

## Influenza 2015-2016: Challenges and Recommendations

RONALD H. GOLDSCHMIDT, MD  
*San Francisco General Hospital, San Francisco, California*

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The influenza season is here. Accompanying it are the omnipresent influenza immunization programs in pharmacies, grocery stores, and of course, physicians' offices. Major points to note for this influenza season include changes in vaccination recommendations for children; diagnosis on the basis of symptoms; and treating only high-risk and seriously ill patients with antiviral drugs. This editorial summarizes some of the recent changes in guidance and provides an updated overview of influenza prevention and management for 2015-2016.

Influenza vaccination for adults and children older than six months remains a critical prevention tool. Until last year's mismatch between the vaccine and the actual circulating influenza strains, recent annual influenza vaccines have been 47% to 61% effective.<sup>1-3</sup> Last year, however, the vaccine was only 18% effective against the predominant influenza A (H3N2) virus and 19% effective against all 2014-2015 influenza viruses.<sup>4</sup> The 2015-2016 vaccines are targeted against the influenza strains that are most likely to predominate in the Northern Hemisphere this year.<sup>5</sup> The trivalent vaccines target specific influenza A virus strains (H1N1 and H3N2), plus an influenza B strain. The quadrivalent vaccines target these influenza A and B viruses plus an additional influenza B virus. Numerous vaccine preparations are available; none is recommended over the others by the Advisory Committee on Immunization Practices or the Centers for Disease Control and Prevention.<sup>6</sup> See <http://www.aafp.org/afp/2015/1015/p732.html#afp20151015p732-t1> for a summary of vaccine preparations.

There are two important changes in vaccination recommendations for children.<sup>6</sup>

First, the dosing recommendations for children six months to eight years of age have been simplified. Children who have previously received two or more influenza vaccinations require only one vaccine dose in 2015-2016. Children who are not known to have received two or more doses require two doses of vaccine this year, administered at least four weeks apart. Secondly, because there are no data demonstrating consistently greater relative effectiveness of the live attenuated influenza vaccine (Flumist) over the inactivated influenza vaccine, the previous recommendation to preferentially use the live attenuated influenza vaccine in children two to eight years of age has been withdrawn. Both vaccine types are considered equally effective, although the live attenuated influenza vaccine is not recommended for children who have asthma or who are taking aspirin, and it is contraindicated for those with an egg allergy.

Recommendations for vaccination of adults 65 years and older have not changed. Some experts had recommended double-strength vaccination for older adults, based on laboratory measures of immune response. A recent reevaluation of data from the original studies and from previously unreported clinical trials suggests fewer episodes of culture-confirmed influenza and influenza-like illnesses with double-strength preparations,<sup>7</sup> although the number needed to treat is approximately 220.<sup>8</sup> Either single- or double-strength immunization is acceptable, although double strength is more costly.

The diagnosis of influenza is generally made by patients themselves based on symptoms consistent with the year's epidemic. For clinicians making or confirming the diagnosis, laboratory testing usually is not required. Rapid antigen testing for influenza has an unacceptably high false-negative rate and rarely affects treatment. When a definitive diagnosis is necessary, the reverse-transcriptase polymerase chain reaction test (influenza PCR), which provides a result in two to five hours, can be used. ►

## Editorials

Treatment of suspected or confirmed influenza with a neuraminidase inhibitor is not routinely indicated. Because influenza is usually self-limited, the benefit of a modest decrease in time to symptom alleviation needs to be balanced against the increased risk of nausea and vomiting with oseltamivir (Tamiflu), as well as medication cost. A 2015 meta-analysis<sup>9</sup> concluded that the benefits of oseltamivir might be slightly greater than suggested in earlier Cochrane reviews.<sup>10,11</sup> The Cochrane reviews estimate symptom alleviation 17 hours earlier (over the course of a six- to seven-day illness) in adults treated with oseltamivir, whereas the new analysis estimates a 24-hour difference (over the course of a five- to six-day illness) among treated adult patients with laboratory-confirmed influenza. The 2015 meta-analysis also suggests that oseltamivir treatment might reduce lower respiratory tract complications and hospital admissions. However, these conclusions have been questioned,<sup>12-14</sup> prompting calls for additional research to better define benefits and risks of oral neuraminidase inhibitors.<sup>15</sup> The Centers for Disease Control and Prevention continues to recommend treatment for persons who have severe or progressive illness, require hospitalization, or are at high risk of influenza-related complications.<sup>5,16</sup>

The basics of patient care during influenza season are well established: early immunization, including implementation of the new childhood influenza immunization practices; personal respiratory hygiene; avoidance of human contact when ill (including in physicians' offices), and symptom control at home. Neuraminidase inhibitor treatment is not routinely indicated. The impact of influenza on the nation's health this year, however, will depend on something the clinician cannot control: the match between the predominant virus and the approved vaccine preparations. Last year's mismatch might reinforce misconceptions among patients that the influenza vaccine is unnecessary or unhelpful, or that its risks exceed potential benefits. In addition, some persons who received the vaccine last year and now learn that the 2015-2016 vaccines are similar might incorrectly believe they do not need to be reimmunized. We need to emphasize to our patients the decreased severity of the disease and reduced hospitalization rates in those who have been properly vaccinated, and provide neuraminidase inhibitor treatment only to patients who are most at risk or seriously ill.

Address correspondence to Ronald H. Goldschmidt, MD, at [RGoldschmidt@nccc.ucsf.edu](mailto:RGoldschmidt@nccc.ucsf.edu). Reprints are not available from the author.

Author disclosure: No relevant financial affiliations.

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