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RSV Hospitalization: Cardiorespiratory Risk in Adults

Ryan Quigley:
You're listening to *AudioAbstracts* on ReachMD. I'm Ryan Quigley, and today, I'll be talking about the risk of cardiorespiratory events following respiratory syncytial virus, or RSV-related hospitalization in adults.

Although RSV vaccination is recommended by the US Centers for Disease Control and Prevention for adults aged 60 to 74 who are at higher risk for severe infection and for *all* adults 75 and older, RSV remains underrecognized as a serious cause of respiratory illness in adults. And beyond the acute respiratory presentation, there's growing concern that RSV may trigger cardiorespiratory complications. Estimates suggest that among adults 65 and older in the US, RSV may contribute to 119,000 emergency department visits and 159,000 hospitalizations each year.

The study we're reviewing today was published in *JAMA Network Open* in February 2026. The investigators wanted to evaluate whether adults hospitalized with RSV face an increased risk of cardiorespiratory complications in the 180 days after hospitalization compared with control periods, which was defined as more than 21 days before hospitalization or more than 180 days afterwards.

So let's take a look at the study design. This was a retrospective, observational, self-controlled case series using data from the Optum Market Clarity database, spanning from January 2017 through March 2024. The analysis included adults who experienced at least one RSV-related hospitalization and at least one cardiorespiratory event—specifically myocardial infarction, stroke, COPD exacerbation, congestive heart failure exacerbation, or arrhythmia.

A key feature of this design is that each patient serves as their own control. The investigators compared event rates during a defined "risk window"—the 180 days following hospitalization—to control periods outside that window. They used conditional Poisson regression to estimate incidence rate ratios, adjusting for time-varying factors such as age, seasonality, and concurrent COVID-19 and influenza activity.

Now let's turn to the findings. The study included nearly 11,900 patients, with a mean age close to 70 years. Across all outcomes, the risk of cardiorespiratory events increased significantly after RSV hospitalization, with the greatest elevations in incidence rate ratios, or IRR, seen in the first two weeks. Within the first week, the IRR for myocardial infarction increased nearly ninefold, while stroke rose more than sevenfold. Congestive heart failure exacerbations were elevated more than twelvefold during this same period. And COPD exacerbations and arrhythmias showed particularly strong early signals, with markedly elevated rates that declined over time.

Although these risks decreased after the initial weeks, they did not immediately return to baseline. For several outcomes, especially myocardial infarction, stroke, and heart failure, elevated risk persisted for weeks to months, with some signals extending up to 180 days after hospitalization.

With those findings in mind, let's briefly consider the strengths of this analysis. Because patients served as their own controls, the design inherently accounts for fixed characteristics, such as chronic comorbidities, even if they weren't directly measured. The study also adjusted for time-varying factors like age, seasonal RSV patterns, and co-circulating infections, such as influenza and COVID-19. Also, multiple sensitivity analyses were performed, and the results remained consistent, supporting the robustness of the findings.

But as for limitations, the study population may not fully represent uninsured individuals or those outside the US. Diagnoses were based on administrative coding data, which introduces the possibility of coding errors or misclassification. RSV testing in adults is also relatively limited, meaning some cases may have been missed. And as with any observational design, residual confounding cannot be completely excluded.

But nonetheless, this study adds to a growing body of evidence that RSV may act as a trigger for cardiorespiratory events, particularly in older adults. The risk appears highest in the first two weeks following hospitalization but may persist for months in some patients. And so taken together, these findings underscore the broader impact of RSV and support ongoing efforts to increase vaccination and prevention strategies in at-risk adult populations.

This has been an *AudioAbstract*, and I'm Ryan Quigley. To access this and other episodes in our series, visit ReachMD.com, where you can Be Part of the Knowledge. Thanks for listening!

Reference:

Liang C, Judy J, Aliabadi N, et al. Risk of Cardiorespiratory Events Following Respiratory Syncytial Virus-Related Hospitalization. *JAMA Netw Open*. 2026;9(2):e2556767. Published 2026 Feb 2. doi:10.1001/jamanetworkopen.2025.56767