

TECHNICAL NOTES:

Influenza Vaccination among Health Care Workers in California General Acute Care Hospitals for the 2014-15 Respiratory Season

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Introduction

Health and Safety Code section 1288.7 (a) requires California acute care hospitals to offer influenza vaccine free of charge to all healthcare providers (HCP) and to sign a declination form if HCP choose not to be vaccinated. Hospitals must report HCP influenza vaccination data to the California Department of Public Health (CDPH), including the percentage of HCP vaccinated. CDPH is required to make this information public on an annual basis [Health and Safety Code section 1288.8 (b)].

This data release for the period of October 1, 2014 through March 31, 2015 is the seventh report on HCP influenza vaccination in California hospitals developed by CDPH and the third using data submitted by hospitals to the Centers for Disease Control and Prevention (CDC) National Healthcare Safety Network (NHSN). Hospitals were required to offer employees influenza vaccine, free of charge, and collect data for HCP physically working in the acute care hospitals for at least one working day. Any number of hours worked counts as a working day during influenza season, regardless of clinical responsibility or patient contact. Data were reported separately for hospital employees, licensed independent practitioners, adult students/trainees and volunteers, and registry and contract staff.

Hospital reporting compliance was 99% for 2014-15, less than 100% for 2013-14. 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

Survey

CDPH 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 3) 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;

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- 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 2014.

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 2014-15 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 implemented a real-time quality assurance process to track and correct errors on surveillance. We identified missing, incomplete, or potentially aberrant data for the reporting period, to hospitals in May 2015. 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 July 2015. Facilities made all corrections in NHSN.

Data presentation and statistical analyses

For 2014-15, 389 (99%) of California hospitals reported data on influenza vaccination of HCP.

New in this report CDPH analyzed the influenza vaccination data by county. The report indicates whether each county had in place a local health order for a mask policy (yes or no) that required HCP who refused flu vaccination to wear a surgical mask at all times while in the hospital during the 2014-2015 influenza season (Table 1).

Hospitals reported data on four vaccination status categories and we calculated vaccination

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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 2).

We calculated mean vaccination, declination, and unknown percentages, and the proportion of hospitals with an overall HCP vaccination percentage over 60% (the Healthy People 2010 target) and those that met the Healthy People 2020 target of 90% (Table 4) [4].

We reported the overall hospital specific vaccination rates with side-by-side comparisons to vaccination rates reported in 2013-2014, 2012-2013, and 2011-2012 (Table 5).

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 9.4 (SAS Institute; Cary, NC, USA) for all analyses.

Limitations and Context

A comprehensive online survey of influenza vaccination policies and practices, completed by 94% of California hospitals, found that most hospitals are using strategies recommended by the Healthcare Infection Control Practices 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 6). 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.

References

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