

## LETTERS TO THE EDITOR

## Employee Thoughts on Influenza Vaccine: Here We Go Again

TO THE EDITOR—Approximately 36,000 deaths occur in the United States annually as a result of influenza epidemics, according to data from 1990 to 1999. Transmission of influenza in the healthcare setting remains a primary concern for infection prevention practitioners, because healthcare professionals may acquire influenza from patients or may serve as a reservoir of transmission. Despite these concerns, the influenza vaccination coverage level was 41.9% among healthcare workers in the United States in 2004.<sup>1,2</sup> In a report by King et al.<sup>3</sup> on 1,651 healthcare workers, the vaccination rate was 38%: workers who were under 50 years of age, African American, or health aides had the lowest vaccination rates. In another study at a large urban teaching hospital, 200 surveys completed by emergency department staff revealed an overall influenza vaccination rate of 50%.<sup>4</sup> Effective January 2007, the Joint Commission on the Accreditation of Healthcare Organizations requires that healthcare organizations implement staff influenza immunization programs and track employee immunization rates.

At Allegheny General Hospital, we have had an active influenza immunization program for several years. A multidisciplinary influenza vaccine task force, comprised of physicians, infection prevention practitioners, pharmacists, and nurses, meets annually to discuss methods for improving the vaccination rate. The trivalent inactivated influenza vaccine is offered free to all employees during influenza season until supplies are exhausted. Employees are notified of several vaccination session dates and times (including physician department meetings) by means of e-mail from the chief executive officer, posters, and department director meetings. Employees are asked to sign a consent form and are given the influenza Vaccine Information Statement from the Centers for Disease Control and Prevention.<sup>5</sup> If employees are unable to attend a vaccination session, they may report directly to Employee Health during the influenza season. Despite our active campaign efforts, vaccination rates at our facility remain consistent with the underwhelming rates of compliance evidenced in the medical literature.

During the 2005-2006 influenza season, 42.1% of our employees were vaccinated. During the 2006-2007 influenza season, the our Influenza Task Force was interested in evaluating, from a quality assurance perspective, why employees were choosing not to receive the vaccine. A survey was generated and sent to all department managers via interoffice mail and to all employees via e-mail. Of a total of 5,000 employees, 995 (19.9%) returned the survey; 718 (72.2%) stated that

they were planning on getting vaccinated this year; 265 (26.6%) declined to get vaccinated; and 12 (1.2%) did not accept or decline influenza vaccination on the survey and therefore were not further categorized. In addition, 7 survey responders did not specify their job position. Therefore, 711 of the 718 people that were planning on getting vaccinated were categorized: 178 (25%) had direct, hands-on patient contact (ie, physicians, nurses, respiratory therapists, occupational therapists, physical therapists, and phlebotomists) and 533 (75%) had no direct patient contact. Notably, only 5% of responders were physicians, and 17% were nurses or nurse aides.

In contrast, of the 265 survey responders who indicated they would decline vaccination, 86 (32.5%) worked directly with patients and 179 (67.5%) had no patient contact. Specifically, physicians (4 [1.5%] of 265) and nursing staff (54 [20.4%] of 265) were underrepresented, and data for those groups were therefore skewed. The most common reason why employees declined to receive the vaccine was the concern that the vaccine would give them "flulike" symptoms; this was indicated by 70 (26.4%) of the 265 who declined vaccination. Fifty-three responders (20%) indicated they "don't believe in vaccines," 33 (12.5%) indicated they "hate shots," and 24 (9.1%) indicated they were "not at risk for getting the flu." Reasons given for declination by employees who had direct patient contact and those who did not are listed in the Table.

A closer look at the data indicates that different populations of employees at our hospital maintain different rationales for declining seasonal influenza vaccination, and each subpopulation maintains unique perceptions of the value of the annual vaccination campaign. The reasons for employees declining vaccination are consistent with the barriers reported in the literature (eg, fear of side effects or needles and the likelihood of contracting influenza), and yet notable differences in perceptions exist between employees who are involved in direct patient care and those who are not. Physicians and others involved in direct patient care were less inclined to complete the survey forms, which suggests that the obstacles to obtaining completed surveys regarding influenza vaccination may be more difficult to overcome than the obstacles to vaccination itself. Of note, physicians who receive the influenza vaccine through Employee Health far outnumber physicians who complete the survey form.

This investigation of perceptions regarding the influenza vaccine highlights the fact that we need educational initiatives that are tailored to reflect the concerns of the specific audience, if we aim to maximize vaccination rates in US hospitals. In addition, our current methods for assessing influenza vaccination rates include only employees who receive influenza vaccine from Employee Health and exclude those who receive the vaccine in other venues, which further com-

TABLE. Reasons Given by Survey Respondents for Declining Influenza Vaccination

Reason	No. (%) of respondents		
	Overall (n = 265)	With direct patient contact (n = 86)	Without direct patient contact (n = 179)
The vaccine gives me "flulike" symptoms	78 (29.4)	19 (24.4)	59 (75.6)
I don't believe in vaccines	53 (20.0)	22 (41.5)	31 (58.5)
I just hate shots	33 (12.5)	10 (30.3)	23 (69.7)
I am not at risk for getting the flu	24 (9.1)	5 (20.8)	19 (79.2)
I fear needles	23 (8.7)	3 (13.0) <sup>a</sup>	20 (87.0) <sup>a</sup>
I was already vaccinated at my doctor's office	19 (7.2)	5 (26.3)	14 (73.7)
I am not a risk to any patients or coworkers	10 (3.8)	2 (20.0)	8 (80.0)
I already had the flu	10 (3.8)	4 (44.4)	5 (55.6)
I have an egg allergy	8 (3.0)	5 (62.5)	3 (37.5)
I might consider it if mobile vaccination carts were available for expanded access	6 (2.3)	1 (16.7)	5 (83.3)
I can never find the time to get vaccinated	5 (1.9)	0 (0)	5 (100)
I was vaccinated last year	5 (1.9)	2 (40.0)	3 (60.0)
I was already vaccinated at a pharmacy or clinic	4 (1.5)	1 (25.0)	3 (75.0)

<sup>a</sup> P = .027, Fisher exact test.

plicates our understanding of true institutional rates of immunization. Despite the survey results, the proportion of employees who were vaccinated against influenza increased to 2,203 (44.1%) of 5,000 in the 2006-2007 season. A more aggressive campaign to educate all healthcare workers about the facts and myths of the influenza vaccine will be stressed in subsequent seasons.

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## Is Diarrhea Enough to Assess the Severity of *Clostridium difficile*-Associated Disease?

TO THE EDITORS—The most common cause of nosocomial infectious diarrhea in adults is *Clostridium difficile*.<sup>1</sup> Recent reports suggest that *C. difficile* colitis may be evolving into a more severe disease. Both the frequency and severity of *C. difficile* colitis are increasing.<sup>2-4</sup>

We read the article by Dubberke et al.<sup>5</sup> with interest. The authors developed a severity grading system for *Clostridium difficile*-associated disease (CDAD) by modifying the criteria given for grading diarrhea and colitis in the National Cancer Institute's Common Terminology Criteria for Adverse Events (CTCAE), version 3.0. The authors conclude that this CDAD