Executive Summary

**Purpose:** Ensure appropriate utilization and control of Zolgensma® (onasemnogene abeparvovec-xioi)

**Why Issue Selected:** On May 24, 2019, the FDA approved Zolgensma® (onasemnogene abeparvovec-xioi), an adeno-associated virus vector-based gene therapy, for the treatment of pediatric patients less than 2 years of age with spinal muscular atrophy (SMA) with bi-allelic mutations in the survival motor neuron 1 (SMN1) gene. SMA is a rare, genetic neuromuscular disease with the most severe cases affecting infants and young children. In the US, SMA incidence is approximately one in 10,000 live births or about 500 new SMA cases per year. The most common cause of SMA is the homozygous deletion or deletion and mutation of the alleles of the SMN1 gene on chromosome 5q. SMN1 creates SMN protein, a protein essential for motor neuron development. Although the SMN2 gene also produces SMN protein, only a small amount of the protein it creates is functional. While the number of SMN2 copies modulates the severity of SMA, patients without SMN1 have an insufficient level of SMN protein regardless of the number of SMN2 copies. Zolgensma is the second product for SMA (following Spinraza) as well as the second gene therapy approved in the United States. Unlike Spinraza, which provides a maintenance therapy aimed at slowing the progression of the disease, Zolgensma is a one-time treatment intended to repair the dysfunctional SMN1 gene; it is also the most expensive drug currently marketed, priced at $2.125 million per one-time dose.

**Type of Criteria:**
- ☒ Appropriate Indications
- ☐ Increased risk of ADE
- ☐ Preferred Drug List
- ☒ Clinical Edit

**Data Sources:**
- ☒ Databases + Prescriber-Supplied
- ☐ Only Administrative Databases

**Setting & Population**

- Drug class for review: Zolgensma® (onasemnogene abeparvovec-xioi)
- Age range: All appropriate MO HealthNet participants aged < 2 years
Approval Criteria

- Participant aged < 2 years **AND**
- Documented diagnosis of SMA with bi-allelic mutations in the SMN1 gene **AND**
- Documented anti-AAV9 antibody titer of ≤ 1:50 measured by ELISA at time of treatment **AND**
- Documented completion of all required baseline assessments:
  - Liver function tests (AST, ALT, total bilirubin, and prothrombin time) **AND**
  - Platelet counts **AND**
  - Troponin-I levels **AND**
- Receipt of a signed Single Case Agreement from the provider
  - Contact MO HealthNet at 573-751-6963 for Single Case Agreement

Denial Criteria

- Therapy will be denied if no approval criteria are met
- Previous claim for Zolgensma at any time
- Concurrent utilization with Spinraza
- Lack of a signed Single Case Agreement from the provider
- Active viral infection (including Hepatitis B, Hepatitis C, HIV, or Zika virus)
- Concomitant illness that may create unnecessary risks for gene replacement therapy such as:
  - Major renal or hepatic impairment
  - Known seizure disorder
  - Diabetes mellitus
  - Idiopathic hypocalcemia
  - Symptomatic cardiomyopathy

Required Documentation

| Laboratory Results: | X | Progress Notes: | X | MedWatch Form: | Other: |

Disposition of Edit

Denial: Exception code “682” (Clinical Edit)

References

- Zolgensma [package insert]. Bannockburn, IL: AveXis; 2019