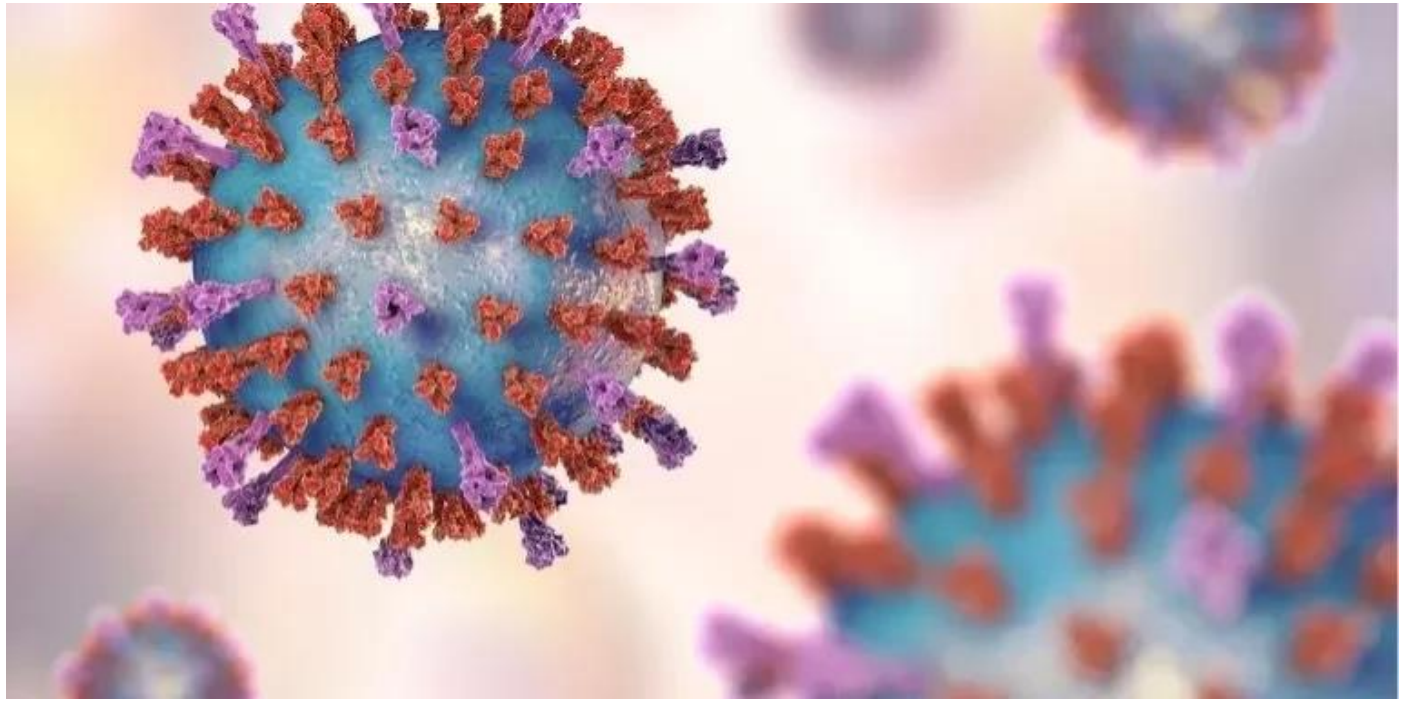
Nirsevimab Toolkit



https://www.nfid.org/infectious-disease/rsv/

Version: 10/08/2023
PHN QI Team

Pediatric Health Network
Children's National

Given the evolving nature of information and recommendations during this first season of nirsevimab administration, updates will be made and reflected in the version date on this title slide. Original version created 09/08/2023.

Contents

Nirsevimab: the basics

Updated 10/08/2023

Long-acting monoclonal antibody product intended for use in newborns and infants to protect against (medically attended) respiratory syncytial virus (RSV) disease

One dose given per season

Provides protection for 5 months

Simultaneous administration of nirsevimab with age-appropriate vaccines is recommended (including COVID-19 vaccines)

Safety/ Side effects: rash and injection site reactions (similar to placebo for <1 yo); similar to palivizumab

Efficacy (pooled from available studies):

- preventing medically attended RSV-associated LRTI* 79.0%
- preventing RSV-associated LRTI with hospitalization 80.6%
- preventing RSV-associated LRTI with ICU admission 90.0%

Source: CDC MMWR

**LRTI = lower respiratory tract infection*

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Link: Nirsevimab Administration Visual Guide

RESEARCH SUMMARY

Nirsevimab for Prevention of RSV in Healthy Late-Preterm and Term Infants

Hammitt LL et al. DOI: 10.1056/NEJMoa2110275

CLINICAL PROBLEM

Nirsevimab — a monoclonal antibody against the respiratory syncytial virus (RSV) fusion protein that has an extended half-life — has been shown to protect healthy preterm infants from RSV-associated lower respiratory tract infection, but its efficacy and safety in late-preterm and term infants are unknown.

CLINICAL TRIAL

Design: A multinational, phase 3, randomized, placebo-controlled trial assessed the efficacy and safety of nirsevimab for preventing RSV-associated lower respiratory tract infection in healthy infants born at a gestational age of at least 35 weeks.

Intervention: 1490 infants were randomly assigned, in a 2:1 ratio, to receive a single intramuscular injection of nirsevimab or placebo before entering their first RSV season. The primary efficacy end point was medically attended RSV-associated lower respiratory tract infection through day 150 after the injection.

RESULTS

Efficacy: The incidence of medically attended RSV-associated lower respiratory tract infection was significantly lower in the nirsevimab group than in the placebo group.

Safety: Similar types of adverse events occurred in the two groups, at similar frequencies. Most adverse events were grade 1 or 2 in severity.

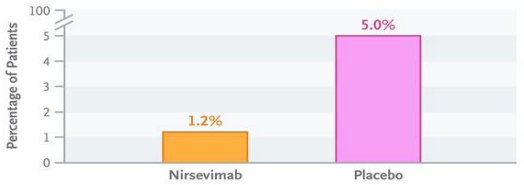
LIMITATIONS AND REMAINING QUESTIONS

- The efficacy of nirsevimab was relatively lower among younger infants (≤3 months vs. >3 months of age) and among those who weighed less (<5 kg vs. ≥5 kg), although small numbers preclude firm conclusions.
- The trial enrolled infants in the northern hemisphere and in South Africa (southern hemisphere). Although the overall incidence of RSV during the trial was as expected in the northern hemisphere, measures to control the Covid-19 pandemic in South Africa limited RSV circulation, resulting in low enrollment there.

Links: Full Article | NEJM Quick Take

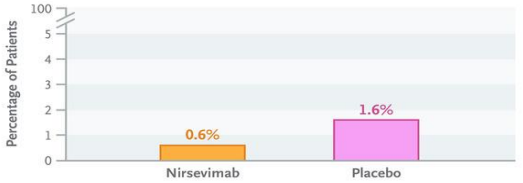
Medically Attended Lower Respiratory Tract Infection through Day 150

Efficacy, 74.5%; 95% CI, 49.6 to 87.1; P<0.001

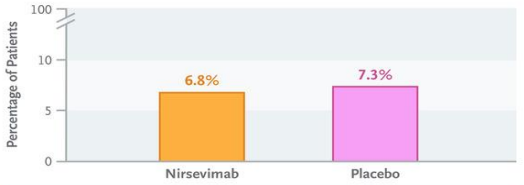


Hospitalization for Lower Respiratory Tract Infection through Day 150

Efficacy, 62.1%; 95% CI, −8.6 to 86.8; P=0.07



Serious Adverse Events through Day 361



CONCLUSIONS

A single dose of nirsevimab given before the RSV season lowered the risk of medically attended RSV-associated lower respiratory tract infection in healthy late-preterm and term infants, with no safety concerns.

Who should get nirsevimab?

Updated 10/08/2023

ACIP/AAP/CDC Recommendations

One dose of nirsevimab is recommended for:

All infants < 8 months born during or entering their first RSV season if:

- The mother did not receive RSV vaccine during pregnancy.
- The mother's RSV vaccination status is unknown.
- The infant was born within 14 days of maternal RSV vaccination.

Except in rare circumstances, nirsevimab is not needed for most infants younger than age 8 months who are born 14 or more days after their mother received RSV vaccine. For additional details, see section on special situations and populations.

Frequently Asked Questions About RSV Vaccine for Children 19 Months and Younger | CDC

ACIP and AAP nirsevimab recommendations- August 2023

Healthcare Providers: RSV Vaccination for Pregnant People | CDC

https://www.cdc.gov/vaccines/acip/meetings/downloads/slides-2023-09-22/07-Mat-Peds-Jones-508.pdf

Who should get nirsevimab?

ACIP/AAP/CDC Recommendations

Which children should receive a dose of nirsevimab in their second RSV season?

- Children with chronic lung disease of prematurity who required medical support (chronic corticosteroid therapy, diuretic therapy or supplemental oxygen) any time during the 6-month period before the start of the second RSV season.
- Children who are severely immunocompromised.
- Children with cystic fibrosis who have manifestations of severe lung disease (previous hospitalization for pulmonary exacerbation in the first year of life or abnormalities on chest imaging that persist when stable) or have weight-for-length that is <10th percentile.
- American Indian and Alaska Native children (note that this is a new group for whom second-season prophylaxis is recommended in contrast to the current palivizumab recommendations).

Source: ACIP and AAP nirsevimab recommendations- August 2023

Nirsevimab (Beyfortus) vs palivizumab (Synagis)?

ACIP/AAP/CDC Recommendations

- If nirsevimab is administered, palivizumab should not be administered later that season.
- If palivizumab was administered initially for the season and <5 doses were administered, the infant should receive 1 dose of nirsevimab (30 days after most recent dose of palivizumab). No further palivizumab should be administered.
- If palivizumab was administered in season 1 and the child is eligible for RSV prophylaxis in season 2, the child should receive nirsevimab in season 2, if available. If nirsevimab is not available, palivizumab should be administered as previously recommended.

Source: ACIP and AAP nirsevimab recommendations- August 2023

When to given nirsevimab?

Link: Nirsevimab Administration Visual Guide

< 8 months at the start of RSV season or 8-19 months, high risk	→	**shortly before season/ any time during season before child ages out**
Born during RSV season	→	**First week of life**

*RSV season varies by year and geography but generally considered October-March

Source: ACIP and AAP nirsevimab recommendations- August 2023

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Timing: a calendar approach for infants < 8 mo

Month of birth	Administration of nirsevimab
April	6 mo WCC in October
May	6 mo WCC in Nov, or Imm visit when available
June	4 mo WCC in October
July	4 mo WCC in Nov, or Imm Visit when available
August	2 mo WCC in Oct
September	Newborn, 2 week, or 1 mo WCC (first visit after office rolls out nirsevimab)
October – March*	In newborn nursery or outpatient newborn visit

*Providers can adjust administration schedules on the basis of local RSV activity in the community

Conduct outreach to patients who will age out (turn 8 months old) prior to their next scheduled visit or well visit. Consider communication to families who have upcoming appointments to alert them of availability and importance of keeping their scheduled visits.

Potential strategies for prioritizing and scheduling patients

Conduct outreach to patients who will age out (turn 8 months old) prior to their next scheduled visit or well visit.

Conduct outreach to high risk children.

Consider communication to families who have upcoming appointments to alert them of availability of nirsevimab and importance of keeping their scheduled visits.

Check with your local hospitals to see if they will be administering to newborns this RSV season. If nirsevimab is given in the birth hospital, patient does not need further doses.

Ordering

Formulations

Nirsevimab is packaged in **pre-filled syringes** of either:

- 50mg (0.5mL) with purple plunger rod (for infants weighing <5 kg)
- 100 mg (1mL) with light blue plunger rod (weighing ≥5kg)

Supply and Ordering

Nirsevimab purchase cost

The private-sector cost for nirsevimab is:

- $495 per dose for 50mg and 100mg doses
- $990 per dose for a 200mg dose (given as two injections of 100 mg dose formulation)

Source: AAP

Ordering

Additional considerations:

- The formulation of nirsevimab will not change from year to year.
- Nirsevimab has a shelf life of about 18 months.
- Nirsevimab can be returned after it expires, similar to other Sanofi vaccine products.
- Sanofi allows payment up until 150 days from the product shipment date if ordered directly from them
- Nirsevimab can be ordered as often as desired and in any quantity (there is no minimum order). The product will come in the following pack sizes:
  - Five 50 mg/0.5 mL single-dose pre-filled syringes in a carton
  - Five 100 mg/mL single-dose pre-filled syringes in a carton

Source: AAP

Ordering/Financing

Financing product

If your practice cannot or does not want to invest significant cash up front into ordering the product as prompt and appropriate payment is still unclear, you can consider financing. Things to consider when financing:

- Look for a credit card or other financing opportunity with a 0% interest rate for as long a term as possible. **Sanofi allows payment up until 150 days from the product shipment date if ordered directly from them**.
- Make certain not to violate payment terms or you might face high interest payments.

Source: AAP

Dosing

Dosing by Weight/Age

First RSV season:

A single dose should be administered to

- Infants weighing <5 kg: 50 mg dose (purple plunger rod)
- Infants weighing ≥5 kg: 100 mg dose (light blue plunger rod)

Second RSV season:

Children receiving nirsevimab in their second RSV season should receive a single dose of 200 mg, administered through 2 separate 100 mg IM injections.

Source: AAP

Recommended Dosage of Beyfortus in Neonates and Infants Born During or Entering Their First RSV Season[5]	
Body Weight at Time of Dosing	**Recommended Dosage**
Less than 5 kg	50 mg by IM injection
5 kg and greater	100 mg by IM injection

50 mg by IM injection

100 mg by IM injection

Source: Sanofi

Dosing: Children Undergoing Cardiac Surgery with Cardiopulmonary Bypass

For children undergoing cardiac surgery with cardiopulmonary bypass, an additional dose of BEYFORTUS is recommended as soon as the child is stable after surgery to ensure adequate nirsevimab-alip serum levels. The recommended dosage of BEYFORTUS is administered as an IM injection.

First RSV season:

- If surgery is within 90 days after receiving BEYFORTUS, the additional dose should be based on body weight at the time of the additional dose. Refer to Table 1 for weight-based dosing.
- If more than 90 days have elapsed since receiving BEYFORTUS, the additional dose should be 50 mg regardless of body weight.

Second RSV season:

- If surgery is within 90 days after receiving BEYFORTUS, the additional dose should be 200 mg, regardless of body weight.
- If more than 90 days have elapsed since receiving BEYFORTUS, the additional dose should be 100 mg, regardless of body weight.

Source: FDA
https://www.accessdata.fda.gov/drugsatfda_docs/label/2023/761328s000lbl.pdf

Storage and Administration

Storage and Handling

You will store nirsevimab the way many vaccines are stored.

Routine Storage: In a refrigerator at 2˚C– 8˚C ; DO NOT FREEZE

Short-term storage: Room temperature (20˚C – 25˚C), for 8 hours, if protected from light

Do I need to report nirsevimab administration to my state immunization information system (IIS)?

Yes. You should report nirsevimab administration to the state IIS in accordance with state policies for reporting of vaccine administration.

Source: AAP

Contraindications/ Warnings

BEYFORTUS is contraindicated in infants and children with a history of serious hypersensitivity reactions, including anaphylaxis, to nirsevimab-alip or to any of the excipients

Hypersensitivity Including Anaphylaxis : Serious hypersensitivity reactions, including anaphylaxis, have been observed with other human immunoglobulin G1 (IgG1) monoclonal antibodies. If signs and symptoms of a clinically significant hypersensitivity reaction or anaphylaxis occur, initiate appropriate medications and/or supportive therapy.
Use in Individuals with Clinically Significant Bleeding Disorders: As with any other IM injections, BEYFORTUS should be given with caution to infants and children with thrombocytopenia, any coagulation disorder, or to individuals on anticoagulation therapy.

What are the ingredients in BEYFORTUS?

- Active ingredient: nirsevimab-alip
- Inactive ingredients: arginine hydrochloride, histidine, L-histidine hydrochloride monohydrate, polysorbate 80, sucrose and water for injection.

Source: FDA
https://www.accessdata.fda.gov/drugsatfda_docs/label/2023/761328s000lbl.pdf

Adverse Events

Most common adverse reactions were **rash** (0.9%) and injection **site reactions** (0.3%).

- Infants > 34 weeks during first RSV season: similar to placebo
- High-risk infants in first RSV season: similar to infants > 34 weeks without risk factors
- High-risk infants in second RSV season: similar to safety profile during first RSV season

Source: FDA

Reporting Adverse Events**:**

- Adverse events when giving nirsevimab alone should be reported to the **FDA's MedWatch Adverse Event Reporting Program**.
- If an adverse event occurs while co-administering nirsevimab with a vaccine, it should be reported to the **Vaccine Adverse Event Reporting System**.

Source: AAP

Coding and Billing- Product CPT codes

Product Codes

CPT codes **90380–90381** were approved by the **American Medical Association's (AMA's) Current Procedural Terminology (CPT)** Editorial Panel in May 2023, released on June 30, 2023.

Report codes **90380–90381** based on the dose administered: 0.5mL or 1.0 mL.
90380: Respiratory syncytial virus, monoclonal antibody, seasonal dose; **0.5 mL dosage,** for intramuscular use
90381: Respiratory syncytial virus, monoclonal antibody, seasonal dose; **1 mL dosage,** for intramuscular use

Follow state specifications for reporting the immunization when the immunoglobulin product is provided through the Vaccines for Children program. For example, report **90380 SL** to indicate state-supplied product).
Source: AAP

Immune Globulin Code

CPT® code 90380 or 90381 should be assigned on all claims for Beyfortus. These codes describe a 0.5-mL dose and a 1-mL dose of this pediatric, once per season, RSV® immunization. It is not necessary to use modifier-51 when reporting these codes with another procedure. See the grid below for more information on billing these codes.

CPT Code	Code Description	Suggested Use
90380	Respiratory syncytial virus, monoclonal antibody, seasonal dose; 0.5 mL dosage, for intramuscular use	Bill 1 unit of 90380 when a 0.5-mL dose is provided.
90381	Respiratory syncytial virus, monoclonal antibody, seasonal dose; 1 mL dosage, for intramuscular use	Bill 1 unit of 90381 when a 1-mL dose is provided.
		Bill 2 units of 90381 when a 2-mL dose is provided.

Source: 2023 Current Procedural Terminology - all code descriptions are as defined by the American Medical Association.

Source: Sanofi

Coding and Billing- Administration Codes

Updated 10/08/2023

Administration Codes

These new codes can be used for the administration nirsevimab:

96380 Administration of respiratory syncytial virus, monoclonal antibody, seasonal dose by intramuscular injection, **with** counseling by physician or other qualified health care professional

96381 Administration of respiratory syncytial virus, monoclonal antibody, seasonal dose by intramuscular injection

Do not report immunization administration codes **90461–90462** or **90471–90472** for the injection of nirsevimab, as these codes are limited to the administration of vaccine and toxoid products.

Do not report the administration of nirsevimab with code **96372** therapeutic, prophylactic, or diagnostic injection.

Source: AAP
https://publications.aap.org/aapnews/news/26439/2-CPT-codes-approved-for-administration-of?autologincheck=redirected

Coding and Billing: Diagnosis Codes

Administration of nirsevimab is not reported with Z23 Encounter for immunization. Z23 is specific to immunization related to vaccines. While nirsevimab is categorized as a monoclonal antibody by CPT, ICD10 CM's index guides us to code:

Z29.11 Encounter for prophylactic immunotherapy for respiratory syncytial virus (RSV).

Using the appropriate diagnosis code is not only important for billing and claims payment, but it is also necessary for data collection and quality metrics.

Source: AAP

Payment

Nirsevimab is part of the Vaccines for Children program.

Initial feedback from regional payers (further specifics on reimbursement to follow):

- CareFirst will cover nirsevimab (90380 & 90381) effective 9/15/23
- Cigna and United will also cover; reimbursement rate TBD

PHN contracting team will continue to engage payers with regarding coverage.

The national AAP and local chapters continue to be engaged in advocacy regarding payment and support for practices and providers.

Payment Tips from AAP

Also consider the following payment tips:

1. Each practice should verify with third party payers if RSV monoclonal antibodies are a covered benefit and how they will be paid.
2. As per the **Affordable Care Act** (ACA) payers have until 12 months after the new plan year following ACIP recommendations to recognize and pay for new vaccines. ACIP recommended nirsevimab on 8-3-2023. The AAP will be notifying the major national health plans about the recommendations and urge timely benefits coverage and appropriate payment for the vaccine and administration.
3. Contracts should be reviewed regarding payment levels for nirsevimab. Include a provision in the contract for the health plan to not pay less than the actual invoice plus related practice expense costs. In addition to the payment for the vaccine and related expenses, make sure there is payment for administration, which is a separate expense. For information on the total direct and indirect costs of immunizations, see the ***AAP Business Case for Pricing Vaccines***.

Payment Tips from AAP

Support/ appeal letter to include when communicating with payers

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN®

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Itasca, IL 60143
Phone: 630/626-6000
Fax: 847/434-8000
www.aap.org

August 23, 2023

Re: Use of Palivizumab Prophylaxis for the 2023-2024 Respiratory Syncytial Virus Season

Dear Payer:

I write today on behalf of the American Academy of Pediatrics (AAP), a non-profit professional organization of 67,000 primary care pediatricians, pediatric medical subspecialists, and pediatric surgical specialists dedicated to the health, safety, and well-being of infants, children, adolescents, and young adults, to share the Academy's clinical guidance, AAP Recommendations for the Use of the Monoclonal Antibody Nirsevimab for the Prevention of RSV Disease.

We urge you to update your policy to support these clinical recommendations, including the use of nirsevimab for the prevention of respiratory syncytial virus (RSV) during the 2023-2024 season. As with any new product, nirsevimab may not be readily available in all clinical settings during this first season of implementation. We, therefore, urge you to support the continued use of palivizumab when necessary and appropriate, as outlined in the guidance linked above. Infants and at-risk toddlers must have equitable access to these products during the rapidly approaching RSV season, without delay, to ensure they receive appropriate treatment and avoid unnecessary ED visits and hospitalizations.

Specifically, per the AAP guidance, high-risk infants who are recommended to receive palivizumab in the first or second year of life, should continue to be treated with palivizumab, as in prior seasons, if nirsevimab is not available. Further, infants who receive palivizumab at the beginning of the RSV season should be allowed to receive nirsevimab once available in lieu of additional doses of palivizumab.

RSV remains the leading cause of hospitalization among US infants. During this first RSV season, where nirsevimab is available, and following last year's unprecedented surge in RSV, all steps must be taken to protect infants and toddlers. As such, payers must remove all barriers and support recommended care for children by paying for the administration of nirsevimab, palivizumab, or both, to children as deemed necessary by their pediatrician.

To support pediatricians in providing palivizumab and nirsevimab doses to eligible children, ***the AAP strongly urges payers to:***

1. **Update your payment policies to allow for the administration of both palivizumab and/or nirsevimab during the 2023-2024 season;**
2. **Update your payment system to allow payment for the use of the current immunoglobulin administration code (96372) when used in conjunction with the nirsevimab product code pending approval of a new nirsevimab administration code; and**
3. **Update your payment systems to reflect the new product codes for nirsevimab (90380–90381), and the nirsevimab specific administration code as soon as it is approved and available to ensure timely and appropriate payment to pediatricians.**

Thank you for your partnership to support recommended RSV prophylaxis for infants and toddlers during the upcoming RSV season.

If you have questions, need additional information, or would like to arrange a follow-up discussion on the AAP guidance on nirsevimab and palivizumab prophylaxis, please contact Stefanie Muntean-Turner, Health Policy & Coding Specialist at Smunteanturner@aap.org or 630-626-6790.

Sincerely,

Sandy Chung, MD, FAAP President

Pediatric Health Network
Children's National

Resources

Updated 10/08/2023

CDC: RSV Preventive Antibody: Immunization Information Sheet

FDA: FDA Prescribing Information

ACIP and AAP Recommendations for Nirsevimab:

CDC MMWR

ACIP-and-AAP-Recommendations-for-Nirsevimab

AAP:

Nirsevimab Administration Visual Guide

AAP RSV resources, including information on ordering, dosing and coding

nirsevimab-frequently-asked-questions

Information for parents from HealthyChildren.org on RSV symptoms and when to call a doctor

New England Journal of Medicine: MELODY trial

Pediatric Health Network

Children's National