HAP CareSource™

PHARMACY POLICY STATEMENT
HAP CareSource™ Marketplace

DRUG NAME	Strensiq (asfotase alfa)
BILLING CODE	Must use valid NDC
BENEFIT TYPE	Pharmacy
SITE OF SERVICE ALLOWED	Home
STATUS	Prior Authorization Required

Strensiq was approved by the FDA in 2015 as a tissue nonspecific alkaline phosphatase indicated for the treatment of patients with perinatal/infantile- and juvenile-onset hypophosphatasia (HPP).
HPP is characterized by low serum alkaline-phosphatase (ALP) activity from mutations of the gene for tissue-nonspecific isozyme of alkaline phosphatase (TNSALP). Natural substrates of TNSALP that accumulate in hypophosphatasia include inorganic pyrophosphate (PPi), an inhibitor of mineralization, and pyridoxal 5′-phosphate (PLP), the principal circulating form of vitamin B_6. High extracellular levels of inorganic pyrophosphate cause rickets or osteomalacia. Pyridoxine-responsive seizures may occur when TNSALP deficiency is profound. Manifestations of HPP range from neonatal death with almost no skeletal mineralization to dental problems in adults without any bone symptoms. Such differences in expression are explained partly by autosomal recessive and autosomal dominant patterns of inheritance.
Strensiq is a TNSALP enzyme replacement therapy (ERT) to reverse the skeletal mineralization defects of HPP. In clinical trials, significant radiographic improvement was observed, as well as significant improvements in patient growth, strength, motor function, agility, pain, disability, and quality of life. Radiographic improvement was noted by 6 weeks and persisted for several years per extension study results. In life-threatening cases, Strensiq improves respiratory function and survival.

Strensiq (asfotase alfa) will be considered for coverage when the following criteria are met:

Hypophosphatasia (HPP)

For **initial** authorization:

1. Medication must be prescribed by or in consultation with an endocrinologist or other specialist in metabolic bone disease; AND
2. Member has a diagnosis of hypophosphatasia (HPP) with perinatal/infantile- or juvenile-onset (**before 18 years of age**) with ALL of the following documented:
   a) Serum alkaline phosphatase (ALP) below age-adjusted normal range
   b) Plasma pyridoxal 5'-phosphate (PLP) elevation
   c) Radiographic evidence of skeletal abnormality (e.g., rickets, osteomalacia).
3. **Dosage allowed/Quantity limit:**
   Perinatal/Infantile-Onset HPP: 2 mg/kg administered subQ three times per week, or 1 mg/kg administered six times per week. The dose may be increased to 3 mg/kg three times per week for insufficient efficacy (e.g., no improvement in respiratory status, growth, or radiographic findings). (Max 9 mg/kg/week). See tables in package insert.

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Juvenile-Onset HPP: 2 mg/kg administered subQ three times per week, or 1 mg/kg administered six times per week. (Total 6 mg/kg/week). See tables in package insert.

If all the above requirements are met, the medication will be approved for 6 months.

For **reauthorization**:

1. Chart notes must document improvement in clinical signs and symptoms of hypophosphatasia, such as respiratory status, growth, or radiographic (skeletal healing) findings.

If all the above requirements are met, the medication will be approved for an additional 12 months.

HAP CareSource considers Strensiq (asfotase alfa) not medically necessary for the treatment of conditions that are not listed in this document. For any other indication, please refer to the Off-Label policy.

DATE	ACTION/DESCRIPTION
09/13/2018	New policy for Strensiq created.
04/23/2021	Updated references. Emphasized disease onset must be before age 18 years. Amended diagnostic criteria to be more simplified: Removed pain, growth components; Removed genetic testing requirement; Added PLP measure. Specified renewal criteria.
03/07/2022	Transferred to new template. Added references. Added rickets, osteomalacia as examples in 2c. Clarified max dosing.

References:

1. Strensiq [package insert]. Boston, MA: Alexion Pharmaceuticals, Inc.; June 2020.
2. Mornet E, Nunes ME. Hypophophatasia. 2007 Nov 20 [Updated 2016 Feb 4]. In: Adam MP, Ardinger HH, Pagon RA, et al., editors. GeneReviews® [Internet]. Seattle (WA): University of Washington, Seattle; 1993-2018. Available from: https://www.ncbi.nlm.nih.gov/books/NBK1150/.
3. Whyte MP, Greenberg CR, Salman NJ, et al. Enzyme-Replacement Therapy in Life-Threatening Hypophosphatasia. N Engl J Med 2012; 366:904-913. Available at: http://www.nejm.org/doi/full/10.1056/NEJMoa1106173.
4. Rush ET. Childhood hypophosphatasia: to treat or not to treat. Orphanet J Rare Dis. 2018 Jul 16;13 (1):116.
5. Whyte MP, Madson KL, Phillips D, et al. Asfotase alfa therapy for children with hypophosphatasia. *JCI Insight*. 2016;1(9):e85971. Published 2016 Jun 16. doi:10.1172/jci.insight.85971
6. Whyte MP. Hypophosphatasia - aetiology, nosology, pathogenesis, diagnosis and treatment. *Nat Rev Endocrinol*. 2016;12(4):233-246. doi:10.1038/nrendo.2016.14
7. Kishnani PS, Rockman-Greenberg C, Rauch F, et al. Five-year efficacy and safety of asfotase alfa therapy for adults and adolescents with hypophosphatasia. *Bone*. 2019;121:149-162. doi:10.1016/j.bone.2018.12.011
8. Shapiro JR, Lewiecki EM. Hypophosphatasia in Adults: Clinical Assessment and Treatment Considerations. *J Bone Miner Res*. 2017;32(10):1977-1980. doi:10.1002/jbmr.3226
9. Whyte MP, Rockman-Greenberg C, Ozono K, et al. Asfotase Alfa Treatment Improves Survival for Perinatal and Infantile Hypophosphatasia. *J Clin Endocrinol Metab*. 2016;101(1):334-342. doi:10.1210/jc.2015-3462
10. Michigami T, Ohata Y, Fujiwara M, et al. Clinical Practice Guidelines for Hypophosphatasia. *Clin Pediatr Endocrinol*. 2020;29(1):9-24. doi:10.1297/cpe.29.9

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