

## **ACP Policy on Influenza Vaccination of Health Care Workers**

### **BACKGROUND**

The discussion over vaccination of health care workers (HCWs) for influenza must begin with an undisputed set of facts: 1) Influenza vaccines are safe and effective, 2) Unvaccinated HCWs spread influenza to their patients, 3) Hospitalized and other vulnerable patients can have prolonged hospitalizations, severe illnesses, and can die as a result of influenza transmission from HCWs.

Transmission of influenza from HCWs to patients has been documented in nearly every health care setting.<sup>1</sup> Multiple studies show that 70 percent or more of HCWs continue to work despite being ill with influenza, increasing exposure of patients and co-workers. Serologic studies suggest that up to 25% of HCWs have evidence of influenza infection each season.<sup>2,3</sup> Influenza can be transmitted while asymptomatic – allowing HCWs to spread the infection to patients and other staff before they know they are ill.<sup>4</sup> Fifty percent of HCWs who have influenza infections are asymptomatic or have only minor symptoms.<sup>5</sup> A review of nosocomial influenza outbreaks in the hospital setting compared attack rates of patients with those of HCWs, and found that HCW attack rates mirrored, and even surpassed, patient attack rates in epidemic areas of the hospital.<sup>6</sup> In addition, the study reported median excess patient mortality rates of 16 percent, with rates in excess of 33 to 60 percent for ICU and transplant units.

### **LEADERS ON THIS ISSUE**

The Centers for Disease Control and Prevention has recommended influenza vaccination for all health care workers since 1981. The major professional societies (see attached compendium) have all endorsed and published recommendations requiring HCWs with direct patient care to be immunized, unless they sign an informed declination. In addition, the new Joint Commission standard (effective January 2007) requires organizations to establish an annual influenza vaccination program, educate staff and physicians about flu vaccination, evaluate vaccination rates and reasons for nonparticipation in the immunization program at the unit level, and implement enhancements to the program to increase participation. The recommendation of the Adult Immunization Advisory Board is that a series of educational activities be centered on this message:

An annual influenza vaccine should be required for every health care worker with direct patient care activities, unless a medical contraindication to influenza immunization exists, a religious objection to immunization exists, or an informed declination is signed by the health care worker.

In so doing, we are proposing only to do for influenza vaccination of HCW that which we already require for HCWs for hepatitis B, measles, mumps, varicella, and annual TB screening. HCW immunization rates now exceed 96% - 99% after mandatory requirements for rubella, measles, mumps, hepatitis B, and varicella vaccinations. Once OSHA mandated Hepatitis B immunization for HCWs – OR – informed declination, immunization rates skyrocketed and now exceed 99%.

## THE EVIDENCE

Immunizing health care workers safely and effectively prevents a significant number of influenza infections, hospitalizations, and deaths among the patients they care for, as well as preventing workplace disruption and medical errors by workers absent from work due to illness, or present at work but ill.<sup>7,8,9</sup>

Influenza vaccination of HCWs lowers mortality among patients. A study of 20 hospitals found an overall 51% staff vaccination rate in hospitals where vaccine was offered vs. 5% staff vaccination rate in hospitals where influenza vaccine was not offered. Mortality among patients was 13.6% (102/749) in the hospitals providing HCW vaccination vs. 22.4% (154/688) ( $P = 0.01$ ) in hospitals that did not.<sup>10</sup> In another study of 12 hospitals, HCWs and patients were randomized to receive influenza vaccine. There was no difference in patient mortality between hospitals with patients who received vaccine and patients who did not. However, the mortality rate among patients in hospitals where HCWs got vaccine was 10%, compared with 17% among hospitals that did not immunize HCWs.<sup>11</sup>

Influenza vaccination of health care workers results in improved patient safety, improved employee safety, and decreased health care expenditures.<sup>12,13</sup> In a 2003 study of University of Ontario house staff, house staff reported working during most days they were ill and infectious. Vaccination was associated with a 30% decrease in ILI ( $p=0.05$ ), a 43% decrease in fever and cough ( $p=0.03$ ), and a 63% reduction in absenteeism. Thirty percent of unvaccinated but 60% of vaccinated residents believed flu vaccination should be mandatory, but depended upon the system to make sure they received it.<sup>14</sup>

## AN ETHICAL OBLIGATION

Vaccinating HCWs against influenza represents a duty of care, and a standard of quality care,<sup>15,16,17</sup> so it should be reasonable that this duty should supercede HCW personal preference. Internists care for the patients most at risk of influenza-related morbidity and mortality. As Rea and Upshur state “Physicians have an *obligation* to their patients to take all reasonable actions to prevent transmission in the context of patient care.”<sup>18</sup> The needs of the patients we as internists are privileged to care for must come before HCW preference – and as the professional society representing internists, ACP endorses taking such a leadership position.

## REFERENCES

- <sup>1</sup> The Society for Healthcare Epidemiology of America. SHEA Position Paper: Influenza vaccination of healthcare workers and vaccine allocation for healthcare workers during vaccine shortages, 2005. Available at [http://www.shea-online.org/Assets/files/HCW\\_Flu\\_Position\\_Paper\\_FINAL\\_9-28.pdf](http://www.shea-online.org/Assets/files/HCW_Flu_Position_Paper_FINAL_9-28.pdf). Accessed 05/07/07.
- <sup>2</sup> Carman WF, Elder AG, Wallace LA, et al. Effects of influenza vaccination of health-care workers on mortality of elderly people in long-term care: a randomised controlled trial. *Lancet*. 2000 Jan 8;355(9198):93-7.
- <sup>3</sup> Potter J, Stott DJ, Roberts MA, et al. Influenza vaccination of health care workers in long-term-care hospitals reduces the mortality of elderly patients. *J Infect Dis*. 1997 Jan;175(1):1-6.
- <sup>4</sup> Ludwig-Beymer P, Gerc SC. An influenza prevention campaign: the employee perspective. *J Nurs Care Qual*. 2002 Apr;16(3):1-12.
- <sup>5</sup> Stott DJ, Kerr G, Carman WF. Nosocomial transmission of influenza. *Occup Med (Lond)*. 2002 Aug;52(5):249-53.
- <sup>6</sup> Salgado CD, Farr BM, Hall KK, Hayden FG. Influenza in the acute hospital setting. *Lancet Infect Dis*. 2002 Mar;2(3):145-55. Review. Erratum in: *Lancet Infect Dis* 2002 Jun;2(6):383.
- <sup>7</sup> Wilde JA, McMillan JA, Serwint J, Butta J, O’Riordan MA, Steinhoff MC. Effectiveness of influenza vaccine in health care professionals. A randomized trial. *JAMA* 1999;281:908–13.
- <sup>8</sup> Bridges CB, Thompson WW, Meltzer MI, Reeve GR, Talamonti WJ, Cox NJ, et al. Effectiveness and cost-benefit of influenza vaccination of healthy working adults: A randomized controlled trial. *JAMA* 2000;284:1655–63.
- <sup>9</sup> Demicheli V, Jefferson T, Rivetti D, Deeks J. Prevention and early treatment of influenza in healthy adults. *Vaccine* 2000;18:957–1030.
- <sup>10</sup> Carman WF, Elder AG, Wallace LA, et al. Effects of influenza vaccination of health-care workers on mortality of elderly people in long-term care: a randomised controlled trial. *Lancet*. 2000 Jan 8;355(9198):93-7.
- <sup>11</sup> Potter J, Stott DJ, Roberts MA, et al. Influenza vaccination of health care workers in long-term-care hospitals reduces the mortality of elderly patients. *J Infect Dis*. 1997 Jan;175(1):1-6.
- <sup>12</sup> Nichol KL, Lind A, Margolis KL, Murdoch M, McFadden R, Hauge M, et al. The effectiveness of vaccination against influenza in healthy, working adults. *N Engl J Med* 1995;333:889–93.
- <sup>13</sup> Carman WF, Elder AG, Wallace LA, McAulay K, Walker A, Murray GD, et al. Effects of influenza vaccination of health-care workers on mortality of elderly people in long-term care: a randomised controlled trial. *Lancet* 2000;355:93–7.
- <sup>14</sup> Lester RT, McGeer A, Tomlinson G, Detsky AS. *Infect Control Hosp Epidemiol*. 2003 Nov;24(11):839-44.
- <sup>15</sup> Partnership for Prevention. Strengthening adult immunization: a call to action. Available at <http://prevent.org/images/stories/Files/docs/CalltoAction.pdf>. Accessed 05/07/07.
- <sup>16</sup> National Quality Forum. Safe practices for better healthcare: 2006 Update—a consensus report. Washington DC, 2006.

<sup>17</sup> The Leapfrog Group. Leapfrog Hospital Quality and Safety Survey. Available at [https://leapfrog.medstat.com/\(4r4gxo45syqnm55lodjht45\)/index.aspx](https://leapfrog.medstat.com/(4r4gxo45syqnm55lodjht45)/index.aspx). Accessed 05/07/07.

<sup>18</sup> Rea E, and Upshur R. Semmelweis revisited: the ethics of infection prevention among health care workers. *CMAJ* 2001 May 15;164:1447-48.