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www.reachmd.com
info@reachmd.com
(866) 423-7849

Pediatric Influenza: Risks, Realities, and Prevention

Announcer:

You're listening to *VacciNation* on ReachMD. This medical industry feature, titled "Pediatric Influenza: Risks, Realities, and Prevention," is sponsored by CSL Seqirus. 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 ongoing burden of pediatric influenza and the importance of vaccination is Dr. Laura Sass. Dr. Sass is board-certified Pediatric Infectious Diseases physician and partner of Children's Specialty Group.

Dr. Sass, welcome to the program.

Dr. Sass:

Thanks for having me.

Dr. Caudle:

Of course, of course. So, to start us off, Dr. Sass, could you explain how influenza typically presents in children?

Dr. Sass:

Absolutely. When we think about how influenza shows up in our pediatric patients, it's usually that classic "flu-like" picture. But in reality, it can look a little different depending on how old the child is. Most children with the flu develop a sudden fever along with a cough and runny nose. Fever is the most common symptom, and many kids will have that typical combination of fever, cough, and cold-like symptoms. So, if you're seeing a child with a high fever and cold-like symptoms in the middle of flu season, this should definitely be on your radar.¹

But it's important to note that symptoms vary by age. In older children and teenagers, the flu tends to look more like it does in adults. Along with fever and cough, they often report sore throat, headache, and muscle aches.¹ Whereas in infants and toddlers, the flu may look a little different. They might not complain of headaches or sore throat, but they can have stomach symptoms like vomiting or diarrhea.¹ In terms of complications, ear infections are the most common, especially for those under three. Sinusitis is more common in children older than three, and pneumonia occurs less frequently but affects both younger and older age groups. So, overall, complications vary by age too, but younger children experience higher rates.²

Dr. Caudle:

So, building on that, how do children factor into the spread of influenza?

Dr. Sass:

That's a great question, Dr. Caudle. Children play a significant role in transmission of influenza within their households *and* their communities.^{3,4} We know that children tend to have some of the highest infection rates during seasonal outbreaks compared to adult groups.⁵ That alone makes them a major driver in spreading influenza. But on top of that, influenza is already contagious about a day before symptoms show up, so children may unknowingly be spreading the virus before anyone realizes they're sick. And while the average person can remain contagious for five to seven days, children can actually remain contagious for more than seven days.^{6,7}

Now, let's think about that in real life. Kids really don't have the best hygiene habits and they're in close-contact environments all the time—schools, daycare, sports, and after-school activities. That makes them superspreaders within their community and within their

families.^{3,4} Influenza spreads through short-range aerosols and respiratory droplets, and it can also survive on contaminated surfaces for up to 48 hours.⁸ So, it doesn't take much for transmission to occur when you factor in close conversations and shared toys and desks.

And we see the impacts of pediatric infection rates and transmission in clinical practice. We've seen an increase in hospitalizations for ages zero to 17 in recent influenza seasons, particularly for children four years and younger.⁹ And it's important to note that these influenza-related hospitalizations weren't limited to high-risk children; in fact, many hospitalized children have no known underlying medical conditions and are otherwise healthy.⁹ So, from a pediatric healthcare utilization standpoint, infants and toddlers account for disproportionate share of the burden.⁹ They're more likely to require medical visits and be hospitalized,^{9,10} which represents a major driver of pediatric influenza-related demand on the healthcare system.

Dr. Caudle:

It's truly sobering to hear this data, especially when we remember that they represent some of our most vulnerable patients. And beyond influenza hospitalizations, Dr. Sass, what are we seeing in terms of mortality?

Dr. Sass:

When we look back on the past influenza seasons, children 11 years old and under consistently account for a larger proportion of influenza-related deaths compared with those aged 12 to 17. Within that younger group, infants and young children—especially those under five years old—make up a meaningful share.¹¹ These deaths are typically a result of complications like pneumonia, sepsis or shock, and acute respiratory distress syndrome.¹²

So, taken together, these patterns show the substantial burden influenza continues to place on pediatric populations. Currently, the CDC assessments classify influenza severity in the pediatric population as high, compared with moderate severity in adults and older adult groups—and for good reason.¹³ In the 2024 to 2025 season, pediatric deaths reached a record high,^{11,14} and 90 percent of those pediatric deaths occurred in children who were not fully vaccinated. That statistic really highlights how vulnerable many children are to severe outcomes from influenza. Hospitalizations were the second highest seen since 2010.¹³ Early data from the 2025 to 2026 season suggest that hospitalizations still remain at peak levels, with children under five years old representing the primary risk group.¹³

Dr. Caudle:

For those just tuning in, you're listening to *VacchiNation* on ReachMD. I'm your host, Dr. Jennifer Caudle, and today I'm speaking with Dr. Laura Sass about the impacts of influenza on pediatric patients and how we can address them.

So, Dr. Sass, with these concerning impacts in mind, what evidence supports seasonal influenza vaccination as an effective and safe strategy to reduce severe outcomes in children?

Dr. Sass:

Well, when we look at the evidence on influenza vaccination in kids, there's a clear and consistent message from public health data: seasonal flu vaccines reduce the risk of severe outcomes, including hospitalization.¹⁵ Studies tracking vaccine effectiveness have shown that children who are vaccinated are less likely to end up in the hospital with flu-associated illness compared to unvaccinated children.¹⁵ And in addition to effectiveness, the safety profile of current seasonal influenza vaccines in pediatric populations has been well-studied. Serious adverse events for influenza vaccines are very rare.¹⁶

But concerns about vaccine safety have increasingly become a part of public discussion, and in some cases, they've contributed to hesitancy. Recently, there's been a class-wide request for pediatric influenza vaccines to include additional safety language related to febrile seizures. It's important to note though that febrile seizures are rare following vaccination and are actually more likely to occur as a result of influenza infection itself.^{17,18} So, as we communicate about vaccination, it may be helpful to reinforce that influenza vaccines have been used in children for decades, and their safety is supported by substantial body of clinical evidence.¹⁶

Unfortunately, it has become clear that these concerns are impacting vaccination trends. In general, pediatric influenza vaccination rates have declined compared with pre-pandemic seasons.¹⁹ As previously discussed, of the 296 pediatric deaths during the 2024 to 2025 flu season, around 90 percent of the eligible children weren't fully vaccinated.^{13,20} So this downward vaccination trend raises real concerns—especially for younger kids who are at higher risk of severe outcomes because vaccination is the best way to prevent influenza infection and severe outcomes.¹¹

However, this also has broader implications because children play a significant role in transmission. Declining vaccination rates can amplify spread across all age groups and contribute to the added strain on healthcare systems during peak flu season.^{3,4} Plus, it

makes it harder to protect those who can't be vaccinated yet—like infants under six months.²¹ But routine influenza vaccination continues to be recommended by US medical societies,²¹ and as providers, it's important to listen to patients' concerns and clearly explain the benefits of seasonal influenza vaccination. Highlighting the long track record of safety and effectiveness data can help reassure caregivers that these vaccines remain a safe and important tool for preventing influenza and its complications in pediatric populations.

Dr. Caudle:

Well, we're almost out of time for today, but before we come to a close, Dr. Sass, what key takeaways would you leave with our audience?

Dr. Sass:

Pediatric influenza carries a significant clinical burden, especially in children under four. This youngest group experiences one of the highest rates of influenza-related illness, healthcare visits, and hospitalization.^{9,10} When we talk about severe outcomes aren't limited to children with underlying medical conditions. Many hospitalized children are otherwise healthy, reinforcing that influenza can lead to serious disease even in children without known risk factors.⁹ So, timely seasonal influenza vaccination is important to help reduce the risk of flu-related illness, complications, and hospitalizations.¹⁵ For the 2026 to 2027 influenza season, egg-based and cell or recombinant vaccines against the H1N1, H3N2, and B/Victoria lineage-like viruses will be available.²²

I also want to reiterate that recent declines in pediatric flu vaccination are concerning because lower vaccination increases vulnerability to influenza infection and transmission across *all* age groups.^{3,4,13} Seasonal influenza vaccination remains an evidence-based strategy to reduce illness and severe outcomes, with a well-established safety profile and continued support from leading U.S. health authorities.^{15,21} The American Academy of Pediatrics recommends annual flu vaccination for all eligible persons six months of age and older, and this guidance is endorsed by a number of medical and public health organizations.^{21,23}

Dr. Caudle:

Well, these are timely and important takeaways from our discussion. And with those final thoughts in mind, I want to thank my guest Dr. Laura Sass for sharing their perspective on the importance of influenza vaccination in children.

Dr. Sass, it was great speaking with you today.

Dr. Sass:

Thank you for having me.

Dr. Caudle:

Of course, and for ReachMD, I'm Dr. Jen Caudle.

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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