

Below are highlights from the Vaccine Integrity Project's evidence reviews for influenza, COVID-19 and RSV immunizations:

Respiratory viruses continue to cause substantial illness

Although the burden of respiratory viruses has changed since the COVID-19 pandemic, influenza, COVID-19 and RSV continue to cause hundreds of thousands of hospitalizations in the United States each year.

Influenza remains one of the nation's leading causes of vaccine-preventable respiratory illness. During the 2025-26 season alone, interim [CDC estimates](#) indicate there were at least 390,000 influenza-related hospitalizations and 24,000 deaths.

COVID-19 has become [substantially less severe](#) than during the height of the pandemic, which is good news for the country. The peak weekly COVID-19 hospitalization rate during the 2025–26 respiratory season was 2.0 per 100,000 people. That's less than half the previous season's peak and about 80% below the 2022–23 peak. Still, it continues to cause significant illness, particularly among older adults, infants, pregnant women and people with compromised immune systems. During the 2025-26 respiratory virus season, COVID-19 was associated with an [estimated](#) 4.6 million to 12.9 million illnesses, 140,000 to 240,000 hospitalizations and 15,000 to 42,000 deaths in the United States.

RSV continues to place infants and older adults at greatest risk for severe disease. During the 2025-26 season, RSV caused an [estimated](#) 2.8 million to 5.8 million outpatient visits, 170,000 to 340,000 hospitalizations and as many as 25,000 deaths.

What the immunization evidence showed

The **influenza** review screened more than 5,800 studies and identified 69 newly published studies, including 21 randomized control trials, and found that seasonal influenza vaccination continued to reduce hospitalization and mortality among those at greatest risk for severe disease.

- Among adults over 65, the flu vaccine increased protection against hospitalization by 31%, according to an analysis of VISION Network data.
- A case-cohort analysis of national surveillance data over eight seasons (2016-2020, 2021-2025) reported that vaccine effectiveness was 80% against laboratory-confirmed influenza-associated deaths among infants and children aged 6 months to 17 years.
- A study of data from 2011-2022 showed that vaccination during pregnancy improved protection by 44% against symptomatic disease in infants 0-6 months.
- For children 6 months-17 years with underlying health conditions, vaccine effectiveness was 48% against influenza-related hospitalization or emergency department visits.

New evidence also demonstrated greater protection against hospitalization with high-dose influenza vaccines in older adults compared with standard-dose vaccines.

No new safety concerns were identified, including among nearly 10 million people evaluated through post-marketing safety surveillance.

Researchers screened more than 11,000 studies related to **COVID-19** vaccine safety and effectiveness, identifying 155 that met the eligibility criteria for inclusion in the review. The data show that updated vaccines continue to provide meaningful protection against hospitalization, intensive care admission and death, particularly among older adults and other high-risk populations.

- For adults over 65, vaccination cut the risk of COVID-related hospitalization by 53% in the 2025-26 respiratory virus season.
- Maternal vaccination lowered the risk of emergency department and urgent care visits for pregnant women by 58% and extended protection to infants too, with fewer COVID-related hospital contacts in the first two months of life – a vaccine effectiveness range of 50-54.0% - regardless of which month of pregnancy the vaccine was received.
- Young children (9 months-4 years) saw a 76% reduction in COVID-related pediatric emergency department visits.
- For adults with immunocompromising conditions, vaccination cut the risk of intensive care admission or death by 32%-53%, depending on the condition and other factors.

The review identified no new safety concerns in comparative studies. While investigators also reviewed post-marketing surveillance studies that reported adverse events following vaccination, they lacked appropriate comparison groups, which prevents a determination that those events occurred more frequently than would be expected in the absence of vaccination.

The examination of **RSV** data identified 75 eligible studies for inclusion in the evidence review out of more than 2,000 assessed. Vaccination of older adults and pregnant women, along with infant immunization with nirsevimab, substantially reduced severe RSV illness and hospitalization. Newly published evidence continued to support the favorable safety profile of RSV immunizations, with no new safety concerns identified.

- For adults over 60, multiple studies showed significant protection against hospitalization, with vaccine effectiveness ranging from 69%-83% within the same season as vaccination.
- Maternal vaccination helped to protect infants against hospitalization, with studies showing a risk reduction of 51%-70%.
- The infant monoclonal antibody immunization nirsevimab reduced the risk of RSV-related hospitalization by 63.6%-93.0% within the first RSV season, regardless of the timing of administration.

One of the questions before researchers and clinicians is whether older Americans need an RSV vaccine booster. At this point, more data is needed. In one study examined by the Vaccine Integrity Project, estimates for RSV vaccine effectiveness against hospitalization and lab-confirmed RSV illness among older adults were higher during the first season after vaccination compared with 12-18 months of follow-up, however, another study showed no significant difference.

None of the comparative studies included in the Vaccine Integrity Project's evidence review found an association between RSV vaccination during pregnancy and preterm birth or other adverse pregnancy outcomes.

The evidence reviews were conducted using prospectively and publicly registered protocols and internationally recognized methods for systematic reviews. Researchers searched major scientific databases, independently screened studies at each stage and assessed study quality and risk of bias before synthesizing the findings.

“Our objective is straightforward: Provide clinicians and medical societies with a transparent, rigorous assessment of the latest evidence so immunization recommendations remain grounded in the best available science,” Osterholm said.

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