Newborn Critical Care Center (NCCC) Clinical Guidelines

Nirsevimab (Beyfortus®) and Palivizumab (Synagis®) Administration Guidelines

The coverage period for RSV prophylaxis is October 24, 2023 through March 31, 2024.

Respiratory Syncytial Virus (RSV) is a negative strand RNA virus of the family *Paramyxoviridae*. RSV causes acute upper respiratory tract infections in patients of all age groups and is one of the most common diseases of childhood. Most infants are infected during their first year of life, most children having been infected by the second year of life. The risk of severe RSV infection is increased by characteristics such as premature birth, cyanotic or complex congenital heart disease and chronic lung disease.

In previous years, Palivizumab (Synagis®) has been the drug of choice for our patient population.

In July 2023, Nirsevimab-alip (Beyfortus®) was the first monoclonal antibody for passive immunization approved by the FDA for the prevention of RSV lower respiratory tract disease in neonates and infants born during, or entering their first RSV season. Beyfortus® is approved for children up to 24 months of age who remain vulnerable to RSV during their second season. Beyfortus® is a RSV F-protein directed fusion inhibitor.

Nirsevimab is contraindicated for infants less than eight months of age whose mothers received RSV vaccine at 32-36 weeks gestation of pregnancy.

The NCCC will begin administration of Nirsevimab (Beyfortus®) in October if available. Palivizumab (Synagis®) administration will begin November 1, 2023 if Beyfortus® is unavailable. Administration begins for in-patients and may be given the day prior to discharge.

ELIGIBILITY CRITERIA (identical for both Synagis® and Beyfortus®)

1. Prophylaxis **IS** recommended for infants born **before** 29 weeks 0 days gestation in the first year of life.
2. In the first year of life, prophylaxis **IS** recommended for preterm infants with **CLD** and birth age of < 32 weeks 0 days gestation **AND** an oxygen requirement of > 0.21 for at least 28 days after birth. (Documentation must be provided such as a NCCC/NICU discharge summary).
3. Prophylaxis **MAY** be administered in the first year of life to infants with hemodynamically significant **heart disease;** i.e. on medication to treat congestive heart failure, or those requiring cardiac surgical procedures. Documentation of cardiologist recommendation is required.
4. Prophylaxis **MAY** be administered to children with moderate to severe pulmonary hypertension.
5. Children with pulmonary or neuromuscular abnormalities which impair the ability to clear upper airway secretions **ARE** eligible for therapy and **MAY** be considered for prophylaxis in the first year of life.
6. Children younger than 24 months of age who may be profoundly immunocompromised **MAY** be considered for prophylaxis.
7. Infants in their **first or second** RSV season:
    a. With profound immunocompromise during the RSV season

b. Undergoing cardiac transplantation during the RSV season

8. Infants less than 24 months of age in their **second** RSV season with a diagnosis of:
    a. CLD of prematurity (see above definition) AND continue to require medical support (supplemental oxygen, chronic corticosteroid medications or diuretic therapy) during the six-month period before the start of their **second** RSV season
    b. Cystic Fibrosis - with manifestations of severe lung disease (previous hospitalization for pulmonary exacerbation in the first year or abnormalities on chest radiography or chest computed tomography that persist when stable) or weight-for-length less than 10th percentile.
    a. Beyfortus®® will be considered on a case-by case basis for NCCC **inpatient** dosing for infants > 6 months of age with chronic BPD or tracheostomy/ventilator dependence since this population is at extremely high risk of morbidity with inpatient acquisition of RSV.

NIRSEVIMAB (BEYFORTUS®) DOSING

For first RSV Season

- < 5 Kg Dose is 50 mg IM x 1 dose
- >/= 5 Kg Dose is 100 mg IM x 1 dose

For second RSV Season

- </ = 90 days since initial dose: 200 mg IM in two injections. (Dose is two 100mg injections)
- > 90 days since initial dose: 100 mg IM x 1 dose

Administer via IM injection in the anterolateral aspect of the thigh. Should two injections be required to complete the total dosage (200 mg dose) different injection sites should be used.

Palivizumab (Synagis®) is a RSV Monoclonal Antibody licensed by the FDA in 1998. It is a humanized monoclonal antibody produced by recombinant DNA technology. Two large multi-center studies have demonstrated the efficacy of Synagis® in reducing the rate of hospital admissions for a select group of patients. The American Academy of Pediatrics (initially in 1998, most recently updated in 2022) published guidelines for the administration of Synagis®. The clinical criteria used by NC Medicaid for the 2023-2024 RSV season are consistent with guidance published by the American Academy of Pediatrics (AAP): 2021-2024 Report of the Committee on Infectious Diseases, 32nd Edition. This policy, reviewed by the American Academy of Pediatrics (AAP) Committee on Infectious Diseases (COID), replaces previous recommendations as published in the 2012 Red Book. It should be given in monthly IM injections at the beginning of RSV season and end on a date that affords protection through the end of RSV season.

The Newborn Critical Care Center will follow the AAP recommendations for administration of Synagis® during the 2023-2024 RSV season and distribute Synagis® to eligible hospitalized NCCC infants with imminent discharge to home on the Thursday that most closely precedes their discharge. **Synagis® will be available on Tuesdays beginning October 24, 2023 to continue weekly through March 31, 2024**. Synagis® may be administered on other days of the week, if necessary, by consultation with NCCC Pharmacist and batching.

Synagis® will only be administered to eligible patients if Nirsevimab is unavailable.

Dosing Criteria:

- For infants who qualify for prophylaxis in the first year of life, a maximum of **FIVE** monthly doses of Synagis® may be given.

In UNC NCCC, dosing will be provided once weekly, on the Thursday closest to the discharge date for eligible patients. If an eligible patient will not be hospitalized in the NCCC on any Thursday during the administration time period, every attempt will be made to co-administer dosing with other eligible patients. (An announcement will be made during NCCC Board Rounds to find other eligible patients and minimize administration costs.)

ADMINISTRATION:

Synagis® 15 mg/kg IM (preferably anterolateral thigh) once every 30 days

- Round dose to the nearest integer
- *Of note*: Beyfortus® or Synagis® do not interfere with responses to other vaccines

FOLLOW-UP:

- Once infants have been identified as recipients of Palivizumab, notify the primary care provider so that they may order the appropriate number of doses for their practice, and to ensure that continuous coverage will be provided during the RSV season.

- All Synagis® requests require prior authorization approval for coverage by NC Medicaid. Clinical criteria utilized by N.C. Medicaid for the 2022/23 RSV season are anticipated to be consistent with published guidelines by the AAP. Prior authorization (PA) requests for the upcoming season will be submitted electronically through the Synagis® web-based application at www.documentforsafety.org.

- The Synagis® prior authorization (PA) request form for NC Medicaid Direct beneficiaries is found on the NC Tracks pharmacy services page at https://www.nctracks.nc.gov/content/public/providers/pharmacy/pa-drugs-criteria-new-format.html.
- Submit PA requests by fax to NCTracks at 855-710-1969
- Call the NCTracks Pharmacy PA Call Center at 866-246-8505 for assistance with submitting a PA request

- A user name and password are required to access the system. Providers should register early in order to avoid delays in submitting requests. An outpatient pharmacy program also exists, and the same user name and password will access all available programs. Pharmacy support is available at 919-855-4300 and Technical Provider support is available at 919-926-3986.
- The provider should use the Non-Covered State Medicaid Plan Services Request Form for recipients under 21 years of age to request Synagis® doses exceeding policy or for coverage outside the defined coverage period. Fax the form to 919-715-1255.
- Technical support is available Monday through Friday from 8 AM to 5 PM at 855-272-6576 or 919-926-3986.
- *Important Note:* User must have their National Provider Identifier (NPI) number to complete password authorization.

The coverage period for Synagis® is October 24, 2023 through March 31, 2024.

Please also see the AAP Recommendations for Synagis® (Palivizumab)

Resources:

1. American Academy of Pediatrics (AAP): American Academy of Pediatrics (AAP): 2022 – 2024 Report of the Committee on Infectious Diseases, 32nd Edition.
2. 2018 - 2021 Report of the Committee on Infectious Diseases (Red Book), 31st Edition.
3. NCDHHS NC Medicaid Outpatient Pharmacy Services Prior Approval Drugs and Criteria for Synagis®
4. Committee on Infectious Diseases and Bronchiolitis Guidelines Committee. Updated Guidance for Palivizumab Prophylaxis Among Infants and Young Children at Increased Risk of Hospitalization for Respiratory Syncytial Virus
5. Infection; Pediatrics Aug 2014, 134 (2) 415-420; DOI 10.1542/peds.2014-1665.

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