Nusinersen (Spinraza™)

IMPORTANT REMINDER

We develop Medical Policies to provide guidance to Members and Providers. This Medical Policy relates only to the services or supplies described in it. The existence of a Medical Policy is not an authorization, certification, explanation of benefits or a contract for the service (or supply) that is referenced in the Medical Policy. For a determination of the benefits that a Member is entitled to receive under his or her health plan, the Member's health plan must be reviewed. If there is a conflict between the medical policy and a health plan or government program (e.g., TennCare), the express terms of the health plan or government program will govern.

The proposal is to add text/statements in red and to delete text/statements with strikethrough:
POLICY

INDICATIONS

The indications below including FDA-approved indications and compendial uses are considered a covered benefit provided that all the approval criteria are met and the member has no exclusions to the prescribed therapy.

FDA-Approved Indications

- Nusinersen for the treatment of spinal muscular atrophy (SMA) is considered **medically necessary** if the coverage ~~medical appropriateness~~ criteria are met. **~~(See Medical Appropriateness below.)~~**
- Nusinersen for the treatment of other conditions/diseases is considered **investigational.**

PRESCRIBER SPECIALITIES

This medication must be prescribed by or in consultation with a neurologist or a physician who specializes in the treatment of spinal muscular atrophy.

~~MEDICAL APPROPRIATENESS~~

DOCUMENTATION

- Baseline documentation of one or more of the following:
  - Motor function/milestones, including but not limited to, the following validated scales: Hammersmith Infant Neurologic Exam (HINE), Hammersmith Functional Motor Scale Expanded (HFMSE), Children's Hospital of Philadelphia Infant Test of Neuromuscular Disorders (CHOP INTEND), Bayley Scales of Infant and Toddler development Third Ed. (BSID-III), 6-minute walk test (6MWT), upper limb module (ULM), motor function measure 32 (MFM32), revised upper limb module (RULM), etc.
  - Respiratory function tests [e.g., forced vital capacity (FVC), etc.]
  - Exacerbations necessitating hospitalization and/or antibiotic therapy for respiratory infection in the preceding year/timeframe
  - Patient weight (for patients without a gastrostomy tube)
- Patient must have the following laboratory tests at baseline and prior to each administration*: platelet count, prothrombin time; activated partial thromboplastin time, and quantitative spot urine protein testing.
- Documentation of a genetic test confirms no more than **3 copies** of the SMN2 gene. *Note: Patients with >3 copies of the SMN2 gene will be reviewed on a case-by-case basis*)
- For patients that have previously received gene therapy, supportive documentation showing response to gene therapy

*Laboratory tests should be obtained within several days prior to administration

COVERAGE ~~INITIAL APPROVAL~~ CRITERIA

Submission of medical records (chart notes) related to the medical necessity criteria is REQUIRED on all requests for authorizations. Records will be reviewed at the time of submission. Please provide documentation related to diagnosis, step therapy, and clinical markers (i.e. genetic and mutational testing) supporting initiation when applicable. Please provide documentation via direct upload through the PA web portal or by fax.

~~**Universal Criteria**~~
Spinal Muscular Atrophy (SMA)

Nusinersen (Spinraza) is considered **medically appropriate** if **ALL** of the following conditions are met:

- Patient must not have previously received treatment with SMA gene therapy (i.e., onasemnogene abeparvovec-xioi); **OR** ~~**AND**~~
  - Patient previously received treatment with SMA gene therapy (i.e., onasemnogene abeparvovec-xioi) and has residual significant functional impairment (*Note: these requests will be reviewed on a case-by-case basis)*
- Patient will not use in combination with other agents for SMA (e.g., onasemnogene abeparvovec, risdiplam, etc.); ~~**AND**~~
- Patient must not have advanced disease (complete limb paralysis, permanent ventilation support, etc.) ~~**AND**~~
- Patient must have the following laboratory tests at baseline and prior to each administration*: platelet count, prothrombin time; activated partial thromboplastin time, and quantitative spot urine protein testing; ~~**AND**~~

~~**Spinal Muscular Atrophy (SMA)**~~

- Patient retains meaningful voluntary motor function (e.g., manipulate objects using upper extremities, ambulate, etc.); ~~**AND**~~
- Patient must have a diagnosis of 5q spinal muscular atrophy confirmed by either homozygous deletion of the SMN1 gene or dysfunctional mutation of the SMN1 gene; ~~**AND**~~
- Patient must have a diagnosis of SMA phenotype I, II or III; **AND**
  - Patient has ≤ 3 copies of the SMN2 gene (*Note: Patients with >3 copies of the SMN2 gene will be reviewed on a case-by-case basis*); **OR**
  - Patient has symptomatic disease (i.e., impaired motor function and/or delayed motor milestones); ~~**AND**~~
- ~~Baseline documentation of one or more of the following:~~
- ~~Motor function/milestones, including but not limited to, the following validated scales: Hammersmith Infant Neurologic Exam (HINE), Hammersmith Functional Motor Scale Expanded (HFMSE), Children's Hospital of Philadelphia Infant Test of Neuromuscular Disorders (CHOP INTEND), Bayley Scales of Infant and Toddler development Third Ed. (BSID-III), 6-minute walk test (6MWT), upper limb module (ULM), motor function measure 32 (MFM32), revised upper limb module (RULM), etc.~~
- ~~Respiratory function tests [e.g., forced vital capacity (FVC), etc.]- FDA~~
- ~~Exacerbations necessitating hospitalization and/or antibiotic therapy for respiratory infection in the preceding year/timeframe~~
- ~~Patient weight (for patients without a gastrostomy tube)- FDA~~

*~~Laboratory tests should be obtained within several days prior to administration~~

CONTINUATION OF THERAPY ~~RENEWAL CRITERIA~~

Authorization of 12 months may be granted for continued treatment in members requesting reauthorization for spinal muscular atrophy when all of the following criteria are met:

- Patient continues to meet the ~~universal and other indication specific relevant~~ criteria such as concomitant therapy requirements (not including prerequisite therapy), performance status, etc. identified in the coverage criteria ~~Initial Approval Criteria~~; ~~**AND**~~
- Absence of unacceptable toxicity which would preclude safe administration of the drug. Examples of unacceptable toxicity include: significant renal toxicity, thrombocytopenia, coagulation abnormalities, etc.; ~~**AND**~~
- Patient has responded to therapy compared to pretreatment baseline in one or more of the following:
  - Stability or improvement in net motor function/milestones, including but not limited to, the following: validated scales: Hammersmith Infant Neurologic Exam (HINE), Hammersmith Functional Motor Scale Expanded (HFMSE), Children's Hospital of Philadelphia Infant Test of Neuromuscular Disorders (CHOP INTEND),), Bayley Scales of Infant and Toddler development Third Ed. (BSID-III), 6-minute walk test (6MWT), upper limb module (ULM), motor function measure 32 (MFM32), revised upper limb module (RULM), etc.- FDA
  - Stability or improvement in respiratory function tests [e.g., (FVC), etc.]- FDA
  - Reduction in exacerbations necessitating hospitalization and/or antibiotic therapy for respiratory infection in the preceding year timeframe FDA
  - Stable or increased patient weight (for patients without a gastrostomy tube) - FDA

~~**LENGTH OF AUTHORIZATION**~~

~~Coverage will be provided annually and may be renewed~~

APPLICABLE TENNESSEE STATE MANDATE REQUIREMENTS

BlueCross BlueShield of Tennessee's Medical Policy complies with Tennessee Code Annotated Section 56-7-2352 regarding coverage of off-label indications of Food and Drug Administration (FDA) approved drugs when the off-label use is recognized in one of the statutorily recognized standard reference compendia or in the published peer-reviewed medical literature.

ADDITIONAL INFORMATION

For appropriate chemotherapy regimens, dosage information, contraindications, precautions, warnings, and monitoring information, please refer to one of the standard reference compendia (e.g., the NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®) published by the National Comprehensive Cancer Network®, Drugdex Evaluations of Micromedex Solutions at Truven Health, or The American Hospital Formulary Service Drug Information).

REFERENCES

1. Spinraza [package insert]. Cambridge, MA; Biogen, Inc.; April 2024. Accessed February 2025.
2. Wang CH, Finkel RS, Bertini ES, et al. Consensus statement for standard of care in spinal muscular atrophy. J Child Neurol. 2007 Aug;22(8):1027-49.
3. Prior TW, Finanger E. Spinal muscular atrophy. GeneReviews. www.ncbi.nlm.nih.gov/books/NBK1352/ -Initial Posting: February 24, 2000; Last Revision: December 3, 2022. Accessed on July 12, 2023.
4. Finkel RS, Mercuri E, Darras BT, et al; for the ENDEAR Study Group. Nusinersen versus sham control in infantile-onset spinal muscular atrophy. N Engl J Med. 2017;377(18):1723- 1732.Finkel RS, Mercuri E, Darras

BT, et al; for the ENDEAR Study Group. Nusinersen versus sham control in infantile-onset spinal muscular atrophy. N Engl J Med. 2017;377(18):1723-1732.
5. Mercuri E, Darras BT, Chiriboga CA, et al; for the CHERISH Study Group. Nusinersen versus sham control in later-onset spinal muscular atrophy. N Engl J Med. 2018 Feb 15;378(7):625-635. doi: 10.1056/NEJMoa1710504.
6. Dabbous O, Maru B, Jansen JP, et al. Survival, Motor Function, and Motor Milestones: Comparison of AVXS-101 Relative to Nusinersen for the Treatment of Infants with Spinal Muscular Atrophy Type 1. Adv Ther. 2019 May;36(5):1164-1176.
7. Kichula E, Duong T, Glanzman A, et al. Children's Hospital of Philadelphia Infant Test of Neuromuscular Disorders (CHOP INTEND) Feasibility for Individuals with Severe Spinal Muscular Atrophy II (S46.004). Neurology Apr 2018, 90 (15 Supplement) S46.004
8. De Vivo DC, Bertini E, Swoboda KJ, et al. Nusinersen initiated in infants during the presymptomatic stage of spinal muscular atrophy: Interim efficacy and safety results from the Phase 2 NURTURE study. Neuromuscul Disord. 2019 Nov;29(11):842-856. doi: 10.1016/j.nmd.2019.09.007. Epub 2019 Sep 12.
9. Michelson D, Ciafaloni E, Ashwal S, et al. Evidence in focus: Nusinersen use in spinal muscular atrophy: Report of the Guideline Development, Dissemination, and Implementation Subcommittee of the American Academy of Neurology. Neurology. 2018 Nov 13;91(20):923-933. doi: 10.1212/WNL.0000000000006502. Epub 2018 Oct 12.
10. Darras BT, Chiriboga CA, Iannaccone ST, et al. Nusinersen in later-onset spinal muscular atrophy: long-term results from the phase 1/2 studies. Neurology. 2019;92(21):e2492-e2506
11. Finikel RS, Mercuri E, Meyer OH, et al. Diagnosis and management of spinal muscular atrophy: Part 2: Pulmonary and acute care; medications, supplements and immunizations; other organ systems; and ethics. Neuromuscul Disord. 2018 Mar;28(3):197-207. doi: 10.1016/j.nmd.2017.11.004. Epub 2017 Nov 23.
12. (ICER) IfCaER . Spinraza and Zolgensma for Spinal Muscular Atrophy: Effectiveness and Value. Final Evidence Report. April 3, 2019 (Updated May 24, 2019) 2019.
13. Kichula E, Duong T, Glanzman A, et al. Children's Hospital of Philadelphia Infant Test of Neuromuscular Disorders (CHOP INTEND) Feasibility for Individuals with Severe Spinal Muscular Atrophy II (S46.004). Neurology Apr 2018, 90 (15 Supplement) S46.004
14. Lexicomp Online. (2023, April). AHFS DI. Nusinersen. Retrieved February 2025 from Lexicomp Online with AHFS.
15. MICROMEDEX Healthcare Series. Drugdex Evaluations. (2024, May). Nusinersen. Retrieved March 2025 from MICROMEDEX Healthcare Series.
16. Naveed A, Calderon H. Onasemnogene Abeparvovec (AVXS-101) for the Treatment of Spinal Muscular Atrophy. J Pediatr Pharmacol Ther. 2021;26(5):437-444. doi: 10.5863/1551-6776-26.5.437. Epub 2021 Jun 28. PMID: 34239394; PMCID: PMC8244960. Accessed March, 2025.
17. Schultz M, Swoboda KJ, Wells C, et al. AVXS-101 Gene-Replacement Therapy (GRT) Clinical Trial in Presymptomatic Spinal Muscular Atrophy (SMA): Phase 3 Study Design and Initial Baseline Demographics. The 23rd International Annual Congress of the World Muscle Society; October 2-6, 2018; Mendoza, Argentina. Accessed March, 2025.

EFFECTIVE DATE

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