



Influenza Vaccine Strategies for Older Adults

Focus Group Summary
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Specifically designed for adults 65 and older, high-dose inactivated vaccines have become a trusted influenza vaccination for this population, recommended by the Advisory Committee on Immunization Practices (ACIP)ⁱ and included in recommendations by organizations including the National Institute on Aging,ⁱⁱ the National Foundation for Infectious Diseases,ⁱⁱⁱ and the National Council on Aging.^{iv}

Multiple studies have shown the efficacy of high-dose influenza vaccines in preventing serious events in older adults.^v

FLUNITY-HD expands this view with even more insights across flu outcomes and subgroups like patients with baseline cardiovascular disease, collected through the largest-ever individually randomized study of influenza vaccines.

This focus group discussed primary findings of FLUNITY-HD along with secondary and exploratory outcomes, including outcomes for high-risk populations and those related to healthcare resource utilization. Questions specifically explored the endpoints that would move decisions in participants' health systems, as well as how subgroup and utilization data might spur organizations to change their approach to influenza immunization.

Participants joined virtually and in person from the AMGA 2026 Annual Conference. They represented roles throughout the healthcare ecosystem—pharmacy, primary care, ambulatory care, quality, population health—from healthcare organizations of a variety of sizes and structures across the United States.

Overview of FLUNITY-HD Study

Morgan Anderson, PharmD, BCIDP, US Field Medical Director- Influenza, Vaccines, NA Medical Affairs, Sanofi

Ferdaus Hassan, Ph.D., Medical Regional Strategic Account Director, NA Medical Affairs, Sanofi

Studies Highlighted:

1. Johansen ND, Modin D, Pardo-Seco J, et al. Effectiveness of high-dose influenza vaccine against hospitalizations in older adults (FLUNITY-HD): an individual-level pooled analysis. *Lancet*. 2025;406(10518):2425-2434. doi:10.1016/S0140-6736(25)01742-8.

Focus Group Participants

Ramsey Abdallah, DHA, MBA, FACHE, PMP, CMQ/OE, CPHQ, CHFP, CPPS, FACHDM, Assistant Vice President, Operations, Northwell Health

Parag Agnihotri, MD, Chief Medical Officer of Population Health Services, UC San Diego Health

Kim Allen, RPh, Director of Pharmacy Services, Sharp Rees-Stealy Medical Group

John Clark, MD, PhD, Chief Population Health Officer, Sharp Rees-Stealy Medical Group

Michael Conroy MD, FACP, President and CEO, Sutter Medical Group

Alan Hui, PharmD, BCPS, Senior Director, Pharmacy; Shared Services – Ambulatory, Northwell Health

Tiffany Segre, MD, Senior Medical Director for Primary Care, MaineHealth

Gordon Sproul, PharmD, BCPS, Clinical Leadership Team, Pharmacy, Sutter Health

Heather Stewart, Clinical Pharmacy Coordinator, MaineHealth



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2. Johansen ND, Modin D, Pardo-Seco J, et al. High-Dose vs. Standard-Dose Influenza Vaccine and Cardiovascular Outcomes in Older Adults: The FLUNITY-HD Prespecified Pooled Analysis. *Circulation*. Published online November 10, 2025. doi:10.1161/CIRCULATIONAHA.125.077801.

Anderson talked about why FLUNITY-HD is such an important step in influenza vaccination and prevention. To date, the high dose inactivated influenza vaccine is the only flu vaccine recommended for adults 65+ with an individually randomized trial demonstrating superiority vs. standard dose inactivated influenza vaccine (SD-IIV) with laboratory-confirmed influenza (LCI) as a primary endpoint. However, no individually randomized, adequately powered study has assessed the rVE of HD-IIV vs. SD-IIV against hospitalizations to date.

Much research to date into the impact of high-dose vaccines on influenza-related hospitalizations has been from observational study, she explained. “This has limitations and strengths, depending on the study design. Randomized controlled trials like those in FLUNITY-HD are the gold standard for any intervention to find out the true benefit.”

FLUNITY-HD began with a small-scale feasibility trial in Denmark, then large-scale trials in Denmark and Spain across three seasons, methodologically harmonized to minimize heterogeneity. Anderson called both the high-dose and standard-dose arms of the study “well matched,” with a mean participant age of 73.3 years and nearly half of participants having chronic conditions. “This ensures the results are credible and applicable to real-world populations,” she said.

Composite hospitalization for influenza or pneumonia was the study’s primary endpoint, with secondary endpoints including cardiorespiratory hospitalization, lab-confirmed flu, all-cause hospitalization, and mortality. Researchers tested these in a hierarchical sequence to ensure statistical rigor. If the first endpoint proved significant, the next one was tested, with testing stopped once an endpoint is nonsignificant. With the exception of lab-confirmed flu, the research team used ICD-10 discharge diagnostic codes to assess all endpoints.

Hassan walked through highlights from the outcomes. The study showed several statistically significant differences including:

- Reduction of lab-confirmed flu hospitalizations by 31.9%
- Reduction of flu or pneumonia hospitalizations by 8.8%
- Reduction of cardiorespiratory hospitalizations by 6.3%
- Reduction of all-cause hospitalizations by 2.2%

“Some of the endpoints here might seem very modest. For example, what does 2.2% mean?” Hassan asked. “A reduction of 2.2% means you will need to vaccinate 515 people to prevent one hospitalization. If you look at the population level, that can translate to big impacts.”

Cardiovascular Subgroup Analyses

These primary findings have been just the beginning of FLUNITY-HD’s insights. “When they designed this study, they prespecified a number of subgroup analyses, and then a large number of exploratory endpoints,” Anderson said.

FLUNITY-HD prespecified cardiovascular outcomes were medical conditions beyond influenza that are prevalent in older patients. They included respiratory disease, myocardial infarction, heart failure, atrial fibrillation, and stroke, along with cardiovascular death and major adverse cardiovascular events.



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The cardiovascular connection is particularly important. Not only are people with heart disease at higher risk of developing serious influenza complications, but flu has also been connected to increases in heart attack and stroke.^{vi} More than 100,000 individuals in the study data had a history of cardiovascular disease.

FLUNITY-HD cardiovascular subgroup analyses found that a high-dose influenza vaccine confers:

- A statistically significant reduction in cardiovascular-related hospitalizations
- Reduced risk of hospitalization for specific cardiovascular outcomes, including heart failure
- Consistent reduction of hospitalization outcomes, regardless of a patient's prior cardiovascular disease history

Anderson ended with one particularly noteworthy takeaway for immunization programs: Just the primary research showed the power of high-dose vaccines to reduce hospitalization across causes (1 fewer hospitalization for every 515 vaccinations of HD instead of SD), subgroup analyses related to cardiovascular disease showed a similar effect—with even greater impact.

“You only need to vaccinate 303 older adults with a history of cardiovascular disease with a high-dose vaccine instead of standard dose to prevent an additional case of all-cause hospitalization,” she said.

More FLUNITY-HD findings are on the way, Anderson announced to conclude the presentation.

“Exploratory endpoints like frailty, ICU utilization, readmission, and nursing home admissions are all currently being investigated,” she said, “which is something to keep in mind when you think about data that you’re currently missing when you’re making decisions for your health systems.”

Focus Group Discussion

From here, Anderson and Hassan had several questions for the group.

“The goal today is to have a practical peer-to-peer discussion about how health systems think about influenza vaccination strategies for older adults, using outcomes that matter in a real-world decision-making setting,” said Anderson.

How meaningful are the findings of the FLUNITY-HD study to your organization?

While it was pointed out that one fewer hospitalization per 515 or 303 vaccinations is “just too small” for organizations targeting populations of only a thousand or so, the group expressed appreciation for such research.

“We do value those endpoints,” one participant replied, pointing out that FLUNITY-HD data support recommendations already made by health organizations like the American College of Cardiology (ACC).

“The outcome studies have definitely helped us move towards the senior vaccine,” another shared. “This research is a great opportunity to show not only that high dose vaccines work, but they’re actually keeping people out of the hospital,” she continued, adding that “it would be great if we could see a decrease in mortality. I think that’s one endpoint that would be helpful.”



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Another participant recalled when high-dose influenza vaccines first rolled out. “There was a lot of skepticism around whether there’s truly a clinical benefit. Over the years, especially with this study, it solidifies that there’s certainly a clinical benefit. The outcomes are spot on.”

The group also discussed how research is just one component of the vaccine evaluation and selection process.

“We also look at cost, resource use, potential for waste, difference in presentations, formulations, things like that,” said one participant.

Another cited the importance of a vaccine that’s readily available and easy to operationalize. “That’s a big piece in our clinic when you have a number of patients to vaccinate.”

“Obviously, hospitalization reduction is important, but we’re making sure that we vaccinate patients when they’re actually in the office,” this participant continued. “Because once they leave, you don’t know what happens.”

Have declining adult immunization rates changed how your organizations choose and implement vaccines?

In terms of hesitancy, one participant reported more vaccine resistance in the pediatric space, rather than with older patients. At the same time, many noted an urgent imperative to make sure eligible people get the vaccines they need, when they need them.

“We try to vaccinate patients when they’re in the office, making sure that we have whatever vaccine they need at the time, trying to get everything done as part of their appointment and trying not to send them elsewhere,” one participant said.

“If we had a patient and only had the standard dose of influenza vaccine, we would encourage them to get vaccinated anyway,” he elaborated. “We know that once patients leave, the risk increases of them not being vaccinated.”

Another participant called out the importance of technology in vaccination administration, specifically identifying eligible patients and supporting efficient clinical pathways to vaccination.

His organization has been moving to Epic, he shared. “We previously had over 20 electronic health records in our ambulatory space, so it was very, very challenging to gather data.” Epic, by contrast, brings vaccination teams valuable features like care gaps. “These will remind providers that if a 65-year-old or older patient comes in during the flu season, they qualify for the vaccine. It will pull that data.”

Addressing Concerns About Vaccine Production and Mismatches

During the discussion, Anderson addressed two concerns that weren’t on the original agenda: the comparative efficacy of egg-based versus non-egg-based vaccines and how well the antigens in high-dose influenza vaccines are corresponding to currently circulating flu viruses.

“We just heard that the vaccines were not as effective because the strains were not matching as much,” one participant brought up. “Do the high-dose vaccines, cell-based or egg-based, have a different efficacy in the long-term?”

“I’m concerned that we are again eroding trust in patients who are coming back to get vaccine,” was another comment. “Now with the mismatch and the strains, I don’t know how many people will show up again next year.”

In terms of egg-based vaccines, which represented 72% of the vaccines for the 2025-2026 flu season,^{vii} versus those developed with cell cultures or recombinant technology, even during a mismatched season, the high-dose influenza vaccine still performed effectively in preventing lab-confirmed flu.^{viv}



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How important are FLUNITY-HD's findings from a quality or population health perspective?

The group emphasized how immunization is part of preventative medicine overall and delved into specifics related to value-based care and reimbursement.

"We want to have high vaccination rates because of the correlation to reduced admissions," was one response. "From a value standpoint, this will hopefully reduce some of the total cost." In downside risk-based contracting, "every reduction in hospitalization" can help an organization hit these marks.

Another participant reminded the group of evolving requirements to connect initiatives to quality metrics. "I think there are incentives and also potential penalties associated with payments if we don't meet those measures."

Which of FLUNITY-HD's subgroups are you and your organization most interested in?

One participant cited oncology patients with immunosuppression. "A lot of patients are going through chemotherapy, and we tend to focus on those groups."

"In the cardiovascular subset, it's clearly the heart failure patients," was another response. "They're the highest cost. They're the ones who end up back in the hospital the most often."

From a less granular perspective, "it doesn't matter to us whether it's a specific cardiovascular condition, heart transplant, or heart failure, because the ACC has said if a patient is 65-plus and has cardiovascular disease, give them a high-dose vaccine," another participant said.

Across subgroups, participants agreed that knowledge is power when it comes to vaccine administration and acceptance.

"The more our physicians and advanced care practitioners understand the benefit in any subpopulation, the more they're going to drive to make sure that their patients get immunized," was one comment.

How important are patient utilization measures like emergency department visits, length of stay, and readmissions? Are these included in formulary reviews?

"From a leadership perspective, it's the utilization metrics—hospitalizations, emergency department visits," one participant affirmed. The conversation also touched on ROI, "making the choice of a lower-cost versus a higher-cost option, because there is added cost."

Sometimes care utilization specific to a vaccine isn't available. "We look at all the clinical data, but I don't think our committee has specific data for our organization based on the influenza vaccine and the length of stay and readmissions," said one participant.

Utilization metrics are just one piece of the puzzle, however, as vaccine operationalization and trust also factor into formulary decisions.

"A lot of times it has to do with the ease of use," was one perspective. "The pharmacy and therapeutics committee makes recommendations, and they use a lot of the literature and evidence," another participant shared.

"Our operational groups, the ones that manage the day-to-day committees, they're not as closely tied to that information," was one explanation of group processes. "But we present it to them at a high level. They want to know what



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the latest recommendations are and who's indicated for what."

Another participant walked through similar steps in his organization's formulary reviews.

"Everything starts at our vaccine advisory committee, and that is multidisciplinary, with representation from both acute care and ambulatory care," he said. "Many pediatricians and family medicine doctors are on there, and we've got our director of quality represented as well,"

He noted that "those types of conversations are becoming more transparent at the highest level, and that information gets translated over to our pharmacy and therapeutics committee."

How helpful is more granular subgroup data, from research studies or expert medical societies, in vaccine selection?

According to one participant, "very fine details [from guidelines] can complicate decision making... "Our organization just looks at the whole basket and try to find something that fit our patient population the best."

"This information is nice and can be helpful, but operationalizing those small details is very difficult," another participant agreed. "You can't have multiple products across your organization. You increase the chance of errors."

"When it comes to formulary decision making, system-level review of evidence and all of these components is very critical to us."

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