RSV vaccine leading to fewer young kid hospitalizations

There was a steep decline in respiratory syncytial virus (RSV) hospitalizations among infants last RSV season, offering welcome relief this time around. Health officials point to the new vaccines and preventive antibodies as the driving force behind the turnaround.

What is RSV and who's at risk

"RSV is a virus, one of the most common viruses in the pediatric population. It usually attacks the upper airway and the lungs," says Kelsey Grimes, DO, outpatient pediatrician with OSF HealthCare. "It leads to a lot of inflammation and excess secretions. Oftentimes we get a runny nose, stuffy nose and an increased work of breathing, also known as respiratory distress. That's the part that usually leads to us seeing them in the office, or them going to the emergency department and being hospitalized."

RSV is the leading cause of hospitalization among U.S. infants, with the Centers for Disease Control and Prevention estimating around 58,000 to 80,000 hospitalizations and 100 to 500 deaths each year in children under five. The virus can lead to severe illnesses like bronchiolitis and pneumonia.

Prevention tools now available

In the fall of 2023, two major preventive products became available in the U.S.:

- A maternal vaccine administered during pregnancy (given between 32-36 weeks' gestation)
- A long-acting monoclonal antibody for infants (0-7 months old) and some children (8-19 months old) at higher risk
- While these preventive products do **not** stop RSV infection entirely, their goal is to **drastically reduce the severity** of symptoms.

These tools mark a major shift in RSV prevention, including the monoclonal antibody product known as Beyfortus (also referred to as nirsevimab). The American Academy of Pediatrics reports that nirsevimab is expected to reduce the risk of severe RSV disease by about 80%.

What the data show: Fewer hospitalizations

"There's still RSV. But we have seen a drastic decrease in hospitalizations and ICU stays, which is usually when kids get the increased work of breathing and need oxygen and support. When they're really little, it's hard for them to suck, swallow and breathe because of all the mucus and inflammation," Dr. Grimes adds. "So sometimes even if they aren't being admitted for oxygen, it's because they're dehydrated."

Recent surveillance data underscore how significant that decrease is. An analysis of the 2024-25 RSV season – the first with widespread availability of both maternal vaccination and the infant antibody – found hospitalization rates among infants 0-7 months old fell by approximately 28% to 43% compared to 2018-20 (pre-pandemic) seasons.

For the youngest infants (0-2 months), the declines were even sharper, around 45% to 52%.

These data signal that many severe RSV cases in infants may now be preventable, a major public-health milestone.

Side effects and practical details

"Most common side effects are local redness, swelling and pain to the area. We aren't seeing any systemic signs with this injection," says Dr. Grimes. "Some other vaccines have an increased risk of fevers, but with this vaccine, we're just seeing, potentially, some localized effect from where the needle went into the thigh."

Additional supportive measures for babies with RSV symptoms include suctioning the nose, using humidifiers or steam from hot showers, nasal saline spray and watching for secondary bacterial infections.

General prevention: stay home when sick, cough into your elbow, wash and sanitize hands and avoid contact with others when appropriate.

Why this matters

Because infants are especially vulnerable, and because RSV has long been the top reason for hospitalization among U.S. babies, these preventive tools arrive at a critical moment. The Centers for Disease Control and Prevention (CDC) recommends that eligible infants receive protection as early in the RSV season as possible, ideally within the first week of life if born during RSV season.

Key takeaways for parents

- If you're pregnant, especially in your third trimester, ask your provider about the maternal RSV vaccine.
- After your baby is born, if they're under 8 months or have certain health conditions, ask about monoclonal antibody protection.
- Even with these tools, everyday precautions still help: hand hygiene, limiting exposure to sick contacts and monitoring for signs of worsening breathing or dehydration.
- Early treatment and care matter: If your baby is working harder to breathe, has decreased feeding, or seems dehydrated, seek medical attention promptly.

OSF OnCall, the digital arm of OSF HealthCare, offers virtual urgent care, a great option for people to be seen without ever stepping foot into an office. Virtual visits can allow your child to be seen and receive a treatment plan in less than half an hour. Additionally, OSF OnCall offers at-home monitoring for babies and toddlers with respiratory illnesses.

Difficulty breathing, or respiratory distress, is a medical emergency. If this happens with your child, take them to the nearest emergency department immediately.