Influenza vaccination for health care workers: A duty of care

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The medical literature has amply documented the transmission of influenza from patients to health care workers (HCWs) (1,2), from HCWs to patients (3) and between HCWs (4-9). The consequences of influenza transmission within the health care environment include morbidity and mortality among patients, most of who are at high risk for the complications of infection, and illness and absenteeism among health care providers. When outbreaks occur in health care facilities, absenteeism among HCWs may approach 30% to 40%, resulting in severe staff shortages, increased employment costs and the potential endangerment of health care delivery due to the scarcity of replacement workers (10-13).

Individuals who are clinically or subclinically infected may transmit influenza virus to others (14). HCWs who are ill frequently continue to work, thereby risking transmission of infection to patients and colleagues (10,15). Peer pressure from overworked colleagues, dedication to patient care, and concerns regarding financial and employment security may motivate HCWs to work despite illness. HCWs may also experience subclinical infection; these individuals continue to work, potentially transmitting infection to their patients. In a recent British study 59% of HCWs with serological evidence of recent influenza infection could not recall having influenza (16).

Vaccination of HCWs has been shown to reduce serologically confirmed influenza and influenza-like illness among the workers, as well as total mortality in the patients for whom they care (10,17-19). A randomized, double-blind, controlled trial was conducted over three successive epidemic seasons to determine the effectiveness of influenza vaccine given to health care professionals working in two American, acute care, urban teaching hospitals. Vaccine efficacy against serologically defined infection among HCWs was 88% for influenza A and 89% for influenza B (10). A recent randomized trial of influenza vaccination of HCWs in urban, geriatric, long term care facilities (LTCF) in Glasgow showed significant reductions not only in influenza-like illness among the vaccinated HCWs but also in the total mortality of the patients for whom they cared (18). Influenza vaccine programs for HCWs

may also result in the saving of health care dollars and reduced work absenteeism, depending on factors that include the match between infecting strain and vaccine, strain virulence, and the presence of disincentives for staff to take sick time off work (11,13,16,20-22).

Despite the burden of illness caused by influenza in both patients and HCWs, and the demonstrated benefits of HCW vaccination, hospital and LTCF studies have shown HCW vaccination rates of only 26% to 61% (22). A number of reasons why HCWs do not receive the influenza vaccine have been reported, including the fear of side effects and 'needles', skepticism regarding vaccine efficacy, belief in one's own innate ability to resist infection, and barriers to accessing the vaccine (23). It is unfortunate that many of these responses reflect misinformation and/or insufficient attention to the 'duty of care' that HCWs owe their patients (24).

Educational efforts among HCWs must clearly and credibly explain the demonstrated benefits as well as the risks of vaccination. Particular misperceptions (23) that must be dispelled include the following:

- I received the vaccine previously but still got the 'flu. Therefore the vaccine doesn't work.
- The vaccine causes the 'flu.
- I haven't had the 'flu in the past several years. Therefore, I'm not at risk for infection and illness myself, or at risk for transmitting infection to the patients for whom I care.
- I am in my second or third trimester of pregnancy. Therefore, I should not receive the vaccine.
- Guillain-Barré syndrome is a common, vaccine-related adverse event.
- Influenza vaccination programs are less important in the prevention of influenza now that neuraminidase inhibitors are available.

HCWs' concerns regarding the possible adverse effects of influenza vaccination should be listened to and dealt with in an atmosphere of trust and consideration. Those who organize and implement immunization programs for HCWs also have a 'duty of care'. HCWs must be adequately informed about the vaccine. Programs should be available to monitor vaccination uptake and assess potential vaccine-related adverse events among HCWs, and to support the worker in the event of a vaccine-associated occupational injury (25).

Conflicting results have been published regarding the effectiveness of educational efforts to change behaviour among HCWs regarding influenza vaccination (23,24,26). It is likely that improvements in compliance require additional programs to increase incentives, remove obstacles and prioritize patient safety. Incentives include the use of friendly competition between health care 'teams'. Removing the obstacles to vaccination requires ensuring that vaccination is accessible in terms of time and place. For example, medical students and resi-

dents commonly complain that they have insufficient time to attend vaccination clinics (23). Finally, the 'duty of care' for patients on the part of HCWs must prevail. The vaccination of HCWs must be regarded more as a matter of meeting professional and ethical standards than of personal preference. To protect patients at risk for illness and complications caused by influenza, HCWs who develop confirmed or presumed influenza, or unvaccinated HCWs who are not on antiviral prophylaxis should be excluded from direct patient care.

Duty of care includes helping our patients (beneficence), doing no harm (nonmaleficence), and obtaining informed consent (autonomy). The use of the influenza vaccine to prevent illness in ourselves and transmission to others is part of this duty of care. Efforts to foster and promote the vaccination of HCWs must involve educational programs, monitoring and support for those experiencing adverse events, incentives for and removal of obstacles to vaccination, and above all, the ethical practice of health care.

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