

Influenza *Immunization* Among Health Care Workers



Improving Dismal Influenza Vaccination Rates
Among Health Care Workers Requires Comprehensive
Approach, Institutional Commitment

CALL TO
ACTION



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Improving Dismal Influenza Vaccination Rates Among Health Care Workers Requires Comprehensive Approach, Institutional Commitment

Influenza immunization rates among health care workers* must be increased. The Centers for Disease Control and Prevention (CDC) as well as other infection control and major medical and nursing groups have long recommended yearly influenza vaccination for all health care workers. Yet only 36 percent are actually immunized each year.¹

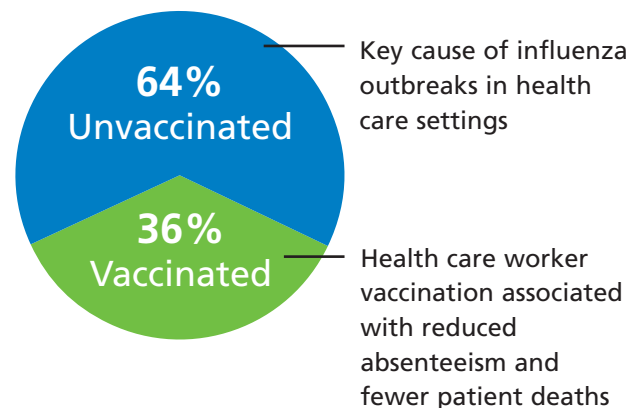
Epidemiological data suggest health care workers can spread the highly contagious influenza virus to patients in their care.^{2,3,4} This is particularly troubling for the many patients at high risk for influenza-related complications, hospitalizations and death.¹ Influenza kills an average of 36,000 persons, 90 percent of whom are elderly, and hospitalizes over 114,000 in the U.S. annually.¹

Unvaccinated health care workers can be a key cause of outbreaks in health care settings. These employees encounter high-risk patients throughout the influenza season in medical practices, general hospitals, specialty hospitals, long-term care and rehabilitation facilities, home-care sites and other health care settings.

There is broad recognition of the seriousness of this issue among health care-related professional organizations, a wide range of health care facilities and the nation's government agencies. All agree institutions must work aggressively to increase influenza vaccination rates among health care workers.

While many health care organizations conduct influenza vaccination programs, the impact of these programs on immunization rates has not been optimal. A comprehensive, concerted effort by health care institutions, employers, insurers and allied professional organizations is essential to improve health care worker influenza vaccination rates.

Average Annual Influenza Vaccination Rates in Health Care Workers



Source: CDC. Prevention and control of influenza: Recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR*. 2003; 52 (RR8): 1-44.

Only 36 percent of health care workers receive influenza vaccine each year, while nearly two thirds remain unvaccinated, contributing to institutional outbreaks that put vulnerable patients at increased risk of contracting influenza and suffering from its potentially major complications.

* In the context of this document, the term "health care worker" extends to all personnel in a health care setting who have contact with patients. This includes physicians, nurses, physician assistants and other personnel in hospital and outpatient settings, including emergency medical response workers; nursing home and chronic care facility employees who have contact with residents; employees of assisted living and other residences for persons in high-risk groups; and persons who provide home health care.

Influenza Outbreaks in Health Care Settings

Documented outbreaks illustrate the problem of influenza transmission between health care workers and patients:

- An outbreak in an organ transplant unit affected four patients. Each was in a single room and three of the four had no visitors to account for the spread. Three of 27 nurses also developed influenza.⁵
- Sixty-five residents in a long-term care facility developed influenza A in the 1991-1992 season. Over half developed pneumonia, 19 were hospitalized and two died. Only one out of 10 health care workers was immunized.⁶
- In a neonatal intensive care unit, 19 infants were infected and one died. Health care workers were the likely source of the spread. Only 15 percent of staff had been immunized.⁷

Influenza Immunization Offers Economic Benefits

Preventing influenza spread between health care workers and patients should be an essential goal in the health care system. Attaining this goal will result in significant cost benefits as well.

- In an influenza outbreak in an internal medicine ward, 23 percent of staff became ill, resulting in:⁸
 - 14 person-days of sick leave
 - Postponement of eight scheduled admissions
 - Suspension of emergency admissions for 11 days
 - Average additional cost per patient of \$3,798
 - Total outbreak cost of \$34,179
- Peers, often working double shifts, or pool workers, must replace health care workers who do not report to work due to influenza illness*:⁹
 - Double shifts increase overtime costs and studies show that attention lags after about 12 hours.
 - Regular staff members are less prone to patient-care errors than pool workers.

What's Needed

Measures should be taken to ensure health care workers are provided convenient access to influenza vaccine.¹ Employers of health care workers need to commit resources toward institutionalizing immunization in the workplace. They need to demonstrate that immunization is critical to employee and patient safety.

Professional health care organizations must develop policies to support health care worker influenza immunization and encourage their members to educate health care workers about the benefits of vaccination and the potential health consequences of influenza illness to patients and themselves.

A variety of approaches can help increase rates and lessen the burden of influenza illness among health care workers. Institutions must break down vaccination barriers to increase health care worker immunization rates:

- Top management/administration need to become strong advocates to ensure health care workers/employees become vaccinated to accomplish:
 - Better infection control
 - Reduced absenteeism
 - Cost savings/effectiveness
- Make influenza vaccination convenient
 - Offer vaccine clinics at various times
 - Take the vaccine to health care workers
- Reduce or remove cost barriers by providing vaccine
- Remind health care workers that CDC recommends influenza vaccination annually
- Educate health care workers that:
 - Injectable vaccine cannot cause influenza
 - Influenza virus is easily transmitted and they are putting patients, themselves, their families and others at risk

*CDC estimates the cost of one severe influenza epidemic at \$12 billion

Organizational Supporters

The National Foundation for Infectious Diseases (NFID) held a roundtable meeting in November 2003 with 24 leading organizations to review influenza vaccination policies and practices aimed at health care workers and reach a consensus on the best ways employers and professional organizations can positively affect vaccination rates of employees. The following groups participated in the roundtable and agree annual influenza vaccination among health care workers is an important goal for improved public health and safety:

- American Academy of Family Physicians
- American Academy of Pediatrics
- American Academy of Physician Assistants
- AAHP-HIAA
- American Association of Occupational Health Nurses
- American College of Occupational and Environmental Medicine
- American College of Physicians
- American Health Care Association/National Center for Assisted Living
- American Hospital Association
- American Medical Association
- American Nurses Association
- American Society of Health-System Pharmacists
- Association for Professionals in Infection Control and Epidemiology, Inc.
- Brigham and Women's Hospital
- Centers for Disease Control and Prevention
- Centers for Medicare & Medicaid Services
- HCA, Hospital Corporation of America
- Joint Commission on Accreditation of Healthcare Organizations
- National Medical Association
- Occupational Safety and Health Administration
- Service Employees International Union
- Society for Healthcare Epidemiology in America
- Tenet Health System
- Visiting Nurse Associations of America

National Foundation for Infectious Diseases

Founded in 1973, NFID is a non-profit organization dedicated to public and professional educational programs about, and in support of, research into causes, treatment and prevention of infectious diseases. The health care worker initiative was made possible through an unrestricted educational grant to NFID from Aventis Pasteur.

4733 Bethesda Avenue, Suite 750
Bethesda, Maryland 20814-5278

E-mail: info@nfid.org

Website: <http://www.nfid.org>

This document is available online at: <http://www.nfid.org/publications/>

References

- ¹ CDC. Prevention and control of influenza: Recommendations of the Advisory Committee on Immunization Practice (ACIP). *MMWR*. 2003;52(RR8):1-44.
- ² Horcajada JP, Pumarola T, Martinez JA, et al. A nosocomial outbreak of influenza during a period without influenza epidemic activity. *Eur Respir J*. 2003;21(2):303-7.
- ³ Salgado CD, Farr BM, Hall KK, Hayden FG. Influenza in the acute hospital setting. *Lancet*. 2002;2(3):145-55.
- ⁴ Harrison J, Abbott P. Vaccination against influenza: UK health care workers not on-message. *Occup Med*. 2002;52(5):277-9.
- ⁵ Malavaud S, Malavaud B, Sanders K, et al. Nosocomial outbreak of influenza virus A (H3N2) infection in a solid organ transplant department. *Transplantation*. 2001;72(3):535-7.
- ⁶ CDC. Outbreak of influenza A in a nursing home—New York, Dec. 1991-Jan. 1992. *MMWR*. 1992; Feb 4(18):129-131.
- ⁷ Cunney RJ, Bialachowski A, Thornley D, Smaill FM, Pennie RA. An outbreak of influenza A in a neonatal intensive care unit. *Infect Control Hosp Epidemiol*. 2000;21(7):449-51.
- ⁸ Sartor C, Zandotti C, Romain F, et al. Disruption of services in an internal medicine unit due to a nosocomial influenza outbreak. *Infect Control Hosp Epidemiol*. 2002;23(10):615-9.
- ⁹ Lundstrom T, Pugliese G, Bartley J, Cox J, Guither C. Organizational and environmental factors that affect worker health and safety and patient outcomes. *Am J Infect Control*. 2002;30:93-106.