In addition to pneumonia and potentially fatal lung complications, the influenza virus can increase patients’ risk of myocardial infarction (MI) and cerebrovascular accidents (CVAs). Those who survive heart attacks and strokes often find their activities of daily living adversely affected with the individuals residing in long-term care facilities (LTCFs) having an increased acuity level and requiring more assistance.

A growing body of literature shows that influenza vaccines not only reduce the risk of infection but also decrease the severity of an infection if one occurs.6,7 For at-risk LTCF residents and the staff who care for them, that is welcome news—and another good reason to be vaccinated annually.

Influenza-related morbidity, mortality, and cardiovascular risks:

- In the United States over the past decade, an estimated 9 - 45 million Americans have had influenza infections during a season, resulting in up to 810,000 hospitalizations + 61,000 deaths

As with COVID-19, influenza more often affects older adults and those with comorbidities; the proportion of influenza-associated fatality is also higher among these patients.1,2

The influenza virus produces cardiovascular complications in the following ways. The influenza virus can directly infect the heart, causing myocarditis or myopericarditis. Through the systemic effects of cytokines and other inflammatory mediators, influenza infection can worsen existing cardiovascular disease; for instance, pre-existing atherosclerotic plaques can be dislodged during systemic inflammation. This creates emboli that can cause an MI if they lodge in coronary arteries or CVAs if they obstruct blood flow to the brain. This increased risk continues for months after influenza infection. Previously healthy individuals can also have cardiovascular events and CVAs as a result of a prothrombotic state induced by systemic inflammation.3-5

LTCF residents and staff need protective immunizations:

A growing body of literature shows that influenza vaccines not only reduce the risk of infection but also decrease the severity of an infection if one occurs.6,7 For at-risk LTCF residents and the staff who care for them, that is welcome news—and another good reason to be vaccinated annually.
In LTCFs, highly contagious viruses are quickly transmitted among people in confined spaces and sharing common areas. Older adults, especially those with comorbidities, have high mortality rates from severe respiratory illness. Yet only about two-thirds of LTCF residents receive annual flu shots, and among all health care work settings, LTCFs continue to have the lowest staff vaccination rates (67.9% in the 2018–2019 season). LTCF administrators, medical directors, and directors of nursing must set and enforce nursing home policies that keep residents and staff safe and healthy. Enhanced influenza vaccines have an important role in accomplishing this goal.

**Figure 1. Estimated Range of Annual Burden of Influenza in the United States Since 2010**

<table>
<thead>
<tr>
<th>Deaths</th>
<th>Hospitalizations</th>
<th>Illnesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>12,000–61,000</td>
<td>140,000–810,000</td>
<td>9,300,000–45,000,000</td>
</tr>
</tbody>
</table>

*The top range of these burden estimates are from the 2017-2018 flu season. These are preliminary and may change as data are finalized.

Source: Reference 1.


*Estimates for these seasons are preliminary and may change as data are finalized.

**2019–20 data are incomplete. Shown are seasons-to-date figures through April 4, 2020. Only ranges of burden had been released; the midpoint of those ranges is depicted in the figure. The reported ranges for this season at the time this report was prepared were 39 million to 56 million infections, 410,000 to 740,000 hospitalizations, and 24,000 to 62,000 influenza-related deaths.

### Resources