

TECHNICAL NOTES

Influenza Vaccination among Health Care Workers in California General Acute Care Hospitals for the 2012-13 Respiratory Season

Introduction

Senate Bill (SB) 739 (Chapter 526, Statutes of 2006) attempted to improve influenza acceptance among employees in California acute care hospitals by requiring them to be offered vaccine free of charge 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 SB 739, including the percentage of HCP vaccinated, and CDPH is required to make this information public [Health and Safety Code section 1288.8 (b)].

This data release, for the period of October 1, 2012 through March 31, 2013, is the fifth release on healthcare personnel (HCP) influenza vaccination in California hospitals developed by CDPH and the first using data submitted by hospitals to the Centers for Disease Control and Prevention (CDC) National Healthcare Safety Network (NHSN). Hospitals were required to offer to employees influenza vaccine, free of charge, and collect data for HCP physically working in the acute care hospital for at least 30 working days between October 1 through March 31 of an influenza season, regardless of clinical responsibility or patient contact. Data were reported separately for employees, licensed independent practitioners, and adult students/trainees and volunteers. Additionally, hospitals were required to submit vaccination data on registry and contract staff as separate HCP categories. The CDPH Healthcare Associated Infections (HAI) Program implemented measures that increased reporting compliance to 100% from 99.5% for 2011-12. In addition to influenza vaccination surveillance data, we used an NHSN online survey to collect information on activities that hospitals used to promote influenza vaccination among employees and non-employee HCP.

Methods and Material

Influenza Vaccination Surveillance

This data release provides the results of the fifth year of mandatory public reporting of HCP influenza vaccination by California hospitals and the first using data submitted by hospitals to the Centers for Disease Control and Prevention (CDC) National Healthcare Safety Network (NHSN). Data were reported separately for employees, licensed independent practitioners, and adult students/trainees and volunteers. Reporting summary data from other contract personnel is optional for CMS but hospitals were required to submit vaccination data on registry and contract staff as separate HCP categories. We also used the same definitions for employees and non-employee HCP, as used by CMS, for HCP influenza vaccination surveillance data reporting to NHSN.

Survey

In addition to influenza vaccination surveillance data, we used an NHSN online survey of influenza vaccination policies and practices to collect information on activities that hospitals used to promote influenza vaccination among employees and non-employee HCP. The survey questions (Table 2) include:

- Whether facility has a written policy for influenza vaccination of employees;
- Consequences or arrangements facility uses for employees that don't comply with the vaccination

requirement;

- Use and requirement of educational programs on influenza vaccination;
- Required documentation of off-site influenza vaccination for employees and non-employee HCP;
- Required signed declination statements for refusal of influenza vaccination;
- Cost of the influenza vaccination for employees and non-employee HCP;
- Shifts during which vaccination was offered;
- Methods used to deliver influenza vaccination;
- Strategies to promote influenza vaccination;

Definitions

We defined a general acute care hospital as any health care facility in California licensed as a general acute care hospital by the CDPH Licensing and Certification Program, with active acute care beds in 2012. CDPH licenses hospitals as single hospitals or multiple campuses under one license, and hospitals could report as single or multi-campus. However, we analyzed each hospital as a unit, regardless of whether its license covered one or more campuses.

We defined all personnel categories as all paid employee and non-employee that worked at the hospital during the reporting period. We defined paid employees as all employees that were on the facility payroll and not on extended leave or absence. We defined non-employee HCP as not receiving a direct paycheck from the reporting hospital. For the 2012-13 season non-employee HCP categories included licensed independent practitioners, students and trainees, and registry and contract personnel.

We collected vaccination status (numerators) in four categories: number of HCP who received vaccination at the facility and elsewhere; number of HCP who declined vaccination; and number of HCP with unknown vaccination status. Also, we gathered data for four personnel categories (denominators): paid employees, non-employee licensed independent practitioners, non-employee contract personnel, and non-employee students/trainees and volunteers.

Quality assurance and control

Hospital personnel were solely responsible for the quality and completeness of their reported HCP influenza data. CDPH assisted hospitals in identifying potential systematic data errors by reviewing hospital-specific NHSN data and notifying hospitals of potential discrepancies. We distributed quality assurance and control reports, which identified missing, incomplete, or potentially aberrant data for the reporting period, to hospitals in June 2013. We strongly encouraged hospitals to investigate and resolve any data issues, as appropriate. Also, CDPH made available to hospitals the assistance of regional infection prevention staff to help resolve NHSN enrollment or reporting issues. We encouraged hospitals to do a final review to make corrections and enter missing data before the final data download in August, 2013. Facilities made all corrections in NHSN.

We implemented a real-time quality assurance process to track and correct errors on surveillance report that led to an increase in reporting compliance for this season.

Analyses

For 2012-13, we received 381 influenza vaccination surveillance reports representing single and multi-campus licenses, indicating that 100% of hospital licenses met the reporting mandate for influenza vaccination of HCP.

As described previously, hospitals reported data on four vaccination status categories and we calculated vaccination status percentages for each personnel category: paid employees and non-employee healthcare personnel HCP (licensed independent practitioners, registry personnel and contractors), students/trainees, and volunteers (Table 1). Also, we calculated mean vaccination, declination, and unknown percentages, and the proportion of hospitals with an overall HCP vaccination percentage over 60% and those that met the Healthy People 2020 target of 90% (Table 3) [4]. New in this report is overall hospital specific vaccination rates with side-by-side comparisons to vaccination rates reported in 2011-2012 (Table 4). We compared mean hospital-specific vaccination, declination and unknown percentages by hospital using the independent samples t-test and ANOVA. For all comparisons, we used a p-value of less than 0.05 to determine statistical significance. We used SAS version 9.3 (SAS Institute; Cary, NC, USA) for all analyses.

Limitations and Context

A comprehensive online survey of influenza vaccination policies and practices, in which 94% of California hospitals participated 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. These strategies include comprehensive influenza vaccination campaigns, multiple vaccination opportunities during all shifts, education on influenza and vaccination, and including all personnel in vaccination promotion strategies and vaccination opportunities.

The hospital-specific mean influenza vaccination percentages are higher among employees than non-employee HCP (Table 5). This could be because even though hospitals provide and promote influenza vaccination to all HCP, their influenza vaccination policies usually apply to employees only. Additionally, hospitals are able to enforce influenza vaccination policies for employees, whereas enforcement of vaccination policies for non-employees may be inadequate. Finally, the hospital employee declination percentage is substantially higher than for all non-employee categories. This may be because statute requires hospitals to obtain a written declination statement from all employees but not from non-employees. Therefore, hospitals may have better systems for maintaining data on employee vaccination status.

This report indicates that compliance with influenza vaccination reporting requirements by California hospitals has significantly improved, but more work is needed to improve data collection on vaccination status among non-employee HCP. While most hospitals use recommended strategies to promote influenza vaccination among HCP, influenza vaccination coverage among HCP in California remains low, and hospital monitoring of HCP vaccination status is inadequate.

For 2013-2014 influenza season, the HCP vaccination requirements have changed. Data will be collected for HCP physically working in the acute care hospitals for at least one working day between October 1 through March 31 of an influenza season, regardless of clinical responsibility or patient contact. This includes HCP who joined after October 1st or before March 31st or who were at extended leave during the part of the reporting period. Noting that working for any number of hours a day counts as a working day.

References:

1. Fiore AE, Uyeki TM, Broder K et al. Prevention and control of influenza with vaccines: recommendations of the Advisory Committee on Immunization Practices (ACIP), 2010. *MMWR Recomm Rep* 2010; 59(RR08):1-62.
2. 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.
3. Centers for Disease Control and Prevention. Influenza vaccination coverage among health-care personnel—United States, 2010-11 influenza season. *MMWR* 2011; 60 (32):1073-77.
4. U.S. Department of Health and Human Services. Office of Disease Prevention and Health Promotion. Healthy People 2020. Washington, DC. Available at <http://healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicId=23>
5. California Department of Public Health. Influenza vaccination among employees in California general acute care hospitals for the 2010-2011 respiratory season. Available at:
<http://www.cdph.ca.gov/programs/hai/Documents/CDPH2010-11HCPInfluenzaVaccinationReport.pdf>
6. Centers for Medicare and Medicaid Services FY 2012 IPPS Final Rule Home Page. Available at <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html?redirect=/AcuteInpatientPPS/FR2012/list.asp>