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## **APIC Position Paper: Influenza Immunization of Healthcare Personnel**

### **2008 APIC Public Policy Committee**

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Influenza is a serious disease that is associated with high rates of morbidity and mortality. In the United States, an estimated 5% to 15% of the population is affected by the virus each year.<sup>1</sup> Influenza infections result in approximately 226,000 hospital admissions and 36,000 deaths annually.<sup>2</sup> A recent study using a probability model from 2003 data estimated that annual influenza epidemics account for 610,660 life-years lost, 3.1 million days of hospitalization and 31.4 million outpatient visits.<sup>3</sup>

The most efficient method of preventing these outbreaks and the associated morbidity and mortality is through pre-exposure vaccination.<sup>4</sup> Healthcare personnel (HCP) are at high risk for acquiring influenza infection due to their exposure to ill patients as well as their exposure in the community. Because those persons who are at greatest risk of developing complications of influenza are exposed to healthcare personnel in a variety of in patient and outpatient settings, an important strategy to decrease exposure to these high risk individuals is to immunize healthcare workers.<sup>5</sup>

Although annual influenza vaccination for HCP has been recommended by the Centers for Disease Control and Prevention (CDC) since 1981, national survey data from 2005-2006, demonstrated a vaccination coverage level of 42% among these workers.<sup>6</sup> Despite long standing recommendations by APIC, CDC and other national healthcare organizations, the response to voluntary vaccination has not risen significantly over the past decade. Even among those healthcare organizations having aggressive targeted campaigns, 30-50% of HCP remain unvaccinated.<sup>7</sup>

As a profession, we must do a better job of immunizing HCP every year to ensure patient safety and protect those individuals at high risk of developing complications of influenza. Therefore, APIC recommends that hospitals, long term care, and other facilities that employ healthcare personnel,\* implement a comprehensive strategy which incorporates all of the recommendations for influenza vaccination of HCP of the Healthcare Infection Control Practices Advisory Committee (HICPAC) and the Advisory Committee on Immunization Practices (ACIP).<sup>8</sup> As part of a comprehensive strategy, we recommend that influenza vaccine be required annually for all healthcare personnel with direct patient care.\*\* Organizations should adopt a system in which an informed declination is obtained from employees that decline for other than medical reasons. This information should be utilized by the facility to develop improvement strategies for the following vaccine season.

**Rationale:**

- The vaccine is most effective in younger, healthier individuals. Patients at highest risk including the elderly and the immunocompromised are least likely to develop an adequate response to the vaccine.<sup>9</sup> Therefore vaccination of those individuals who come in contact with our vulnerable population is the most effective strategy for prevention.<sup>10</sup>
- The virus can be transmitted to patients by both symptomatic and asymptomatic HCP. Multiple studies show that 70% or more of HCP continue to work despite being ill with influenza, thus exposing patients to the virus.<sup>11</sup>
- Influenza immunization of HCP has been demonstrated to decrease illness in HCP, decrease work absences and decrease mortality in the patients they care for. At least two randomized control studies have demonstrated decreased mortality in patients cared for by HCP who receive the vaccine.<sup>12</sup>
- Influenza vaccine is safe. The most common side effects of the injectable (inactivated) influenza vaccine include soreness, redness, or swelling at the site of the injection. These reactions are temporary and occur in 15%–20% of recipients.<sup>13</sup>
- Immunization requirements are effective in increasing vaccination rates. HCP rates for measles, mumps, rubella and TB screening have been successful in achieving near universal compliance. Requiring influenza vaccine should similarly be highly effective.<sup>14</sup>
- Many agencies and professional organizations, including the Centers for Disease Control and Prevention (CDC), the National Foundation for Infectious Diseases (NFID), the Infectious Disease Society of America (IDSA), and the Joint Commission recommend annual influenza vaccinations for HCP because of their increased risk of contracting and transmitting influenza.<sup>15 16 17 18</sup>

**Conclusion:**

Vaccination of HCP offers an important method for preventing transmission of influenza to high-risk patients. Evidence supports the fact that influenza vaccine is effective, cost efficient and successful in reducing morbidity and mortality. Evidence also demonstrates that the current policy of voluntary vaccination has not been effective in achieving acceptable vaccination rates. As healthcare providers, we have an obligation to ensure that all HCP are vaccinated against influenza. Requiring influenza vaccination of HCP is important to patient safety and quality of care. By increasing HCP vaccination rates, we can play a vital role in protecting the health and well being of our patients, families and the community at large.

*\*These recommendations apply to HCP in acute care hospitals, nursing homes, skilled nursing facilities, physician's offices, urgent care centers, and outpatient clinics, and to persons who provide home health care.*

*\*\*“HCP” refers to all medical and non-medical personnel in contact with patients. The CDC holds this view, including non-remunerated and/or temporary staff, as well as persons exposed to human samples. This definition includes diverse roles with varying exposure levels to the virus and contact with the patients: physicians, nurses, physiotherapists, dieticians, religious workers, cleaning, kitchen and laboratory personnel.*

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- <sup>2</sup> Fiore AE, Shay DK, Haber P, et al. Prevention and Control of Influenza. Recommendations of the Advisory Committee on Immunization Practices (ACIP), *MMWR* 2008; 57(RR-7):1-59.
- <sup>3</sup> Molinari NA, Ortega-Sanchez IR, Messionnier, ML, et al. The annual impact of seasonal influenza in the US: measuring disease burden and cost. *Vaccine* 2007; 25(27):5086-5096.
- <sup>4</sup> Poland, GA, Tosh P, Jacobson RM. Requiring influenza vaccination for healthcare workers: seven truths we must accept. *Vaccine* 2005; 23:2251-2255.
- <sup>5</sup> Ibid.
- <sup>6</sup> Fiore AE, Shay DK, Haber P, et al. Prevention and Control of Influenza. Recommendations of the Advisory Committee on Immunization Practices (ACIP), *MMWR* 2008; 57(RR7):1-59.
- <sup>7</sup> Sartor C, Tissot-Dupont H, Zandotti C, et al. Use of a mobile cart influenza program for vaccination of hospital employees. *Infect Control Hosp Epidemiol* 2004; 25:918-22.
- <sup>8</sup> Pearson ML, Bridges CB, Harper, SA. Influenza vaccination of health-care personnel, recommendations of the Healthcare Infection Control Practices Advisory Committee (HICPAC) and the Advisory Committee on Immunization Practices (ACIP). *MMWR* 2006; 55(RR02):1-16.
- <sup>9</sup> Jackson ML, Nelson JC, Weiss NS, et al. Influenza vaccination and risk of community-acquired pneumonia in immunocompetent elderly people: a population-based, nested case-control study. *Lancet* 2008; 372:352-354.
- <sup>10</sup> Wilde JA, Mc Millan JA, Serwint J, et al. Effectiveness of influenza vaccine in healthcare professionals. *JAMA* 1999; 281:908-913.
- <sup>11</sup> Ibid.
- <sup>12</sup> Bridges CB, Thompson WW, Meltzer MI, et al. Effectiveness and cost-benefit of influenza vaccination of healthy working adults: a randomized controlled trial. *JAMA* 2000; 284:1655-1663.
- <sup>13</sup> Belshe RB, Nichol KL, Black SB, et al. Safety, Efficacy, and Effectiveness of Live, Attenuated, Cold-Adapted Influenza Vaccine in an Indicated Population Aged 5–49 Years. *Clin Infect Dis* 2004; 39:920-927.
- <sup>14</sup> Poland, GA, Tosh P, Jacobson RM. Requiring influenza vaccination for healthcare workers: seven truths we must accept. *Vaccine* 2005; 23:2251-2255.
- <sup>15</sup> Pearson ML, Bridges CB, Harper, SA. Influenza vaccination of health-care personnel, recommendations of the Healthcare Infection Control Practices Advisory Committee (HICPAC) and the Advisory Committee on Immunization Practices (ACIP). *MMWR* 2006; 55(RR02):1-16.
- <sup>16</sup> National Foundation for Infectious Diseases. Call to action: Influenza immunization among health care personnel 2008. Available at: <http://www.nfid.org/pdf/publications/fluhealthcarecta08.pdf>.
- <sup>17</sup> Infectious Diseases Society of American news release 2007. Available at: <http://www.idsociety.org/Content.aspx?id=3708>.
- <sup>18</sup> The Joint Commission on the Accreditation of Healthcare Organizations. Accreditation Program: Hospital Infection Prevention and Control. 2008. Available at: [http://www.jointcommission.org/NR/rdonlyres/38BEBD6D-59D7-4314-9E2B-3C4571F92159/0/HAP\\_IC.pdf](http://www.jointcommission.org/NR/rdonlyres/38BEBD6D-59D7-4314-9E2B-3C4571F92159/0/HAP_IC.pdf).