

## Template Policy Statement for Influenza Immunization of Health Care Personnel (HCP)

Influenza is a serious infection that causes an average of 36,000 deaths and over 200,000 hospitalizations in the United States each year.<sup>1, 15, 25</sup> HCP are at high risk for acquiring influenza infection because of their exposure to ill patients, as well as their exposure in the community. HCP infected with influenza can spread the virus to patients in their care.<sup>5,6,7</sup> In fact, research suggests that HCP can be a key source of institutional outbreaks, contributing to increased morbidity and mortality among vulnerable patients.<sup>1</sup> HCP encounter patients throughout the influenza season in a variety of settings, including medical practices, general hospitals, specialty hospitals, pediatric hospitals,<sup>8,9</sup> long-term care facilities,<sup>10</sup> emergency departments,<sup>11</sup> ambulatory care settings, rehabilitation facilities and home-care sites.

Vaccination is the single best way to reduce transmission and prevent influenza infection, yet immunization rates among HCP remain low. Less than 40 percent of HCP who have direct contact with patients are immunized annually, despite long-standing recommendations issued by the Centers for Disease Control and Prevention (CDC), the Association for Professionals in Infection Control and Epidemiology (APIC), and other national health care organizations.<sup>1, 12, 13</sup>

Greater emphasis needs to be placed on improving influenza immunization rates among HCP to help ensure patient safety and protection—especially for patients at increased risk of influenza-related complications. Immunization provides personal protection for HCP and minimizes workforce absenteeism during the influenza season.<sup>14</sup>

### **Transmission**

Flu viruses spread mainly from person to person through coughing or sneezing of people with influenza. Sometimes people may become infected by touching something with flu viruses on it and then touching their mouth or nose. The virus can spread rapidly, especially in classrooms, households, offices, and medical settings.<sup>1,15,25</sup>

Individuals are generally infectious the day before symptom onset; however, only around 50% of infected persons will develop classical symptoms of influenza, making exclusion of infected HCP difficult.<sup>1,15</sup> Moreover, individuals remain infectious five or more days after symptoms appear.<sup>1, 15, 25</sup> Studies show HCP are more likely than staff in other areas to work through illness or return to work sooner during illness, thus increasing the likelihood of transmitting the virus to patients.<sup>16</sup> In a University hospital in Brazil, 243 out of 258 employees (94%) stated that they had come to work with the flu and 41% admitted to caring for patients while showing symptoms of acute influenza.<sup>29</sup>

### **Institutional Influenza Outbreaks**

Institutional influenza outbreaks can have serious implications for both patients and HCP. These events can put patients at risk, result in or exacerbate existing staff shortages, slow down admissions, and increase health care costs. For example, an outbreak in a tertiary neonatal intensive care unit (NICU) in the year 2000 included 19 infants, one of whom died. Only 15 percent of staff in the facility had been immunized against influenza. Although investigators could not pinpoint the source of the outbreak, HCP were the suspected source.<sup>17</sup>

A 2001 report documented an outbreak that included four influenza cases among patients in a 12-bed, single-room transplant unit. Three of the four affected patients had no visitors between admission and influenza infection to account for the spread. Investigators concluded that HCP were the likely source of transmission.<sup>18</sup>

A very large outbreak in the early 1990s occurred in a nursing home in New York. Nineteen percent of residents developed influenza. A total of 34 individuals developed pneumonia, 19 were hospitalized, and two died. In this facility, only 10 percent of HCP were immunized.<sup>19</sup>

While index cases are not always identifiable, HCP can easily propagate an outbreak as they move from patient to patient. It is also clear that unvaccinated HCP can be the index case for influenza in a facility, potentially posing a threat to high-risk patients and other workers.

### **Economic Impact of Outbreaks**

Influenza outbreaks are associated with substantial direct and indirect costs. An outbreak in an internal medicine ward of a French hospital in 1999, in which 41 percent of patients and 23 percent of staff were infected, resulted in 14 days of staff sick leave and suspension of all admissions to the ward, including eight that were previously scheduled. The total cost of the outbreak in this small ward was estimated at \$34,000 (U.S. dollars) with the average additional charge per infected patient at \$3,798.<sup>20</sup>

Ensuring the health and safety of HCP has additional implications for patient safety and health care cost containment. Hiring replacement workers often means assuming additional costs beyond those associated with salary. Studies show that using pool staff in place of experienced unit staff increases the incidence of medical errors.<sup>21</sup>

### **Role of Health Care Facilities**

Health care facilities have an important role to play in maximizing influenza vaccination rates among HCP. Every facility should develop and implement comprehensive influenza vaccination programs for employees and vaccination rates should be regularly measured and reported, with ward-, unit-, and specialty-specific coverage rates made available to staff and administration.<sup>1</sup>

## Recommendations

[NAME OF INSTITUTION] recommends the following measures be implemented to increase influenza immunization rates among its HCP and improve patient safety and personal health.

- HCP should receive an annual influenza immunization to prevent spread of the virus to vulnerable patients.
- Develop an influenza immunization program that is implemented annually, to
  - Educate HCP about the importance of influenza immunization in health care settings and the low risk of adverse events associated with immunization;<sup>22</sup>
  - Increase vaccine demand among HCP;
  - Reduce barriers to immunization of HCP by developing programs that increase access to immunization and reduce the cost of the vaccine;<sup>23, 28</sup> and
  - Facilitate the influenza vaccination process, for example, through the use of standing orders.
- Monitor annual immunization rates of employees and provide feedback through the infection control and patient safety programs.
- Monitor and track influenza rates among HCP and compare those figures to national HCP immunization rates. Providing this information may stimulate HCP to seek vaccination.
- Work with public health officials to track community incidence of influenza, using data from emergency rooms, physicians' offices, and clinics. As the incidence increases, infection control and hospital administration should work together to identify pending admissions of potential influenza cases and to establish parameters for visitor restrictions.

*This document was adapted from the Association for Professionals in Infection Control & Epidemiology (APIC).*