Medical Xpress

New RSV vaccine for older adults can result in individual and societal cost savings, benefits

September 5 2024

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Vaccination against respiratory syncytial virus for adults over 60 is likely to be cost-effective by preventing illness, hospitalizations, lost quality of life and deaths, according to new research.

The study, conducted by researchers at the University of Michigan and the U.S. Centers for Disease Control and Prevention and published in the journal *Vaccine*, evaluated newly approved RSV vaccines: Arexvy, manufactured by GSK, and Abrysvo, manufactured by Pfizer. The study did not include a third approved vaccine, Moderna's mRESVIA.

The vaccines are now available to adults 60 and older. The CDC recommends a single dose for individuals over 75 and a single dose for those over 60 with increased risk of severe disease. The FDA in May 2023 approved both vaccines for use in older adults, a decision regarded by health care providers and public health experts as a substantial advancement in combating the illness. According to the U.S. Centers for Disease Control and Prevention, RSV results in 60,000 to 160,000 hospitalizations and 6,000 to 10,000 deaths of adults 67 and older each year.

"We view this as a pivotal study that highlights the potential of RSV vaccination to make significant public health and economic impacts for older adults," said David Hutton, corresponding author of the study and professor of health management and policy and global public health at U-M's School of Public Health.

Prior to the approval for vaccines in older adults, RSV immunizations were primarily recommended and used for high-risk infants. RSV is a common respiratory virus that can cause severe respiratory illness in young children, particularly those under a year old.

"As RSV continues to pose a serious threat to individuals in this age group, the goal is for these findings to provide timely insights for health care decisionmakers and policymakers," Hutton said.

To determine cost effectiveness, Hutton and colleagues evaluated the general population within the 60 and older age group and recorded RSV-

associated health care utilization, including outpatient appointments, emergency department visits, inpatient hospital stays and RSV deaths.

The researchers specifically analyzed quality-adjusted life-years lost, or QALY, and societal costs that come with contracting RSV, and found the costs varied by age group and type of vaccine. The research also showed that vaccine efficacy, the incidence of RSV-related hospitalizations and vaccine costs had the most significant impact on the cost per QALY saved.

For example:

- For all adults aged 60 and older, the societal cost per QALY saved was $196,842 for GSK's Arexvy and $176,557 for Pfizer's Abrysvo.
- For adults aged 65 and older, the cost was lower at $162,138 for GSK and $146,543 for Pfizer.
- For adults between 60 and 64, the cost per QALY saved was notably higher at $385,829 for GSK and $331,486 for Pfizer.

Historically, efforts to prevent and treat RSV have focused on this younger population due to the high risk of hospitalization and severe outcomes. Recognizing similar risks for older populations, RSV vaccines were developed with the goal of preventing severe RSV-related illness, hospitalization and death.

The researchers concluded that RSV vaccination might be cost-effective for adults 60 and older, especially those of more advanced age. They noted that reduced vaccine costs and sustained efficacy beyond two RSV seasons could make RSV vaccination more cost-effective for a broader population. They also said that uncertainties remain, particularly around

long-term vaccine efficacy.

"We look forward to continuing working with CDC to determine the best ways to use our health resources to prevent respiratory disease," said Hutton, who also is a professor of operations and industrial engineering at the U-M College of Engineering.

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More information: David W. Hutton et al, Cost-effectiveness of vaccinating adults aged 60 years and older against respiratory syncytial virus, *Vaccine* (2024). DOI: 10.1016/j.vaccine.2024.126294

Provided by University of Michigan