

Fighting the Flu: A Vaccination Program for Healthcare Workers

Anita M. Reedy, RN, MSN

Approximately 36,000 Americans die each year from influenza (Centers for Disease Control and Prevention, 2007b). People most at risk for contracting flu are those aged 65 years or older, children younger than two years, and those who have comorbidities such as diabetes, pulmonary disease, or heart disease (Centers for Disease Control and Prevention, 2007a). People with serious health-related problems are more likely to be in hospitals and nursing homes. Patients diagnosed with cancer are at increased risk for contracting the flu, secondary to treatment-related immunosuppression.

Healthcare workers can transmit flu to their patients in hospitals and nursing homes even when they are asymptomatic (Backer, 2006; Poland, Tosh, & Jacobson, 2005). One study demonstrated that increased contact among people resulted in increased flu transmission (Carrat et al., 2006). Healthcare workers naturally have frequent contact with patients, but decreasing contact to prevent flu transmission is not desirable. Vaccination of healthcare workers is directly related to decreased patient morbidity and mortality rates, less disruption of healthcare delivery, and reduced healthcare costs (Dash et al., 2004).

The Centers for Disease Control and Prevention recommend vaccination of health-

care workers as a standard of care. However, only 35%–45% of healthcare workers reportedly receive flu vaccination (U.S. Department of Veterans Affairs, 2007). The number is not adequate to prevent transmission of flu from staff to patients (Poland et al., 2005). Healthcare workers are obligated to protect their patients from unintentional transmission of disease (Cowan, Winston, Davis, Wortley, & Clark, 2006). Steckel (2007) asserted that mandatory flu vaccination for healthcare workers who provide direct clinical care to immunocompromised patients is imperative and ethically sound. Even so, many barriers prevent healthcare workers from receiving the flu vaccine, including doubt that the vaccine will be effective, concern about developing the flu from the vaccine, and a lack of desire to receive the vaccine. Other, more legitimate barriers include allergies to eggs, underlying neurologic disorders, and a fear of needles (Hofmann, Ferracin, Marsh, & Dumas, 2006; Willis & Wortley, 2007).

To decrease the risk of passing the flu to patients, the Epidemiology and Infection Control Committee at the author's hospital requested that the oncology center pilot test a program to increase the percentage of staff members who received the flu vaccine. The

goals were to offer the flu vaccine to 100% of the nurses, ancillary staff, and physicians who worked with patients with cancer and to increase the overall rate of vaccination above the national average. The presumption was that staff members in the oncology center would be more receptive to the flu vaccination program because of the increased risk to their patients. By increasing the percentage of staff vaccinated, the committee hoped to decrease the risk of spreading the flu to immunocompromised patients with cancer.

The Plan

Nurse and physician leadership agreed to develop a flu vaccine pilot program in the oncology center, and a plan was devised to accomplish the task. To increase staff participation in the vaccination program, the nurse managers decided on an individual approach to ensure that no staff member "fell through the cracks." Nurse managers on each unit identified a "champion," a staff nurse who would promote flu vaccination on the unit. The thinking was that a clinical nurse who believed that the vaccine was important and who encouraged other staff to receive it would be a positive influence and help increase vaccination rates.

Before vaccination began, nurses from the committee visited each unit to educate staff about the vaccine, how it worked and how it affected transmission of the flu virus. To address staff concerns, the committee emphasized that the flu vaccine is a dead virus and cannot cause the flu. The most common side effects of flu vaccination are soreness, redness, and swelling at the site of injection, which usually resolve in a few days.

Anita M. Reedy, RN, MSN, is a nurse manager in the Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins Hospital in Baltimore, MD.

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Leadership & Professional Development

This feature provides a platform for oncology nurses to illustrate the many ways that leadership may be realized and professional practice may transform cancer care. Possible submissions include but are not limited to overviews of projects, accounts of the application of leadership principles or theories to practice, and interviews with nurse leaders. Descriptions of activities, projects, or action plans that are ongoing or completed are

welcome. Manuscripts should clearly link the content to the impact on cancer care. Manuscripts should be six to eight double-spaced pages, exclusive of references and tables, and accompanied by a cover letter requesting consideration for this feature. For more information, contact Associate Editor Paula Klemm, PhD, RN, OCN®, at klemmpa@udel.edu or Associate Editor Judith K. Payne, PhD, RN, AOCN®, at payne031@mc.duke.edu

The Centers for Disease Control and Prevention recommends that only injectable vaccine be given to staff members caring for immunocompromised patients because of the possibility that the virus can be shed when the mist form is used. Although this may not be a major concern for patients with cancer, the committee followed the recommendations. Another source of staff anxiety was that the vaccine might be ineffective. This has some basis in fact, because the vaccine is reformulated each year based on the latest strain anticipated for that year. If another viral strain causes a flu outbreak, staff may contract the flu even though they were vaccinated. However, staff members were assured by the committee that they were much less likely to contract the flu if they were vaccinated.

The champion, nurse manager, and clinical nurse specialist on each unit entered information about staff members into a spreadsheet prior to launching the vaccination program. The spreadsheets were posted in the staff conference room on each unit and were not accessible to patients or visitors.

The Occupational Health Office, working with nurses in the oncology center, delivered vaccine doses to each unit, hoping that convenience would make staff more likely to receive the vaccine. The vials were kept in the medication refrigerators on the units. Staff members could come to a conference room or other designated place on each unit to receive the vaccine. Once the vaccine was delivered to the units, each staff member was approached by the champion, nurse manager, or clinical nurse specialist, who encouraged participation in the program. All of the vaccinations were provided by one of those three staff members, who then entered the information on the spreadsheet. When a staff member was vaccinated, the person who gave the vaccination entered the information on the spreadsheet. As additional staff members were vaccinated and their names entered on the spreadsheet for all staff to see, others decided to receive the vaccine. Peer pressure played an important role in participation in the program.

After the vaccination program was completed, the results were presented in aggregate form to employees and administrators during regularly scheduled staff meetings.

Program Evaluation

At the end of the vaccination period, 100% (n = 194) of the nursing staff in the oncology center had been invited to receive the vaccine. The vaccination rate for the inpatient units was nearly 80% (n = 130) as compared to about 60% (n = 19) in the outpatient clinic. Three members of the nursing staff received the flu vaccine in Occupational Health, rather than on the clinical unit. In addition, 106 non-nursing staff members, including physicians; respiratory, physical, and occupational therapists; and social work-

ers were vaccinated through the program. Vaccinations were provided to non-nursing personnel when they came to the units and either noted the "Flu Vaccine Here" sign or saw the vaccine being given and requested to receive it. Overall vaccination numbers in the oncology center were much higher than the numbers reported in the literature. Once enough people are vaccinated against the flu, those around them are less likely to become infected. This is referred to as herd immunity. In general, a 95% vaccination rate is necessary to achieve herd immunity. Although this program's vaccination rates averaged about 80%, it was a dramatic improvement over the national vaccination rate for healthcare workers (First do no harm? 2005).

Why vaccination rates in the outpatient department were quite a bit lower than the rates in the inpatient units is not clear. The outpatient department is open only during daylight hours from Monday through Saturday. The physical space is divided into "pods." Each pod is separated from the others, with small numbers of nurses working in each pod. Perhaps the more isolated, busy work environment had a negative impact on vaccination rates, as staff members were less likely to interact with the champion, clinical nurse specialist, or nurse manager throughout the day.

Overall, the reasons that staff members provided for declining the vaccine were (a) gets sick or fears will get sick, (b) never gets a vaccination or never gets sick, (c) reacts to vaccine, (d) does not think it works, (e) has allergies to latex or eggs, (f) is pregnant and concerned about getting the vaccine, and (g) has a history of neurologic disorder (private doctor recommended against the vaccine).

Discussion

The program demonstrated that an individual approach increased flu vaccination rates among healthcare workers in the oncology center. The use of unit-based champions, staff education about vaccination, and knowledge of the barriers to vaccination were essential components of the program. Also beneficial was posting participation rates. Another essential component of success was having the vaccine doses on the unit to facilitate participation in the program.

Results of the vaccination program were used in developing education for the next year's flu program and expanding the program to other units in the hospital. The hospital goals were to continue the program in the oncology center and to expand it to all other departments for the 2007 flu season to decrease the risk of transmission to all patients. The hospital-wide vaccination program was launched in the fall of 2007 and required much communication and commitment among department leaders and nurse managers. Cost savings of the flu vaccination program have not been tracked. However, since the program was instituted, no noso-

comial flu infections have been reported in patients in the oncology center.

The program stopped short of requiring flu vaccination. However, hepatitis vaccination and positive titers to all of the childhood communicable diseases are required for employment. Consideration must be given to whether vaccination against the flu should become a requirement for employment as well.

Author Contact: Anita M. Reedy, RN, MSN, can be reached at reedyan@jhmi.edu, with copy to editor at ONFEditor@ons.org.

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