

## **KEY FINDINGS AND PUBLIC HEALTH ACTIONS**

### **Influenza Vaccination Among Health Care Workers in California General Acute Care Hospitals for the 2011-12 Respiratory Season**

#### **Introduction**

Influenza is the eighth leading cause of death in the United States, according to the Centers for Disease Control and Prevention (CDC), with the majority of influenza-related illnesses and deaths occurring among vulnerable members of the population [1-2]. Health care personnel (HCP) are a source of transmission of influenza to coworkers and patients in hospitals [1-4]. Influenza vaccination is a simple, safe, and cost effective way to prevent transmission of influenza from HCP to patients [4]. Vaccination of HCP has been shown to reduce worker's illness, absenteeism, staff shortages, and healthcare costs [3]. A low rate of influenza vaccination is a serious problem, especially because influenza infections can be subclinical but still contagious, resulting in transmission by asymptomatic or minimally ill HCP.

Senate Bill (SB) 739 (Chapter 526, Statutes of 2006) was adopted into law to improve influenza vaccination acceptance in California acute care hospitals by requiring them to offer the vaccine free of charge to HCP and to sign a declination form if they choose not to be vaccinated [Health and Safety Code section 1288.7 (a)]. Hospitals must report to the California Department of Public Health (CDPH) on their implementation of these requirements, including the percentage of HCP (employees and non-employee personnel) vaccinated, and CDPH is required to make this information public [Health and Safety Code section 1288.8 (b)].

For the 2011-12 influenza season, September 1, 2011 through March 31, 2012, CDPH's Healthcare Associated Infections (HAI) Program implemented measures that increased reporting compliance and significantly improved the completeness and quality of the reported data. A comprehensive online survey of influenza vaccination policies and practices, in which 99.0% of California hospitals participated (Table 2), found that most hospitals are using strategies recommended by the Healthcare Infection Control Practice Advisory Committee and Advisory Committee on Immunization Practices (ACIP) to promote influenza vaccination among HCP. We also found that hospitals with mandatory masking policies for non-vaccinated personnel had higher vaccination percentages and were more likely to achieve 90% vaccination than hospitals without masking policies (Table 3).

This data release, for the period of September 1, 2011 through March 31, 2012, is the fourth release on healthcare personnel influenza vaccination in California hospitals developed by CDPH. As in prior releases, we implemented a real-time quality assurance process to track and correct errors on surveillance report forms that led to an increase in reporting compliance. For each hospital we calculated vaccination status percentages for each personnel category, the proportion of hospitals with an overall HCP vaccination percentage that met the Healthy People 2020 target of 90% (Table 5) and analyzed the results of an online survey on activities that hospitals used to promote influenza vaccination. We also used specific, standard definitions for employees and

non-employee HCP, which significantly improved the completeness and quality of reported employee influenza vaccination surveillance data. And for first time hospitals were required to submit vaccination data on registry and contract staff as separate HCP categories.

While most hospitals use recommended strategies to promote influenza vaccination among HCP, influenza vaccination coverage among HCP in California remains relatively low at 67.8% for employees, compared with 64.3% in the previous report, and 62.2% for non-employee HCP (2010-2011 report did not stratify data in this way). The current mandates have not demonstrated sufficient progress toward achieving recommended influenza vaccination coverage among HCP in California general acute care hospitals.

This data release provides the results of the fourth year of mandatory public reporting of HCP influenza vaccination by California hospitals.

### **Key Findings**

- The surveillance data allowed the CDPH/HAI Program to compare the influenza vaccination coverage by hospital among HCP in California general acute care hospitals for the 2011-2012 respiratory season (Table 1).
- The influenza vaccination surveillance reporting compliance for this season increased from 98% for 2010-11 to 99.5% for 2011-2012.
- The mean hospital-specific employee vaccination percentage was 67.8% for 2011-12, 3.5 percentage points higher than 64.3% for 2010-11 [5], which was only 1 percentage point higher than 63% for 2009-10 [6]. This suggests that if the statewide mandatory written declination policy (72.6%) has had an effect on the hospital employee influenza vaccination coverage, it is a minor effect (Table 4).
- 203 (55%) of California hospitals reached over 60% vaccination among employees, compared to 192 (50.1%) in the previous data release. Only 28 (7.6%) hospitals reached the Healthy People 2020 target of 90% for employee influenza vaccination, compared to 14 (3.7%) in the previous data release (Table 5).
- Overall, non-employee vaccination percentages were lower than for employees. For non-employee HCP, the mean hospital specific vaccination percentage was 62.6%. The mean hospital-specific vaccination percentages for registry personnel and contractors were 33.4% and 51.7%, respectively. The mean hospital-specific vaccination percentages for students/trainees and volunteers were 50.4% and 54.0%, respectively (Table 4).
- More hospitals achieved 90% vaccination percentages for non-employee HCP (n=46) than for employee HCP (n=28). This may reflect high vaccination

coverage among certain non-employee personnel such as physicians in these hospitals.

- A majority of hospitals conducted surveillance on the vaccination status of non-employee HCP. Fewer than half require non-employee HCP to provide documentation of vaccination status.

Participation in a comprehensive online survey of influenza vaccination policies and practices increased to 99%, compared with 91.4% participation in the survey last year. Results are as follows (Table 2):

- Over 95% of respondent hospitals offered influenza vaccination during all work shifts, including nights and weekends. Approximately 82% offered vaccination in conferences, meetings, cafeteria, and via mobile carts.
- One third of respondents reported that hospital contracts with registry agencies did not include a requirement that registry personnel be vaccinated against influenza. Over half required that registry personnel be vaccinated or provide a written declination statement. Processes that could improve vaccination of registry personnel, such as a mandatory vaccination policy, appear to be underutilized.
- Survey results showed that most hospitals have implemented recommended strategies for improving influenza vaccination among HCP, such as comprehensive influenza vaccination campaigns, multiple vaccination opportunities during all shifts, education on influenza and vaccination, and inclusion of all personnel in vaccination promotion strategies and vaccination opportunities. This suggests that these voluntary efforts may have a limited effect if any on increasing influenza vaccination coverage among HCP in California hospitals.
- More than 94% of respondents reported that the hospital had a written policy on influenza vaccination for employees.
- 79% of respondent hospitals required a statement from the employee regarding why he/she was declining vaccination.
- Over 59% of respondent hospitals required employees who received off-site influenza vaccination to provide documentation of vaccination status.
- Over 49% of respondents required employees that didn't comply with the vaccination requirement to display non-vaccination status on employee badge or similar visual indicator.
- 14% of respondent hospitals were located in a city or county that mandates hospital healthcare workers to receive influenza vaccination. Of those, 65% changed policy in order to be consistent with the city or county mandate.

- Based on survey results, hospitals with HCP influenza vaccination coverage of 90% or higher were more likely to have a mandatory vaccination policy that included masking of unvaccinated HCP than hospitals with lower vaccination percentages.
  - In 65 hospitals with a masking policy, 84.4% of employees and 54.8% of non-employee HCP were vaccinated compared to 67.8% of employees and 52.7% of non-employee HCP in hospitals without masking policies.
  - Of 65 hospitals with a masking policy, 17 (26.0%) achieved 90% vaccination for employees and 12 (18.0%) achieved 90% vaccination for non-employee HCP, compared to 11 (3.6%) for 90% vaccination for employees and 34 (11.0%) for 90% vaccination for non-employee HCP, in 308 hospitals without masking policies. (Table 3).

## **Recommendations**

In follow-up to this report, CDPH will:

- Continue tracking and reporting compliance with influenza vaccination data collection and the methods and systems used to document the vaccination status of all healthcare personnel.
- To improve data consistency, require use of CDC's National Healthcare Safety Network (NHSN) for reporting HCP influenza vaccination summary data for 2012-2013. California law requires data beyond what CDC requires.

CDPH recommends all hospitals should:

- Take reasonable and timely actions to review data and evaluate their influenza vaccination program and policies to significantly improve influenza vaccination coverage of HCP to achieve the Healthy People 2020 target of 90% vaccination.
- Ensure that influenza vaccination status is a requirement of contracts with physician groups, registry organizations, fellowships, and student training programs.
- Implement robust data collection and management systems to document the vaccination status of all HCP.
- Monitor the reduction of healthcare associated influenza that can be made by vaccinating all healthcare personnel against influenza.
- Promote employee formal educational programs on influenza and the importance of influenza vaccination to prevent influenza for themselves, their friends and families, and their patients.

The public should:

- Discuss the risk of influenza to themselves and their families and ask about the strategies an individual HCP or facility uses to keep patients safe from the influenza (e.g. hand hygiene, vaccination programs, education to staff). Discussions will reinforce the patient safety aspect of vaccination and emphasize professional responsibility to protect patients through vaccination.

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