



DHSS HEALTH ADVISORY

Date: 11.01.2022

The Missouri Department of Health & Senior Services (DHSS) uses four types of documents to provide important information to medical and public health professionals, and to other interested persons:

Health Alerts convey information of the highest level of importance which warrants immediate action or attention from Missouri health providers, emergency responders, public health agencies, and/or the public.

Health Advisories provide important information for a specific incident or situation, including that impacting neighboring states; may not require immediate action.

Health Guidances contain comprehensive information pertaining to a particular disease or condition, and include recommendations, guidelines, etc. endorsed by DHSS.

Health Updates provide new or updated information on an incident or situation; can also provide information to update a previously sent Health Alert, Health Advisory, or Health Guidance; unlikely to require immediate action.

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FROM: Paula F. Nickelson, Acting Director

SUBJECT: Increased Respiratory Syncytial Virus (RSV) Activity in Missouri

Summary

- Missouri is experiencing significant early increase in respiratory syncytial virus (RSV) activity, also seen nationwide;
- High hospital census at Missouri children's hospitals is driven in part by the spike in RSV infection, and strain overall hospital capacity in those facilities;
- Pediatric inpatient surge could result in patient transfer difficulties from acute care facilities to children's hospitals when specialty care is required;
- Health care providers should consider testing patients presenting with acute respiratory illness who have a negative SARS-CoV-2 test for RSV and influenza;
- Long-term care facilities (LTCF) should test any residents with ILI symptoms for SARS-CoV-2 and influenza and test for RSV and other respiratory viruses if the initial testing is negative;
- Healthcare personnel, childcare providers, and staff of LTCFs should avoid reporting to work while acutely ill even if they test negative for SARS-CoV-2;
- Ensure prophylactic administration of palivizumab to high-risk infants and young children per American Academy of Pediatrics (AAP) guidance;
- Encourage all eligible individuals to receive influenza and COVID-19 vaccines;
- Report outbreaks of severe respiratory illness regardless of etiology to your local public health agency or the Missouri Department of Health and Senior Services (DHSS);
- For additional questions or to report an outbreak of severe respiratory illness, please contact your local public health agency or the DHSS' Bureau of Communicable Disease Control and Prevention at 573-751-6113 or 800-392-0272(24/7).

Background

In the United States, respiratory syncytial virus (RSV) is a major respiratory pathogen leading to 58,000 hospitalizations and up to 500 deaths among young children, and 177,000 hospitalizations and 14,000 deaths among adults 65 years or older, annually. RSV bronchiolitis and pneumonia are typical reasons for infant hospitalizations, while severe acute respiratory infection due to RSV is the typical reason for adult hospitalizations.

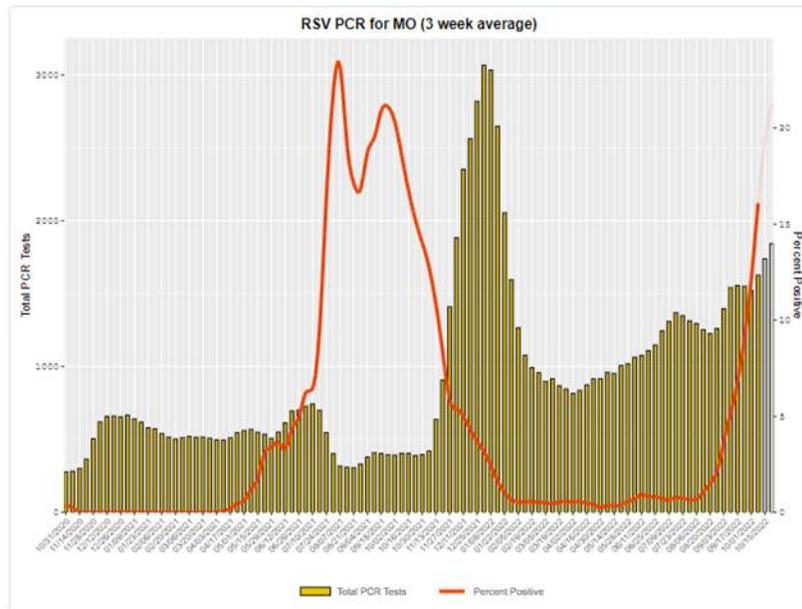
RSV usually circulates during late fall and early winter, but this pattern has been changing recently. In Missouri, high RSV activity was observed during the summer of last year, and an increase in outpatient visits and hospitalizations due to RSV have already occurred early this year.

According to the data from National Respiratory and Enteric Virus Surveillance System (NREVSS), Missouri started experiencing increased RSV activity earlier than usual, as



evidenced by the high RSV test positivity (Figure 1.). The 3-week moving average of the PCR test positivity for RSV has reached 16% by mid-October.

Figure 1. Total PCR tests and test positivity, Missouri, 2020-2022, NREVSS



According to the laboratory surveillance by the Barnes-Jewish Hospital (BJH) and St Louis Children’s hospital (SLCH), RSV test positivity was 18.6% in mid-October, when RSV antigen test and PCR test data were combined. At SLCH in October of 2022, hospitalizations and ICU admissions due to RSV, far exceeded those in each of the four preceding years during the same time period (SLCH data includes residents of Illinois hospitalized in Missouri). Compared to previous years, there was also an increase in the share of children older than 4 years among all hospitalized children.

RSV Infection

RSV spreads when an infected person coughs or sneezes, and virus droplets enter into eyes, nose, or mouth, or when you touch a surface contaminated with RSV and then touch your face, or with a direct contact with the virus, like kissing the face of a child with RSV. People infected with RSV are usually contagious for 3 to 8 days. However, some infants, and people with weakened immune systems, can continue to spread the virus even after symptoms resolve for up to 4 weeks.

Clinical symptoms of RSV are nonspecific and can overlap with other viral respiratory infections, as well as some bacterial infections. Patients with RSV infection typically present with fever, cough, wheezing and runny nose. Fever may or may not occur with illness presentation. The symptoms might be atypical especially in infants under 6 months of age presenting as irritability, lethargy, and poor feeding instead. Severe disease most commonly occurs in very young infants. Children with any of the following underlying conditions are considered at high risk:

- Premature infants
- Very young infants, especially those 6 months and younger



- Children younger than 2 years old with chronic lung disease or congenital heart disease
- Children with suppressed immune systems
- Children who have neuromuscular disorders, including those who have difficulty swallowing or clearing mucus secretions

Majority of otherwise healthy infants and young children with RSV infection do not need hospitalization, and improve with supportive care.

Most adults with RSV infection have mild or no symptoms. Symptoms usually last up to 5 days, and are consistent with an upper respiratory tract infection, such as rhinorrhea, sore throat, cough, headache, fatigue, and fever. However, some adults may have more severe symptoms of a lower respiratory tract infection, such as pneumonia. Those adults at high risk for severe illness from RSV include adults aged 65 years and older, those with chronic lung or heart disease, and those with a weakened immune system. RSV can sometimes worsen preexisting medical conditions, such as asthma, chronic obstructive pulmonary disease (COPD), and congestive heart failure.

RSV Testing

The most commonly used clinical laboratory tests performed on upper and lower respiratory specimens are real-time reverse transcriptase-polymerase chain reaction (rRT-PCR), which is more sensitive than other tests, and antigen testing, which is highly sensitive in children but not sensitive in adults. For infants and young children, both rRT-PCR and antigen detection tests are effective methods for diagnosing RSV infection. The RSV sensitivity of antigen detection tests generally ranges from 80% to 90% in this age group. For older children, adolescents, and adults healthcare providers should use highly sensitive rRT-PCR assays. Antigen tests are not sensitive for older children and adults because they may have lower viral loads in their respiratory specimens.

RSV Management

There is no specific treatment for RSV infection, and patients are managed with supportive care. Palivizumab is a monoclonal antibody recommended by the American Academy of Pediatrics (AAP) to be administered to high-risk infants and young children likely to benefit from immunoprophylaxis based on gestational age and certain underlying medical conditions. It is given in monthly intramuscular injections during the RSV season. For the latest palivizumab guidance, please consult [the AAP policy statement](#). The RSV vaccine and antivirals are under development.

RSV Prevention

- Cover your coughs and sneezes with a tissue or your upper shirt sleeve, not your hands
- Wash hands often with soap and water for at least 20 seconds
- Avoid close contact, such as kissing, shaking hands, and sharing cups and eating utensils, with others
- Clean frequently touched surfaces such as doorknobs, mobile devices, computers, etc.
- People with cold-like symptoms should not interact with children at high risk for severe RSV disease, including premature infants, children younger than 2 years of age with chronic lung or heart conditions, and children with weakened immune systems.