

## Influenza Vaccination as a Component of an Influenza Prevention and Control Bundle

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There are many challenges facing patients receiving home healthcare (HHC). A significant, potentially vaccine-preventable illness that can be contracted by a HHC patient from a HHC or hospice clinician is seasonal influenza. The highest rates of influenza-associated hospitalizations are generally observed among adults aged  $\geq 65$  years and children aged  $< 5$  years, and during seasons when influenza A (H3N2) viruses have predominated (which occurred during the 2014–2015 influenza season). During the 2014–2015 influenza season, hospitalization rates among adults aged  $\geq 65$  years were fivefold or greater than the overall rates as well as rates of other age group-specific hospitalization rates (Centers for Disease Control and Prevention [CDC], 2015a).

The primary factors in influenza-associated illness and deaths are underlying patient medical conditions and risk factors such as heart, chronic lung or kidney disorders, and immunosuppressive therapy. Influenza can be a contributor to the cause of death, but not necessarily be the primary cause of death. It is the goal of HHC and hospice organizations to prevent patient influenza-associated complications and hospitalizations, and one of the main ways to do this is by promoting annual influenza vaccination for patients  $\geq 6$  months of age and older who do not have contraindications to the vaccine (CDC, 2015b).

The current Advisory Committee on Immunization Practices (ACIP) also recommends that all healthcare personnel receive an influenza vaccination each year (Grohskopf et al., 2014). Even with these strong ACIP recommendations, when the influenza vaccine is not mandated by state regulations or the HHC or hospice organization's policies, vaccination rates among healthcare personnel are low. The benefits of influenza vaccination of healthcare personnel on patient outcomes and reduced absenteeism have been well documented, but national influenza vaccination coverage remains low.

There has been controversy surrounding the evidence that influenza vaccination for healthcare personnel reduces morbidity and mortality among patients. Ahmed et al. conducted a systematic review of randomized trials, cohort studies, and case-control studies published through June 2012 to ascertain the effect of influenza vaccination of healthcare personnel on mortality, hospitalization, and influenza cases in patients of healthcare facilities. Using the Grading of Recommendations Assessment, Development and Evaluation approach, the quality of the evidence for the effect of healthcare personnel vaccination on mortality and influenza cases in patients was moderate and low, respectively. The evidence quality for the effect of healthcare personnel vaccination on

patient hospitalization was low (Ahmed et al., 2014).

In an Internet panel survey analyzed by the CDC, of the health care disciplines that declined the influenza vaccine, aides had the lowest influenza vaccination rate (CDC, 2014). Keep in mind that home health aides also have prolonged physical contact with the home care patient (when providing personal care assistance) and are the lowest paid, with the lowest education levels. As with all HHC and hospice clinicians, promoting the importance of influenza vaccination is key. However, this influenza season pay special attention to the home health aides to help raise their overall influenza vaccination rates.

Transmission of the influenza virus can be by large-particle respiratory droplets when in close contact with a person (which may be projected outwards of 3 feet, even during normal talking), and through contact with contaminated surfaces. If the HHC or hospice clinician is not immunized against influenza, he or she can transmit the influenza virus to both the patient and their environment. A nonimmunized HHC or hospice clinician is most likely to transmit the influenza virus if he or she had patient contact in the 24 hours before becoming symptomatic with influenza, or up to 5 to 7 days after being sick. The HHC or hospice clinician can unknowingly put the home care patient, their coworkers, and families at risk. A HHC

patient is typically homebound and may have limited access to others, and thus limited exposure to the influenza virus. It is through the patient's exposure to a nonimmunized HHC or hospice clinician that the patient can be exposed to influenza. Even if both the patient and HHC or hospice clinician are immunized against influenza, sometimes the influenza virus circulating during the influenza season may be different from those covered by the influenza vaccine. The influenza vaccination can still provide protection though, and may reduce a severe outcome, such as hospitalizations and deaths.

Influenza vaccination needs to be a component of a bundle of other infection prevention and control strategies implemented by HHC and hospice staff to prevent and control the spread of influenza. In a Cochrane review, there was no evidence that only vaccinating healthcare workers prevented laboratory-confirmed influenza or its complications (i.e., lower respiratory tract infection, hospitalization or death due to lower respiratory tract infection) in individuals aged 60



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or over in long-term care institutions (Thomas et al., 2013). Implementing an influenza prevention and control bundle includes those strategies in Table 1. It is important that basic infection prevention and control strategies are implemented at

all times when caring for a home care or hospice patient, regardless of the patient or home care or hospice clinician's influenza vaccination status. ■

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The author declares no conflicts of interest.

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**Table 1. Home Care Influenza Prevention and Control Bundle**

1. Receive the influenza vaccination annually
2. Perform hand hygiene
3. Implement respiratory hygiene and cough etiquette
4. Detect influenza early and confirm through lab testing
5. Promptly initiate antiviral use when clinically indicated and ordered by the physician
6. Implement droplet precautions
7. Discourage in-home visitors
8. Clean and disinfect equipment and supplies
9. Restrict a home care and hospice clinician with an influenza-like illness from working

Source: McGoldrick, M. (2015). Droplet precautions and caring for a patient with confirmed or suspected pandemic influenza or emerging pathogen. Isolation precautions. In *Home Care Infection Prevention and Control Program* (pp. 14-15 and 19-22). Saint Simons Island, GA: Home Health Systems, Inc. Adapted with permission.