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Recommendations for Mandatory Influenza Vaccinations for Health Care Personnel from Infection Advisory Subcommittee of AMDA, the Society for Post-Acute Long-Term Care Medicine.

Elizabeth Frentzel, MPH^{a,*}, Robin L. P. Jump, MD, PhD^{b,c}, Laurie Archbald-Pannone, M.D., MPH^d, David A. Nace, MD, MPH, CMD^e, Steven J. Schweon, RN, MPH, MSN^f, Swati Gaur, MD, MBA, CMD, AGSF^g, Naqvi Fatima, MD, CMD^h, Naushira Pandya, MD, CMDⁱ, William Mercer, MD, CMD^j Infection Advisory Subcommittee for AMDA, The Society of Post-Acute and Long-Term Care Medicine

^aEssential Hospitals Institute of the America's Essential Hospitals, Washington, DC.

^bGeriatric Research Education and Clinical Center, Specialty Care Center of Innovation and Division of Infectious Diseases, Louis Stokes Cleveland Veterans Affairs Medical Center, Cleveland, Ohio.

^cDivision of Infectious Diseases and HIV Medicine, Department of Medicine and Department of Population and Quantitative Health Sciences, Case Western Reserve University School of Medicine, Cleveland, Ohio.

^dGeneral Medicine, Geriatrics and Palliative Care, Department of Medicine, University of Virginia Health System

^eDivision of Geriatric Medicine, Department of Medicine, School of Medicine, University of Pittsburgh, Pittsburgh, PA.

^fSteven J. Schweon LLC, Saylorsburg, PA.

^gNortheast Georgia Health System, Division of Postacute Long Term Care, Gainesville, GA.

^hFive Star Physician Services.

ⁱDepartment of Geriatrics, Nova Southeastern University.

^jWheeling Ohio County Health Department and Peterson Rehabilitation and Geriatric Hospital, Wheeling, WV.

Abstract

^{*}**Corresponding Author:** Elizabeth Frentzel MPH. Essential Hospitals Institute of the America's Essential Hospitals. Address: 401 Ninth St, Suite 900, Washington DC, 20004. efrentzel@essentialhospitals.org. Phone: 1-202-585-0136.

CONFLICTS OF INTEREST

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Preventing influenza infections is a national health priority, particularly among vulnerable geriatric and frail adults who reside in post-acute and long-term care (PALTC) settings. Older adults account for more than 70% of deaths from influenza, a reflection of decreased vaccine effectiveness in that age group. Annually vaccinating health care personnel (HCP) working with these vulnerable patients against influenza is critical to reducing influenza morbidity and mortality among patients. PALTC HCP have the lowest influenza vaccination rate when compared to HCP in other settings. The Advisory Committee on Immunization Practices (ACIP) recommends that all HCP receive an annual influenza vaccination, including those who do not have direct patient care responsibilities.¹ Here, we discuss the importance of influenza vaccination for HCP, detail recommendations for influenza vaccination practice and procedures for PALTC settings, and offer support to PALTC settings and their staff on influenza vaccinations.

Summary of the article:

This article presents the Society for Post-Acute & Long-Term Care Medicine's recommendations, and FAQs for influenza vaccinations for post-acute and long-term care health care personnel.

Keywords

Nursing Home; Influenza; Vaccinations; Aged; Policy

BACKGROUND

Influenza has been linked to 12,000 to 56,000 deaths in the United States alone each year. Geriatric adults, those 65 years old, are the most vulnerable to severe infection and account for up to 85% of these deaths.²⁻⁴ For the 2016–2017 influenza season, the Centers for Disease Control and Prevention (CDC) estimates, influenza vaccination prevented over 5 million illnesses and prevented nearly 85,000 hospitalizations.⁵ Nonetheless, there were still 600,000 hospitalizations for influenza infections that year and most of those hospitalized were geriatric patients.⁵ The effectiveness of the influenza vaccine can vary widely from 19% to 60% over the past ten years (Table 2). This means the vaccine reduced a person's risk of having to seek medical care by 40% in 2018, the CDC found. Even though that seems low, it is still our best way to prevent influenza and its complications.⁶ Residents who are cared for in post-acute and long-term care (PALTC) facilities are increased risk for exposure to influenza and more likely to have co-morbidities that increase vulnerability to poor outcome following infection.^{7, 8} Therefore, it is critical to maximize infection control efforts in these facilities amongst residents, staff, and visitors. Long-term care facility environments and the vulnerability of their residents provide a setting conducive to the rapid spread of influenza and other respiratory pathogens. Infections may be introduced by staff, visitors or new transferred residents, and outbreaks in such settings can have devastating consequences for individuals as well as placing extra strain on health services.⁹ As a result of these risks, influenza has a major impact on residents of nursing homes. Influenza attack rates typically range from 20 to 30%, and even higher rates have been documented. In addition, mortality rates during such influenza outbreaks often exceed 5%.¹⁰

Rationale for influenza vaccines among post-acute and long-term care (PALTC) staff

As people age, their immune systems become less responsive rendering vaccinations, including seasonal influenza, less effective. While vaccination is still a critical part of controlling influenza in this vulnerable population, vaccination of patients alone is not sufficient. Infection control policies and procedures must be implemented to reduce influenza exposure for these geriatric patients. This makes reducing exposure to influenza important for the health and safety of geriatric patients. This is particularly true for frail elders who live in PALTC settings as they are dependent on health care personnel (HCP) for assistance with activities of daily living and therefore have direct exposure to HCP. Any person who is infected with influenza may shed the virus for 24 hours even before developing symptoms.¹¹ Therefore, even the most conscientious HCP may still become infected with influenza and before symptoms develop, may unintentionally expose their PALTC residents to a potentially severe infection.

Vaccinating PALTC HCP reduces has been shown to save the lives of residents from influenza and reduce hospitalizations.^{12,13} While the influenza vaccine has generally had a low effectiveness, it still has proven to be an effective method to reduce influenza-like illness (ILI) and deaths. Since 2008–2009 influenza season when data were more rigorously collected, the effectiveness of influenza vaccines has ranged from 19% in the 2014–2015 season to 60% in the 2010–2011 season (see table 2).¹⁴ And yet, even with low and varied rates of effectiveness, studies show the positive impact on lives. In one randomized control study of 44 nursing homes, the vaccination of healthcare personnel resulted the equivalent of preventing five deaths, two admissions to hospital with ILI, and nine cases of ILI per 100 residents during the period of influenza activity.¹² Similarly striking results were found in a similar, pair-matched randomized cluster-randomized trial which led to a 20% lower mortality in intervention homes and ILI was 30% lower among residents.

Vaccinating PALTC HCP also reduces their risk for infection, presenteeism, and absenteeism. Surveys of HCP indicate 75% of HCP have worked while ill.^{15,16} Yet, studies also show that among HCP who reported at least 1 day absent due to sickness, vaccinated HCP were significantly less absent with influenza compared to unvaccinated HCP.^{17–19} A meta-analysis examining the effects effects of influenza vaccination on HCP found that absenteeism from ILI was reduced substantially (RR = 0.62) as was the duration of being absent from work (RR=0.82).²⁰

Unfortunately, PALTC HCP have been found to consistently have lower rates of influenza vaccination than HCP in all other settings. During the 2017–2018 influenza season, the CDC found that, while 78% of HCP respondents reported receiving an influenza vaccine, HCP in PALTC had the lowest rate of only 67% vaccinated. In contrast, 92% of HCP in hospitals reported receiving an influenza vaccine.²¹

Potential Barriers to Vaccinating HCP Against Influenza

Similar to the general public, HCP have reported multiple concerns that lead to hesitation to receive influenza vaccination. These concerns include potential adverse reactions, perceived personal lack of susceptibility to infection, and perceived lack of vaccine effectiveness.^{22–28}

In addition, qualitative research has shown that nurses specifically reported a general lack of trust for influenza vaccines, stating the vaccine is not effective, may lower overall immunity, and is not needed for otherwise healthy people. Furthermore, nurses surveyed were reported to feel that mandatory influenza vaccine protocols violate personal autonomy.²⁹

This perceived lack of vaccine effectiveness is backed up by CDC's data. Since 2008–2009 influenza season when data were more rigorously collected, the effectiveness of influenza vaccines has ranged from 19% in the 2014–2015 season to 60% in the 2010–2011 season.¹⁴ Yet, even with relatively low rates of effectiveness, studies have shown that vaccination of HCP has led to significant reductions.^{12,13}

Mandatory Influenza Vaccination Policies

Mandatory employer-based influenza vaccination protocols for HCP in general have been shown to have influenza vaccination rates near 100%. In contrast, settings in which HCP were encouraged to get vaccinated, but vaccination is not required, promoted, or offered on-site, less than half HCP were vaccinated.²¹ Most United States hospitals have mandatory influenza vaccination protocols.³⁰ However, most PALTC facilities do not have mandatory vaccination programs. Over two-thirds of hospital-based HCPs reported that their institution required an annual influenza vaccine while less than 30% of HCPs working in PALTC reported similar requirements.²¹ This discrepancy is a vital factor explaining the difference in rates of vaccination among hospital-based HCP and HCP in PALTC facilities.

The CDC's Advisory Committee for Immunization Practices (ACIP) recommends vaccinating all individuals who work in health care settings (HCP), even including HCP without direct patient care of patients and residents.³¹ In addition, all of the following professional organizations recommend mandatory seasonal influenza vaccinations for HCP: Society for Healthcare Epidemiology of America (SHEA);³² Association of Professionals in Infection Control and Epidemiology (APIC);³³ American Academy of Family Physicians (AAFP); American Hospital Association; Infectious Disease Society for America (IDSA); American Nurses Association and AMDA—The Society for Post-Acute and Long-Term Care.³⁴ All mandatory vaccination programs allow for exemption. Potential acceptable exemption from mandatory influenza vaccination for HCP include medical contraindication or religious reasons.³⁵ Less than a third of the states require influenza vaccination for PALTC HCP. States vary in their legal requirements regarding influenza vaccination for HCPs (Table 1).^{36, 37}

Recommendations and Implications

AMDA—The Society for Post-Acute and Long-Term Care Medicine (The Society) strongly supports influenza vaccination of all HCP, including those who do not provide direct care. The Society also recognizes a need for continued efforts to improve influenza vaccination rates. Box 1 details a policy statement regarding influenza vaccination, which was developed by the Infection Advisory Subcommittee (IAC) and adopted by The Society. Additionally, to support improved influenza vaccination rates among PALTC HCP, the IAC developed a list of frequently asked questions (Appendix 1). Seasonal influenza vaccines are an effective way that all HCP can support the health and safety of PALTC residents.

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APPENDIX: Infections Advisory Subcommittee FAQ: Influenza Vaccinations for Health Care Providers

In 2011, the Advisory Committee for Immunization Practices recommended influenza vaccination for all health care personnel (HCP), even those without direct patient contact.¹ Vaccination rates for HCP in post-acute and long-term care facilities have been shown to be the lowest of any healthcare setting. Therefore, in 2018, the Society of Post-Acute and Long-term Care recommended mandatory annual influenza vaccination for all post-acute and long-term care HCP unless there is a medical contraindication. Here are answers to some Frequently Asked Questions about influenza vaccination.

1. Who should receive influenza vaccine (“flu shot”)?

All staff, including those who do and those who do not have direct contact with residents, should receive the flu shot each year.

2. Is it important for me to get a flu shot even if I am healthy?

YES! Thousands of older and frail residents die each year from influenza or flu. Vaccinating residents is important, but it’s best when residents and staff, like you are vaccinated.

3. Why do flu shots have to be mandatory?

Voluntary programs don’t help to increase the rates of flu shots. Avoiding the flu is especially important at nursing homes, where residents are already frail. Each year, between 12,000 and 56,000 Americans die from the flu, and over two thirds of the people who die are older than 65.^{2,3,38} Flu shots help prevent you from getting the flu and help the residents you care for from getting the flu.

4. Why can’t I just wash my hands and wear a mask when I am sick?

If you’ve been exposed to the flu, you can spread the virus for a whole day even before you have any symptoms. Wearing a mask with a cough is important, but even before symptoms develop, the flu shot can help protect your patients. Washing your hands properly is also an important piece of preventing spreading infections to residents.

5. How effective is the flu shot, especially since it keeps changing every year?

Public health officials predict the main flu strains each year. These strains change each year and each year the flu shot changes to protect against the common strains. The effectiveness of a flu shot also varies from year-to-year and has been less than 50% in the last few years.¹⁴ Even though the flu shot works partially well, studies have shown that vaccinations results in substantially fewer flu-related deaths and flu or flu-like illnesses.^{12,13} That is why you should get a flu shot every year. Even if a strain isn't in the flu shot, getting the flu shot can make your illness from flu milder. That means you will feel less sick, miss fewer days of work, and be at lower risk for bad outcomes from flu. The flu shot is the best way to prevent influenza for you and helps the people you care for.

6. Can I get the flu from the flu shot?

NO! You can't get the flu from the flu shot. The flu shot only has parts of the virus that don't cause illness. You can still get a cold from other viruses—the flu shot only protects against influenza virus.

7. Will the flu shot make me feel sick?

Most people who receive the flu shot don't feel sick. Sometimes you can have soreness, redness or swelling where the injection was given or a slight fever and body aches. Over-the-counter medicines like ibuprofen and acetaminophen can help with these side effects. These side effects can be signs that the flu shot is inducing an immune response—that is, the flu shot is working. But, if you don't have these side effects, it doesn't mean that the shot isn't working. If they do occur, they start soon after you received the flu shot and typically last no more a day or two. There may be a very small increased risk of severe reactions after the flu shot. There is a 1 or 2 cases of Guillain-Barré Syndrome from the flu shot.³⁹ As with any medicine, there is a very remote chance of the flu shot causing a severe allergic reaction, other serious injury, or death. If you think you are having an allergic reaction, get medical help immediately.

8. I am pregnant. Should I get the flu shot?

Yes, pregnant women should especially get a flu shot. Flu shots have been given to millions of pregnant women over many years and have been shown to be completely safe. Pregnant women should get a flu shot only but not the nasal spray flu vaccine.⁴⁰ Flu shots given during pregnancy help protect both you and your baby from the flu. Flu shots have been shown to reduce the chance of flu-associated respiratory infections in pregnant women by about one-half. If you get a flu shot you are also helping to protect your baby from flu illness for the first several months after birth, when a baby is too young to get vaccinated. So getting a flu shot while you're pregnant is even more important. According to the CDC, you can get the flu shot during any trimester of your pregnancy.

9. Is there any reason I shouldn't get a flu shot (medical exemption)?

There are medical reasons that the flu shot is not for everybody- are called medical exemptions. You should not get the flu shot if you have a documented severe allergy to the vaccine or any vaccine component or if you have a history of Guillain-Barré Syndrome within 6 weeks of a receiving a flu shot.

Even with an egg allergy you can get a flu shot. Most flu shots and the nasal flu vaccine spray have a small amount of egg in them. However, studies have shown that severe allergic reactions in people with egg allergies are unlikely. A recent CDC study found the rate of anaphylaxis after all vaccines is 1.31 per one million vaccine doses given.⁴¹ Since 2016, the CDC and ACIP recommend that people with a history of egg allergy of any severity should receive any licensed, recommended, and age-appropriate influenza vaccine.⁴¹ Additionally, if have had severe egg allergies in the past, you can get a egg-free flu shots just to be sure.

10. Is there any reason I should avoid a flu shot (religious exemption)?

[Note: It is up to the healthcare system to determine whether or not to allow religious exemptions.] Most religions support vaccinations. Two exceptions are the Dutch Reformed Church and the Church of Christ, Scientist.³⁵ If you have questions, talk with your facility to learn more.

11. Is there any reason I should avoid a flu shot (philosophical exemption)?

There are philosophical reasons—personal, moral, or other beliefs—regarding the influenza vaccination. At the same time, employment in a nursing home requires other vaccinations such as vaccines against measles, mumps, and rubella, all to avoid potentially getting or infecting others with these harmful diseases. Avoiding the flu is especially important at nursing homes, where residents are already frail. Each year, between 12,000 and 56,000 Americans die from the flu, and over two-thirds of the people who die are older than 65.^{2,3,38} Flu shots help prevent you from getting the flu and help the patients and residents you care for from getting the flu. If you have questions, talk with your facility to learn more.

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BOX 1.**AMDA - THE SOCIETY FOR POST-ACUTE AND LONG-TERM CARE MEDICINE POLICY
STATEMENT ON INFLUENZA VACCINATION FOR HEALTHCARE PERSONNEL**

AMDA - The Society for Post-Acute & Long-Term Care Medicine (the Society) supports mandatory annual influenza vaccination for all post-acute and long-term care HCP unless there is a medical contraindication. All HCP should be included in mandatory influenza vaccination programs, as all HCP, even those with indirect contact, have the potential to be in close proximity with residents, which can allow for transmission of infection.

The Society supports education for HCP on the efficacy and safety of influenza vaccination in general and as an important measure to enhance resident safety. It further recommends that medical directors and other practitioners encourage professional HCP and family caregivers to obtain an annual vaccination.

In addition, the Society recommends that HCP who do not receive an influenza vaccination must wear personal-protective masks when in direct resident contact during influenza season (October through April). The Society also recommends targeted education to any HCP who do not receive an influenza vaccination.

Finally following Advisory Committee on Immunization Practices (ACIP) recommendations, the Society recommends annual influenza vaccinations are made available and offered at no cost to all HCP working or volunteering in post-acute and long-term care settings.

TABLE 1:**REQUIREMENTS FOR INFLUENZA VACCINATION FOR HEALTHCARE PERSONNEL (HCP) BY REPORTING STATES^a**

Requirements		States ^b
Influenza vaccine required for HCP working in post-acute/long-term care		Alabama, Arkansas, Colorado, Delaware, Kentucky, Maryland, Massachusetts, New Hampshire, New York, North Carolina, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, District of Columbia.
	Required only for those with direct patient contact	South Carolina, Texas
Exemptions ^c		
	Medical	All states except Delaware, Georgia, New Hampshire
	Religious	Alabama, Arkansas, Illinois, Kentucky, Maine, Maryland, Massachusetts, New Hampshire, New York, North Carolina, Pennsylvania, Rhode Island, District of Columbia
	Philosophical	Alabama, Arkansas, California, Colorado, Delaware, Georgia, Illinois, Kentucky, Maine, Maryland, Massachusetts, Missouri, New Hampshire, New York, North Carolina, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Utah, District of Columbia
	Unspecified	New Hampshire, New York, Texas, Utah

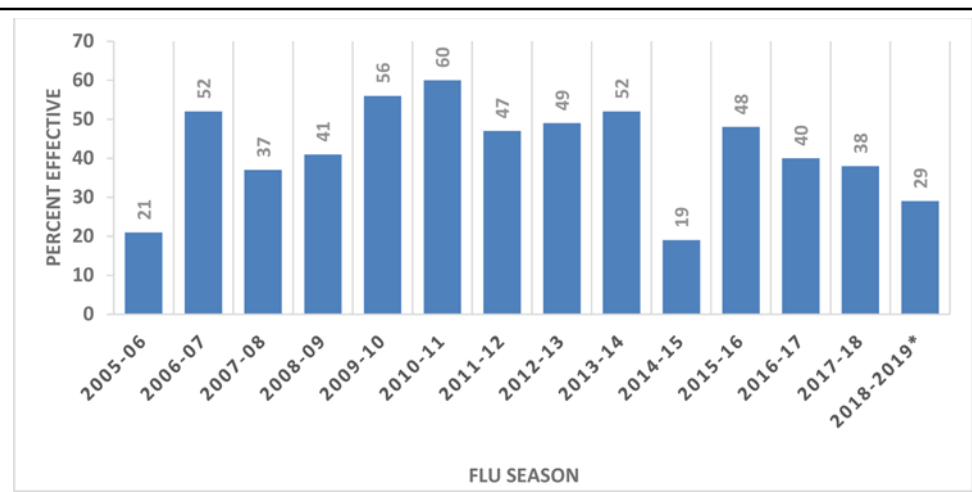
^aBased on information obtained from Appendix 1: Influenza Vaccination Laws for Healthcare Workers (HCWs) in Long-Term Care Facilities of 1. CDC - State Long-Term Care Facility Influenza Vaccination Laws - Publications by Topic - Public Health Law. <https://www.cdc.gov/phlp/publications/topic/menus/lcinflluza/index.html>. Accessed January 31, 2019. Please check with your local and/or state department of health for current information.

^bIncludes the District of Columbia and Puerto Rico.

^cApplies to HCP in long term care settings

TABLE 2.

INFLUENZA VACCINE EFFECTIVENESS OVER TIME



While CDC began estimating influenza vaccine effectiveness annually in 2004–05, this slide captures data beginning in 2008–2009 when the U.S. Influenza Vaccine Effectiveness Network (U.S. Flu VE Network) began. Earlier estimates may not have been representative because they were from only one site.

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