

Preparing for the 2020-2021 Influenza Season

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As health care systems across the US are experiencing or preparing for surges in individuals with coronavirus disease 2019 (COVID-19) this fall and winter, the potential for cocirculation of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and influenza viruses poses added challenges for clinicians and public health. Recent reports suggest that influenza activity can be influenced substantially by nonpharmaceutical measures implemented to control the spread of SARS-CoV-2 (eg, use of face masks, social distancing, restrictions on public gatherings, travel restrictions) and other factors influenced by the COVID-19 pandemic (eg, reduced domestic and international travel). In early spring of 2020, sharp declines in influenza activity coincided with implementation of SARS-CoV-2 control measures in the US.¹

More recently, Australia, Chile, and South Africa experienced very low influenza virus circulation during the typical Southern Hemisphere influenza season.¹ Although clinic visits for influenzalike illness have declined, with fewer respiratory specimens tested in many countries, the proportion of respiratory specimens testing positive for influenza viruses has declined markedly. However, recent increases in influenza activity, notably due to influenza A(H3N2) viruses in Southeast Asia, could have implications for spread to other regions and may forecast the potential for influenza virus circulation in areas with limited SARS-CoV-2 mitigation efforts.² Given the public health implications of seasonal influenza and uncertainty of the extent and severity of the upcoming season, preparing for the 2020-2021 influenza season should include established influenza prevention and control measures (vaccination and antiviral treatment).

Public Health Benefit of Annual Influenza Vaccination

The 2019-2020 influenza season in the US peaked in mid-February, before extensive SARS-CoV-2 transmission occurred. Revised preliminary estimates from the Centers for Disease Control and Prevention (CDC) are that approximately 38 million influenza-related illnesses, 18 million medical visits, 400 000 hospitalizations, and 22 000 deaths occurred during 2019-2020 when influenza A(H1N1)pdm09 and influenza B viruses predominated—estimates that are lower than in prior seasons in which influenza A(H3N2) viruses predominated.³ Although the effectiveness of influenza vaccines varies from season to season and among different age groups, the public health importance of annual influenza vaccination is demonstrated by the estimated effect on disease burden. During 2010-2020, influenza vaccination was estimated to have averted 1.4 million to 7.5 million illnesses, 0.7 million to 3.5 million medical visits, 39 000 to 105 000 hospitalizations, and 3500 to 12 000 deaths from influenza each season in the US.⁴

A record number of 194 million to 198 million influenza vaccine doses are expected to be available in the US this influenza season (Figure). Although all persons 6 months or older are recommended by the CDC for influenza vaccination by the end of October, persons remaining unvaccinated are strongly encouraged to continue to pursue vaccination in November and December, and as long as influ-

enza viruses are circulating and vaccine is available.⁵ Although the extent of influenza activity this season is unpredictable, influenza vaccination can reduce the burden of acute respiratory illness and complications attributable to influenza and thereby decrease the effect of influenza on health care systems so that available health care resources can be focused on patients with COVID-19.

Influenza Vaccination of Persons With COVID-19

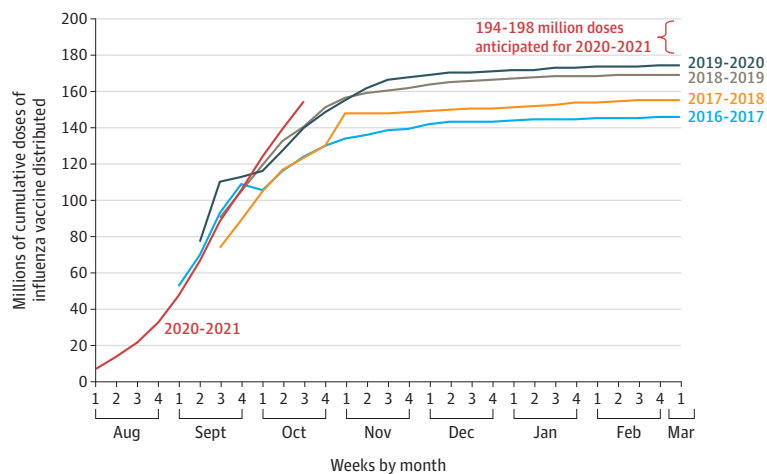
Influenza vaccination of hospitalized patients at discharge during influenza season can increase influenza vaccination coverage of persons at high risk for influenza complications. However, there are no available data on the safety, immunogenicity, or effectiveness of influenza vaccines in persons with COVID-19 to inform the optimal timing of influenza vaccination, including for those with severe or critical illness who received short-acting anti-inflammatory therapy (eg, dexamethasone) or long-acting immunomodulators. For persons with suspected or laboratory-confirmed COVID-19, clinicians should consider delaying influenza vaccination of patients with mild illness until at least 10 days after illness onset and improvement in symptoms and 24 hours without fever without antipyretic medication to reduce transmission risk to vaccinators and defer vaccination of those with moderate and more severe illness until the patient is no longer acutely ill.⁶ If influenza vaccination is delayed, patients should be reminded to return for influenza vaccination after they have recovered from their acute illness. Specific guidance for vaccinations during the COVID-19 pandemic is available on the CDC's website.⁶

Influenza Testing and Antiviral Treatment

Because of overlapping signs, symptoms, and complications, influenza virus infection cannot be distinguished by clinical findings alone from SARS-CoV-2 infection or coinfection with both viruses. When influenza viruses and SARS-CoV-2 are cocirculating in a community, testing is needed to determine whether either virus or coinfection is present in patients presenting with acute respiratory illness. In addition to US Food and Drug Administration (FDA)-cleared influenza nucleic acid detection and rapid influenza antigen detection assays, and SARS-CoV-2 nucleic acid and antigen detection assays that have received FDA Emergency Use Authorization, several multiplex assays that detect both SARS-CoV-2 and influenza A and B viruses have received FDA Emergency Use Authorization.⁷ These multiplex assays vary in the time to results from 15 to 40 minutes to up to 8 hours and are authorized for a variety of clinical settings, including point-of-care clinic use. For hospitalized patients with suspected influenza, use of nucleic acid detection assays for influenza viruses are recommended to guide antiviral treatment decisions. For outpatients, influenza testing can be done if the results will inform clinical management decisions. SARS-CoV-2 testing and treatment for hospitalized patients and outpatients with suspected and laboratory-confirmed COVID-19 should follow existing guidelines, such as those from the National Institutes of Health.⁸

Four FDA-approved antivirals are recommended for the treatment of individuals with influenza (oseltamivir, zanamivir, peramivir, and baloxavir). Efficacy of early antiviral treatment of influenza (within 2 days

Figure. Cumulative Doses of Influenza Vaccines Distributed by Week and Season, 2016-2017 to 2020-2021



From the Centers for Disease Control and Prevention FluFinder distribution tracking program.

of illness onset) in outpatients has been shown in randomized clinical trials, and observational studies have shown clinical benefit when antiviral treatment is administered at the time of admission to hospitalized patients with influenza.⁹ Starting antiviral treatment as soon as possible is recommended for the following priority groups: persons requiring hospitalization with suspected influenza (without waiting for influenza testing results) and outpatients with suspected or laboratory-confirmed influenza who have progressive disease or complications or who are at high risk for influenza complications.⁹

Because antiviral treatment of influenza is most effective when initiated soon after symptoms begin, clinicians should encourage persons at high risk for influenza complications to contact them as soon as they experience acute respiratory illness symptoms if there is local influenza activity. Whether evaluated in a clinical setting or through telemedicine consultation, influenza can be clinically diagnosed in outpatients without influenza testing and empirical antiviral treatment can be prescribed; patients should be advised to start

treatment as soon as possible. Clinical algorithms for testing and treatment of influenza when SARS-CoV-2 and influenza viruses are cocirculating are available on the CDC's website.¹⁰

Conclusions

The clinical and public health effects of influenza in the US for the upcoming winter during the COVID-19 pandemic are difficult to predict and could vary widely by location and by extent of SARS-CoV-2 community mitigation measures. Annual vaccination remains the best tool for preventing influenza, and vaccine availability is projected at record levels. Initiation of antiviral treatment as soon as possible is recommended for persons with suspected or confirmed influenza who are hospitalized, have progressive disease, or are at high risk for complications. Clinicians should monitor local influenza and SARS-CoV-2 activity (eg, local and state public health surveillance data, testing performed for influenza and COVID-19 at health care facilities) to inform evaluation and treatment of patients with acute respiratory illness.

ARTICLE INFORMATION

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Published Online: November 2, 2020.
doi:10.1001/jama.2020.21849

Conflict of Interest Disclosures: None reported.

Disclaimer: The findings and conclusions in this report are those of the author(s) and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

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