CLINICAL VIGNETTE

Influenza Vaccine Skepticism

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Case Report

A 31-year-old man with no major medical problems presents to primary care clinic for his annual physical. He is feeling well and has no complaints. His physical examination is unremarkable, and the majority of the visit is spent discussing preventive care. He is counseled on maintaining a healthy diet, exercising regularly, limiting excess alcohol consumption and avoiding tobacco. Depression screen is negative.

The patient received his routine childhood vaccinations but has not had regular care by a physician since then, and he has not received any vaccines as an adult. Influenza vaccination is offered, and the patient politely declines. He says he remembers once, many years ago, getting the flu after receiving a flu shot. Other than that time, he says he never gets sick, so he does not see the point in risking it today.

Discussion

Trends in Vaccine Uptake

According to the CDC's most recent report in their series "Surveillance of Vaccination Coverage Among Adult Populations," adult vaccine uptake appears to have modestly increased in recent years but overall remains low. [1] Nationally, early flu season vaccination coverage among adults was 44.9% during the 2018-19 flu season, up 6.8% from the year before.[2] Uptake of other vaccines has also been inadequate. In 2016, vaccine coverage rates in California had the most data: tetanus (Td or Tdap), 62.0%; shingles, 35.9%; and pneumococcal disease, 72.4% and 34.1%, respectively, among adults 65 and older versus younger adults at increased risk due to comorbidity.[3] Recent news reports have identified local clusters of pertussis,[4] and widespread outbreaks of measles across the United States and internationally have led to local transmission in Los Angeles.[5] The chief executive of the United Kingdom's National Health Service, Simon Stevens, said recently at a health policy summit, "Across the world two to three million lives are saved each year by vaccination but as part of the fake news movement the vaccination deniers are getting some traction."[6]

Improving Vaccine Uptake

According to the CDC, evidence-based practices that may improve vaccination uptake include: routine assessment of patients' vaccination indications, implementation of a reminder-recall system, use of standing-order programs for vaccination, and practice-level assessment and feedback of vaccine acceptance rates.[1] All of these types of interventions are implemented at UCLA, but many patients nonetheless avoid vaccination. Improving vaccine coverage will require patient education and a deeper understanding by primary care physicians of why patients are skeptical of vaccines. Using data from the CDC, [7-16] a patient-oriented pamphlet, see Appendix 1, created to help improve general understanding of vaccine safety and efficacy, and to serve as a conversation starter between patients and their doctors. The following discussion highlights a few key points that frequently impact decisions about accepting vaccination against influenza.

Risks of Vaccination

In this vignette, the patient declined influenza vaccination because he fears it will cause him to get the flu. Indeed, why would anyone accept a treatment that causes the very disease it is meant to prevent? In fact, flu shots contain inactivated viral particles. You cannot get influenza from a flu shot. However, mild flu-like symptoms are common after vaccination. Primary care physicians need to discuss the risks and benefits to help their patients understand the nuanced balance in which the recommendation for routine flu vaccination lies.

Patients may cite various other reasons why they are hesitant to accept influenza vaccination. People allergic to eggs may have been told they cannot be vaccinated, but patients with mild-to-moderate egg allergies tolerate modern flu shots, and even patients with severe egg allergies can be vaccinated in a monitored setting. Patients with ongoing moderate to severe illnesses should defer vaccination until they recover. Also, individuals who have developed Guillain-Barré Syndrome after flu vaccine should not be vaccinated.

Benefits of Vaccination

Symptoms of influenza can be similar to the side effects patients may feel after being vaccinated against the flu, including: fever, cough, headache, and fatigue. Widespread vaccine uptake is nonetheless a powerful tool for decreasing morbidity and mortality. For every 100 patients that get the flu, vaccination prevents about 40 hospitalizations; and, for every 100 patients that are hospitalized for influenza, vaccination prevents approximately 59 admissions to the intensive care unit.

During the 2017-18 flu season, vaccination prevented approximately 8,000 deaths in the United States.[17] Young children and older adults are particularly susceptible to adverse outcomes from influenza infection, and herd immunity is essential to halting the spread of the virus through communities. When setting expectations with patients who are receiving a flu shot, it is important to warn them of the mild flu-like symptoms they may experience over the subsequent few days, but for most patients this risk is overtaken by significant reductions in morbidity and mortality.

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