How to Boost Flu Vaccination Rates Among Employees in Your Program

by Marie A. de Perio, Douglas M. Wiegand, Stefanie M. Evans, and Maureen T. Niemeier

Flu viruses are typically spread by droplets, when people who are sick with flu cough, sneeze, or talk. Less often, a person may get flu from touching a surface or object that has the virus on it and then touching his own mouth, eyes, or nose. Flu symptoms include fever, chills, cough, sore throat, runny or stuffy nose, muscle or body aches, headaches, fatigue, vomiting, and diarrhea. Flu can cause mild to severe illness and may even lead to death. In the United States, more than 200,000 people are hospitalized each year for flu-related illnesses (Thompson et al., 2004).

Marie A. de Perio, MD, is a medical officer for the Centers for Disease Control and Prevention (CDC), National Institute for Occupational Safety and Health (NIOSH), Health Hazard Evaluation (HHE) team in Cincinnati, Ohio. She is a physician, board certified in internal medicine and infectious diseases, and has published scientific papers regarding various infectious diseases in workplaces.

Douglas M. Wiegand, PhD, is a behavioral scientist for the CDC, NIOSH, HHE team in Cincinnati, Ohio. He is trained in applied behavior analysis, social psychology, and clinical psychology, and has published scientific papers on the psychology of safety and health.

Stefanie M. Evans, MA, is a health communication specialist for the CDC, NIOSH, HHE team in Cincinnati, Ohio. She is trained in social marketing, and health education and behavior and specializes in tailoring health and safety messages for occupational audiences.

Maureen T. Niemeier, BBA, is a freelance technical writer/editor in Cincinnati, Ohio. She has written and edited public health documents for NIOSH and other clients since 2002.

Flu in Child Care Settings

Child care providers are at risk of acquiring and transmitting flu through their daily duties. Flu can spread rapid-ly among children and child care providers for a number of reasons:

1) Children younger than 5 years old are particularly vulnerable to flu.
2) Children are constantly in close contact with each other and their providers.
3) Toys and other objects that could have the flu virus on them are shared among children.
4) Young children may not be able to wash their hands well, or cover their mouths and noses effectively when they cough or sneeze.

CDC Flu Vaccination Recommendations

It is well documented that vaccination is the most effective way to prevent flu and serious illness and death from flu infection (Cox & Subbarao, 1999; Nichol et al., 1999). During the 2009-2010 influenza A (H1N1) or pH1N1 pandemic, the U.S. Advisory Committee on Immunization Practices (ACIP) recommended that:

- Caregivers of children younger than 6 months of age be among the target groups to receive the pH1N1 vaccine first. Children younger than 6 months are at high risk for flu complications, but are too young to receive the vaccine themselves (CDC, 2009a).
- Caregivers of children younger than 5 years of age be targeted to receive the 2009–2010 seasonal influenza vaccine (CDC, 2009b).

Annual flu vaccination is now recommended for all people 6 months of age or older for the 2012-2013 flu season (CDC, 2012).

NIOSH's Survey of Child Care Center Employees

Between January 30 and March 1, 2010, we surveyed 384 employees at 32 randomly selected licensed child care centers in one county (95% of the 403 total employees). We gave the employees an anonymous survey, which covered personal and work characteristics, pertinent medical history, and receipt of or intention to receive the seasonal flu vaccine. The median age of survey respondents was 30 years, with a range of 18-81 years.

- 85 employees (22%) reported having received the seasonal flu vaccine.
- Rates of seasonal flu vaccination ranged from 0% to 57% by center.

- Four centers had no seasonal flu-vaccinated employees.

The seasonal flu vaccination rate was 14% for caregivers of young infants (younger than 6 months).

The most common main reasons employees cited for getting the vaccine were:

- "To protect myself/my family."
- "My doctor recommended that I receive the vaccine."

The most common main reasons employees cited for not getting the vaccine were:

- "I don't think I need the vaccine."
- "I don't think the vaccine will keep me from getting the flu."
- "The vaccine is not safe."

Flu Vaccine Knowledge, Beliefs, and Attitudes

Most of the employees (79-82%) we surveyed had positive attitudes toward the seasonal flu vaccine, believing it to be beneficial, good, and wise. However, many employees also believed the vaccine would make them sick (84%) and that it would not prevent them from getting the flu (44%). Factors independently associated with receipt of the vaccine included: believing in its efficacy, having positive attitudes toward it, feeling external pressure to get it, and feeling personal control over whether or not to get it.

Discussion and Recommendations

Only 22% of surveyed employees reported having received the 2009-2010 seasonal flu vaccine. Influenza vaccination has been proven to be both effective and safe. Despite this, the major barriers to receiving the vaccine were the misconceptions held by child care center employees that they were not at risk for flu, they did not think the vaccine was effective, and they did not think the vaccine was safe.

Our findings demonstrate the need for targeted efforts to promote flu vaccination in this group to protect themselves and the children for whom they care. As stated earlier, annual flu vaccination is now recommended for all people 6 months of age or older for the 2012-2013 flu season (CDC, 2012). We offered several recommendations to the county, as well as to the participating child care centers. These recommendations, discussed below, may be helpful to your center in implementing a comprehensive flu prevention strategy. Such a strategy should include: encouraging vaccination of children and providers, hand hygiene, cough etiquette, observing children for symptoms of respiratory illness, and encouraging sick children and employees to stay home. For more information on ways to prevent the spread of flu at child care centers, visit: www.cdc.gov/flu/professionals/infectioncontrol/childcaresettings.htm/.

Offer Training on Flu Prevention

Consider offering specific training to child care center employees on flu prevention. Training should educate employees about their risk for infection and severe illness, as well as flu prevention strategies including information about vaccine efficacy and safety. In response to the misconceptions we found in our study, we created a fact sheet targeted to child care center employees and distributed it to the county and participating centers. Centers can request a copy of this fact sheet by sending an e-mail to HHERequestHelp@cdc.gov. Consult with your local health department for more information and assistance in offering employee education programs. Additionally, the CDC offers flu resource materials that can be downloaded for free from: www.cdc.gov/flu/freeresources/.

Recommend Flu Vaccination to All Employees

We recommend child care centers develop a flu control strategy that includes methods for promoting vaccination:

- Provide employees with up-to-date information on clinics that offer the flu vaccine and share information about vaccination with them via email, center newsletters, or informational sheets.
- Recommend the flu vaccine to all employees, especially those who care for children younger than 6 months old.
- Having an employee advocate for vaccination and an employer requirement of vaccination have each been shown to effectively increase vaccination rates in health care personnel (CDC, 2010; Slaunwhite et al., 2009).

Offer Free or Reduced-Cost Vaccination

The flu vaccination rates in our study were lower than those found in other studies of child care centers (51-60%) which eventually offered free on-site vaccination (Hayney & Bartell, 2005; Lee et al., 2008). We found that almost one-third of child care center employees felt that they did not have the money to get the flu vaccine. We recommend child care centers contact local health departments and health care providers to see if they will offer the vaccine at reduced or no cost to child care center employees.

Set Up a Vaccination Clinic at the Child Care Center

Consider setting up a vaccination clinic at your child care center to offer the flu vaccine to employees (and to children whose parents or guardians give consent). Almost one-third of the child care center employees we surveyed felt they did not have time to get vaccinated, so this could ensure that more employees get vaccinated.

Offer Incentives to Employees Who Get Vaccinated

Some employees may choose to get vaccinated because there is an incentive being offered. Suggestions for such incentives could be raffles of a 'free' day off or gift cards. Another idea might be to encourage a friendly competition between rooms of providers, rewarding those with the highest vaccination rates with a free lunch.

Conclusion

The flu vaccine needs to be promoted among child care center employees, with a focus on the benefits, safety, and effectiveness of vaccination. As a child care provider, you have a responsibility to yourself, your family, your coworkers, and the children you care for to get vaccinated.

References

CDC (Centers for Disease Control and Prevention). (2009a). *2009 H1N1 Vaccination Recommendations.* Accessed September, 2010 at: www.cdc.gov/h1n1flu/vaccination/acip.htm.

CDC (Centers for Disease Control and Prevention). (2009b). Prevention and control of seasonal influenza with vaccines: Recommendations of the Advisory Committee on Immunization Practices (ACIP). *Morbidity and Mortality Weekly Report*, *58* (No. RR-8), 1-52.

CDC (Centers for Disease Control and Prevention). (2010). Interim results: influenza A (H1N1) 2009 monovalent and seasonal influenza vaccination coverage among health care personnel — United States, August 2009-January 2010. *Morbidity and Mortality Weekly Report*, 59(12), 357-362.

CDC (Centers for Disease Control and Prevention). (2012). Prevention and Control of Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices (ACIP) — United States, 2012-13 Influenza Season. *Morbidity and Mortality Weekly Report*, *61*(32), 613-618.

Cox, N. J., & Subbarao, K. (1999). Influenza. *Lancet*, 354(9186), 1277-1282.

Hayney, M. S., & Bartell, J. C. (2005). An immunization education program for childcare providers. *Journal of School Health*, 75(4), 147-150.

Lee, I., Thompson, S., Lautenbach, E., et al. (2008). Effect of accessibility of influenza vaccination on the rate of childcare staff vaccination. *Infection Control and Hospital Epidemiology*, 29(5), 465-467.

Nichol, K. L., Lind, A., Margolis, K. L., et al. (1999). The effectiveness of vaccination against influenza in healthy, working adults. *New England Journal of Medicine*, *333*(14), 889-893.

Slaunwhite, J. M., Smith, S. M., & Fleming, M. T. (2009). Increasing vaccination rates among health care workers using unit "champions" as a motivator. *Canadian Journal of Infection Control*, *24*(3), 159-164.

Thompson, W. W., Shay D. K., Weintraub E., Brammer L., Cox N. J., & Fukuda, K. (2004). Influenza-associated hospitalizations in the United States. *Journal of the American Medical Association*, *292*(11), 1333-1340.

Our study was published in the April 2012 print edition of the *Journal of Community Health.* The entire report of the above-referenced investigation may be found online at: www.cdc.gov/niosh/hhe/reports/pdfs/2010-0025-3121.pdf.

*For more information on the NIOSH HHE program, go to: www.cdc.gov/niosh/hhe/HHEprogram.html.

—■—