AHRQ Safety Program for Telemedicine: Improving Antibiotic Use

Respiratory Syncytial Virus (RSV) – Clinician Guide

Diagnosis

- Most adults and children present with mild disease (e.g., rhinorrhea, nasal congestion, sore throat, low-grade fevers) –indistinguishable from the common cold[1]
- Adults 75 years of age and older at higher risk of severe disease (e.g., wheezing, difficulty breathing, mental status changes); may be more appropriate candidates for in person visits[1]
- Infants under 12 months of age at higher risk of severe disease and should be seen in person[2,3]
- Adults and children with severe immune compromise (e.g., solid organ transplant recipients, active chemotherapy, or with prolonged corticosteroid use) and patients with underlying cardiac disease (e.g., congestive heart failure) more appropriate candidates for in person visits[1-3]
- Adults and children with underlying pulmonary disease (e.g., asthma, chronic obstructive pulmonary disease) can be seen via telemedicine; refer for in person visits if there are signs of severe disease[1-3]
- Routine RSV testing for adults or children with viral upper respiratory tract infection symptoms not necessary as antiviral treatment is not available; an exception is patients with severe immune compromise[4-6]
    - Decision for in person visits (with possible RSV testing during the in person visit) for adults and children with potential RSV infection should be based on patient age (e.g., infants and ≥75 years), underlying medical conditions (e.g., severe immune compromise, congestive heart failure), and evidence of severe infection (e.g., difficulty breathing, high fevers, mental status changes)

Treatment

- Antibiotics not indicated for treatment of RSV infection
- Suggestions for symptomatic management for patients with mild RSV infection provided in the “Viral Upper Respiratory Tract Infection (the “Common Cold”)” Clinician Guide

Prevention

- RSV is spread by hand contact and droplets
- To avoid transmission to others, encourage frequent hand washing, cough and sneeze into a tissue or into the arm rather than the hand, wear a face mask, and avoid touching the face
- **RSV vaccines** (Brand names: Arexvy®, Abrysvo®, Mresvia®)[7]
    - All 3 RSV vaccines licensed for adults ≥60 years
    - Centers for Disease Control and Prevention (CDC) recommends adults ≥75 years receive an RSV vaccine; adults ≥60 years at increased risk of severe RSV disease should also receive an RSV vaccine
    - One vaccine (Arexvy®) approved for adults ≥50 years at higher risk for severe disease
    - Risk factors for severe disease: chronic heart or lung disease, immune compromise, end stage renal disease, diabetes with complications, cirrhosis, neuromuscular conditions causing impaired airway clearance, severe obesity (BMI≥40 kg/m2), nursing home resident; complete list at: www.cdc.gov/rsv/hcp/clinical-overview/index.html[8]
    - Pregnant people should receive a single dose of Abrysvo® during weeks 32 through 36 of pregnancy; another dose of RSV vaccine not necessary during subsequent pregnancies
- **RSV monoclonal antibodies** (Brand name: Beyfortus®)[9,10]
    - All infants <8 months should receive one dose of Beyfortus® if the mother did not receive RSV vaccination during pregnancy
    - Infants 8-19 months at increased risk for severe RSV should receive a second dose upon entry into their second RSV season; also applies to infants who received palivizumab (Synagis®) during first RSV season[11]

Followup

- Symptoms typically worst on day 3-5 of illness; some symptoms commonly linger for up to two weeks
- Patients with symptoms that have not improved after 10 days or if they develop a high fever (above 102°F), confusion, lethargy, difficulty breathing or swallowing, severe headache, pain in the face or forehead, or severe fatigue should seek in person care

References

1. Hall CB. Respiratory syncytial virus and parainfluenza virus. N Engl J Med. 2001 Jun 21;344(25):1917-28. PMID: 11419430.

2. Lively JY, Curns AT, Weinberg GA, et al. Respiratory syncytial virus-associated outpatient visits among children younger than 24 months. J Pediatric Infect Dis Soc. 2019 Jul 1;8(3):284-286. PMID: 30840770.

3. Piedimonte G, Perez MK. Respiratory syncytial virus infection and bronchiolitis. Pediatr Rev. 2014 Dec;35(12):519-30. Erratum in: Pediatr Rev. 2015 Feb;36(2):85. PMID: 25452661.

4. Branche AR, Falsey AR. Respiratory syncytial virus infection in older adults: An under-recognized problem. Drugs Aging. 2015 Apr;32(4):261-9. PMID: 25851217.

5. Schwartz RH, Selvarangan R, Zissman EN. BD Veritor System respiratory syncytial virus rapid antigen detection test: Point-of-care results in primary care pediatric offices compared with reverse transcriptase polymerase chain reaction and viral culture methods. Pediatr Emerg Care. 2015 Dec;31(12):830-4. PMID: 25803752.

6. Chartrand C, Tremblay N, Renaud C, et al. Diagnostic accuracy of rapid antigen detection tests for respiratory syncytial virus infection: Systematic review and meta-analysis. J Clin Microbiol. 2015 Dec;53(12):3738-49. Epub 2015 Sep 9. PMID: 26354816.

7. Melgar M, Britton A, Roper LE, et al. Use of respiratory syncytial virus vaccines in older adults: Recommendations of the Advisory Committee on Immunization Practices - United States, 2023. MMWR Morb Mortal Wkly Rep. 2023 Jul 21;72(29):793-801. PMID: 37471262.

8. Centers for Disease Control and Prevention. Clinical overview of RSV. August 30, 2024. https://www.cdc.gov/rsv/hcp/clinical-overview/index.html. Accessed November 7, 2024.

9. Jones JM, Fleming-Dutra KE, Prill MM, et al. Use of nirsevimab for the prevention of respiratory syncytial virus disease among infants and young children: Recommendations of the Advisory Committee on Immunization Practices - United States, 2023. MMWR Morb Mortal Wkly Rep. 2023 Aug 25;72(34):920-925. PMID: 37616235.

10. Caserta MT, O'Leary ST, Munoz FM, et al. Palivizumab prophylaxis in infants and young children at increased risk of hospitalization for respiratory syncytial virus infection. Pediatrics. 2023 Jul 1;152(1):e2023061803. PMID: 37357729.

11. Centers for Disease Control and Prevention. RSV in infants and young children. August 30, 2024. https://www.cdc.gov/rsv/infants-young-children/index.html. Accessed November 20, 2024.