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Clinical Guideline Snapshot

Updated Guidance: Use of Palivizumab Prophylaxis to Prevent Hospitalization from Severe Respiratory Syncytial Virus (RSV) Infection During the 2022–2023 RSV Season

Guidance last updated November 17, 2022

American Academy of Pediatrics (AAP)

Provided to you by FormularyDecisions
Snapshot last updated November 19, 2022
Prepared by The Medical Letter, Inc.

Clinical Guideline Overview

Date of publication	Current guideline: August 1, 2014[1]; reaffirmed 2019 Updated guidance: November 17, 2022[2]; interim guidance presumed to expire December 31, 2022, unless otherwise specified
Summary	The updated guidance discusses palivizumab prophylaxis to prevent hospitalization for respiratory syncytial virus (RSV) infection during the 2022–2023 RSV season; it is in addition to the current guideline which was published in 2014.[1]
Changes since last guideline publication	• Because of a change in the seasonality of RSV due to the COVID-19 pandemic, the AAP supports the use of palivizumab (5 consecutive monthly doses to provide protection for the length of a typical RSV season) in eligible infants in any region experiencing rates of RSV activity at any time in 2022 similar to a typical fall-winter season • The AAP supports providing >5 consecutive doses to eligible children if RSV disease activity persists at high levels (data supporting use beyond 5 months are lacking) • The AAP will update this guidance as needed if the RSV season lasts longer than 6 months
Epidemiology	• According to the CDC, each year in the US, RSV leads to 58,000–80,000 hospitalizations in children <5 years old and 60,000–120,000 hospitalizations in adults ≥65 years old. There are 6,000–10,000 deaths per year in adults ≥65 years old and 100–300 deaths in children <5 years old[3] • RSV activity remained low in the 2020–2021 fall/winter season but increased during the spring of 2021 and continued through the following summer and fall. The shift in seasonality of RSV is expected to vary by region and continue through 2022–2023 • RSV activity in the US is monitored by the CDC; these data are available from the National Respiratory and Enteric Virus Surveillance System (NREVSS).[4] The CDC webpage provides links to Florida and Alaska state-specific RSV guidance

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Products included in guideline	• SYNAGIS® (palivizumab)

Clinical Considerations

Recommendations	• In the first year of life, palivizumab prophylaxis is recommended for infants born before 29 weeks, 0 days' gestation • Palivizumab prophylaxis is not recommended for otherwise healthy infants born at or after 29 weeks, 0 days' gestation • In the first year of life, palivizumab prophylaxis is recommended for preterm infants with CLD of prematurity, defined as birth at <32 weeks, 0 days' gestation and a requirement for >21% oxygen for at least 28 days after birth • Clinicians may administer palivizumab prophylaxis in the first year of life to certain infants with hemodynamically significant heart disease • Children with pulmonary abnormality or neuromuscular disease that impairs the ability to clear secretions from the upper airways may be considered for prophylaxis in the first year of life • Clinicians may administer up to a maximum of 5 monthly doses of palivizumab (15 mg/kg per dose) during the RSV season to infants who qualify for prophylaxis in the first year of life. Qualifying infants born during the RSV season may require fewer doses • Monthly prophylaxis should be discontinued in any child who experiences a breakthrough RSV hospitalization • Palivizumab prophylaxis is not recommended in the second year of life except for children who required at least 28 days of supplemental oxygen after birth and who continue to require medical intervention (supplemental oxygen, chronic corticosteroid, or diuretic therapy) • Children younger than 24 months who will be profoundly immunocompromised during the RSV season may be considered for prophylaxis • Palivizumab prophylaxis is not recommended for prevention of healthcare-associated RSV disease • Palivizumab lacks therapeutic efficacy for treatment of RSV. Passive antibody administration is not effective in treatment of RSV disease and is not approved or recommended for this indication • Updated guidance[2]: With the shift of seasonality noted in 2021 and the current regional variability in interseason RSV cases, the AAP supports the use of palivizumab in eligible infants in any region experiencing rates of RSV activity at any time in 2022 similar to a typical fall-winter season. The AAP recommends initiating the standard administration of palivizumab, which consists of 5 consecutive monthly doses
Recommendations for specific patient populations	**Preterm infants without chronic lung disease (CLD) of prematurity or congenital heart disease (CHD) born before 29 weeks, 0 days' gestation who are younger than 12 months at the start of the RSV season** • Palivizumab prophylaxis may be administered to infants born before 29 weeks, 0 days' gestation who are younger than 12 months at the start of the RSV season. For infants born during the RSV season, fewer than 5 monthly doses will be needed **Preterm infants without CLD of prematurity or CHD born at 29 weeks, 0 days' gestation or later who are younger than 12 months at the start of the RSV season** • Palivizumab prophylaxis not universally recommended • Infants 29 weeks, 0 days' gestation or later may qualify to receive prophylaxis on the basis CHD, CLD, or another condition **Preterm infants without CLD of prematurity or CHD born at 29 weeks, 0 days' gestation or later who are ≤24 months at the start of the RSV season**

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- Palivizumab prophylaxis is not recommended in the second year of life on the basis of a history of prematurity alone

Preterm infants with CLD

- Prophylaxis may be considered during the RSV season during the **first year of life** for preterm infants who develop CLD of prematurity defined as gestational age <32 weeks, 0 days and a requirement for >21% oxygen for at least the first 28 days after birth
- During the **second year of life**, consideration of palivizumab prophylaxis is recommended only for infants who satisfy this definition of CLD of prematurity and continue to require medical support (chronic corticosteroid therapy, diuretic therapy, or supplemental oxygen) during the 6-month period before the start of the second RSV season. For infants with CLD who do not continue to require medical support in the second year of life, prophylaxis is not recommended

Infants with hemodynamically significant CHD

- Certain children who are ≤12 months old at the start of the RSV season with hemodynamically significant CHD may benefit from palivizumab prophylaxis. Children with hemodynamically significant CHD who are most likely to benefit from palivizumab prophylaxis include infants with acyanotic heart disease who are receiving medication to control congestive heart failure and will require cardiac surgical procedures and infants with moderate to severe pulmonary hypertension
- The following groups of infants with CHD generally should **not** receive palivizumab prophylaxis:
  - Infants and children with hemodynamically insignificant heart disease (eg, secundum atrial septal defect, small ventricular septal defect, pulmonic stenosis, uncomplicated aortic stenosis, mild coarctation of the aorta, and patent ductus arteriosus)
  - Infants with lesions adequately corrected by surgery, unless they continue to require medication for congestive heart failure
  - Infants with mild cardiomyopathy who are not receiving medical therapy for the condition
  - Children in the second year of life
- For children who are receiving prophylaxis and who continue to require prophylaxis after a surgical procedure, a postoperative dose of palivizumab (15 mg/kg) should be considered after cardiac bypass or at the conclusion of extracorporeal membrane oxygenation for infants and children younger than 24 months
- Children younger than 2 years who undergo cardiac transplantation during the RSV season may be considered for palivizumab prophylaxis

Children with anatomic pulmonary abnormalities or neuromuscular disorder

- Infants with neuromuscular disease or congenital anomaly that impairs the ability to clear secretions from the upper airway because of ineffective cough may be considered for palivizumab prophylaxis during the first year of life

Immunocompromised children

- Prophylaxis may be considered for children younger than 24 months of age who are profoundly immunocompromised during the RSV season

Children with Down syndrome

- Data are insufficient to justify a recommendation for routine use of prophylaxis in children with Down syndrome unless qualifying heart disease, CLD, airway clearance issues, or prematurity (<29 weeks, 0 days' gestation) is present

Children with cystic fibrosis

- Routine use of palivizumab prophylaxis in patients with cystic fibrosis, including neonates diagnosed with cystic fibrosis by newborn screening, is not recommended unless other indications are present
- An infant with cystic fibrosis with clinical evidence of CLD and/or nutritional compromise in the first year of life may be considered for prophylaxis
- Continued use of palivizumab prophylaxis in the second year may be considered for infants with manifestations of severe lung disease (previous hospitalization for

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pulmonary exacerbation in the first year of life or abnormalities on chest radiography or chest computed tomography that persist when stable) or weight or length less than the 10th percentile

Alaska native and American Indian infants

- Clinicians may wish to use RSV surveillance data generated by the state of Alaska to assist in determining onset and end of the RSV season for qualifying infants
- Special consideration may be prudent for Navajo and White Mountain Apache infants in the first year of life

Children with breakthrough RSV hospitalization while receiving prophylaxis

- Monthly prophylaxis should be discontinued because of the extremely low likelihood of a second RSV hospitalization in the same season

Children in the second year of life

- A second season of palivizumab prophylaxis is recommended only for preterm infants born at <32 weeks, 0 days' gestation who required at least 28 days of oxygen after birth and who continue to require supplemental oxygen, chronic systemic corticosteroid therapy, or bronchodilator therapy within 6 months of the start of the second RSV season

Healthcare-associated RSV disease outbreaks

- Palivizumab use is not recommended for this purpose
- Infants in a neonatal unit who qualify for prophylaxis because of CLD, prematurity, or CHD may receive the first dose 48 to 72 hours before discharge to home or promptly after discharge

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Product Summary

Drug	Formulations	Dosage	Cost[1]
Palivizumab – *Synagis* (MedImmune)	50 mg/0.5 mL, 100 mg/mL single-dose vials	15 mg/kg IM once/month x 5 months (max)[2]	$6579.80

1. Approximate WAC for one dose for a 13-kg patient (two 100-mL vials). WAC = wholesaler acquisition cost or manufacturer's published price to wholesalers; WAC represents a published catalogue or list price and may not represent an actual transactional price. Source: AnalySource® Monthly. November 5, 2022. Reprinted with permission by First Databank, Inc. All rights reserved. ©2022. www.fdbhealth.com/policies/drug-pricing-policy.
2. First dose should be given before the start of RSV season. Babies born during RSV season will receive less than 5 doses. Recommended interval between doses is <35 days.

References

Other related clinical guidelines	• Guidelines for the diagnosis, management, and prevention of bronchiolitis[5]: An update of the 2006 AAP guidelines, applicable for children 1–23 months old • National Perinatal Association (NPA) Guideline for RSV prevention[6]: Published in October 2017, this guideline is critical of the American Academy of Pediatrics guidelines (originally published in 2014), stating that they significantly limit use of palivizumab and that such limitations result in unnecessary morbidity and mortality. They argue that use of the drug according to the broader FDA-approved indication is needed • WHO international guidelines for the management of common childhood illnesses[7]
Citations	1. Updated guidance for palivizumab prophylaxis among infants and young children at increased risk of hospitalization for respiratory syncytial virus infection. American Academy of Pediatrics Committee on Infectious Diseases; American Academy of Pediatrics Bronchiolitis Guidelines Committee. *Pediatrics*. 2014 Aug;134(2):e620-638. doi:10.1542/peds.2014-1666 2. Updated Guidance: Use of palivizumab prophylaxis to prevent hospitalization from severe respiratory syncytial virus infection during the 2022–2023 RSV season. American Academy of Pediatrics; August 2022. 3. Centers for Disease Control and Prevention. RSV research and surveillance. https://www.cdc.gov/rsv/. Accessed April 6, 2023. 4. Centers for Disease Control and Prevention, The National Respiratory and Enteric Virus Surveillance System. Respiratory syncytial virus (RSV) surveillance. Trends in the U.S. 5. SL Ralston, et al. Clinical practice guideline: the diagnosis, management, and prevention of bronchiolitis. American Academy of Pediatrics. *Pediatrics*. 2014 Nov;134(5):e1474-502. doi:10.1542/peds.2014-2742 6. Goldstein M, et al. National Perinatal Association (NPA): 2018 Respiratory syncytial virus (RSV) prevention clinical practice guideline – an evidence-based interdisciplinary collaboration. *Neonatology Today*. October 2017. 7. Pocket Book of Hospital Care for Children: Guidelines for the Management of Common Childhood Illnesses 2nd edition. Geneva: World Health Organization; 2013. WHO Guidelines Approved by the Guidelines Review Committee.
Request additional information	⇒ Please contact us at guidelines@medicalletter.org for questions about this snapshot.

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