

## Clinical Edit Criteria Proposal

Drug/Drug Class: **Spinraza<sup>®</sup> (Nusinersen) Clinical Edit**  
 Date: **June 15, 2017**  
 Prepared for:  
 Prepared by: **MO HealthNet**

**New Criteria**

**Revision of Existing Criteria**

### Executive Summary

**Purpose:** To establish MO HealthNet (MHD) Program policy regarding authorization of Spinraza<sup>®</sup> (Nusinersen) as a treatment for Spinal Muscular Atrophy (SMA).

Spinal muscular atrophy (SMA) is a rare, debilitating neuromuscular disease. It is a progressive muscle wasting disease that can have a devastating impact on infants, children, and their families. SMA is the leading genetic cause of infant mortality. The disease mainly affects the motor neurons in the spinal cord and is characterized by motor neuron degeneration, muscle weakness, and atrophy, but it is not believed to impact a person's capacity to think, learn, and build interpersonal relationships. Among SMA Types (Type 0 – Type 4), clinical classification is typically based on age of onset and maximum motor function achieved. Patients experience motor function decline with disease progression.

**Why was this Issue Selected:**

**Spinraza<sup>®</sup>** is a survival motor neuron-2 (SMN2)-directed antisense oligonucleotide indicated for the treatment of spinal muscular atrophy (SMA) in pediatric and adult patients. The drug is administered intrathecally. Numerous studies, including ENDEAR, NURTURE, and CHERISH support the effectiveness of nusinerin across a range of SMA patients, from presymptomatic infants, infantile-onset SMA, to children with later onset SMA (most likely to develop Type 2 or Type 3). Studies are ongoing (e.g. EMBRACE and SHINE) to assess the long-term effect of nusinersen. Currently, there are no authoritative updated guidelines on the treatment of SMA; however, nusinersen may be a long-term treatment option for pediatric and adult patients with SMA based on clinical trial data demonstrating efficacy.

All requests for therapy will be reviewed by a Clinical Consultant.

Program-specific information:	Drug	Claims	Cost Information
	• Spinraza <sup>®</sup> (Nusinersen)	None	<b>\$ 750,000</b> Initial treatment year; <b>\$350,000</b> annually

**Setting & Population:** MHD participants with confirmed mutations in chromosome 5q13 demonstrating homozygous SMN1 gene deletion or mutation or compound heterozygous SMN 1 gene mutation with sufficient number of copies of SMN2 gene.

**Type of Criteria:**  **Increased risk of ADE**  **Non-Preferred Agent**  
 **Appropriate Indications**  **Dose Optimization**

**Data Sources:**  **Only administrative databases**  **Databases + Prescriber-supplied**

## Setting & Population

- Drug for review: Spinraza<sup>®</sup> (Nusinersen)
- Age range: Infant-to-Adult
- Gender: Male and female

## Approval Criteria

### INITIAL 6-MONTH APPROVAL (MUST MEET ALL CRITERIA)

- Documentation of a confirmed diagnosis of Spinal Muscular Atrophy (SMA) including genetic tests of 5q13 demonstrating:
  - Homozygous SMN1 gene deletion or mutation; OR
  - Compound heterozygous SMN1 gene mutation: **AND**
- Sufficient number of copies of SMN2 gene defined as ONE of the following (either 2a or 2b) genetic tests demonstrating :
  - If a pre-symptomatic infant, then  $\leq 3$  copies of SMN2 gene required; OR
  - If a symptomatic patient, then  $\geq 2$  copies of SMN2 gene is required; **AND** documentation of age of onset of symptoms; **AND**
- Patient is under the supervision and monitoring of a Neurology Specialist; **AND**
- Clinical Baseline Documentation Received:
  - **For all patients:**
    - Hammersmith Functional Motor Scale Expanded (HFMSE)
    - Children's Hospital of Philadelphia Infant Test of Neuromuscular Disorders (CHOP INTEND)
    - Pulmonary Status (e.g. tracheostomy, hrs of ventilation, CPAP, etc.)
    - Complete blood count, cystatin-C, coagulation status, urine protein, serum electrolytes including bicarbonate, liver and renal function tests
  - **For infant to early childhood:**
    - Hammersmith Infant Neurological Exam (HINE)
  - **For ambulatory patients:**
    - 6 Minute Walk Test (6MWT)
  - **For non-ambulatory patients:**
    - Upper Limb Module (ULM) Score

## Approval Criteria (continued)

### RENEWAL APPROVAL: MAINTENANCE THERAPY (MUST MEET ALL CRITERIA)

- Absence of unacceptable toxicity from the drug. Examples of unacceptable toxicity include serious infections, fatal glomerulonephritis, thrombocytopenia, etc.; **AND**
- Documentation that patient has received benefit from therapy:
  - Improvement or maintenance of functional status from baseline functional tests (HFMSE, CHOP-INTEND, Pulmonary status, HINE, 6MWT, or ULM); **OR**
  - Patient has achieved and maintained new motor milestones from pretreatment baseline functional tests (HFMSE, CHOP-INTEND, Pulmonary status, or HINE); **OR**
  - Disease progression is slower than what would otherwise be expected in this population using ONE or MORE of the following tools:
    - **HFMSE:**
      1. At least 3 points increase in score from pretreatment baseline
    - **CHOP-INTEND:**
      1. At least a 4 point increase in score from the pretreatment baseline
    - **If infant or early childhood: HINE:**
      1. Patient has demonstrated improvement in more categories than decline; **AND**
      2. At least 2 points (or maximum score) in ability to kick; **OR**
      3. At least 1 point in any other HINE milestone (e.g. head control, rolling, sitting, crawling, etc.)
    - **If ambulatory: 6MWT:**
      1. At least a 30 meter increase from pretreatment baseline
    - **If non-ambulatory: ULM:**
      1. At least a 2 point increase in score from the pretreatment baseline
- Renewal request, including documentation, is required every **12 months**
- Maintenance dosing every 4 months
- Documented compliance on current therapy regimen

## Denial Criteria

- Lack of appropriate diagnosis of Spinal Muscular Atrophy (SMA)
- SMA without documentation of genetic testing confirming 5q mutations or deletions or in pre-symptomatic patients with > 3 copies of the SMN2 gene
- Lack of documentation of clinical benefit from treatment
- Failure to meet approval criteria
- Adverse reaction or drug toxicity to therapy

## Required Documentation

Laboratory results:   
MedWatch form:

Progress notes:   
Other:

## Disposition of Edit

- **Denial:** Edit 682 “Clinical Edit”

## References

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