

Blue Cross Blue Shield of Massachusetts is an Independent Licensee of the Blue Cross and Blue Shield Association

Pharmacy Medical Policy Spinal Muscular Atrophy (SMA) Medications

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Information Pertaining to All Policies

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Policy Number: 044

BCBSA Reference Number: 5.01.28

Related Policies

- Quality Care Dosing guidelines may apply to the following medications and can be found in Medical Policy #621A.
- Zolgensma (onasemnogene abeparvovec-xioi) for Spinal Muscular Atrophy (SMA) #008

Policy

Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity

Note: All requests for outpatient retail pharmacy for indications listed and not listed on the medical policy guidelines may be submitted to BCBSMA Clinical Pharmacy Operations by completing the Prior Authorization Form on the last page of this document. Physicians may also call BCBSMA Pharmacy Operations department at (800)366-7778 to request a prior authorization/formulary exception verbally.

Prior Authorization Information

☑ Prior Authorization☐ Step Therapy☑ Quality Care Dosing		Pharmacy Operation Tel: 1-800-366-7778 Fax: 1-800-583-6289 Policy last updated	
Pharmacy (Rx) or Medical (MED) benefit coverage	⊠ Rx □ MED	To request for coverage: Physicians may call, fax, or mail the attached form (Formulary Exception/Prior Authorization form) to the address below.	
 Policy applies to Commercial Members: Managed Care (HMO and POS), PPO and Indemnity MEDEX with Rx plan Managed Major Medical with Custom BCBSMA Formulary Comprehensive Managed Major Medical with Custom BCBSMA Formulary Managed Blue for Seniors with Custom BCBSMA Formulary 		Pharmacy Operation 25 Technology Place Hingham, MA 02043 Individual Consider	ation: Policy for requests that riteria of this policy, see section

Please refer to the chart below for the formulary and/or step status of the medications affected by this policy.

	Standard Formulary
Drug	Formulary Status
Evrysdi ™ (risdiplam)	PA Required
Spinraza ™ (nusinersen)	PA Required

We may cover Evrysdi ™ (risdiplam) for spinal muscular atrophy (SMA) in patients when all of the following criteria are met:

- Diagnosis of spinal muscular atrophy confirmed by genetic testing demonstrating bi-allelic mutations in the survival motor neuron 1 (SMN1) gene as stated below: deletion of both copies of the SMN1 gene OR identification of pathogenic variant(s) in both copies of the SMN1 gene, AND
- If patient is symptomatic, documentation of a genetic test confirms 2, 3 or 4 copies of the SMN2 gene; OR
 If patient is asymptomatic, documentation of a genetic test confirms minimum of 2 but less than 4 copies of
 the SMN2 gene, AND
- The prescription is written by a board certified / board eligible Neurologist, AND
- Patient is not on permanent ventilator dependence, AND
- Dose is limited to FDA approved dosing of less than 2 months of age at 0.15mg/kg daily oral dosing or 2 months to less than 2 years of age dosed at 0.2 mg/kg daily oral dosing or for 2 years and older dosed at 0.25 mg/kg with a Max dose of 5mg or 6 & 2/3 mls (20 kg or above) of oral liquid daily, AND
- Patient is not receiving concurrent treatment with Spinraza[™] (nusinersen) or Zolgensma[®] (onasemnogene abeparvovec).

Reauthorization will require the same criteria above and documentation to support clinically meaningful improvement in motor milestones during previous treatment period.

If approved the Prior Authorization will be granted for up to one year.

We may cover Spinraza ™ (nusinersen) for spinal muscular atrophy (SMA) in patients when all of the following criteria are met:

 Diagnosis of spinal muscular atrophy confirmed by genetic testing demonstrating bi-allelic mutations in the survival motor neuron 1 (SMN1) gene as stated below:

deletion of both copies of the SMN1 gene OR

compound heterozygous mutations of the SMN1 gene (defined below):

pathogenic variant(s) in both copies of the SMN1 gene

pathogenic variant in one copy and deletion of the second copy of the SMN1 gene AND

- If patient is symptomatic, documentation of a genetic test confirms 2, 3 or 4 copies of the SMN2 gene; OR If
 patient is asymptomatic, documentation of a genetic test confirms minimum of 2 but less than 4 copies of
 the SMN2 gene, AND
- The prescription is written by a board certified / board eligible Neurologist, AND
- Dose is limited to FDA approved dosing of 12mg (5ml) administered intrathecally per treatment with 4 loading doses; the first three loading doses should be administered at 14-day intervals. The 4th loading dose should be administered 30 days after the 3rd dose. A maintenance dose should be administered once every 4 months thereafter, AND
- Patient is not receiving concurrent treatment with Evrysdi™ (risdiplam) or Zolgensma® (onasemnogene abeparvovec).

Reauthorization will require the same criteria above and documentation to support clinically meaningful improvement in motor milestones during previous treatment period.

If approved the Prior Authorization will be granted for up to one year.

**Requests based exclusively on the use of samples will not meet coverage criteria for exception. Additional clinical information demonstrating medical necessity of the desired medication must be submitted by the requesting prescriber for review.

We do not cover the medications listed above for other conditions not listed above.

CPT Codes / HCPCS Codes / ICD Codes

Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage as it applies to an individual member.

Providers should report all services using the most up-to-date industry-standard procedure, revenue, and diagnosis codes, including modifiers where applicable.

The above <u>medical necessity criteria MUST</u> be met for the following codes to be covered for Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity:

HCPCS Codes

HCPCS	
codes:	Code Description
J2326	Injection, nusinersen, 0.1 mg

The following ICD Diagnosis Codes are considered medically necessary when submitted with the HCPCS code above if medical necessity criteria are met:

ICD-10 Diagnosis Codes

ICD-10-CM diagnosis codes:	Code Description
G12.0	Infantile spinal muscular atrophy, type I [Werdnig-Hoffman]
G12.1	Other inherited spinal muscular atrophy
G12.8	Other spinal muscular atrophies and related syndromes
G12.9	Spinal muscular atrophy, unspecified

CPT Codes

There is no specific CPT code for this service.

Other Information

Blue Cross Blue Shield of Massachusetts (BCBSMA*) members (other than Medex®; Blue MedicareRx, Medicare Advantage plans that include prescription drug coverage) will be required to fill their prescriptions for the above medications at one of the providers in our retail specialty pharmacy network, see link below:

Link to Specialty Pharmacy List

Individual Consideration

All our medical policies are written for the majority of people with a given condition. Each policy is based on medical science. For many of our medical policies, each individual's unique clinical circumstances may be considered in light of current scientific literature. Physicians may send relevant clinical information for individual patients for consideration to:

Blue Cross Blue Shield of Massachusetts Pharmacy Operations Department 25 Technology Place Hingham, MA 02043 Tel: 1-800-366-7778 Fax: 1-800-583-6289

Policy History

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Date	Action
7/2023	Reformatted Policy.
8/2022	Updated to include new age dosing of Evrysdi ™ to the policy.
12/2021	BCBSA National medical policy review. No changes to policy statements. New references added.
4/2021	Updated to align with Association policy with changes in criteria.
10/2020	Updated to add Evrysdi ™ to the policy.
10/2019	Updated to reference the Association policy
1/2018	Clarified coding information
10/2017	Updated to change Walgreens Specialty Name.
7/2017	Updated to add AllCare to Pharmacy Specialty list.
5/2017	Implementation of a new policy including the medication Spinraza™.

References

- 1. Prior TW, Snyder PJ, Rink BD, et al. Newborn and carrier screening for spinal muscular atrophy. Am J Med Genet A. Jul 2010; 152A(7): 1608-16. PMID 20578137
- 2. Wang CH, Finkel RS, Bertini ES, et al. Consensus statement for standard of care in spinal muscular atrophy. J Child Neurol. Aug 2007; 22(8): 1027-49. PMID 17761659
- 3. Lorson CL, Hahnen E, Androphy EJ, et al. A single nucleotide in the SMN gene regulates splicing and is responsible for spinal muscular atrophy. Proc Natl Acad Sci U S A. May 25 1999; 96(11): 6307-11. PMID 10339583
- 4. Lefebvre S, Burlet P, Liu Q, et al. Correlation between severity and SMN protein level in spinal muscular atrophy. Nat Genet. Jul 1997; 16(3): 265-9. PMID 9207792
- 5. Feldkotter M, Schwarzer V, Wirth R, et al. Quantitative analyses of SMN1 and SMN2 based on real-time lightCycler PCR: fast and highly reliable carrier testing and prediction of severity of spinal muscular atrophy. Am J Hum Genet. Feb 2002; 70(2): 358-68. PMID 11791208
- 6. Muscular Dystrophy Association. Spinal Muscular Atrophy. n.d.; https://www.mda.org/disease/spinal-muscular-atrophy. Accessed August 12, 2021
- 7. National Organization for Rare Disorders, Russman B. Spinal Muscular Atrophy. 2012; https://rarediseases.org/rare-diseases/spinal-muscular-atrophy/. Accessed August 12, 2021
- 8. Zerres K, Rudnik-Schoneborn S. Natural history in proximal spinal muscular atrophy. Clinical analysis of 445 patients and suggestions for a modification of existing classifications. Arch Neurol. May 1995; 52(5): 518-23. PMID 7733848
- 9. Finkel RS, McDermott MP, Kaufmann P, et al. Observational study of spinal muscular atrophy type I and implications for clinical trials. Neurology. Aug 26 2014; 83(9): 810-7. PMID 25080519
- Rudnik-Schoneborn S, Hausmanowa-Petrusewicz I, Borkowska J, et al. The predictive value of achieved motor milestones assessed in 441 patients with infantile spinal muscular atrophy types II and III. Eur Neurol. 2001; 45(3): 174-81. PMID 11306862
- 11. Farrar MA, Vucic S, Johnston HM, et al. Pathophysiological insights derived by natural history and motor function of spinal muscular atrophy. J Pediatr. Jan 2013; 162(1): 155-9. PMID 22809660
- 12. Prior TW. Perspectives and diagnostic considerations in spinal muscular atrophy. Genet Med. Mar 2010; 12(3): 145-52. PMID 20057317
- 13. Sugarman EA, Nagan N, Zhu H, et al. Pan-ethnic carrier screening and prenatal diagnosis for spinal muscular atrophy: clinical laboratory analysis of 72,400 specimens. Eur J Hum Genet. Jan 2012; 20(1): 27-32. PMID 21811307
- 14. Biogen Inc. Highlights of Prescribing Information: Spinraza (nusinersen) injection, for intrathecal use: Prescribing label. 2016;
 - https://www.spinraza.com/content/dam/commercial/specialty/spinraza/caregiver/en_us/pdf/spinraza-prescribing-information.pdf. Accessed August 12, 2021

- 15. Genentech. Highlights of Prescribing Information: EVRYSDI (risdiplam) for oral solution: Prescribing label. 2020; https://www.gene.com/download/pdf/evrysdi prescribing.pdf. Accessed August 12, 2021.
- 16. Dominguez E, Marais T, Chatauret N, et al. Intravenous scAAV9 delivery of a codon-optimized SMN1 sequence rescues SMA mice. Hum Mol Genet. Feb 15 2011; 20(4): 681-93. PMID 21118896
- 17. Foust KD, Nurre E, Montgomery CL, et al. Intravascular AAV9 preferentially targets neonatal neurons and adult astrocytes. Nat Biotechnol. Jan 2009; 27(1): 59-65. PMID 19098898
- 18. Foust KD, Wang X, McGovern VL, et al. Rescue of the spinal muscular atrophy phenotype in a mouse model by early postnatal delivery of SMN. Nat Biotechnol. Mar 2010; 28(3): 271-4. PMID 20190738
- 19. Valori CF, Ning K, Wyles M, et al. Systemic delivery of scAAV9 expressing SMN prolongs survival in a model of spinal muscular atrophy. Sci Transl Med. Jun 09 2010; 2(35): 35ra42. PMID 20538619
- 20. Albers CA, Grieve AJ. Test Review: Bayley, N. (2006). Bayley Scales of Infant and Toddler Development Third Edition. San Antonio, TX: Harcourt Assessment. J Psychoeduc Assess. 2007;25:18090
- 21. Glanzman AM, Mazzone E, Main M, et al. The Children's Hospital of Philadelphia Infant Test of Neuromuscular Disorders (CHOP INTEND): test development and reliability. Neuromuscul Disord. Mar 2010; 20(3): 155-61. PMID 20074952
- 22. Glanzman AM, McDermott MP, Montes J, et al. Validation of the Children's Hospital of Philadelphia Infant Test of Neuromuscular Disorders (CHOP INTEND). Pediatr Phys Ther. 2011; 23(4): 322-6. PMID 22090068
- 23. Finkel RS, Chiriboga CA, Vajsar J, et al. Treatment of infantile-onset spinal muscular atrophy with nusinersen: a phase 2, open-label, dose-escalation study. Lancet. Dec 17 2016; 388(10063): 3017-3026. PMID 27939059
- Glanzman AM, O'Hagen JM, McDermott MP, et al. Validation of the Expanded Hammersmith Functional Motor Scale in spinal muscular atrophy type II and III. J Child Neurol. Dec 2011; 26(12): 1499-507. PMID 21940700
- 25. Mercuri E, Finkel R, Montes J, et al. Patterns of disease progression in type 2 and 3 SMA: Implications for clinical trials. Neuromuscul Disord. Feb 2016; 26(2): 126-31. PMID 26776503
- 26. Kaufmann P, McDermott MP, Darras BT, et al. Prospective cohort study of spinal muscular atrophy types 2 and 3. Neurology. Oct 30 2012; 79(18): 1889-97. PMID 23077013
- 27. De Sanctis R, Coratti G, Pasternak A, et al. Developmental milestones in type I spinal muscular atrophy. Neuromuscul Disord. Nov 2016; 26(11): 754-759. PMID 27769560
- 28. Vuillerot C, Payan C, Iwaz J, et al. Responsiveness of the motor function measure in patients with spinal muscular atrophy. Arch Phys Med Rehabil. Aug 2013; 94(8): 1555-61. PMID 23380348
- 29. Trundell D, Le Scouiller S, Gorni K, et al. Validity and Reliability of the 32-Item Motor Function Measure in 2- to 5-Year-Olds with Neuromuscular Disorders and 2- to 25-Year-Olds with Spinal Muscular Atrophy. Neurol Ther. Dec 2020; 9(2): 575-584. PMID 32856191
- 30. Trundell D, Le Scouiller S, Le Goff L, et al. Assessment of the validity and reliability of the 32-item Motor Function Measure in individuals with Type 2 or non-ambulant Type 3 spinal muscular atrophy. PLoS One. 2020; 15(9): e0238786. PMID 32946459
- 31. Trundell D, Le Scouiller S, Staunton H, Gorni K and Vuillerot C. Validity and reliability of the Motor Function Measure (MFM32) in children with neuromuscular disorders (NMDs) and in individuals with Type 2 and non-ambulant Type 3 spinal muscular atrophy (SMA). Poster presented as at the Cure SMA Researcher Meeting, 23rd International SMA Research Meeting, Disneyland, Anaheim, CA, USA, June 28July 1, 2019.
- 32. Center for Drug Evaluation and Research Application Number: 213535orig1s000. Clinical Review(S) Accessed August 12, 2021. Available at https://www.accessdata.fda.gov/drugsatfda_docs/nda/2020/213535Orig1s000MedR.pdf
- 33. Haataja L, Mercuri E, Regev R, et al. Optimality score for the neurologic examination of the infant at 12 and 18 months of age. J Pediatr. Aug 1999; 135(2 Pt 1): 153-61. PMID 10431108
- 34. Kolb SJ, Coffey CS, Yankey JW, et al. Natural history of infantile-onset spinal muscular atrophy. Ann Neurol. Dec 2017; 82(6): 883-891. PMID 29149772
- 35. 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. Nov 2019; 29(11): 842-856. PMID 31704158
- 36. Finkel RS, Mercuri E, Darras BT, et al. Nusinersen versus Sham Control in Infantile-Onset Spinal Muscular Atrophy. N Engl J Med. Nov 02 2017; 377(18): 1723-1732. PMID 29091570
- 37. Acsadi G, Crawford TO, Muller-Felber W, et al. Safety and efficacy of nusinersen in spinal muscular atrophy: The EMBRACE study. Muscle Nerve. May 2021; 63(5): 668-677. PMID 33501671

- 38. Chiriboga CA, Swoboda KJ, Darras BT, et al. Results from a phase 1 study of nusinersen (ISIS-SMN(Rx)) in children with spinal muscular atrophy. Neurology. Mar 08 2016; 86(10): 890-7. PMID 26865511
- 39. 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. May 21 2019; 92(21): e2492-e2506. PMID 31019106
- 40. Mercuri E, Darras BT, Chiriboga CA, et al. Nusinersen versus Sham Control in Later-Onset Spinal Muscular Atrophy. N Engl J Med. Feb 15 2018; 378(7): 625-635. PMID 29443664
- 41. Biogen, RTI Health Solutions. Formulary Submission Dossier: Spinraza (Nusinersen) for Spinal Muscular Atrophy (NS-US-0199). Cambridge, MA: Biogen; 2019 December
- 42. Institute for Clinical and Evidence Review. Spinraza and Zolgensma for Spinal Muscular Atrophy: Effectiveness and Value (Final Evidence Report April 3, 2019; Updated May 24, 2019). 2019; https://icerreview.org/wp-content/uploads/2018/07/ICER_SMA_Final_Evidence_Report_052419.pdf. Accessed August 12, 2021
- 43. Mendell JR, Al-Zaidy S, Shell R, et al. Single-Dose Gene-Replacement Therapy for Spinal Muscular Atrophy. N Engl J Med. Nov 02 2017; 377(18): 1713-1722. PMID 29091557
- 44. Day JW, Finkel RS, Chiriboga CA, et al. Onasemnogene abeparvovec gene therapy for symptomatic infantile-onset spinal muscular atrophy in patients with two copies of SMN2 (STR1VE): an open-label, single-arm, multicentre, phase 3 trial. Lancet Neurol. Apr 2021; 20(4): 284-293. PMID 33743238
- 45. Mendell JR, Al-Zaidy SA, Lehman KJ, et al. Five-Year Extension Results of the Phase 1 START Trial of Onasemnogene Abeparvovec in Spinal Muscular Atrophy. JAMA Neurol. Jul 01 2021; 78(7): 834-841. PMID 33999158
- 46. Lin CW, Kalb SJ, Yeh WS. Delay in Diagnosis of Spinal Muscular Atrophy: A Systematic Literature Review. Pediatr Neurol. Oct 2015; 53(4): 293-300. PMID 26260993
- 47. Prior TW, Krainer AR, Hua Y, et al. A positive modifier of spinal muscular atrophy in the SMN2 gene. Am J Hum Genet. Sep 2009; 85(3): 408-13. PMID 19716110
- 48. Inc. A. Highlights of Prescribing Information: Zolgensma (onasemnogene abeparvovec-xioi) suspension for intravenous infusion: Prescribing label. 2019; https://www.avexis.com/us/Content/pdf/prescribing_information.pdf. Accessed August 12, 2021
- 49. 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
- Darras BT, Masson R, Mazurkiewicz-Beldzinska M, et al. Risdiplam-Treated Infants with Type 1 Spinal Muscular Atrophy versus Historical Controls. N Engl J Med. Jul 29 2021; 385(5): 427-435. PMID 34320287
- 51. Baranello G, Darras BT, Day JW, et al. Risdiplam in Type 1 Spinal Muscular Atrophy. N Engl J Med. Mar 11 2021; 384(10): 915-923. PMID 33626251
- 52. Strauss KA, Swoboda KJ, Farrar MA, et al. AVXS-101 gene-replacement therapy in presymptomatic spinal muscular atrophy: SPR1NT study update [poster 6-057]. Presented at: 71st Annual American Academy of Neurology (AAN) Meeting; May 4-10, 2019; Philadelphia, PA.
- 53. Strauss KA, Farrar MA, Swoboda KJ, et al. Onasemnogene abeparvovec in presymptomatic spinal muscular atrophy: SPR1NT study update as of 31 Dec 2019 [presentation]. Presented at: 2020 Annual American Academy of Neurology (AAN) Meeting [virtual meeting]; April 25May 1 2020.
- 54. NICE (National Institute for Health and Care Excellence): Technology appraisal guidance: Nusinersen for treating spinal muscular atrophy. Published July 24, 2019. Accessed on August 12, 2021. https://www.nice.org.uk/guidance/ta588

To request prior authorization using the Massachusetts Standard Form for Medication Prior Authorization Requests (eForm), click the link below:

http://www.bluecrossma.org/medical-policies/sites/g/files/csphws2091/files/acquiadam-assets/023%20E%20Form%20medication%20prior%20auth%20instruction%20prn.pdf