINATION PERCENTAGE
MISSION HOSPITAL REGIONAL MEDICAL CENTER Mission Hospital Regional Medical Center Mission Hospital Laguna Beach	No Report	.	.
MODOC MEDICAL CENTER	Report	66.2	33.8
MONROVIA MEMORIAL HOSPITAL	Report	53.8	46.2
MONTCLAIR HOSPITAL MEDICAL CENTER	Report	59.5	26.0
MONTEREY PARK HOSPITAL	No Report	.	.
MOTION PICTURE & TELEVISION HOSPITAL	Report	55.9	7.6
MOUNTAINS COMMUNITY HOSPITAL	Report	61.8	12.1
NATIVIDAD MEDICAL CENTER	Report	79.9	20.1
NEWPORT SPECIALTY HOSPITAL	Report	59.9	31.8
NORTHBAY MEDICAL CENTER Northbay Medical Center Northbay Vacavalley Hospital	Report	72.4	25.0
NORTHERN CALIFORNIA REHABILITATION HOSPITAL	Report	51.5	14.3
NORTHERN INYO HOSPITAL	Report	91.1	11.7
NORTHRIDGE HOSPITAL MEDICAL CENTER	Report	57.4	27.5
NOVATO COMMUNITY HOSPITAL	Report	76.1	19.2
O'CONNOR HOSPITAL	Report	74.8	18.3
OAK VALLEY HOSPITAL DISTRICT (2-RH)	Report	76.6	23.4
OJAI VALLEY COMMUNITY HOSPITAL	Report	52.1	35.6
OLYMPIA MEDICAL CENTER	No Report	.	.
ORANGE COAST MEMORIAL MEDICAL CENTER	Report	78.5	12.7



HOSPITAL NAME	REPORT STATUS	EMPLOYEE SEASONAL INFLUENZA VACCINATION PERCENTAGE	EMPLOYEE SEASONAL INFLUENZA DECLINATION PERCENTAGE
OROVILLE HOSPITAL	No Report	.	.
PACIFIC ALLIANCE MEDICAL CENTER	No Report	.	.
PACIFIC HOSPITAL OF LONG BEACH	No Report	.	.
PACIFICA HOSPITAL OF THE VALLEY	Report	37.5	20.2
PALM DRIVE HOSPITAL	Report	47.6	13.4
PALO VERDE HOSPITAL	Report	67.4	30.0
PALOMAR MEDICAL CENTER	Report	64.7	19.0
PARADISE VALLEY HOSPITAL	Report	74.7	26.1
PARKVIEW COMMUNITY HOSPITAL MEDICAL CENTER	Report	63.1	39.2
PATIENTS' HOSPITAL OF REDDING	Report	66.7	33.3
PETALUMA VALLEY HOSPITAL	Report	70.8	30.9
PIONEERS MEMORIAL HEALTHCARE DISTRICT	Report	54.1	23.2
PLACENTIA LINDA HOSPITAL	Report	78.0	21.6
PLUMAS DISTRICT HOSPITAL	Report	77.1	11.5
POMERADO HOSPITAL	Report	57.6	11.2
POMONA VALLEY HOSPITAL MEDICAL CENTER	Report	63.5	25.7
PORTERVILLE DEVELOPMENTAL CENTER	No Report	.	.
PRESBYTERIAN INTERCOMMUNITY HOSPITAL	Report	81.9	12.8
PROMISE HOSP OF EAST LOS ANGELES-EAST L.A. CAMPUS	Report	23.8	15.9
PROMISE HOSP OF EAST LOS ANGELES-SUBURBAN CAMPUS	Report	36.5	20.0
PROMISE HOSPITAL OF SAN DIEGO	No Report	.	.
PROVIDENCE HOLY CROSS MEDICAL CENTER	No Report	.	.
PROVIDENCE LITTLE COMPANY OF MARY MEDICAL CENTER SAN PEDRO	Report	53.8	5.6

HOSPITAL NAME	REPORT STATUS	EMPLOYEE SEASONAL INFLUENZA VACCINATION PERCENTAGE	EMPLOYEE SEASONAL INFLUENZA DECLINATION PERCENTAGE
PROVIDENCE LITTLE COMPANY OF MARY MEDICAL CENTER TORRANCE	Report	45.9	2.0
PROVIDENCE SAINT JOSEPH MEDICAL CENTER	No Report	.	.
PROVIDENCE TARZANA MEDICAL CENTER	No Report	.	.
QUEEN OF THE VALLEY MEDICAL CENTER	Report	68.8	26.5
RADY CHILDREN'S HOSPITAL - SAN DIEGO	Report	99.0	0.9
RANCHO SPECIALTY HOSPITAL	Report	37.0	30.7
REDLANDS COMMUNITY HOSPITAL	No Report	.	.
REDWOOD MEMORIAL HOSPITAL	Report	69.8	7.0
REGENTS OF THE UNIVERSITY OF CALIFORNIA UCSF Medical Center UCSF Medical Center at Mount Zion	Report	84.4	5.7
REGIONAL MEDICAL CENTER OF SAN JOSE	Report	88.6	6.3
REHABILITATION INSTITUTE AT SANTA BARBARA	No Report	.	.
RIDGECREST REGIONAL HOSPITAL	Report	60.0	21.7
RIVERSIDE COMMUNITY HOSPITAL	Report	89.7	10.0
RIVERSIDE COUNTY REGIONAL MEDICAL CENTER	Report	42.5	15.9
RONALD REAGAN UCLA MEDICAL CENTER	Report	93.0	7.0
SADDLEBACK MEMORIAL MEDICAL CENTER Saddleback Memorial Medical Center Saddleback Memorial Medical Center – San Clemente	Report	64.0	14.6
SAINT AGNES MEDICAL CENTER	Report	74.2	23.7
SAINT FRANCIS MEDICAL CENTER	Report	91.4	22.7
SAINT FRANCIS MEMORIAL HOSPITAL	Report	67.8	25.7

HOSPITAL NAME	REPORT STATUS	EMPLOYEE SEASONAL INFLUENZA VACCINATION PERCENTAGE	EMPLOYEE SEASONAL INFLUENZA DECLINATION PERCENTAGE
SAINT JOHN'S HEALTH CENTER	Report	54.6	33.5
SAINT LOUISE REGIONAL HOSPITAL	Report	95.4	25.3
SAINT VINCENT MEDICAL CENTER	Report	63.3	36.2
SALINAS VALLEY MEMORIAL HOSPITAL	Report	70.9	22.1
SAN ANTONIO COMMUNITY HOSPITAL	Report	59.1	39.3
SAN DIMAS COMMUNITY HOSPITAL	Report	66.7	18.3
SAN FRANCISCO GENERAL HOSPITAL	Report	76.7	18.6
SAN GABRIEL VALLEY MEDICAL CENTER	Report	60.3	39.7
SAN GORGONIO MEMORIAL HOSPITAL	No Report	.	.
SAN JOAQUIN COMMUNITY HOSPITAL	Report	63.4	24.9
SAN JOAQUIN GENERAL HOSPITAL	Report	72.0	23.7
SAN JOAQUIN VALLEY REHABILITATION HOSPITAL	Report	41.6	14.9
SAN MATEO MEDICAL CENTER	Report	23.7	6.0
SAN RAMON REGIONAL MEDICAL CENTER, INC.	Report	48.1	51.9
San Ramon Regional Medical Center			
San Ramon Regional Medical Center South Building			
SANTA BARBARA COTTAGE HOSPITAL	Report	65.5	26.8
SANTA CLARA VALLEY MEDICAL CENTER	Report	84.3	0.0
SANTA MONICA - UCLA MEDICAL CENTER AND ORTHOPAEDIC HOSPITAL	Report	96.0	4.0
SANTA ROSA MEMORIAL HOSPITAL	Report	77.3	25.2
SANTA YNEZ VALLEY COTTAGE HOSPITAL	Report	56.3	42.5
SCRIPPS GREEN HOSPITAL	Report	70.1	14.0

HOSPITAL NAME	REPORT STATUS	EMPLOYEE SEASONAL INFLUENZA VACCINATION PERCENTAGE	EMPLOYEE SEASONAL INFLUENZA DECLINATION PERCENTAGE
SCRIPPS HEALTH	Report	74.1	28.6
Scripps Mercy Hospital			
Scripps Mercy Hospital Chula Vista			
SCRIPPS MEMORIAL HOSPITAL - ENCINITAS	Report	72.3	25.7
SCRIPPS MEMORIAL HOSPITAL - LA JOLLA	Report	68.5	31.5
SENECA HEALTHCARE DISTRICT	Report	74.1	25.9
SEQUOIA HOSPITAL	Report	75.5	19.2
SETON MEDICAL CENTER	Report	71.4	22.6
Seton Medical Center			
Seton Medical Center – Coastside			
SHARP CHULA VISTA MEDICAL CENTER	Report	76.8	17.2
SHARP CORONADO HOSPITAL AND HEALTHCARE CENTER	Report	73.8	18.1
SHARP MARY BIRCH HOSPITAL FOR WOMEN AND NEWBORNS	Report	73.6	23.2
SHARP MEMORIAL HOSPITAL	No Report	.	.
SHASTA REGIONAL MEDICAL CENTER	Report	46.6	3.0
SHERMAN OAKS HOSPITAL	Report	47.4	30.1
SHRINERS HOSPITALS FOR CHILDREN	Report	72.2	19.7
SHRINERS HOSPITALS FOR CHILDREN NORTHERN CALIF.	Report	50.8	27.1
SIERRA KINGS DISTRICT HOSPITAL	Report	57.3	20.6
SIERRA NEVADA MEMORIAL HOSPITAL	Report	61.6	27.1
SIERRA VIEW DISTRICT HOSPITAL	No Report	.	.
SIERRA VISTA REGIONAL MEDICAL CENTER	Report	78.3	19.6
SILVER LAKE MEDICAL CENTER	Report	32.5	66.9

HOSPITAL NAME	REPORT STATUS	EMPLOYEE SEASONAL INFLUENZA VACCINATION PERCENTAGE	EMPLOYEE SEASONAL INFLUENZA DECLINATION PERCENTAGE
SIMI VALLEY HOSPITAL & HEALTH CARE SERVICES	Report	39.7	2.3
SONOMA DEVELOPMENTAL CENTER	No Report	.	.
SONOMA VALLEY HOSPITAL	Report	72.0	36.3
SONORA REGIONAL MEDICAL CENTER	Report	77.2	26.8
SOUTHERN INYO HOSPITAL	No Report	.	.
ST BERNARDINE MEDICAL CENTER	Report	77.2	22.8
ST ELIZABETH COMMUNITY HOSPITAL	Report	49.4	39.0
ST JOHN'S PLEASANT VALLEY HOSPITAL	Report	46.2	13.7
ST JOHN'S REGIONAL MEDICAL CENTER	Report	50.8	15.5
ST ROSE HOSPITAL	Report	70.2	11.9
ST. HELENA HOSPITAL	Report	90.6	16.9
ST. HELENA HOSPITAL - CLEARLAKE	Report	60.6	39.2
ST. JOSEPH HOSPITAL	Report	53.0	6.7
St. Joseph Hospital			
The General Hospital			
ST. JOSEPH HOSPITAL	Report	86.9	13.1
ST. JOSEPH'S MEDICAL CENTER OF STOCKTON	Report	60.7	12.4
ST. JUDE MEDICAL CENTER	Report	93.4	2.9
ST. MARY MEDICAL CENTER	No Report	.	.
ST. MARY MEDICAL CENTER	Report	76.5	23.5
ST. MARY'S MEDICAL CENTER	No Report	.	.
STANFORD HOSPITAL	Report	82.2	14.1
STANISLAUS SURGICAL HOSPITAL	Report	66.7	30.9

HOSPITAL NAME	REPORT STATUS	EMPLOYEE SEASONAL INFLUENZA VACCINATION PERCENTAGE	EMPLOYEE SEASONAL INFLUENZA DECLINATION PERCENTAGE
SURPRISE VALLEY COMMUNITY HOSPITAL	No Report	.	.
SUTTER AMADOR HOSPITAL	No Report	.	.
SUTTER AUBURN FAITH HOSPITAL	Report	70.6	29.4
SUTTER COAST HOSPITAL	Report	80.1	20.5
SUTTER DAVIS HOSPITAL	Report	74.6	25.4
SUTTER DELTA MEDICAL CENTER	Report	59.4	9.4
SUTTER EAST BAY HOSPITALS	Report	57.5	13.1
Alta Bates Summit Medical Center – Alta Bates Campus			
Alta Bates Summit Medical Center – Herrick Campus			
Alta Bates Summit Medical Center – Summit Campus Summit St			
Alta Bates Summit Medical Center – Summit Campus Hawthorne St			
SUTTER HEALTH SACRAMENTO SIERRA REGION	Report	77.2	23.1
Sutter Memorial Hospital			
Sutter General Hospital			
SUTTER LAKESIDE HOSPITAL	Report	31.0	69.0
SUTTER MATERNITY & SURGERY CENTER OF SANTA CRUZ	Report	75.8	22.5
SUTTER MEDICAL CENTER OF SANTA ROSA	Report	55.0	12.0
SUTTER ROSEVILLE MEDICAL CENTER	Report	67.9	31.2
SUTTER SOLANO MEDICAL CENTER	No Report	.	.
SUTTER SURGICAL HOSPITAL - NORTH VALLEY	Report	67.5	32.5
SUTTER TRACY COMMUNITY HOSPITAL	Report	67.0	20.3

HOSPITAL NAME	REPORT STATUS	EMPLOYEE SEASONAL INFLUENZA VACCINATION PERCENTAGE	EMPLOYEE SEASONAL INFLUENZA DECLINATION PERCENTAGE
SUTTER WEST BAY HOSPITALS	Report	45.4	40.2
California Pacific Medical Center – West Campus			
California Pacific Medical Center – Davies Campus			
California Pacific Medical Center – Pacific Campus			
TAHOE FOREST HOSPITAL	Report	52.2	2.3
TEHACHAPI HOSPITAL	Report	60.6	33.8
TEMPLE COMMUNITY HOSPITAL	Report	49.8	40.1
THE FREMONT-RIDEOUT HEALTH GROUP	No Report	.	.
Fremont Medical Center			
Rideout Memorial Hospital			
THE REGENTS OF THE UNIVERSITY OF CALIFORNIA (UCSD)	Report	79.7	14.5
University of California, San Diego Medical Center			
UCSD – La Jolla, John M. and Sally B. Thornton Hospital			
THOUSAND OAKS SURGICAL HOSPITAL	Report	60.2	17.2
TORRANCE MEMORIAL MEDICAL CENTER	Report	59.0	39.2
TRI-CITY MEDICAL CENTER	Report	67.2	30.2
TRI-CITY REGIONAL MEDICAL CENTER	No Report	.	.
TRINITY HOSPITAL	Report	62.2	25.0
TULARE DISTRICT HOSPITAL	Report	59.1	13.9
TWIN CITIES COMMUNITY HOSPITAL	Report	76.1	22.2
UHS-CORONA, INC.	Report	59.7	39.1
Corona Regional Medical Center – Magnolia Ave			
Corona Regional Medical Center – South Main St			
UKIAH VALLEY MEDICAL CENTER/HOSPITAL DRIVE	Report	52.7	22.4

HOSPITAL NAME	REPORT STATUS	EMPLOYEE SEASONAL INFLUENZA VACCINATION PERCENTAGE	EMPLOYEE SEASONAL INFLUENZA DECLINATION PERCENTAGE
UNIVERSAL HEALTH SERVICES OF RANCHO SPRINGS, INC. Southwest Healthcare System – Murrieta Southwest Healthcare System – Wildomar	Report	38.2	9.1
UNIVERSITY OF CALIFORNIA DAVIS MEDICAL CENTER	Report	76.2	4.9
UNIVERSITY OF CALIFORNIA IRVINE MEDICAL CENTER	Report	93.8	5.3
USC KENNETH NORRIS JR. CANCER HOSPITAL	No Report	.	.
USC UNIVERSITY HOSPITAL	No Report	.	.
VALLEY PRESBYTERIAN HOSPITAL	Report	61.2	30.5
VALLEYCARE MEDICAL CENTER	Report	68.3	6.8
VERDUGO HILLS HOSPITAL	Report	58.1	27.3
VIBRA HOSPITAL OF SAN DIEGO	Report	75.7	21.0
VICTOR VALLEY COMMUNITY HOSPITAL	Report	57.1	31.0
VISTA HOSPITAL OF SAN GABRIEL VALLEY	Report	0.0	77.8
VISTA HOSPITAL OF RIVERSIDE	No Report	.	.
VISTA HOSPITAL OF SOUTH BAY	Report	11.9	22.6
WASHINGTON HOSPITAL	Report	61.1	15.2
WATSONVILLE COMMUNITY HOSPITAL	Report	64.8	30.0
WEST ANAHEIM MEDICAL CENTER	Report	65.0	31.8
WEST HILLS HOSPITAL & MEDICAL CENTER	Report	64.0	7.1
WESTERN MEDICAL CENTER ANAHEIM	No Report	.	.
WESTERN MEDICAL CENTER SANTA ANA	Report	33.9	32.5
WHITE MEMORIAL MEDICAL CENTER	Report	45.9	48.9



HOSPITAL NAME	REPORT STATUS	EMPLOYEE SEASONAL INFLUENZA VACCINATION PERCENTAGE	EMPLOYEE SEASONAL INFLUENZA DECLINATION PERCENTAGE
WHITTIER HOSPITAL MEDICAL CENTER	Report	70.4	14.6
WOODLAND MEMORIAL HOSPITAL	Report	77.3	18.2

Source: Influenza Vaccination among Employees in California General Acute Care Hospitals for the 2009-2010 Respiratory Season, California Department of Public Health, December 2010.

**Table 10. Employee 2009 influenza A (H1N1) vaccination report status and hospital-specific employee 2009 influenza A (H1N1) vaccination and declination percentages in single and multi-hospital licenses, general acute care hospitals, California 2009-2010.**

HOSPITAL NAME	REPORT STATUS	EMPLOYEE 2009 INFLUENZA A (H1N1) VACCINATION PERCENTAGE	EMPLOYEE 2009 INFLUENZA A (H1N1) DECLINATION PERCENTAGE
ADVENTIST HEALTH SYSTEMS			
Hanford Community Medical Center	Report	35.5	64.5
Selma Community Hospital			
AHMC ANAHEIM REGIONAL MEDICAL CENTER	Report	41.0	13.1
ALAMEDA COUNTY MEDICAL CENTER			
Alameda County Medical Center	Report	58.8	34.6
Fairmont Campus			
ALAMEDA HOSPITAL	Report	35.2	64.8
ALHAMBRA HOSPITAL MEDICAL CENTER	Report	62.6	8.8
ALTA LOS ANGELES HOSPITALS, INC.			
Los Angeles Community Hospital	Report	15.4	20.0
Norwalk Community Hospital			
ALVARADO HOSPITAL, LLC			
Alvarado Hospital – 6645 Alvarado Rd San Diego	Report	73.4	26.6
Alvarado Hospital – 6655 Alvarado Rd San Diego			
ANAHEIM GENERAL HOSPITAL	Report	20.7	34.0
ANTELOPE VALLEY HOSPITAL	Report	48.9	20.6
ARROWHEAD REGIONAL MEDICAL CENTER	Report	42.4	33.2
ARROYO GRANDE COMMUNITY HOSPITAL	Report	68.3	25.5
BAKERSFIELD HEART HOSPITAL	Report	68.1	20.2

HOSPITAL NAME	REPORT STATUS	EMPLOYEE 2009 INFLUENZA A (H1N1) VACCINATION PERCENTAGE	EMPLOYEE 2009 INFLUENZA A (H1N1) DECLINATION PERCENTAGE
BAKERSFIELD MEMORIAL HOSPITAL	Report	57.6	24.0
BALLARD REHABILITATION HOSPITAL	Report	56.9	29.4
BANNER LASSEN MEDICAL CENTER	No Report	.	.
BARLOW RESPIRATORY HOSPITAL	Report	49.1	14.2
BARSTOW COMMUNITY HOSPITAL	No Report	.	.
BARTON MEMORIAL HOSPITAL	Report	54.6	12.2
BEAR VALLEY COMMUNITY HOSPITAL	Report	51.2	25.8
BELLFLOWER MEDICAL CENTER	Report	62.0	0.0
BEVERLY HOSPITAL	Report	42.9	43.1
BIGGS GRIDLEY MEMORIAL HOSPITAL	No Report	.	.
BROTMAN MEDICAL CENTER	Report	47.3	52.7
CALIFORNIA HOSPITAL MEDICAL CENTER - LOS ANGELES	Report	31.6	31.4
CALIFORNIA MEDICAL FACILITY	Report	48.4	0.0
CALIFORNIA MENS COLONY	Report	31.2	0.0
CALIFORNIA PACIFIC MEDICAL CENTER - ST. LUKE'S CAMPUS	Report	58.6	29.4
CASA COLINA HOSPITAL FOR REHABILITATIVE MEDICINE	Report	89.7	29.8
CATALINA ISLAND MEDICAL CENTER	No Report	.	.
CATHOLIC HEALTHCARE WEST – Santa Cruz			
Dominican Hospital – Frederick St	Report	71.4	16.5
Dominican Hospital – Soquel Dr			
CATHOLIC HEALTHCARE WEST – Bakersfield			
Mercy Hospital	Report	69.3	47.9
Mercy Southwest Hospital			

HOSPITAL NAME	REPORT STATUS	EMPLOYEE 2009 INFLUENZA A (H1N1) VACCINATION PERCENTAGE	EMPLOYEE 2009 INFLUENZA A (H1N1) DECLINATION PERCENTAGE
CEDARS-SINAI MEDICAL CENTER	Report	45.4	9.0
CENTINELA HOSPITAL MEDICAL CENTER	Report	53.6	52.6
CENTRAL VALLEY GENERAL HOSPITAL	Report	34.5	65.5
CHAPMAN MEDICAL CENTER	Report	54.0	40.2
CHILDREN'S HOSPITAL AT MISSION	Report	68.4	20.7
CHILDREN'S HOSPITAL CENTRAL CALIFORNIA	Report	49.5	41.1
CHILDREN'S HOSPITAL OF ORANGE COUNTY	Report	96.0	1.7
CHILDRENS HOSPITAL AND RESEARCH CENTER AT OAKLAND	Report	63.4	15.9
CHILDRENS HOSPITAL OF LOS ANGELES	Report	41.8	9.7
CHINESE HOSPITAL	No Report	.	.
CHINO VALLEY MEDICAL CENTER	Report	36.7	36.5
CITRUS VALLEY MEDICAL CENTER, INC. Citrus Valley Medical Center IC Campus – Covina Citrus Valley Medical Center QV Campus – West Covina	Report	81.8	18.0
CITY OF HOPE HELFORD CLINICAL RESEARCH HOSPITAL	Report	45.4	48.8
CLOVIS COMMUNITY MEDICAL CENTER	Report	37.8	58.9
COALINGA REGIONAL MEDICAL CENTER	No Report	.	.
COAST PLAZA HOSPITAL	Report	27.3	26.3
COASTAL COMMUNITIES HOSPITAL	Report	47.8	46.6
COLLEGE HOSPITAL COSTA MESA	Report	34.2	21.4
COLORADO RIVER MEDICAL CENTER	No Report	.	.
COLUSA REGIONAL MEDICAL CENTER	Report	68.4	32.2
COMMUNITY AND MISSION HOSPITAL OF HUNTINGTON PARK	No Report	.	.

HOSPITAL NAME	REPORT STATUS	EMPLOYEE 2009 INFLUENZA A (H1N1) VACCINATION PERCENTAGE	EMPLOYEE 2009 INFLUENZA A (H1N1) DECLINATION PERCENTAGE
COMMUNITY HOSPITAL OF LONG BEACH	Report	69.6	9.8
COMMUNITY HOSPITAL OF SAN BERNARDINO	Report	36.4	56.3
COMMUNITY HOSPITAL OF THE MONTEREY PENINSULA	Report	70.2	29.7
COMMUNITY MEMORIAL HOSPITAL - SAN BUENAVENTURA	Report	49.8	25.6
COMMUNITY REGIONAL MEDICAL CENTER	Report	38.4	58.2
CONTRA COSTA REGIONAL MEDICAL CENTER	Report	52.6	12.9
CORCORAN DISTRICT HOSPITAL	No Report	.	.
COUNTY OF VENTURA			
Ventura County Medical Center	Report	34.3	5.2
Ventura County Medical Center – Santa Paula Hospital			
DAMERON HOSPITAL	Report	57.7	40.5
DELANO REGIONAL MEDICAL CENTER	No Report	.	.
DESERT REGIONAL MEDICAL CENTER	No Report	.	.
DESERT VALLEY HOSPITAL	Report	41.3	61.3
DOCTORS HOSPITAL OF MANTECA	Report	60.0	33.6
DOCTORS HOSPITAL OF WEST COVINA, INC.	No Report	.	.
DOCTORS MEDICAL CENTER	No Report	.	.
DOCTORS MEDICAL CENTER - SAN PABLO	Report	31.2	0.0
DOWNEY REGIONAL MEDICAL CENTER	Report	62.2	26.7
EARL & LORAIN MILLER CHILDREN'S HOSPITAL	Report	85.5	3.8
EAST LOS ANGELES DOCTORS HOSPITAL	No Report	.	.
EAST VALLEY HOSPITAL MEDICAL CENTER	No Report	.	.
EASTERN PLUMAS HEALTH CARE	Report	58.7	31.5

HOSPITAL NAME	REPORT STATUS	EMPLOYEE 2009 INFLUENZA A (H1N1) VACCINATION PERCENTAGE	EMPLOYEE 2009 INFLUENZA A (H1N1) DECLINATION PERCENTAGE
EDEN MEDICAL CENTER			
Eden Medical Center	Report	62.8	25.8
San Leandro Hospital			
EISENHOWER MEDICAL CENTER	No Report	.	.
EL CAMINO HOSPITAL	Report	51.8	33.0
EL CAMINO HOSPITAL LOS GATOS	No Report	.	.
EL CENTRO REGIONAL MEDICAL CENTER	Report	78.8	2.0
EMANUEL MEDICAL CENTER INC.	Report	52.6	29.0
ENCINO HOSPITAL MEDICAL CENTER	No Report	.	.
ENLOE MEDICAL CENTER			
Enloe Medical Center – Cohasset			
Enloe Medical Center – Esplanade	Report	48.2	39.1
Enloe Rehabilitation Center			
FAIRCHILD MEDICAL CENTER	Report	42.4	47.6
FAIRVIEW DEVELOPMENTAL CENTER	Report	80.2	44.4
FALLBROOK HOSPITAL DISTRICT	Report	72.1	24.7
FEATHER RIVER HOSPITAL	Report	22.8	11.6
FOOTHILL PRESBYTERIAN HOSPITAL-JOHNSTON MEMORIAL	Report	75.5	30.9
FOUNTAIN VALLEY REGIONAL HOSPITAL & MED CENTER			
Fountain Valley Regional Hospital and Med Center – Euclid	Report	46.3	7.2
Fountain Valley Regional Hospital and Med Center – Warner Ave			
FRANK R. HOWARD MEMORIAL HOSPITAL	Report	57.1	34.6
FRENCH HOSPITAL MEDICAL CENTER	Report	60.0	5.9
FRESNO HEART AND SURGICAL HOSPITAL	Report	44.7	56.1

HOSPITAL NAME	REPORT STATUS	EMPLOYEE 2009 INFLUENZA A (H1N1) VACCINATION PERCENTAGE	EMPLOYEE 2009 INFLUENZA A (H1N1) DECLINATION PERCENTAGE
FRESNO SURGICAL HOSPITAL	Report	0.0	4.8
GARDEN GROVE HOSPITAL AND MEDICAL CENTER	Report	43.9	57.7
GARFIELD MEDICAL CENTER	Report	74.4	18.8
GEORGE L. MEE MEMORIAL HOSPITAL	Report	54.1	6.3
GLENDALE ADVENTIST MEDICAL CENTER	Report	52.4	34.5
GLENDALE MEMORIAL HOSPITAL AND HEALTH CENTER	Report	47.0	26.2
GLENN MEDICAL CENTER	Report	47.6	52.4
GOLETA VALLEY COTTAGE HOSPITAL	Report	71.6	26.8
GOOD SAMARITAN HOSPITAL	Report	57.1	28.2
GOOD SAMARITAN HOSPITAL	No Report	.	.
GOOD SAMARITAN HOSPITAL, LP – San Jose			
Good Samaritan Hospital	Report	55.2	4.2
Mission Oaks Hospital			
GREATER EL MONTE COMMUNITY HOSPITAL	No Report	.	.
GROSSMONT HOSPITAL	Report	66.4	24.0
HAZEL HAWKINS MEMORIAL HOSPITAL	Report	45.5	5.9
HEALDSBURG DISTRICT HOSPITAL	Report	75.7	24.3
HEALTHBRIDGE CHILDREN'S HOSPITAL - ORANGE	No Report	.	.
HEALTHSOUTH BAKERSFIELD REHABILITATION HOSPITAL	Report	50.2	49.8
HEALTHSOUTH TUSTIN REHABILITATION HOSPITAL	Report	34.6	68.6
HEMET VALLEY MEDICAL CENTER	Report	24.6	27.5
HENRY MAYO NEWHALL MEMORIAL HOSPITAL	Report	43.1	0.0
HI-DESERT MEDICAL CENTER	Report	64.5	15.4

HOSPITAL NAME	REPORT STATUS	EMPLOYEE 2009 INFLUENZA A (H1N1) VACCINATION PERCENTAGE	EMPLOYEE 2009 INFLUENZA A (H1N1) DECLINATION PERCENTAGE
HOAG HOSPITAL IRVINE	No Report	.	.
HOAG MEMORIAL HOSPITAL PRESBYTERIAN	Report	63.4	16.4
HOLLYWOOD COMMUNITY HOSPITAL OF HOLLYWOOD	No Report	.	.
HOLLYWOOD PRESBYTERIAN MEDICAL CENTER	Report	49.3	51.5
HUNTINGTON BEACH HOSPITAL	Report	61.2	37.2
HUNTINGTON MEMORIAL HOSPITAL	No Report	.	.
JEROLD PHELPS COMMUNITY HOSPITAL	Report	61.5	38.5
JOHN C. FREMONT HEALTHCARE DISTRICT	Report	54.2	38.8
JOHN D KLARICH MEMORIAL HOSPITAL, CSP-CORCORAN	Report	12.4	0.0
JOHN F. KENNEDY MEMORIAL HOSPITAL	Report	44.6	32.0
JOHN MUIR MEDICAL CENTER- WALNUT CREEK CAMPUS	Report	85.3	0.9
JOHN MUIR MEDICAL CENTER-CONCORD CAMPUS	Report	87.4	4.1
KAISER FOUND. HOSPITAL & REHAB. CENTER - VALLEJO	No Report	.	.
KAISER FOUNDATION HOSPITAL - ANTIOCH	Report	50.9	43.6
KAISER FOUNDATION HOSPITAL - BALDWIN PARK	Report	59.6	40.4
KAISER FOUNDATION HOSPITAL - ORANGE COUNTY Kaiser Foundation Hospital Anaheim	Report	48.6	51.3
Kaiser Foundation Hospital Irvine			
KAISER FOUNDATION HOSPITAL - PANORAMA	Report	54.7	45.2
KAISER FOUNDATION HOSPITAL - REDWOOD CITY	Report	67.6	32.3
KAISER FOUNDATION HOSPITAL - SAN DIEGO	Report	58.4	41.6
KAISER FOUNDATION HOSPITAL - SAN FRANCISCO	No Report	.	.
KAISER FOUNDATION HOSPITAL - SAN RAFAEL	No Report	.	.



HOSPITAL NAME	REPORT STATUS	EMPLOYEE 2009 INFLUENZA A (H1N1) VACCINATION PERCENTAGE	EMPLOYEE 2009 INFLUENZA A (H1N1) DECLINATION PERCENTAGE
KAISER FOUNDATION HOSPITAL - SANTA ROSA	Report	36.5	63.5
KAISER FOUNDATION HOSPITAL - SOUTH BAY	Report	50.9	49.0
KAISER FOUNDATION HOSPITAL - SOUTH SAN FRANCISCO	Report	67.3	32.1
KAISER FOUNDATION HOSPITAL -- FRESNO	Report	54.2	45.3
KAISER FOUNDATION HOSPITAL FONTANA	Report	42.8	56.9
KAISER FOUNDATION HOSPITAL SUNSET	Report	47.5	52.5
KAISER FOUNDATION HOSPITAL, RIVERSIDE	Report	47.2	52.7
KAISER FOUNDATION HOSPITAL, WOODLAND HILLS	Report	55.3	44.7
KAISER FOUNDATION HOSPITAL-DOWNEY	Report	40.4	59.0
KAISER FOUNDATION HOSPITAL-MORENO VALLEY	No Report	.	.
KAISER FOUNDATION HOSPITAL-SACRAMENTO/ROSEVILLE	Report	55.5	.
KAISER FOUNDATION HOSPITAL-SACRAMENTO/ROSEVILLE	Report	36.4	50.4
KAISER FOUNDATION HOSPITAL-SAN JOSE	Report	61.8	38.5
KAISER FOUNDATION HOSPITAL-SANTA CLARA	Report	61.9	31.2
KAISER FOUNDATION HOSPITAL-SOUTH SACRAMENTO	Report	52.4	35.7
KAISER FOUNDATION HOSPITAL-WALNUT CREEK	Report	61.0	35.6
KAISER FOUNDATION HOSPITAL-WEST LA	Report	40.2	59.8
KAISER FOUNDATION HOSPITALS - EAST BAY			
Kaiser Foundation Hospital Oakland/Richmond	Report	46.8	51.2
Kaiser Foundation Hospital Richmond			
KAISER FOUNDATION HOSPITALS - HAYWARD/FREMONT			
Kaiser Foundation Hospital Hayward/Fremont	Report	58.2	39.0
Kaiser Foundation Hospital Fremont			

HOSPITAL NAME	REPORT STATUS	EMPLOYEE 2009 INFLUENZA A (H1N1) VACCINATION PERCENTAGE	EMPLOYEE 2009 INFLUENZA A (H1N1) DECLINATION PERCENTAGE
KAISER FOUNDATION HOSPITALS - MANTECA/MODESTO			
Kaiser Foundation Hospital Manteca	Report	49.1	50.9
Kaiser Foundation Hospital Modesto			
KAWEAH DELTA MEDICAL CENTER	Report	45.2	16.5
KENTFIELD REHABILITATION & SPECIALTY HOSPITAL	No Report	.	.
KERN MEDICAL CENTER	Report	60.1	29.1
KERN VALLEY HEALTHCARE DISTRICT	No Report	.	.
KINDRED HOSPITAL - LA MIRADA	Report	51.3	33.3
KINDRED HOSPITAL - LOS ANGELES	Report	85.0	0.0
KINDRED HOSPITAL - SACRAMENTO	Report	53.6	40.4
KINDRED HOSPITAL - SAN DIEGO	Report	59.5	43.2
KINDRED HOSPITAL - SAN FRANCISCO BAY AREA	Report	87.8	11.8
KINDRED HOSPITAL - SAN GABRIEL VALLEY	Report	48.0	0.0
KINDRED HOSPITAL - SANTA ANA	Report	42.2	0.0
KINDRED HOSPITAL BREA	No Report	.	.
KINDRED HOSPITAL ONTARIO	Report	50.1	33.1
KINDRED HOSPITAL WESTMINSTER	Report	61.0	34.3
KINGSBURG MEDICAL CENTER	No Report	.	.
LA PALMA INTERCOMMUNITY HOSPITAL	Report	59.1	39.8
LAC+USC MEDICAL CENTER	No Report	.	.
LAC/HARBOR-UCLA MEDICAL CENTER	Report	57.3	33.7
LAC/RANCHO LOS AMIGOS NATIONAL REHABILITATION CTR	Report	37.5	54.5
LAGUNA HONDA HOSPITAL & REHABILITATION CENTER	Report	72.1	12.2

HOSPITAL NAME	REPORT STATUS	EMPLOYEE 2009 INFLUENZA A (H1N1) VACCINATION PERCENTAGE	EMPLOYEE 2009 INFLUENZA A (H1N1) DECLINATION PERCENTAGE
LAKEWOOD REGIONAL MEDICAL CENTER	Report	70.6	17.6
LANCASTER COMMUNITY HOSPITAL	No Report	.	.
LANTERMAN DEVELOPMENTAL CENTER	Report	43.4	26.9
LODI MEMORIAL HOSPITAL ASSOCIATION, INC.			
Lodi Memorial Hospital – West	No Report	.	.
Lodi Memorial Hospital			
LOMA LINDA UNIVERSITY MEDICAL CENTER			
Loma Linda University Medical Center	Report	64.8	15.9
Loma Linda University Medical Center East Campus Hospital			
Loma Linda University Heart and Surgical Hospital			
LOMPOC VALLEY MEDICAL CENTER	Report	50.4	18.2
LONG BEACH MEMORIAL MEDICAL CENTER	No Report	.	.
LOS ALAMITOS MEDICAL CENTER	No Report	.	.
LOS ANGELES COUNTY OLIVE VIEW-UCLA MEDICAL CENTER	Report	64.6	35.4
LOS ANGELES METROPOLITAN MEDICAL CENTER	Report	14.4	34.1
LOS ROBLES REGIONAL MEDICAL CENTER			
Los Robles Hospital and Medical Center	Report	40.8	19.8
Los Robles Hospital and Medical Center East Campus			
LUCILE SALTER PACKARD CHILDREN'S HOSP AT STANFORD	Report	73.3	24.9
MAD RIVER COMMUNITY HOSPITAL	Report	50.5	49.5
MADERA COMMUNITY HOSPITAL	No Report	.	.
MAMMOTH HOSPITAL	Report	43.1	14.6
MARIAN MEDICAL CENTER	Report	65.5	31.3
MARIN GENERAL HOSPITAL	Report	70.5	25.2

HOSPITAL NAME	REPORT STATUS	EMPLOYEE 2009 INFLUENZA A (H1N1) VACCINATION PERCENTAGE	EMPLOYEE 2009 INFLUENZA A (H1N1) DECLINATION PERCENTAGE
MARINA DEL REY HOSPITAL	No Report	.	.
MARK TWAIN ST. JOSEPH'S HOSPITAL (4RH)	No Report	.	.
MARSHALL MEDICAL CENTER (1-RH)	No Report	.	.
MAYERS MEMORIAL HOSPITAL	No Report	.	.
MEMORIAL HOSPITAL LOS BANOS	Report	84.0	7.2
MEMORIAL HOSPITAL OF GARDENA	Report	35.5	40.3
MEMORIAL MEDICAL CENTER	Report	48.0	32.1
MENDOCINO COAST DISTRICT HOSPITAL	Report	63.0	30.9
MENIFEE VALLEY MEDICAL CENTER	Report	26.7	24.3
MENLO PARK SURGICAL HOSPITAL	No Report	.	.
MERCY GENERAL HOSPITAL	Report	63.0	36.3
MERCY HOSPITAL OF FOLSOM	Report	62.8	31.7
MERCY MEDICAL CENTER MERCED - COMMUNITY CAMPUS	No Report	.	.
MERCY MEDICAL CENTER MT. SHASTA	Report	32.8	67.2
MERCY MEDICAL CENTER REDDING	Report	56.3	15.4
MERCY SAN JUAN MEDICAL CENTER	Report	66.2	26.7
METHODIST HOSPITAL OF SACRAMENTO	Report	58.2	41.8
METHODIST HOSPITAL OF SOUTHERN CALIFORNIA	Report	60.4	32.0
MILLS-PENINSULA HEALTH SERVICES			
Mills Health Center	Report	68.9	30.5
Peninsula Medical Center			
MIRACLE MILE MEDICAL CENTER	Report	87.8	12.2
MISSION COMMUNITY HOSPITAL - PANORAMA CAMPUS	Report	60.0	0.0

HOSPITAL NAME	REPORT STATUS	EMPLOYEE 2009 INFLUENZA A (H1N1) VACCINATION PERCENTAGE	EMPLOYEE 2009 INFLUENZA A (H1N1) DECLINATION PERCENTAGE
MISSION HOSPITAL REGIONAL MEDICAL CENTER			
Mission Hospital Regional Medical Center	No Report	.	.
Mission Hospital Laguna Beach			
MODOC MEDICAL CENTER	Report	37.7	0.0
MONROVIA MEMORIAL HOSPITAL	Report	53.8	46.2
MONTCLAIR HOSPITAL MEDICAL CENTER	Report	40.7	37.9
MONTEREY PARK HOSPITAL	No Report	.	.
MOTION PICTURE & TELEVISION HOSPITAL	Report	20.2	5.0
MOUNTAINS COMMUNITY HOSPITAL	Report	64.7	7.5
NATIVIDAD MEDICAL CENTER	Report	53.3	13.3
NEWPORT SPECIALTY HOSPITAL	Report	38.4	38.8
NORTHBAY MEDICAL CENTER			
Northbay Medical Center	Report	53.9	18.8
Northbay Vacavalley Hospital			
NORTHERN CALIFORNIA REHABILITATION HOSPITAL	Report	39.2	10.6
NORTHERN INYO HOSPITAL	Report	79.9	25.7
NORTHRIDGE HOSPITAL MEDICAL CENTER	Report	62.5	22.3
NOVATO COMMUNITY HOSPITAL	Report	55.2	15.9
O'CONNOR HOSPITAL	Report	60.6	29.0
OAK VALLEY HOSPITAL DISTRICT (2-RH)	Report	46.1	0.0
OJAI VALLEY COMMUNITY HOSPITAL	Report	43.8	49.3
OLYMPIA MEDICAL CENTER	No Report	.	.
ORANGE COAST MEMORIAL MEDICAL CENTER	Report	71.7	18.1

HOSPITAL NAME	REPORT STATUS	EMPLOYEE 2009 INFLUENZA A (H1N1) VACCINATION PERCENTAGE	EMPLOYEE 2009 INFLUENZA A (H1N1) DECLINATION PERCENTAGE
OROVILLE HOSPITAL	No Report	.	.
PACIFIC ALLIANCE MEDICAL CENTER	No Report	.	.
PACIFIC HOSPITAL OF LONG BEACH	No Report	.	.
PACIFICA HOSPITAL OF THE VALLEY	Report	38.0	21.2
PALM DRIVE HOSPITAL	Report	45.2	3.8
PALO VERDE HOSPITAL	Report	42.1	42.1
PALOMAR MEDICAL CENTER	Report	65.3	28.4
PARADISE VALLEY HOSPITAL	Report	73.8	18.7
PARKVIEW COMMUNITY HOSPITAL MEDICAL CENTER	Report	56.7	49.6
PATIENTS' HOSPITAL OF REDDING	Report	16.7	83.3
PETALUMA VALLEY HOSPITAL	Report	75.4	31.8
PIONEERS MEMORIAL HEALTHCARE DISTRICT	Report	40.2	25.1
PLACENTIA LINDA HOSPITAL	Report	68.1	23.0
PLUMAS DISTRICT HOSPITAL	Report	64.2	4.6
POMERADO HOSPITAL	Report	82.1	16.1
POMONA VALLEY HOSPITAL MEDICAL CENTER	Report	61.5	27.5
PORTERVILLE DEVELOPMENTAL CENTER	No Report	.	.
PRESBYTERIAN INTERCOMMUNITY HOSPITAL	Report	69.9	6.6
PROMISE HOSP OF EAST LOS ANGELES-EAST L.A. CAMPUS	Report	48.4	2.4
PROMISE HOSP OF EAST LOS ANGELES-SUBURBAN CAMPUS	Report	25.2	27.1
PROMISE HOSPITAL OF SAN DIEGO	No Report	.	.
PROVIDENCE HOLY CROSS MEDICAL CENTER	No Report	.	.
PROVIDENCE LITTLE COMPANY OF MARY MEDICAL CENTER SAN PEDRO	Report	46.7	4.5

HOSPITAL NAME	REPORT STATUS	EMPLOYEE 2009 INFLUENZA A (H1N1) VACCINATION PERCENTAGE	EMPLOYEE 2009 INFLUENZA A (H1N1) DECLINATION PERCENTAGE
PROVIDENCE LITTLE COMPANY OF MARY MEDICAL CENTER TORRANCE	Report	54.0	5.5
PROVIDENCE SAINT JOSEPH MEDICAL CENTER	No Report	.	.
PROVIDENCE TARZANA MEDICAL CENTER	No Report	.	.
QUEEN OF THE VALLEY MEDICAL CENTER	Report	66.4	22.9
RADY CHILDREN'S HOSPITAL - SAN DIEGO	Report	99.1	0.9
RANCHO SPECIALTY HOSPITAL	Report	29.2	2.6
REDLANDS COMMUNITY HOSPITAL	No Report	.	.
REDWOOD MEMORIAL HOSPITAL	Report	80.5	8.4
REGENTS OF THE UNIVERSITY OF CALIFORNIA UCSF Medical Center	Report	75.4	5.9
UCSF Medical Center at Mount Zion			
REGIONAL MEDICAL CENTER OF SAN JOSE	Report	61.7	17.4
REHABILITATION INSTITUTE AT SANTA BARBARA	No Report	.	.
RIDGECREST REGIONAL HOSPITAL	Report	41.1	12.6
RIVERSIDE COMMUNITY HOSPITAL	Report	60.9	27.1
RIVERSIDE COUNTY REGIONAL MEDICAL CENTER	Report	54.5	4.1
RONALD REAGAN UCLA MEDICAL CENTER	Report	95.9	4.1
SADDLEBACK MEMORIAL MEDICAL CENTER Saddleback Memorial Medical Center	Report	65.0	14.6
Saddleback Memorial Medical Center – San Clemente			
SAINT AGNES MEDICAL CENTER	Report	55.8	38.1
SAINT FRANCIS MEDICAL CENTER	Report	80.9	10.9
SAINT FRANCIS MEMORIAL HOSPITAL	Report	65.6	24.8

HOSPITAL NAME	REPORT STATUS	EMPLOYEE 2009 INFLUENZA A (H1N1) VACCINATION PERCENTAGE	EMPLOYEE 2009 INFLUENZA A (H1N1) DECLINATION PERCENTAGE
SAINT JOHN'S HEALTH CENTER	Report	50.3	42.6
SAINT LOUISE REGIONAL HOSPITAL	Report	84.7	30.1
SAINT VINCENT MEDICAL CENTER	Report	58.6	40.2
SALINAS VALLEY MEMORIAL HOSPITAL	Report	66.5	27.6
SAN ANTONIO COMMUNITY HOSPITAL	Report	61.8	37.0
SAN DIMAS COMMUNITY HOSPITAL	Report	73.3	30.0
SAN FRANCISCO GENERAL HOSPITAL	Report	72.1	19.8
SAN GABRIEL VALLEY MEDICAL CENTER	Report	55.1	44.9
SAN GORGONIO MEMORIAL HOSPITAL	No Report	.	.
SAN JOAQUIN COMMUNITY HOSPITAL	Report	55.1	33.1
SAN JOAQUIN GENERAL HOSPITAL	Report	63.8	31.6
SAN JOAQUIN VALLEY REHABILITATION HOSPITAL	Report	11.9	62.4
SAN MATEO MEDICAL CENTER	Report	23.8	4.3
SAN RAMON REGIONAL MEDICAL CENTER, INC. San Ramon Regional Medical Center San Ramon Regional Medical Center South Building	Report	53.8	46.2
SANTA BARBARA COTTAGE HOSPITAL	Report	61.4	30.3
SANTA CLARA VALLEY MEDICAL CENTER	Report	73.6	0.0
SANTA MONICA - UCLA MEDICAL CENTER AND ORTHOPAEDIC HOSPITAL	Report	71.3	28.7
SANTA ROSA MEMORIAL HOSPITAL	Report	83.3	23.4
SANTA YNEZ VALLEY COTTAGE HOSPITAL	Report	42.5	56.3
SCRIPPS GREEN HOSPITAL	Report	74.2	18.4



HOSPITAL NAME	REPORT STATUS	EMPLOYEE 2009 INFLUENZA A (H1N1) VACCINATION PERCENTAGE	EMPLOYEE 2009 INFLUENZA A (H1N1) DECLINATION PERCENTAGE
SCRIPPS HEALTH			
Scripps Mercy Hospital	Report	67.7	29.8
Scripps Mercy Hospital Chula Vista			
SCRIPPS MEMORIAL HOSPITAL - ENCINITAS	Report	70.3	26.9
SCRIPPS MEMORIAL HOSPITAL - LA JOLLA	Report	56.0	44.0
SENECA HEALTHCARE DISTRICT	Report	25.9	74.1
SEQUOIA HOSPITAL	Report	79.6	20.3
SETON MEDICAL CENTER			
Seton Medical Center	Report	69.1	22.0
Seton Medical Center – Coastside			
SHARP CHULA VISTA MEDICAL CENTER	Report	74.0	18.0
SHARP CORONADO HOSPITAL AND HEALTHCARE CENTER	Report	59.4	26.2
SHARP MARY BIRCH HOSPITAL FOR WOMEN AND NEWBORNS	Report	74.4	21.4
SHARP MEMORIAL HOSPITAL	No Report	.	.
SHASTA REGIONAL MEDICAL CENTER	Report	55.4	0.0
SHERMAN OAKS HOSPITAL	Report	45.7	32.8
SHRINERS HOSPITALS FOR CHILDREN	Report	69.2	21.0
SHRINERS HOSPITALS FOR CHILDREN NORTHERN CALIF.	Report	85.1	14.5
SIERRA KINGS DISTRICT HOSPITAL	Report	29.1	32.7
SIERRA NEVADA MEMORIAL HOSPITAL	Report	38.2	3.6
SIERRA VIEW DISTRICT HOSPITAL	No Report	.	.
SIERRA VISTA REGIONAL MEDICAL CENTER	Report	73.2	23.2
SILVER LAKE MEDICAL CENTER	Report	40.1	56.1

HOSPITAL NAME	REPORT STATUS	EMPLOYEE 2009 INFLUENZA A (H1N1) VACCINATION PERCENTAGE	EMPLOYEE 2009 INFLUENZA A (H1N1) DECLINATION PERCENTAGE
SIMI VALLEY HOSPITAL & HEALTH CARE SERVICES	Report	36.9	36.8
SONOMA DEVELOPMENTAL CENTER	No Report	.	.
SONOMA VALLEY HOSPITAL	Report	59.2	45.9
SONORA REGIONAL MEDICAL CENTER	Report	57.2	42.5
SOUTHERN INYO HOSPITAL	No Report	.	.
ST BERNARDINE MEDICAL CENTER	Report	72.4	27.6
ST ELIZABETH COMMUNITY HOSPITAL	Report	51.3	39.9
ST JOHN'S PLEASANT VALLEY HOSPITAL	Report	27.3	10.8
ST JOHN'S REGIONAL MEDICAL CENTER	Report	33.7	8.4
ST ROSE HOSPITAL	Report	80.7	15.3
ST. HELENA HOSPITAL	Report	48.2	21.2
ST. HELENA HOSPITAL - CLEARLAKE	Report	48.5	50.4
ST. JOSEPH HOSPITAL			
St. Joseph Hospital	Report	74.6	8.1
The General Hospital			
ST. JOSEPH HOSPITAL	Report	82.5	17.5
ST. JOSEPH'S MEDICAL CENTER OF STOCKTON	Report	50.2	18.7
ST. JUDE MEDICAL CENTER	Report	84.4	0.8
ST. MARY MEDICAL CENTER	No Report	.	.
ST. MARY MEDICAL CENTER	Report	67.3	32.7
ST. MARY'S MEDICAL CENTER	No Report	.	.
STANFORD HOSPITAL	Report	76.1	22.9
STANISLAUS SURGICAL HOSPITAL	Report	39.4	52.7

HOSPITAL NAME	REPORT STATUS	EMPLOYEE 2009 INFLUENZA A (H1N1) VACCINATION PERCENTAGE	EMPLOYEE 2009 INFLUENZA A (H1N1) DECLINATION PERCENTAGE
SURPRISE VALLEY COMMUNITY HOSPITAL	No Report	.	.
SUTTER AMADOR HOSPITAL	No Report	.	.
SUTTER AUBURN FAITH HOSPITAL	Report	66.1	33.9
SUTTER COAST HOSPITAL	Report	63.4	34.1
SUTTER DAVIS HOSPITAL	Report	67.9	32.1
SUTTER DELTA MEDICAL CENTER	Report	67.3	7.6
SUTTER EAST BAY HOSPITALS			
Alta Bates Summit Medical Center – Alta Bates Campus			
Alta Bates Summit Medical Center – Herrick Campus	Report	48.9	2.6
Alta Bates Summit Medical Center – Summit Campus Summit St			
Alta Bates Summit Medical Center – Summit Campus Hawthorne St			
SUTTER HEALTH SACRAMENTO SIERRA REGION			
Sutter Memorial Hospital	Report	70.1	30.2
Sutter General Hospital			
SUTTER LAKESIDE HOSPITAL	Report	28.6	66.7
SUTTER MATERNITY & SURGERY CENTER OF SANTA CRUZ	Report	73.8	20.0
SUTTER MEDICAL CENTER OF SANTA ROSA	Report	62.3	7.0
SUTTER ROSEVILLE MEDICAL CENTER	Report	62.1	37.0
SUTTER SOLANO MEDICAL CENTER	No Report	.	.
SUTTER SURGICAL HOSPITAL - NORTH VALLEY	Report	44.6	55.4
SUTTER TRACY COMMUNITY HOSPITAL	Report	69.2	23.9

HOSPITAL NAME	REPORT STATUS	EMPLOYEE 2009 INFLUENZA A (H1N1) VACCINATION PERCENTAGE	EMPLOYEE 2009 INFLUENZA A (H1N1) DECLINATION PERCENTAGE
SUTTER WEST BAY HOSPITALS			
California Pacific Medical Center – West Campus	Report	53.2	33.6
California Pacific Medical Center – Davies Campus			
California Pacific Medical Center – Pacific Campus			
TAHOE FOREST HOSPITAL	Report	20.9	0.8
TEHACHAPI HOSPITAL	Report	35.9	27.5
TEMPLE COMMUNITY HOSPITAL	Report	45.6	24.0
THE FREMONT-RIDEOUT HEALTH GROUP			
Fremont Medical Center	No Report	.	.
Rideout Memorial Hospital			
THE REGENTS OF THE UNIVERSITY OF CALIFORNIA (UCSD)			
University of California, San Diego Medical Center	Report	75.9	18.1
UCSD – La Jolla, John M. and Sally B. Thornton Hospital			
THOUSAND OAKS SURGICAL HOSPITAL	Report	37.5	20.3
TORRANCE MEMORIAL MEDICAL CENTER	Report	46.1	52.5
TRI-CITY MEDICAL CENTER	Report	58.7	39.0
TRI-CITY REGIONAL MEDICAL CENTER	No Report	.	.
TRINITY HOSPITAL	Report	61.6	25.0
TULARE DISTRICT HOSPITAL	Report	31.6	11.8
TWIN CITIES COMMUNITY HOSPITAL	Report	70.3	28.2
UHS-CORONA, INC.			
Corona Regional Medical Center – Magnolia Ave	Report	46.6	52.6
Corona Regional Medical Center – South Main St			
UKIAH VALLEY MEDICAL CENTER/HOSPITAL DRIVE	Report	66.1	21.9

HOSPITAL NAME	REPORT STATUS	EMPLOYEE 2009 INFLUENZA A (H1N1) VACCINATION PERCENTAGE	EMPLOYEE 2009 INFLUENZA A (H1N1) DECLINATION PERCENTAGE
UNIVERSAL HEALTH SERVICES OF RANCHO SPRINGS, INC.			
Southwest Healthcare System – Murrieta	Report	38.2	9.9
Southwest Healthcare System – Wildomar			
UNIVERSITY OF CALIFORNIA DAVIS MEDICAL CENTER	Report	76.0	5.8
UNIVERSITY OF CALIFORNIA IRVINE MEDICAL CENTER	Report	92.6	6.4
USC KENNETH NORRIS JR. CANCER HOSPITAL	No Report	.	.
USC UNIVERSITY HOSPITAL	No Report	.	.
VALLEY PRESBYTERIAN HOSPITAL	Report	42.2	32.8
VALLEYCARE MEDICAL CENTER	Report	65.1	17.1
VERDUGO HILLS HOSPITAL	Report	65.4	23.7
VIBRA HOSPITAL OF SAN DIEGO	Report	57.0	33.5
VICTOR VALLEY COMMUNITY HOSPITAL	Report	30.8	50.8
VISTA HOSPITAL OF SAN GABRIEL VALLEY	Report	77.8	22.2
VISTA HOSPITAL OF RIVERSIDE	No Report	.	.
VISTA HOSPITAL OF SOUTH BAY	Report	11.9	17.7
WASHINGTON HOSPITAL	Report	63.3	16.4
WATSONVILLE COMMUNITY HOSPITAL	Report	83.1	5.1
WEST ANAHEIM MEDICAL CENTER	Report	56.4	37.6
WEST HILLS HOSPITAL & MEDICAL CENTER	Report	37.9	0.0
WESTERN MEDICAL CENTER ANAHEIM	No Report	.	.
WESTERN MEDICAL CENTER SANTA ANA	Report	57.6	28.1
WHITE MEMORIAL MEDICAL CENTER	Report	42.2	47.0

HOSPITAL NAME	REPORT STATUS	EMPLOYEE 2009 INFLUENZA A (H1N1) VACCINATION PERCENTAGE	EMPLOYEE 2009 INFLUENZA A (H1N1) DECLINATION PERCENTAGE
WHITTIER HOSPITAL MEDICAL CENTER	Report	55.6	17.5
WOODLAND MEMORIAL HOSPITAL	Report	74.9	21.5

Source: Influenza Vaccination among Employees in California General Acute Care Hospitals for the 2009-2010 Respiratory Season, California Department of Public Health, December 2010.

## REFERENCES

1. Fiore AE, Shay DK, Broder K, Iskander JK, Uyeki TM, Mootrey G, Bresee JS, Cox, NJ. Prevention and control of seasonal influenza with vaccines: recommendations of the Advisory Committee on Immunization Practices (ACIP), 2009. MMWR Recomm Rep 2009; 58 (RR08): 1-52.
2. Centers for Disease Control and Prevention. Use of Influenza A (H1N1) 2009 Monovalent Vaccine. MMWR Recomm and Rep 2009; 58 (RR10): August 28, 2009: 1-8.
3. Centers for Disease Control and Prevention. Update: Influenza Activity – United States, August 30, 2009-March 27, 2010, and Composition of the 2010-2011 Influenza Vaccine. MMWR 2010; 59 (14): April 16, 2010: 423-430.
4. Talbot TR, Bradley SF, Cosgrove SE, Ruef C, Siegel JD, Weber DJ. Influenza vaccination of healthcare workers and vaccine allocation for healthcare workers during vaccine shortages. Infect Control Hosp Epidemiol 2005; 26: 882-90.
5. Talbot TR, Dellit TH, Hebden J, Sama D, Cuny J. Factors associated with increased healthcare worker influenza vaccination rates: results from a national survey of university hospitals and medical centers. Infect Control Hosp Epidemiol 2010; 31: 456-62.
6. Pavia AT. Mandate to protect patients from health care-associated influenza. CID 2010; 50: 465-67.
7. Perez-Padilla et al. Pneumonia and respiratory failure from swine-origin influenza A (H1N1) in Mexico. NEJM 2009; 361(7): 680-689.
8. Wicker S et al. Novel Influenza H1N1/2009: virus transmission among health care worker. Dtsch Med Wochenschr 2009;134(48):2443-6. Epub 2009 Nov 11.
9. Bertin M, Rii J, Fraser T, Yen-Lieberman B, Gordon SM. (2010, March). A cluster of 2009 pandemic influenza A (H1N1) in patients and healthcare providers in a hematology oncology unit. Panel presented at the Fifth Decennial International Conference on Healthcare-Associated Infections, Atlanta, GA.
10. Safdar N, Bearden A. (2010, March). Nosocomial transmission of the novel H1N1 virus: an outbreak investigation. Poster session presented at the Fifth Decennial International Conference on Healthcare-Associated Infections, Atlanta, GA.
11. Centers for Disease Control and Prevention. Novel influenza A (H1N1) virus infections among health-care personnel – United States, April-May 2009. MMWR 2009;58:641-5.
12. National Foundation for Infectious Diseases. Call to action: Influenza immunization among health care personnel. Bethesda, MD, 2008.
13. U.S. Department of Health and Human Services. *Healthy People 2010*. 2nd ed. With Understanding and Improving Health and Objectives for Improving Health. 2 vols. Washington, DC: U.S. Government Printing Office, November 2000.

14. California Department of Public Health. Influenza Vaccination Among Hospital Employees in California General Acute Care Hospitals for the 2008-2009 Respiratory Season. [http://www.cdph.ca.gov/programs/hai/Documents/InfluenzaVaccination\\_Employees\\_CaliforniaGeneralAcuteCareHospitals\\_%202008\\_2009RespiratorySeasonHAIPProgramReport9\\_30\\_10.pdf](http://www.cdph.ca.gov/programs/hai/Documents/InfluenzaVaccination_Employees_CaliforniaGeneralAcuteCareHospitals_%202008_2009RespiratorySeasonHAIPProgramReport9_30_10.pdf). Accessed on October 29, 2010.
15. Greenberg ME et al. Response to a monovalent 2009 influenza A (H1N1) vaccine. *NEJM* 2009;361(25):2405-13.
16. Centers for Disease Control and Prevention. Serum cross-reactive antibody response to a novel influenza a (H1N1) virus after vaccination with seasonal influenza vaccine. *MMWR Weekly*; 58(19):521-24.
17. Centers for Disease Control and Prevention. Interim Results: Influenza A (H1N1) 2009 Monovalent and Seasonal Vaccination Coverage among Health-Care Personnel – United States, August 2009-January 2010. *MMWR*, 59 (12): April 2, 2010: 357-362.
18. Babcock HM, Gemeinhart N, Jones M, Claiborne Dunagan W, Woeltje KF. Mandatory influenza vaccination of health care workers: translating policy to practice. *CID* 2010; 50: 459-64.
19. California Code of Regulations, Title 22, §70739.
20. Pearson ML, Bridges CB, Harper SA. Influenza vaccination of health-care personnel: recommendations of the Healthcare Infection Control Practices Advisory Committee (HICPAC) and the Advisory Committee on Immunization Practices (ACIP). *MMWR Recomm Rep* 2006; 55 (RR02): 1-16.
21. Rural Health Policy Council. Rural Hospital Information. <http://www.oshpd.ca.gov/RHPC/Hospital/index.html>. Accessed on April 29, 2010.
22. Association of American Medical Colleges. Member Teaching Hospitals and Health Systems. [http://services.aamc.org/memberlistings/index.cfm?fuseaction=home.search&search\\_type=TH&state\\_criteria=ALL](http://services.aamc.org/memberlistings/index.cfm?fuseaction=home.search&search_type=TH&state_criteria=ALL). Accessed on April 29, 2010.
23. Accreditation Council for Graduate Medical Education. List of ACGME Accredited Programs and Sponsoring Institutions. <http://www.acgme.org/adspublic/default.asp>. Accessed on April 29, 2010.
24. Santos CD, Bristow RB, Vornekamp, JV. Which health care workers were most affected during the spring 2009 H1N1 pandemic? *Disaster Med Public Health Prep* 2010; 4(1):47-54.
25. Polgreen PM, Polgreen LA, Evans T, Helms C. A statewide system for improving influenza vaccination rates in hospital employees. *Infect Control Hosp Epidemiol* 2009; 30:474-78.
26. Polgreen PM, Septimus Ej, Parry MF, Beekmann SE, Cavanaugh JE, Srinivasan A, Talbot TR. Relationship of influenza vaccination declination statements and influenza vaccination rates for healthcare workers in 22 US hospitals. *Infect Control Hosp Epidemiol* 2008; 29: 675-77.



27. Ajenjo MC, Woeltje FK, Babcock HM, Gemeinhart N, Jones M, Fraser VJ. Influenza vaccination among healthcare workers: ten-year experience of a large healthcare organization. *Infect Control Hosp Epidemiol* 2010; 31: 233-40.
28. Hirsch P, Martinello R, Davey V, Hodgson M. (2010, March). Influenza vaccination in health care: a four-year intervention story. Poster session presented at the Fifth Decennial International Conference on Healthcare-Associated Infections, Atlanta, GA.
29. Rupp ME, Fitzgerald T, short C, Castro P, Dinsmoor D. (2010, March). Successful healthcare worker influenza vaccination program without declination forms or mandates. Poster session presented at the Fifth Decennial International Conference on Healthcare-Associated Infections, Atlanta, GA.