



Influenza Exposure Management Option

Introduction: The Advisory Committee on Immunization Practices (ACIP) recommends that all healthcare personnel (HCP) and persons in training for healthcare professions should be vaccinated annually against influenza.[1,2] Persons who are infected with influenza virus, including those with subclinical infection, can transmit influenza virus to persons at higher risk for complications from influenza. Vaccination of HCP has been associated with reduced work absenteeism [3] and with fewer deaths among nursing home patients [4,5] and elderly hospitalized patients.[5] Although annual vaccination is recommended for HCP and is a high priority for reducing morbidity associated with influenza in healthcare settings, national survey data have demonstrated vaccination coverage levels of <50% among HCP over several vaccination seasons.[1]

Although annual vaccination with the seasonal influenza vaccine is the best way to prevent infection, antiviral drugs can be effective for prevention and treatment of influenza. When HCP have not been vaccinated or are exposed to an influenza strain with no vaccine coverage (i.e., non-seasonal), a plan for anti-viral chemoprophylaxis and treatment could be implemented.

Influenza Exposure Management Option

Use of the Influenza Exposure Management Option permits a healthcare facility to record information on antiviral medication use for chemoprophylaxis or treatment without reporting influenza vaccination. It can be used in any healthcare setting. This option includes reporting of individual-level antiviral medication use for chemoprophylaxis or treatment after exposure to influenza. The reason for antiviral medication use can be attributed to either seasonal or non-seasonal influenza. Use of this option will allow facilities and CDC to measure antiviral medication use related to the prevention and treatment of influenza.

Settings: Any healthcare settings

Requirements: Surveillance for influenza in the healthcare facility is to be conducted during the vaccination season.

Definitions:

- **HCW (Healthcare Worker):** A person who works in the facility, whether paid or unpaid, who has the potential for exposure to infectious materials, including body substances, contaminated medical supplies and equipment, contaminated environmental surfaces, or contaminated air. Healthcare worker is the singular form of healthcare personnel.
- **HCP (Healthcare Personnel):** The entire population of healthcare workers working in a healthcare setting.



- **Non-seasonal influenza vaccine:** A vaccine for additional/novel influenza virus strains (e.g., 2009 H1N1) not included in the seasonal influenza vaccine which may or may not be offered on an annual basis.
- **Seasonal influenza vaccine:** A vaccine for seasonal influenza virus strains that is offered on an annual basis.
- **Severe adverse reaction to antiviral medication use for influenza chemoprophylaxis or treatment:** Adverse reactions severe enough to affect daily activities and/or result in the discontinuation of the antiviral medication.
- **Vaccination season:** A 12-month period starting from July 1 of a year – June 30 of the following year.

Reporting Instructions

Forms Description and Purpose: (See also: Tables of Instructions for Completion of Healthcare Personnel Safety Component forms)

All NHSN facilities following the Influenza Exposure Management Option:

NHSN participants should complete the following forms:

- *Healthcare Personnel Safety Component Facility Survey (CDC 57.200)* – Used to collect facility administrative data including total patient beds set up and staffed, annual inpatient days, number of patient admissions per year, number of annual outpatient encounters, number of annual employee hours worked. The survey also collects annual data on the total number of HCP in selected occupational groups (full-time equivalents and numbers of HCP, full or part-time). Numbers of HCWs for at least one nurse occupation (e.g., registered nurse, nurse midwife) and one physician occupation (i.e., intern/resident, fellow, attending physician) are required. All other fields are optional for the Selected HCW Occupational Groups; you may enter 0 for these optional fields.
- *Healthcare Personnel Safety Monthly Reporting Plan (CDC 57.203)* – Used to collect data on which modules and which months a facility intends to participate in the NHSN HPS Component. This form should be completed for every month that the facility will participate in the HPS Component.
- *Healthcare Worker Demographic Data (CDC 57.204)* – Used to collect data on HCW demographics such as gender and occupation for each individual HCW. This form is also used optionally to collect information about immune status for certain vaccine-preventable diseases (e.g., measles, mumps, rubella).

Influenza Exposure Management Reporting:



Facilities participating in influenza exposure management reporting for antiviral medication use should complete the following form:

- *Healthcare Worker Prophylaxis/Treatment – Influenza (CDC 57.210)* – Used to collect data on which (if any) antiviral medications were administered to the HCW and any severe adverse reactions associated with their use.

Data Analyses:

The use of the Influenza Exposure Management Option will allow facilities and CDC to measure antiviral medication use related to the prevention and treatment of influenza. Antiviral medication use for chemoprophylaxis or treatment after exposure to influenza can be evaluated and monitored. Frequencies and trends of antiviral medication use as a result of potential or confirmed exposures to influenza will be calculated and summarized. Also, frequency estimates of the personnel types and clinical areas more likely to require chemoprophylaxis or treatment may be analyzed as well as information on adverse effects associated with the receipt of antiviral medications (as part of chemoprophylaxis or treatment).

References:

- [1] Centers for Disease Control and Prevention, Prevention and control of seasonal influenza with vaccines: Recommendations of the Advisory Committee on Immunization Practices (ACIP), 2009, MMWR, 58 (2009) 1-52.
- [2] Centers for Disease Control and Prevention, Influenza vaccination of health-care personnel, MMWR, 55 (2006) 1-16.
- [3] R. T. Lester, A. McGeer, G. Tomlinson, and A. S. Detsky, Use of, effectiveness of, attitudes regarding influenza vaccine among house staff, *Infection Control and Hospital Epidemiology*, 24 (2003) 839-844.
- [4] J. Potter, D. J. Stott, M. A. Roberts, A. G. Elder, B. O'Donnell, P. V. Knight, and W. F. Carman, Influenza vaccination of health care workers in long-term-care hospitals reduces the mortality of elderly patients, *Journal of Infectious Diseases*, 175 (1997) 1-6.
- [5] R. E. Thomas, T. O. Jefferson, V. Demicheli, and D. Rivetti, Influenza vaccination for health-care workers who work with elderly people in institutions: a systematic review, *Lancet Infectious Diseases*, 6 (2006) 273-279.