

Neal Flomenbaum, MD
EDITOR-IN-CHIEF



One Flu Over the Cuckoo's Nest

In recent years, influenza seems to come at the most inopportune time, bringing with it misery and confusion to patients and health-care providers alike. In January 2000, flu arrived amid heightened vigilance for the “flu-like symptoms” of bioterrorism. During the Spring of 2009, an unseasonal pandemic of A/H1N1 (“swine flu”) caught many hospitals off-guard and unable to absorb the increased numbers of stricken patients in their ED.

This season, flu came to the Northeast in late December, when many EDs in New York City were still struggling to cope with an increased number of patients, many who ordinarily would have been seen at hospitals still closed in the aftermath of Hurricane Sandy.

In the days before Christmas, several members of our ED staff became symptomatic and tested positive for influenza A, including some who had been vaccinated weeks earlier—raising the specter of a virulent strain of flu and an only moderately effective vaccine. Adding to the feeling that this was going to be a really bad flu season were reports that the virus was traveling with respiratory syncytial virus, pertussis, and a nasty new norovirus.

To deal with yet another unfolding crisis this year, we immediately sent even mildly symptomatic staff home and encouraged them to start antiviral meds even before laboratory confirmation of flu. In addition, we emphasized—and rigidly monitored—frequent handwashing and use of masks and gloves by all staff.

Any doubts about the severity of the flu pattern we were experiencing, or the need for the strict containment measures we had

adopted, ended in January when the Centers for Disease Control and Prevention and state health departments began posting increasing numbers of reported flu cases. By February, the New York State Department of Health had logged almost 34,000 lab-positive cases statewide—compared to 4,404 cases for the entire 2011-2012 season; 20,380 for 2010-2011; and 25,086 for 2009-2010 (source: NYS Department of Health “Statewide Influenza Surveillance Report for Week Ending February 2, 2013”).

The unexpected early appearance, rapid spread, and severe symptoms of influenza this year, together with an apparently weak vaccine, presented a confusing picture. But CDC itself might have inadvertently contributed to the confusion: As flu began to spread, CDC described this year’s trivalent vaccine for A/H3N2, A/H1N1, and B as a 90% match for the prevalent strains causing illness. This information, disseminated by the media, undoubtedly encouraged many people to be vaccinated—a good thing. But **vaccine match isn’t the same as effectiveness**, which, on a practical basis, can only be determined later in the season. When CDC reported in January that the vaccine appeared to be 62% effective, many thought they had been misled about its value and certainly were not reassured by CDC’s further assertion that 62% is about the same vaccine effectiveness as in most years.

Yet another source of confusion was CDC’s use of the word “effectiveness,” which might, logically, have been assumed to refer to preventing flu *infection*—something that could be reliably determined only in a double-blind trial of vaccinated and unvaccinated subjects

exposed to influenza virus, followed by laboratory testing. However, the actual statement in the January 18, 2013, edition of *Morbidity and Mortality Weekly Report (MMWR)*, based on observational studies, was: “Findings from early data suggest that this season’s vaccine so far is reducing the risk of having to go to the doctor for influenza by about 60% for vaccinated people” (italics added).

Clearly, this is *not* the same as whether a person does or does not actually have influenza.

Although confusion over the words “match” and “effectiveness” might have encouraged people to be vaccinated this year, this confusion might also undermine the success of future vaccination programs. **CDC needs to re-establish credibility with the public in a few easily understood sentences that describe the meaning of, and difference between, “match” and “effectiveness.”** At the same time, CDC needs to emphasize that vaccination is only one component of a program to avoid getting and spreading the flu—a program that must also include handwashing; avoiding crowds; covering coughs and sneezes; and, when necessary, wearing a mask and gloves. **EM**

Editor’s note: CDC’s February 22, 2013 MMWR contains a second interim surveillance report on 2012-2013 influenza vaccine effectiveness (VE). The report estimates a VE of 47% against influenza A/H3N2—the predominant strain this season—and 67% against B virus infection, for an overall VE of 56%. Of particular concern is the age-adjusted VE of 9% against influenza A in persons older than 65 years.