

Transcript Details

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Beyond the Flu: Safeguarding Older Adults Through Vaccination

Announcer:

You're listening to *VacciNation* on ReachMD. This medical industry feature, titled "Beyond the Flu: Safeguarding Older Adults Through Vaccination," is sponsored by CSL Seqirus. And now, here's your host, Dr. Jennifer Caudle.

Dr. Caudle:

Welcome to *VacciNation* on ReachMD. I'm your host Dr. Jennifer Caudle and joining me today to discuss the role of influenza vaccination in protecting high-risk patients is Dr. Steven Thomas. He's an infectious diseases physician scientist from SUNY Upstate Medical University in Syracuse, New York. Dr. Thomas, welcome to the program.

Dr. Thomas:

Thank you, and I'm happy to be here.

Dr. Caudle:

We're happy that you're here as well. So, Dr. Thomas, let's start with some background. How can influenza infection trigger or worsen cardiovascular, respiratory, or metabolic conditions in high-risk populations such as older individuals or those with underlying health conditions?

Dr. Thomas:

Well, influenza infection can be tough on the body, even in otherwise healthy people. And for patients with existing comorbidities, the impact can be much more severe. Influenza triggers a strong immune response that can strain the heart, lungs, and metabolic systems, especially in people with chronic conditions.¹⁻⁵

Inflammatory cytokines, oxidative stress, and endothelial injury can accelerate coronary plaque rupture and clot formation, sometimes causing myocardial infarction.^{1,2,6} Viral invasion of heart tissue may lead to myocarditis, reducing contractility and causing arrhythmias or acute heart failure in vulnerable patients.²

On the respiratory side, influenza can worsen COPD and asthma by increasing airway inflammation and mucus production, lowering oxygen levels, and raising cardiac workload.⁴

Meanwhile, fever and hypoxia heighten sympathetic activity which can worsen insulin resistance and disrupt glucose control in diabetes.^{2,5,7}

Dr. Caudle:

What do we know about the protective effects of influenza vaccination in reducing comorbidity exacerbations, hospitalizations, and other influenza-related complications?

Dr. Thomas:

Absolutely. Influenza vaccination doesn't just help prevent the flu; it also helps keep people out of the hospital. And while vaccination reduces illness and hospitalizations even in otherwise healthy adults, the benefit is even greater for those with chronic conditions.²⁻⁸

In fact, multiple studies show that getting the influenza vaccine can significantly reduce the risk of cardiovascular events among high-risk patients.^{2,3}

In one study, vaccinated patients with coronary artery disease had a 55 percent reduced risk of cardiac events, and overall, influenza

vaccination was associated with a 36 percent lower risk of major adverse cardiovascular events. Other analyses have shown that benefits of the influenza vaccine are comparable to other cornerstone preventive therapies, like statins or antihypertensive drugs.^{2,3}

In another study including patients with acute coronary syndrome, vaccinated individuals had significantly fewer hospitalizations for recurrent events. They also saw trends toward fewer deaths and heart failure admissions.⁶

Dr. Caudle:

That's great. And how about patients with COPD or diabetes?

Dr. Thomas:

Among those with chronic respiratory diseases like COPD, vaccination has been shown to lower both the frequency and severity of exacerbations, leading to fewer hospital stays.⁴

And for people with diabetes, studies show reduced hospitalizations for pneumonia, influenza, and metabolic complications among those vaccinated for influenza.^{5,7}

So overall, by protecting high-risk patients from influenza infection and the downstream inflammatory cascade, vaccination is an important preventative tool that can substantially reduce hospitalizations.⁸

Dr. Caudle:

For those just tuning in, you're listening to *VacciNation* on ReachMD. I'm Dr. Jennifer Caudle, and I'm speaking with Dr. Stephen Thomas about influenza vaccination in high-risk patients.

So, we've talked about how vaccination can reduce hospitalizations in several high-risk groups. How might this translate into broader health benefits for older adults who are often managing multiple chronic conditions?

Dr. Thomas:

Well vaccinating against influenza doesn't just prevent a viral infection, it can also help break the cycle of inflammation and physiological stress that can trigger cardiac events, COPD flare-ups, and metabolic decompensation. Over time, reducing these acute episodes can translate to better overall stability of chronic disease, fewer hospitalizations and improved quality of life.^{1,2,4,5,7}

Dr. Caudle:

Now, given this impact, what do key health authorities recommend regarding influenza vaccination for patients with chronic conditions?

Dr. Thomas:

The CDC and medical societies such as the American College of Cardiology, or ACC, and the Global Initiative for Chronic Obstructive Lung Disease, or GOLD, all emphasize one consistent message: annual influenza vaccination is essential for people with chronic health conditions.⁹⁻¹¹

Dr. Caudle:

So, Dr. Thomas, if we look beyond the seasonal impacts, how might influenza vaccines provide longer-term benefits for high-risk individuals who are 65 years and older?

Dr. Thomas:

Well, vaccination is one of the best ways to prevent influenza. As people age and comorbidities rise, it's increasingly important to have vaccines that can produce a strong immune response.^{12,13}

FLUAD® is an adjuvanted influenza vaccine that met the immunogenicity non-inferiority criteria compared to standard dose non adjuvanted FLU vaccine in randomized clinical studies. And it also has a demonstrated safety profile¹⁴ Among adults 65 years of age and older. The most frequently reported local and systemic adverse reactions were injection site pain in 25 percent, injection site tenderness in 21 percent, myalgia in 15 percent, fatigue in 13 percent, and headache in 13 percent.¹⁴

And real-world evidence studies provide complementary insights, which is important since they help illustrate how vaccines perform across broader, more diverse patient populations, across multiple seasons, and in routine clinical practice.^{15,16}

Two large U.S. studies published in 2024 took a closer look at how the adjuvanted influenza vaccine FLUAD performs in older adults with specific high-risk conditions. Both were large retrospective cohort analyses using national electronic health record and claims data from the 2019 to 2020 influenza season, focusing on adults 65 years and older, including those with comorbid conditions such as cardiovascular disease, COPD, and diabetes.^{15,16}

One study compared FLUAD with the standard-dose egg-based quadrivalent influenza vaccine. This study included a cohort of over 1.6 million high-risk adults 65 years and older.¹⁶

Among these patients, those who received FLUAD had about a 19 percent lower risk of being hospitalized for influenza or pneumonia, with a 95 percent confidence interval of 16.3 to 21.6 percent, and roughly a 23 percent drop in overall flu-related medical visits compared to the standard-dose quadrivalent influenza vaccine, with a 95 percent confidence interval of 20.9 to 26.1 percent. That includes doctor's appointments, ER visits, and hospital stays. These benefits held true across most high-risk groups, from people with heart and metabolic disease to those with chronic lung or kidney problems.¹⁶

The limitations of this study include potential for residual confounding, variability in the completeness and accuracy of healthcare data, and reliance on diagnosis codes that may misclassify outcomes. Additionally, incomplete race and ethnicity data, challenges in assessing condition severity from ICD-10 codes, and heterogeneity in patients' healthcare use may introduce bias despite efforts like adjusting for overall health status.¹⁶

Dr. Caudle:

And how does FLUAD compare to high-dose influenza vaccines in real-world studies?

Dr. Thomas:

We saw similar results in the companion study which compared the relative vaccine effectiveness of FLUAD with the high-dose trivalent influenza vaccine at preventing influenza-related medical encounters in more than 3.6 million older adults. Across all participants, FLUAD and HD-TIV showed similar effectiveness in those without underlying risk factors, with a relative vaccine effectiveness of 5.2 percent, with a 95 percent confidence interval between negative 5.2 percent to 15.1 percent. However, across subgroups of seniors with chronic-comorbidities, relative vaccine effectiveness ranged from 10.4 percent to 18.4 percent greater protection against influenza-related medical encounters and hospitalizations, and all reported 95 percent confidence intervals were statistically significant.¹⁵

This analysis had a few limitations, including variability in how individuals use the US healthcare system, incomplete or inconsistent data, and the nonrandom assignment of vaccines, which could introduce bias despite conducting an NCO analysis. This study also relied on records that could have been incomplete or not lab-confirmed, and some information, like socioeconomic factors, isn't captured in EHR or claims data, which can further affect the results.¹⁵

Dr. Caudle:

Before we close, Dr. Thomas, what key takeaways would like to share with our audience?

Dr. Thomas

Well, the primary goal of influenza vaccinations is to prevent influenza disease, but no vaccine is 100 percent effective. I think it's important to understand that influenza vaccinations can also reduce the severity and burden of the infection, so even if someone still gets the flu, being vaccinated can mean a milder infection, fewer complications, and a much lower chance of ending up in the hospital. And for high-risk patients such as older adults, that protection can make a real difference—not just during the influenza season, but also in maintaining their longer-term health.^{1,2,4,5,7}

Dr. Caudle:

That's a great way to round out our discussion. And I'd like to thank my guest, Dr. Stephen Thomas, for sharing his insights on the impact of influenza vaccination on high-risk adults. Dr. Thomas, it was great speaking with you today.

Dr. Thomas:

Thanks for having me.

Dr. Caudle:

Of course, and for ReachMD, I'm your host, Dr. Jennifer Caudle. Before we close, let's take a moment to review some important safety information.

Announcer:

FLUAD® (Influenza Vaccine, Adjuvanted)

INDICATION AND IMPORTANT SAFETY INFORMATION

INDICATION AND USAGE

FLUAD is a vaccine indicated for active immunization for the prevention of influenza disease caused by influenza virus subtypes A and type B contained in the vaccine. FLUAD is approved for use in adults 65 years of age and older.

This indication is approved under accelerated approval based on the immune response elicited by FLUAD. Continued approval for this indication may be contingent upon verification and description of clinical benefit in a confirmatory trial.

CONTRAINDICATIONS

Do not administer FLUAD to anyone with a history of a severe allergic reaction (e.g., anaphylaxis) to any component of the vaccine, including egg protein, or to a previous influenza vaccine.

WARNINGS AND PRECAUTIONS

If Guillain-Barré Syndrome (GBS) has occurred within six weeks of previous influenza vaccination, the decision to give FLUAD should be based on careful consideration of the potential benefits and risks.

Appropriate medical treatment must be immediately available to manage potential anaphylactic reactions following administration of FLUAD.

Syncope (fainting) may occur in association with administration of injectable vaccines including FLUAD. Procedures should be in place to avoid injury from fainting.

The immune response to FLUAD in immunocompromised persons, including individuals receiving immunosuppressive therapy, may be lower than in immunocompetent individuals.

Vaccination with FLUAD may not protect all vaccine recipients against influenza disease.

ADVERSE REACTIONS

The most common ($\geq 10\%$) local and systemic adverse reactions in adults 65 years of age and older who received FLUAD were injection site pain (25%), injection site tenderness (21%), myalgia (15%), fatigue (13%) and headache (13%).

Other adverse events may occur.

To report SUSPECTED ADVERSE REACTIONS, contact CSL Seqirus at 1-855-358-8966 or VAERS at 1-800-822-7967 and www.vaers.hhs.gov.

Before administration, please see the full [US Prescribing Information](#) for FLUAD.

Announcer:

This medical industry feature was sponsored by CSL Seqirus. If you missed any part of this discussion or to find others in this series, visit *VacciNation* on ReachMD.com, where you can Be Part of the Knowledge.

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