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Prior Authorization Criteria Update: Spinal Muscular Atrophy

Plain Language Summary:

- Spinal muscular atrophy (SMA) is an inherited condition which destroys nerve cells that control muscles involved in speaking, walking, breathing, and swallowing. In SMA, the muscles weaken over time and waste away. There are 4 types of SMA: Type 1 has the most severe symptoms. People with Type 2, Type 3, and Type 4 SMA may live longer lives, as their symptoms are usually less severe.
- There are 4 medicines approved in the United States to treat SMA: SPINRAZA (nusinersen), ZOLGENSMA (onasemnogene abeparvovec-xioi), ITVISMA (onasemnogene abeparvovec-brve), and EVRYSDI (risdiplam). SPINRAZA is injected into the fluid surrounding the spinal cord in the lower back every 4 months. ZOLGENSMA is administered only once as in infusion into the veins. EVRYSDI is a pill or liquid that is taken by mouth every day for life. ITVISMA is the medicine most recently approved by the FDA and is a one-time injection into the fluid surrounding the spinal cord in the lower back.
- Studies have shown that all 4 medicines improve most muscle function. None of the medicines help the breathing muscles, so some patients may still need a machine called a ventilator to help with breathing.

Purpose of Update:

- Evaluate prior authorization (PA) criteria for SMA drugs to ensure requirements are aligned with current clinical guidelines.

Research Questions:

1. What were the inclusion and exclusion criteria for the studies that led to approval of the SMA drugs?
2. Did the outcomes for these clinical trials assess the need for ventilatory support?

Conclusions:

- Most clinical studies of the four SMA treatments excluded patients that needed more than 16 hours of ventilatory support (see **Table 3**). Very few trials assessed the need for ventilatory support as a primary or secondary outcome. In addition, the National Institute for Health and Care Excellence (NICE) and Canadian Agency for Drugs and Technologies (CADTH) guidelines exempt ventilatory support as a condition for approval or continuation of SMA treatments.
- NICE recently updated guidance for the use of risdiplam or nusinersen in patients that been unsuccessfully treated with onasemnogene abeparvovec-xioi (ZOLGENSMA) and provided specific criteria for treatment failure with gene therapy.[1]

Recommendation:

- Based on a recently published clinical guidelines, modify SMA PA criteria to permit use of nusinersen or risdiplam for patients who have not responded to treatment with onasemnogene abeparvovec.

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Spinal muscular atrophy (SMA) is a rare, inherited genetic disorder, with 5 clinical subtypes (i.e., types 0, 1, 2, 3, and 4) varying by age of onset and degree of severity, associated with muscular weakness and wasting that typically worsens with age.[2] The different forms of SMA are caused by biallelic deletions or mutations in the SMN1 gene on chromosome 5q13, resulting in a deficiency of the SMN1 protein.[3] The most common mutation of SMN1 is a deletion of exon 7.[4] Approximately 95% of patients with SMA carry homozygous deletions of exon 7.[5] The remaining 5% of cases are compound heterozygous for the common exon 7 deletion and an SMN1 point mutation.[5] Approximately 10 to 15 percent of mRNAs from SMN2 contain exon 7 and can produce some functional, full-length SMN protein.[6] Thus, the loss of the SMN1 protein is partially compensated by SMN2 protein synthesis, a mechanism that explains some but not all of the phenotypic variability in patients with SMA.[7] Disease severity in SMA generally correlates inversely with SMN2 copy number, which varies from 0 to 8 in the normal population, and to a lesser degree with the level of SMN protein.[8] The presence of 4 or more copies of SMN2 is associated with a milder phenotype.[8] SMA causes irreversible loss of motor and ventilatory function, and, in its most severe form, leads to paralysis and premature death.[9] Progressive loss of motor neurons that control the movement of skeletal muscles, mainly affecting those involved in breathing, swallowing, head and neck movement, and motor functions such as walking, crawling, and arm movement occurs in patients with untreated SMA.[9] **Table 1** describes the SMA classifications and characteristics.

Table 1. Spinal Muscular Atrophy Classification and Characteristics[10]

SMA Type	SMN2 copy numbers	Age of Onset	Motor Function	Median Survival *	Incidence (per 100,000 live births)
0	1	Prenatal	Respiratory failure at birth	<6 months	< 1%
1	2-3	1 – 5 months	Never able to sit unassisted	<2 years	3.2 – 7.1 (45% of cases)
2	3	6 - 18 months	Able to sit, but unable to independently walk	>2 years (~70% still alive at age 25)	1 – 5.3 (20% of cases)
3	3-4	>18 months	Able to independently stand and walk, which may decline with disease progression	Adult	1.5 – 4.6 (30 % of cases)
4	4-8	>5 years	Ambulatory	Adult	5% of cases

*Natural history may vary depending on supportive interventions

The standard diagnostic tool for SMA is genetic testing to assess for homozygous deletions or mutations in the SMN1 gene.[11] In part because of SMA's rapid progression and the importance of early diagnosis to preserve motor functioning, the disease has been added to newborn screening in the United States.[11] Different methods for a newborn screening have been developed to diagnose SMA from DNA extracted from newborn blood spots, including a liquid microbead array to detect the homozygous SMN1 exon 7 deletion, a high-resolution DNA melting analysis with the possibility to identify SMN1 and SMN2 deletion as well as to quantify copy numbers of both genes, and a real-time polymerase chain reaction. Carrier testing is available and carrier frequency is estimated as 1:40 to 1:60 in the general population.[12] It is not possible to predict the severity of the SMA phenotype from carrier screening.

Four medications have received Food and Drug Administration (FDA) approval for the treatment of SMA. FDA-approved indications for SMA treatments are broader than the confirmatory trial populations.[2] Trial data used in the drug applications have raised questions about efficacy and safety due to short follow-up durations, lack of comparator groups, and outcome switching.[2] Similarly, data on clinically relevant outcomes (e.g., motor function, respiratory support) are limited to infants (i.e., under 24 months of age) with presymptomatic SMA and SMA types 1 and 2.[2] **Table 2** summaries the 4 FDA-approved medications. **Table 3** summarizes the inclusion and exclusion criteria for the clinical trials that supported approval of these drugs derived from a 2022 systematic review completed by the Drug Evidence Review Program (DERP).

Table 2. FDA-Approved SMA Treatments

Drug (BRAND NAME)	Mechanism	Route of Administration	Frequency of Administration	FDA-Approved Age Range
Nusinersen (SPINRAZA)[13]	SMN2 splicing modifier	Intrathecal Injection	Loading Dose: 4 doses over 2 months Maintenance Dose: Once every 4 months	All SMA patients
Onasemnogene abeparvovec-xioi (ZOLGENSMA)[14]	Gene replacement	Intravenous Infusion	Once	Patients less than 2 years of age with bi-allelic mutations in SMN1 gene
Onasemnogene abeparvovec-brve (ITVISMA)[15]	Gene replacement	Intrathecal Injection	Once	Patients 2 years of age and older with confirmed mutation in SMN1 gene
Risdiplam (EVRYSDI)[16]	SMN2 splicing modifier	Oral	Once daily	All SMA patients
Abbreviations: FDA: Food and Drug Administration; SMA = spinal muscular atrophy; SMN = survival motor neuron				

Table 3. Randomized Controlled Trials and Uncontrolled Interventional Studies of FDA-approved Treatments for SMA[2]

Drug (BRAND NAME)	Trial Name	Sample Size	SMA Description	SMA Type	Age	Ventilatory Support[d]	Risk of Bias
Randomized Controlled Trials							
Nusinersen (SPINRAZA)	ENDEAR	Nusinersen, n=81 Sham control, n=41	Genetic documentation of SMA homozygous gene deletion or mutation	Infantile-onset[a]	0 to 7 months	Nusinersen: n= 21 (26%) Sham Control: n = 6 (15%)	High
	CHERISH	Nusinersen, n=84 Sham control n=42	Genetic documentation of SMA (a homozygous deletion, mutation, or compound heterozygote in SMN1)	Later-onset[b]	2 to 12 years	Excluded	Moderate
	EMBRACE	Nusinersen, n=14 Sham control n=7	Genetic documentation of 5q SMA homozygous gene deletion, mutation, or compound heterozygote	Infantile-onset[a] or Later-onset[b]	0 to 4 years	Excluded	High
Risdiplam (EVRYSDI)	SUNFISH Part 2	Risdiplam, n=120 Placebo, n=60	Confirmed diagnosis of 5q-autosomal recessive SMA	Type 2 or Non-ambulatory Type 3	2 to 25 years	Excluded	Moderate
Onasemnogene abeparvovec-brve	STEER	Onasemnogene, n=75 Sham Control, n=51	Diagnostic confirmation of SMA	Type 2	2 to 17 years	Excluded	Moderate

(ITVISMA)							
Uncontrolled Interventional Studies							
Nusinersen (SPINRAZA)	CS1/CS10	n=28	Documented SMN1 homozygous gene deletion	Type 2 or 3	2 to 14 years	Excluded	High
	CS2/CS12	n=28	Genetic documentation of SMA	Later-onset[b]	2 to 15 years	Excluded	High
	CS3A	n=20	Documented SMN1 homozygous gene deletion or mutation	Infantile-onset[a]	3 weeks to 7 months	NA	High
	NURTURE	n=25	Genetic documentation of SMA: homozygous gene deletion or mutation or compound heterozygous mutation	Presymptomatic	< 6 weeks	Presymptomatic	High
Onasemnogene abeparvovec-xioi (ZOLGENSMA)	STR1VE-US	n=22	Biallelic SMN1 mutations (deletion or point mutations) and one or two copies of SMN2	Type 1	< 6 months	Excluded	High
	STR1VE-EU	n=32	Biallelic SMN1 mutations (deletion or point mutations) and one or two copies of SMN2	Type 1	< 6 months	Excluded	High
	START	n=15	Genetically confirmed diagnosis of SMA type 1, homozygous SMN1 exon 7 deletions	Type 1	< 6 months	Excluded	High
	START LTFU[c]	n=13	Genetically confirmed diagnosis of SMA type 1, homozygous SMN1 exon 7 deletions	Type 1	< 6 months	NA	High
	SPR1NT	n=29	Biallelic SMN1 mutation	Presymptomatic	< 6 weeks	Excluded	High
Risdiplam (EVRYSDI)	FIREFISH Part 2	n=41	Genetic confirmation of homozygous deletion or compound heterozygosity predictive of loss of function of the SMN1 gene	Type 1	1 to 7 months	Excluded	High
	RAINBOWFISH	n=26	SMN 1 homozygous gene deletion or compound heterozygous mutation	Presymptomatic	< 6 months	Excluded	High
Onasemnogene abeparvovec-brve (ITVISMA)	STRENGTH	n=27	Diagnostic confirmation of SMA	Type 2: Previously treated with nusinersen or risdiplam	2 to 17 years	Excluded	High

Abbreviations: FDA: Food and Drug Administration; LTFU: long term follow-up; NA = not available; SMA = spinal muscular atrophy; SMN = survival motor neuron
Notes:
a. Infantile-onset defined as symptom onset before 6 months of age
b. Later-onset defined as symptom onset after 6 months of age
c. START LFTU is an ongoing, observational follow-up study to the original START trial with 13 of the 15 original participants for up to 15 years
d. Ventilatory support defined in: EMBRACE as ventilation ≥ 16 hours per day continuously for > 21 days; CHERISH as invasive or noninvasive ventilation > 6 hours during a 24-hour period; SUNFISH Part 2 and START only as invasive ventilation; CS2/CS12 and CS1/CS10 only as invasive or noninvasive ventilation; STR1VE as noninvasive ventilation ≥ 6 hours daily prior to screening or while awake; STR1VE-EU as invasive ventilation or noninvasive ventilation ≥ 12 hours daily in 2 weeks prior to dosing; FIREFISH Part 1 only as invasive ventilation or awake noninvasive ventilation; STEER as invasive or noninvasive ventilation in the past 30 days

Drug Effective Review Project Review: Effectiveness of Nusinersen, Onasemnogene Abeparvovec, and Risdiplam in Treating SMA (2022)
Different outcomes including mortality, need for permanent ventilation, motor-milestone response, and motor function were used to evaluate medication effectiveness across all the studies.[2]
Mortality

- In 2 RCTs (ENDEAR and EMBRACE; total enrollment=142) some evidence of reduced mortality risk was shown with nusinersen over sham control (low CoE).[2] In the ENDEAR trial, which was conducted in participants with infantile-onset SMA (i.e., SMA Types 1 and 2) the risk of mortality was reduced by 60% with nusinersen compared to control (RR 0.4; 95% CI 0.2 to 0.8; p=0.01; low CoE).[2] In contrast, in the EMBRACE trial which included participants with later-onset SMA (i.e., SMA Types 2 and 3), nusinersen had no effect on mortality compared with sham control (RR 0.2; 95% CI 0.0 to 3.9; p=0.91; low CoE).[2]
- In 3 cohort studies of nusinersen, 3 deaths out of 312 participants (1%) were reported in children with SMA Type 1 after 2 years of treatment (low CoE).[2]
- In 3 uncontrolled trials of onasemnogene abeparvovec (STR1VE, STR1VE-EU, START), 2 deaths out of 70 participants (3%) were reported in infants with SMA Type 1 over 36 months of follow-up (low CoE).[2]
- In 1 uncontrolled trial of risdiplam (FIREFISH Part 1), 3 deaths out of 21 participants (14%) were reported in infants with SMA Type 1 at 12 months (low CoE).[2]

Need for Permanent Ventilation

- In one RCT (ENDEAR, n=122), nusinersen did not reduce the need for permanent ventilation compared to sham control (RR 0.7; 05% CI 0.4 to 1.3; p=0.28; very low CoE).[2]
- In 2 uncontrolled trials with nusinersen (CS3A, NURTURE) a small proportion of participants required permanent ventilation (range 0 to 15%; very low CoE).[2] However, participants in these trials had higher baseline motor scores, and one trial was in presymptomatic infants.[2]
- In 3 uncontrolled trials with onasemnogene abeparvovec (STR1VE, STR1VE-EU, START) a small proportion of participants required permanent ventilation (range 8 to 18%; very low CoE).[2]
- In one uncontrolled trial of risdiplam (FIREFISH Part 1) the need for permanent ventilation was observed in 80% of participants (very low CoE).[2]
- In 4 cohort studies of nusinersen no ventilatory support was needed in children with SMA Types 1 to 3 (very low CoE).[2]

High-Quality Guidelines:

- NICE guidance for treating SMA with nusinersen and risdiplam was updated in June 2026.[1] Recommendations include the following statements:
    - Nusinersen can be used as an option to treat SMA, only if it has not been successfully treated with onasemnogene abeparvovec-xioi and nusinersen is not used with risdiplam.[1]

- Risdiplam can be used as an option to treat SMA type 1, 2 or 3 or with 1 to 4 SMN2 copies, only if it has not been successfully treated with onasemnogene abeparvovec-xioi and if risdiplam is not used with nusinersen for presymptomatic SMA when onasemnogene abeparvovec is suitable.[1]
- Stop nusinersen or risdiplam if there is sustained deterioration across a range of clinical measures and the treatment is not providing benefit. Assess whether the person is benefitting from treatment based on clinical judgement of their individual needs.[1]

Unsuccessful treatment with onasemnogene abeparvovec-xioi is defined as either or both:

- a reduction in motor ability, defined as total worsening in scale score corroborated by 2 consecutive measurements from any 2 of the following 3 scales
  - more than 2 points on the horizontal kick scale or 1 point on other Hammersmith Infant Neurological Examination (HINE) scores excluding voluntary grasp
  - more than 4 points on the Children's Hospital of Philadelphia Infant Test of Neuromuscular Disorders (CHOP-INTEND) scale
  - more than 3 points on the Revised Hammersmith scale
- a deterioration in respiratory function defined as:
  - an increasing requirement for respiratory support overnight, and
  - an uncharacteristic increase in respiratory infections requiring hospital treatment that cannot be accounted for by aspiration or intrinsic lung disease.[1]

- NICE guidance for onasemnogene abeparvovec-xioi (ZOLGENSAMA) in SMA was updated in 2023.[17] Onasemnogene abeparvovec-xioi is recommended as an option for treating SMA with a bi-allelic mutation in the SMN1 gene and a clinical diagnosis of type 1 SMA in babies only if:
  - they are aged 6 months or younger (the primary population studied in clinical trials), or
  - aged 7 to 12 months if treatment is agreed by the national multidisciplinary team, and
  - tracheostomy or permanent ventilation for more than 16 hours per day is not needed.[17]

  The main clinical-effectiveness evidence for onasemnogene abeparvovec-xioi for treating presymptomatic SMA came from SPR1NT, an open-label single arm study. This study included babies diagnosed with presymptomatic SMA and consisted of 2 cohorts. Cohort 1 included babies with 2 copies of the SMN2 gene and cohort 2 included babies with 3 copies of the SMN2 gene. All the babies were aged 6 weeks and under at enrollment. There were 14 babies in cohort 1 and follow up was for 18 months. There were 15 babies in cohort 2 and follow up was for 24 months. All the babies in cohort 1 reached the primary outcome of sitting without support for at least 30 seconds. All the babies in cohort 2 reached the primary outcome of standing alone for at least 3 seconds.[17]
  - Onasemnogene abeparvovec-xioi is recommended as an option for treating presymptomatic SMA with a biallelic mutation in the SMN1 gene and up to 3 copies of the SMN2 gene in babies aged 12 months and under.[17]

- The 2021 CADTH guidance recommends onasemnogene abeparvovec-xioi be reimbursed for the treatment of pediatric patients with SMA with biallelic mutations in the SMN1 gene, only if the following conditions are met.
  1. Genetic documentation of SMA with biallelic mutations in the SMN1 gene.
  2. Patients who are:
     - symptomatic or pre-symptomatic with one to three copies of the SMN2 gene
     - 180 days of age or younger

- not currently requiring permanent feeding or ventilatory support (either invasive or non-invasive).[18]

- The 2021 Canadian Agency for Drugs and Technologies (CADTH) recommends risdiplam be reimbursed for the treatment of pediatric patients aged 2 months to 7 months with genetic documentation of 2 or 3 copies of the SMN2 gene or non-ambulatory patients aged 8 months to 25 years with genetic documentation of 2 or 3 copies of the SMN2 gene. Patients are ineligible if the they currently require permanent invasive ventilation.[19]

- The 2017 CADTH guidance recommends nusinersen use for the treatment of SMA if the following criteria are met:
  - Under the care of a specialist with experience in the diagnosis and management of SMA.[20]
  - Genetic documentation of SMA homozygous gene deletion, homozygous mutation, or compound heterozygote.[20]
  - Genetic documentation of 2 copies of the survival motor neuron 2 (SMN2) gene.[20]
  - Disease duration is less than 26 weeks with onset of clinical signs and symptoms consistent with SMA after the first week after birth and on or before 7 months of age.[20]
  - Patient is not currently requiring permanent invasive ventilation.[20]
  - Treatment should be discontinued if, prior to the fifth dose or every subsequent dose of nusinersen:
    - there is no demonstrated maintenance of motor milestone function (as assessed using the Hammersmith Infant Neurological Examination [HINE] Section 2
    - or there is no demonstrated improvement in motor milestone function (as assessed using the HINE Section 2)
    - or if permanent invasive ventilation is required.[20]

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Spinal Muscular Atrophy Drugs

Goal(s):
- Approve nusinersen (SPINRAZA), onasemnogene abeparvovec-xioi (ZOLGENSMA), risdiplam (EVRYSDI), or onasemnogene abeparvovec-brve (ITVISMA) for conditions supported by evidence of benefit (e.g., spinal muscular atrophy).

Length of Authorization:
- Nusinersen: Up to 8 months for initial approval and up to 12 months for renewal.
- Onasemnogene abeparvovec-xioi and onasemnogene abeparvovec-brve: one gene therapy per lifetime
- Risdiplam: Up to 6 months for initial approval and 12 months for renewal.

Requires PA:
- Nusinersen, onasemnogene abeparvovec-xioi, or onasemnogene abeparvovec-brve (pharmacy or provider administered claims)
- Risdiplam (pharmacy claims)

Covered Populations:
- Onasemnogene abeparvovec-xioi and onasemnogene abeparvovec-brve: FFS and CCO enrolled populations beginning 1/1/26
- Risdiplam and nusinersen: FFS populations only

Covered Alternatives:
- Current PMPDP preferred drug list per OAR 410-121-0030 at www.orpdl.org
- Searchable site for Oregon FFS Drug Class listed at www.orpdl.org/drugs/

Table 1. FDA-Approved Dosing For Risdiplam

Age and Body Weight	Recommended Daily Dose of Risdiplam
Less than 2 months of age	0.15 mg/kg
2 months to less than 2 years of age	0.2 mg/kg
2 years of age and older weighing less than 20 kg	0.25 mg/kg
2 years of age and older weighing 20 kg or more	5 mg

Approval Criteria		
1. What diagnosis is being treated?	Record ICD-10 code. Go to #2	
2. Is this a request for continuation of nusinersen or risdiplam therapy? Note: Onasemnogene abeparvovec-xioi and onasemnogene abeparvovec-brve are only approved as a single, one-time dose per lifetime	**Yes:** Go to **Renewal Criteria**	**No:** Go to #3
3. Does the patient have a diagnosis of spinal muscular atrophy (SMA), confirmed by SMN1 (chromosome 5q) gene mutation or deletion AND at least 2 copies of the SMN2 gene as documented by genetic testing?	**Yes:** Go to #4 Document results of genetic testing	**No:** Pass to RPh. Deny; medical appropriateness.
4. Is the requested medication prescribed by a pediatric neurologist or a provider with experience treating SMA?	**Yes:** Go to #5	**No:** Pass to RPh. Deny; medical appropriateness
5. Is the patient ventilator-dependent (using at least 16 hours per day on at least 21 of the last 30 days)? Note: This assessment does not apply to patients who require ventilator assistance	**Yes:** Pass to RPh. Deny; medical appropriateness	**No:** Go to #6

Approval Criteria		
6. Has baseline motor assessment appropriate for age and/or intended population been assessed within the past 6 months? Examples include, but are not limited to, the following validated assessment tools: • Hammersmith Infant Neurological Examination, Section 2 (HINE-2) • Hammersmith Functional Motor Scale (HFMSE) • Children's Hospital of Philadelphia Infant Test of Neuromuscular Disorders (CHOP-INTEND) • The Motor Function Measure 32 items (MFM-32) • Upper Limb Module (ULM) • 6-minute walk test (6MWT)	**Yes:** Document date and assessment results Date: _____ Assessment: _____ Results: _____ Go to #7	**No:** Pass to RPh. Deny; medical appropriateness.
7. Has the provider documented goals of therapy for this treatment?	**Yes:** Go to #8	**No:** Pass to RPh. Deny; medical appropriateness.
8. For able patients, is there baseline documentation of pulmonary function measured by spirometry (FEV1, FVC, etc.) or other validated pulmonary function test within the past 6 months?	**Yes:** Go to #9. Document baseline results. _____	**No:** Pass to RPh. Deny; medical appropriateness.
9. Has the patient had previous administration of onasemnogene abeparvovec-xioi (ZOLGENSMA) or onasemnogene abeparvovec-brve (ITVISMA), either in a clinical study or as part of medical care?	**Yes:** Go to #10	**No:** Go to #11

Approval Criteria		
10. Has the provider determined that treatment with onasemnogene abeparvovec has been unsuccessful due to either: a) a reduction in motor ability, defined as total worsening in scale score corroborated by 2 consecutive measurements from any 2 of the following 3 scales: • more than 2 points on the horizontal kick scale or 1 point on other HINE scores excluding voluntary grasp • more than 4 points on the CHOP-INTEND scale • more than 3 points on the Revised Hammersmith scale OR b) a deterioration in respiratory function defined as: • an increasing requirement for respiratory support overnight, and • an uncharacteristic increase in respiratory infections requiring hospital treatment that cannot be accounted for by aspiration or intrinsic lung disease.	**Yes:** Go to **#**11	**No:** Pass to RPh. Deny; medical appropriateness
11. Is the request for risdiplam?	**Yes**: Go to #12	**No**: Go to #15
12. Is the request for concomitant therapy with nusinersen?	**Yes:** Pass to RPh. Deny; medical appropriateness	**No**: Go to #13
13. Is the prescribed dose within the limits defined in Table 1?	**Yes:** Go to #14	**No:** Pass to RPh. Deny; medical appropriateness. Recommended FDA-approved dosage is determined by age and body weight.
14. In people of child-bearing potential, is there documentation that the provider and patient have discussed the teratogenic risks of the drug if the patient were to become pregnant?	**Yes:** Approve for 6 months. If approved, a referral will be made to case management by the Oregon Health Authority.	**No:** Pass to RPh. Deny; medical appropriateness

Approval Criteria		
15. Is the request for nusinersen?	**Yes**: Go to #16	**No**: Go to #18
16. Is the request for concomitant therapy with risdiplam?	**Yes:** Pass to RPh. Deny; medical appropriateness	**No**: Go to #17
17. Is there documentation of recent safety monitoring in the past 4 months as recommended by the FDA (including platelet counts above the lower limit of normal and urinary protein concentrations < 0.2 g/L)?	**Yes:** Approve for up to 8 months.	**No:** Pass to RPh. Deny; medical appropriateness**.**
18. Is the request for onasemnogene abeparvovec in an FDA-approved age? Note: onasemnogene abeparvovec-xioi (ZOLGENSMA) is approved for < 2 years of age. Onasemnogene abeparvovec-brve (ITVISMA) is approved for ≥2 years of age. *Patients should only receive one gene therapy treatment per lifetime.	**Yes:** Go to #19	**No:** Pass to RPh. Deny; medical appropriateness
19. Have all the following labs been obtained: a) a baseline platelet count; b) baseline liver function tests (AST, ALT, total bilirubin, and PT); AND c) baseline troponin-I?	**Yes:** Go to #20	**No:** Pass to RPh. Deny; medical appropriateness

Approval Criteria		
20. Does the patient have a prescription on file for 30 days of on oral corticosteroid to begin one day before infusion of onasemnogene abeparvovec?	**Yes:** Pass to RPh. Approval pending secondary review by DMAP. Duration: Approvals cover one lifetime dose. Approval valid for 12 months and will be extended if needed to cover treatment journey.	**No:** Pass to RPh. Deny; medical appropriateness

Renewal Criteria		
1. Is there evidence of adherence and tolerance to therapy through pharmacy claims/refill history and provider assessment?	**Yes:** Go to #2	**No:** Pass to RPh; Deny; medical appropriateness
2. Is the patient meeting goals of therapy as documented by the provider in the initial approval?	**Yes:** Approve for 12 months	**No:** Pass to RPh; Deny; medical appropriateness.

P&T Review: 10/26; 6/26 (DM); 2/23 (DM); 9/19 (DM); 7/17; 3/17
Implementation: 1/1/27; 7/1/2026; 4/1/23; 11/1/19: 9/1/17; 5/17