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Effective Date: 08/08/2024

Zolgensma[®] (onasemnogene abeparvovec)

HCPCS: J3399

Policy:

Requests must be supported by submission of chart notes and patient specific documentation.

- A. Coverage of the requested drug is provided when all the following are met:
 - a. FDA approved age
 - b. Prescribed by or in consultation with a neurologist or neuromuscular specialist with expertise in treating spinal muscle atrophy (SMA)
 - c. Diagnosis of spinal muscle atrophy with genetically-confirmed double-deletion of spinal motor neuron 1 (SMN1) gene and less than or equal to four copies of the SMN2 gene
 - d. Must not have antibodies against the viral vector, adeno-associated virus serotype 9 vector (AAV9), > 1:50
 - e. Must receive oral corticosteroids daily starting at least 24 hours prior to therapy and continuing 30 days after therapy with Zolgensma
 - f. The patient does not have advanced SMA (for example: complete paralysis of limbs, permanent ventilator dependence)
 - g. The member will not be taking concurrently with Spinraza[®] or Evrysdi[™]
 - h. The requesting physician attests to providing clinical outcome information within the appropriate provider portal as requested by BCBSM
 - i. Trial and failure, contraindication, OR intolerance to the preferred drugs as listed in BCBSM/BCN's utilization management medical drug list

- B. Quantity Limitations, Authorization Period and Renewal Criteria
 - a. Quantity Limit: Align with FDA recommended dosing
 - b. Authorization Period: 3 months
 - c. Renewal Criteria: Not applicable as no further authorization will be provided.

***Note: Coverage and approval duration may differ for Medicare Part B members based on any applicable criteria outlined in Local Coverage Determinations (LCD) or National Coverage Determinations (NCD) as determined by Center for Medicare and Medicaid Services (CMS). See the CMS website at <http://www.cms.hhs.gov/>. Determination of coverage of Part B drugs is based on medically accepted indications which have supported citations included or approved for inclusion determined by CMS approved compendia.

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Background Information:

- Zolgensma is an AAV9 that works by replacing the missing or defective SMN1 gene with a functional copy that makes SMN protein and is indicated for the treatment of pediatric patients less than 2 years of age with SMA with bi-allelic mutations in the SMN1 gene.
- SMA is a severe, inherited progressive neuromuscular disease that causes devastating muscle atrophy and disease-related complications in approximately 4 to 10 per 100,000 live births. SMA is caused by a mutation in the SMN1 gene that results in a deficiency of SMN protein. People have a “backup” copy of this gene called SMN2 that produces low levels of SMN protein. SMA varies in severity with four different types that inversely correlates to the number of SMN2 copies a person has. The type of SMA a person has is based on function and age of onset. Type 1 is the most severe type of SMA and the most common, affecting 6 out of every 10 children with SMA. Those with Type 1 have the fewest number of SMN2 copies (usually 2 or fewer). Type 1 patients have an age of onset usually between 0-6 months, and as the natural history of those with Type 1 SMA progresses the children will never be able to sit unsupported. Untreated life expectancy of Type 1 patients is less than 2 years old. Type 2 patients usually present around 7-18 months of age and will have the ability to sit, but never stand. The majority of SMA Type 2 patients have 3 copies of SMN2. Type 3 SMA patients present after 18 months of age and usually are able to stand and walk. About 51% of the patients with SMA Type 3 have 3 copies of SMN2 while 46% have 4 copies of SMN2. Although there is an inverse correlation between severity of disease and number of SMN2 copies, diagnoses of type is not solely based on number of SMN2 copies.
- The diagnosis of SMA is based on molecular genetic testing. Genetic testing of SMN1/SMN2 is highly reliable and it is first line investigation when the condition is suspected in a typical case. In approximately 96% of patients, SMA is caused by homozygous absence of exons 7 and 8 of the SMN1 gene, or, in some cases, only of exon 7.
- SMA patients' motor function and ability are monitored in a variety of ways, including but not limited to Bayley Scales of Infant and Toddler development (BSID), Motor Function Measure 32 (MFM-32), Hammersmith Infant Neurological Exam (HINE), Hammersmith Functional Motor Scale Expanded (HFMSSE), Revised Upper Limb Module (RULM) Test (non-ambulatory patients), Six-Minute Walk Test (6MWT) (ambulatory patients only) and Children's Hospital of Philadelphia Infant Test of Neuromuscular Disorders (CHOP INTEND).
- There is currently no data supporting co-administration of Zolgensma with other SMA therapies, or in patients with advanced SMA (e.g., complete paralysis of limbs, permanent ventilator dependence).
- CureSMA developed a treatment algorithm published in 2018. In September 2019, the working group reconvened to update its stance on infants with 4 copies of SMN2 on newborn screening. The working group has updated their stance and recommends immediate treatment for infants diagnosed with SMA via newborn screening with 4 copies of SMN2. Zolgensma's pivotal STR1VE trial included patients with SMA Type 1 who had 2 copies of SMN2. Zolgensma's SPR1NT trial, an ongoing Phase III, open-label, single-arm, multi-center trial in presymptomatic patients is being studied in patients with either 2 or 3 copies of SMN2, and included one patient with four copies of SMN2. The RESTORE registry is an ongoing, prospective, multicenter, multinational, non-interventional observation study that is evaluating long-term outcomes in patients with SMA. This study included 4 patients with 4 copies of SMN2 and 5 patients with 4+ copies of SMN2 who received Zolgensma. The CHOP INTEND scores showed improvement from baseline in this subset of patients.
- In the clinical trials patients were required to have baseline anti-AAV9 antibody titers of $\leq 1:50$, measured using an enzyme-linked immunosorbent assay (ELISA). Evidence of prior exposure to AAV9 was uncommon. The safety and efficacy of Zolgensma in patients with anti-AAV9 antibody titers above 1:50 have not been evaluated. Antibodies titers above 1:50 may inhibit the efficacy of gene therapy.

- Bridging therapy with either Evrysdi or Spinraza prior to the use of Zolgensma can be appropriate in young patients with elevated anti-AAV9 antibodies. Elevated titers are not common (~13%) in SMA patients. Those that do have titers can get it from the placenta at birth from mothers who have acquired them. Just like other maternal antibodies passed on to children, these antibodies diminish over time. Bridging therapy allows patients to start therapy without delay, and waits for the titers to naturally diminish. Scientists have stressed the importance of treating SMA as early as possible, and suggested that patients with elevated antibodies be given disease-modifying therapies that work through different mechanisms — Spinraza (nusinersen) or Evrysdi (risdiplam) — as “bridge treatments” until able to receive Zolgensma.
- Zolgensma can increase liver enzyme levels and cause acute serious liver injury. Oral corticosteroid medication should be given one day before and for 30 days after infusion with Zolgensma to avoid liver injury.
- Provider portals are used to capture clinical outcome information for patients on select high-cost treatments, such as gene and cellular therapies. If a patient meets medical necessity as defined by this policy and is approved for treatment, the requesting physician must attest to providing clinical outcome information within the appropriate provider portal at the requested cadence.

References:

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14. Pre-symptomatic study of intravenous onasemnogene abeparvovec-xioi in spinal muscular atrophy (SMA) for patients with multiple copies of SMN2 (SPR1NT). ClinicalTrials.gov. U.S. National Library of Medicine. ClinicalTrials.gov Identifier: NCT03505099
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Policy History												
#	Date	Change Description										
2.1	Effective Date: 08/08/2024	Updated criteria to specify that Zolgensma will not be used concurrently with Evrysdi/Spinraza due to a bridging scenario										
2.0	Effective Date: 06/06/2024	Annual review of criteria was performed, no changes were made										
1.9	Effective Date: 06/08/2023	Annual review of criteria was performed, no changes were made										
1.8	Effective Date: 06/09/2022	Updated criteria to allow for Zolgensma use in those with 4 or fewer copies of SMN2 to align with CureSMA guidelines										
1.7	Effective Date: 04/14/2022	Update to include Audaire Health™ requirements										
1.6	Effective Date: 04/08/2021	This policy replaces previously approved criteria that was embedded in a drug review which will be retired.										
1.5	Effective Date: 08/13/2020	Annual review of criteria was performed, no changes were made.										
1.4	Effective Date: 02/03/2020	UM medical management system update for MAPPO and BCNA <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Line of Business</th> <th>PA Required in Medical Management System (Yes/No)</th> </tr> </thead> <tbody> <tr> <td>BCBS</td> <td>Yes</td> </tr> <tr> <td>BCN</td> <td>Yes</td> </tr> <tr> <td>MAPPO</td> <td>Yes</td> </tr> <tr> <td>BCNA</td> <td>Yes</td> </tr> </tbody> </table>	Line of Business	PA Required in Medical Management System (Yes/No)	BCBS	Yes	BCN	Yes	MAPPO	Yes	BCNA	Yes
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1.3	Effective Date: 08/15/2019	New full drug review										
1.2	Effective Date: 08/01/2019	UM medical management system update for BCBSM <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Line of Business</th> <th>PA Required in Medical Management System (Yes/No)</th> </tr> </thead> <tbody> <tr> <td>BCBS</td> <td>Yes</td> </tr> <tr> <td>BCN</td> <td>Yes</td> </tr> <tr> <td>MAPPO</td> <td>TBD</td> </tr> <tr> <td>BCNA</td> <td>TBD</td> </tr> </tbody> </table>	Line of Business	PA Required in Medical Management System (Yes/No)	BCBS	Yes	BCN	Yes	MAPPO	TBD	BCNA	TBD
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1.1	Effective Date: 06/01/2019	UM medical management system update for BCN <table border="1" data-bbox="488 201 1365 407"> <thead> <tr> <th data-bbox="488 201 964 268">Line of Business</th> <th data-bbox="964 201 1365 268">PA Required in Medical Management System (Yes/No)</th> </tr> </thead> <tbody> <tr> <td data-bbox="488 268 964 302">BCBS</td> <td data-bbox="964 268 1365 302">No</td> </tr> <tr> <td data-bbox="488 302 964 336">BCN</td> <td data-bbox="964 302 1365 336">Yes</td> </tr> <tr> <td data-bbox="488 336 964 369">MAPPO</td> <td data-bbox="964 336 1365 369">TBD</td> </tr> <tr> <td data-bbox="488 369 964 407">BCNA</td> <td data-bbox="964 369 1365 407">TBD</td> </tr> </tbody> </table>	Line of Business	PA Required in Medical Management System (Yes/No)	BCBS	No	BCN	Yes	MAPPO	TBD	BCNA	TBD
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1.0	Effective Date: 02/14/2019	New Policy <table border="1" data-bbox="488 489 1365 695"> <thead> <tr> <th data-bbox="488 489 964 556">Line of Business</th> <th data-bbox="964 489 1365 556">PA Required in Medical Management System (Yes/No)</th> </tr> </thead> <tbody> <tr> <td data-bbox="488 556 964 590">BCBS</td> <td data-bbox="964 556 1365 590">No</td> </tr> <tr> <td data-bbox="488 590 964 623">BCN</td> <td data-bbox="964 590 1365 623">No</td> </tr> <tr> <td data-bbox="488 623 964 657">MAPPO</td> <td data-bbox="964 623 1365 657">TBD</td> </tr> <tr> <td data-bbox="488 657 964 695">BCNA</td> <td data-bbox="964 657 1365 695">TBD</td> </tr> </tbody> </table>	Line of Business	PA Required in Medical Management System (Yes/No)	BCBS	No	BCN	No	MAPPO	TBD	BCNA	TBD
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* The prescribing information for a drug is subject to change. To ensure you are reading the most current information it is advised that you reference the most updated prescribing information by visiting the drug or manufacturer website or <http://dailymed.nlm.nih.gov/dailymed/index.cfm>.