INDIAN HEALTH SERVICE
National Pharmacy and Therapeutics Committee
Formulary Brief: ***RSV Monoclonal Antibodies***
-August 2025-

Background:

The Indian Health Service (IHS) National Pharmacy and Therapeutics Committee (NPTC) provided a review of approved respiratory syncytial virus monoclonal antibodies (mAB). The review focused on three approved mABs: palivizumab, approved in 1998 for select infants, nirsevimab, approved in July 2023 for all infants <8 months of age (moa) and high risk infants 8-20 moa, and clesrovimab, approved in June 2025 for all infants <8 moa. All immunizations recommended by the CDC's Advisory Committee on Immunization Practices (ACIP) are on the IHS National Core Formulary (NCF). Ultimately, the NPTC made no modifications to the NCF. **For the 2025-2026 RSV season, IHS guidance is the preferential use of nirsevimab for AI/AN eligible infants and children.**

Discussion:

Epidemiology: Respiratory syncytial virus (RSV) is a leading cause of hospitalization among young children[1]. Currently, 2-3% of young infants are hospitalized for RSV; 80% of hospitalized infants and children have no underlying risk for hospitalization.[1] All infants are at risk for RSV hospitalization. Historically, American Indian and Alaska Native (AI/AN) infants/children have experienced up to 10-fold higher rates of hospitalization compared to the general USA population.[2]

RSV Background: In August 2023, nirsevimab, a long-acting preventive RSV mAB, was recommended for all infants <8 moa (born during or entering their first RSV season) and for children 8–19 moa (entering their second RSV season) who have increased risk for severe RSV illness.[3] All AI/AN children are considered high risk and should receive RSV mAB for two seasons.[3-5] See the American Academy of Pediatrics (AAP) Nirsevimab Administration Guide for additional details.[3]

PEDIATRIC Preventive Monoclonal Antibodies (mAB)

Palivizumab (Synagis®) is s short acting RSV mAB approved in 1998 for select high risk infants. On July 16, 2025, the AAP recommendations for RSV prevention stated "Palivizumab is no longer routinely recommended for use".[3]

Nirsevimab (Beyfortus®) has been administered for two RSV seasons (2023-2024; 2024-2025) with data on real world product effectiveness, reduction of hospital and ICU admissions, efficacy for a longer time frame, and adverse events.

- Real world product effectiveness data: many USA studies show the high product effectiveness of nirsevimab.[6-10] An important study for IHS was completed in the Yukon-Kuskokwim Delta region, Alaska [6]. This evaluation estimated nirsevimab effectiveness among AI/AN children in their first or second RSV seasons during 2023–2024. Among 472 children with medically attended acute respiratory illness (MA ARI), 48% overall had received nirsevimab ≥7 days earlier (median = 91 days before the ARI-related visit)[6]. This study demonstrated product effectiveness in the AI/AN population[6]. The chart shows the YK Delta study results, clinical trial efficacy and other USA nirsevimab product effectiveness data.

CLINICAL TRIAL EFFICACY	MA-RSV (95% CI)	RSV Hospitalization (95% CI)	RSV ICU admission (95% CI)	Comments
Combined efficacy[7]	79.0% (68.5-86.1)	80.6% (62.3-90.1)	90.0% (16.4-98.6)	Pre-term and term infants
2023-2024 PRODUCT EFFECTIVENESS	**MA-RSV (95% CI)**	**RSV Hospitalization (95% CI)**	**RSV ICU admission (95% CI)**	**Comments**
YK Delta[6] <8 moa 8-19 moa	82% (62-91) 76% (42-90) 88% (48-97)	93% (64-99) 89% (32-98) No hospitalizations	--	98% were AI/AN
Vision[8] <8 moa	77% (69-83)	98% (95-99)	--	127 Emergency rooms & 107 hospitals
NVSN[8] <8 moa	89 (77-94)	91% (79-96)	--	7 Pediatric medical centers
Kaiser[9] <8 moa	R87.5% (82.0-91.3)	98% (85.1-99.7)	--	31,900 infants; one immunized infant hospitalized with RSV
2024-2025 PRODUCT EFFECTIVENESS	**MA-RSV (95% CI)**	**RSV Hospitalization (95% CI)**	**RSV ICU admission (95% CI)**	**Comments**
Vision[10] <8 moa	63% (56-69)	79% (67-87)	82% (57-93)	
NSVN[10] <8 moa	76% (55-87)	82% (71-88)	88% (63-96)	
Overcoming[10] <8 moa	--	--	80% (16-99)	26 Pediatric ICUs

- Study data show RSV reductions in hospitalization and ICU admission from pre-COVID years to the 2024-2025 RSV season (after introduction of nirsevimab) in surveillance networks (RSV-NET and NVSN). Infants 0-7 moa have 38% and 31% reduction in hospitalizations; infants 0-2 moa at 47% and 46%.[10] RSV-associated ICU admission data from RSV-NET show a reduction of 38% in infants 0-7 moa and 42% in infants 0-2 moa.[10]

- Efficacy of nirsevimab remains robust through 180 days, allowing reassurance about duration of protection.[11]

- Vaccine Safety Datalink reports 37,909 infants received nirsevimab during the 2024-2025 RSV season.[10] No increased risk for seizures, immune thrombocytopenia, drug reactions, sepsis or fever was found. There were 18 cases (~0.05% of doses) of allergic reaction, primarily urticaria; there were no cases of anaphylaxis.

Conclusion: Nirsevimab is effective for preventing severe RSV illness among infants entering their first RSV season and children entering their second season with increased risk for severe RSV, including all AI/AN children.

Clesrovimab (Enflosia®) is a new, long-acting RSV F protein fusion inhibitor mAB indicated for prevention of RSV disease in infants.[12] It was approved by the FDA on June 9, 2025. Clesrovimab is approved for use in infants <8 months of age born during or entering their first RSV season; it is **not** approved for use in children ages 8-19 months at increased risk of severe RSV disease and entering their second RSV season. Data supporting this decision was derived from the CLEVER and SMART studies.[13] In the CLEVER Study, clesrovimab decreased medically-attended RSV LRTI by 60.5% (95% CI: 44.1-77.9%); RSV hospitalization by 84.2% (95% CI: 66.6-92.6%); RSV LTRI hospitalization by 90.9% (95% CI: 76.2-96.5%); and severe RSV LRTI hospitalization by 91.7% (95% CI: 82.9-98.1%) in the healthy term and late preterm infants, durable through 180 days post-injection.[13] In the SMART Study, high-risk infants, including those born extremely preterm, with chronic lung disease or congenital heart disease, were enrolled; these infants received either clesrovimab or palivizumab. Rates of RSV-related disease and hospitalization were similar between groups with incidence rates of hospitalization of 1.3% (95% CI: 0.4-6.0) for clesrovimab and 1.5% (95% CI: 0.6-3.3) for palivizumab.[13] The safety profile shows clesrovimab is well tolerated in healthy preterm and full-term infants born during or entering their first RSV season, with a safety profile that is generally comparable to placebo. The safety profile of clesrovimab in infants at increased risk of severe RSV disease is generally comparable to palivizumab and consistent with the safety profile in healthy infants. In both studies, 98% of infants had post-dose temperatures of <100.4° F. There were no Grade 4 (life threatening) adverse events and no deaths related to the studies. The most common adverse reactions with clesrovimab were injection-site erythema (3.7%) and injection-site swelling (2.7%).

ACIP proposed RSV preventative guidance: All infants <8 moa should receive RSV prevention, either through the maternal RSV immunization **OR** one of the infant RSV mAB (nirsevimab or clesrovimab) in the first RSV season. *For high risk children, nirsevimab is the only RSV preventive measure recommended for second season use.*[10] Additional information on RSV and nirsevimab can be found at the AAP and nirsevimab references below.[3-5,14-16]

Findings:

Nirsevimab is the only approved and recommended long-acting mAB with proven real-world effectiveness for the prevention of serious RSV disease, especially in AI/AN tribal communities. For the 2025-2026 RSV immunization season, nirsevimab supply is expected to be ample while the supply chain for clesrovimab is likely to be limited and/or delayed. Unlike nirsevimab, clesrovimab is not currently approved for use during a child's second RSV season (e.g., 8-19 months) as recommended for all AI/AN children. For these reasons, **for the 2025-2026 RSV season, IHS guidance is the preferential use of nirsevimab for eligible AI/AN infants and children.**

References:

1. U.S. Centers for Disease Control and Prevention. ACIP. Evidence to Recommendation Framework: Clesrovimab. June 25, 2025.
2. U.S. Centers for Disease Control and Prevention. Evidence to Recommendations Framework: Nirsevimab Updates. August 3, 2023.
3. American Academy of Pediatrics. AAP Recommendations for the Prevention of RSV Disease in Infants and Children. Published July 8, 2025.
4. U.S. Centers for Disease Control and Prevention. ACIP Meeting. Maternal/Pediatric Respiratory Syncytial Virus (RSV) Work Group. Oct 23, 2024.
5. American Academy of Pediatrics. Nirsevimab Administration Visual Guide. Accessed July 22, 2025.
6. U.S. Centers for Disease Control and Prevention. Nirsevimab Effectiveness Against Medically Attended Respiratory Syncytial Virus Illness and Hospitalization Among Alaska Native Children —Yukon-Kuskokwim Delta Region, Alaska, Oct 2023–June 2024. MMWR. 2024; 73(45):1015-21.
7. National Foundation for Infectious Diseases. Updates in RSV Prevention. September 19, 2023.
8. U.S. Centers for Disease Control and Prevention. National Center for Immunization and Respiratory Diseases (NCIRD). Summary of effectiveness of nirsevimab in infants. June 28, 2024.
9. American Academy of Pediatrics. Effectiveness of Nirsevimab Against RSV and RSV-Related Events in Infants. Pediatrics. 2025; 156(2).
10. U.S. Centers for Disease Control and Prevention. Effectiveness and impact of RSV prevention products in infants during the 2024–2025 RSV season. June 25, 2025.
11. Munro AP, Drysdale SB, Cathie K, et al.180-day efficacy of nirsevimab against hospitalisation for respiratory syncytial virus lower respiratory tract infections in infants (HARMONIE): a randomised, controlled, phase 3b trial. Lancet. 2025; 9(6):404-12.
12. American Academy of Pediatrics. CDC director OKs new RSV immunization for infants. Published August 7, 2025.
13. U.S. Centers for Disease Control and Prevention. ACIP Meeting. Clesrovimab (MK-1654): Pediatric Clinical Program. October 23, 2024.
14. Enflonsia® [package insert]. Rahway, NJ: Merck Sharp & Dohme LLC; 2025.
15. American Academy of Pediatrics. Red Book: Respiratory Syncytial Virus. Report on the Committee on Infectious Disease. (33rd edition). 2024.
16. American Academy of Pediatrics. Nirsevimab Frequently Asked Questions. Last Updated: July 17, 2025.