Clinical Policy: Sodium phenylbutyrate (Buphenyl)

Reference Number: PA.CP.PHAR.208
Effective Date: 01/18
Last Review Date: 05/17

Coding Implications
Revision Log

Description
The intent of the criteria is to ensure that patients follow selection elements established by Pennsylvania Health and Wellness® clinical policy for sodium phenylbutyrate (Buphenyl®).

Policy/Criteria
It is the policy of Pennsylvania Health and Wellness that Buphenyl is **medically necessary** when the following criteria are met:

I. Initial Approval Criteria

A. Urea Cycle Disorder: CPS, OTC, AS (must meet all):

1. Prescribed by or in consultation with a physician experienced in treating metabolic disorder;
2. Diagnosis of one of the following urea cycle disorders (UCDs) confirmed by enzymatic, biochemical or genetic analysis:
   a. Carbamylphosphate synthetase (CPS) deficiency;
   b. Ornithine transcarbamylase (OTC) deficiency;
   c. Argininosuccinic acid synthetase (AS) deficiency;
3. Inadequate response to dietary protein restriction or amino acid supplementation alone;
4. Buphenyl will be used in conjunction with dietary protein restriction;
5. Prescribed dose does not exceed 20 grams of sodium phenylbutyrate per day.

Approval duration: 6 months

B. Other diagnoses/indications: Refer to PA.CP.PHAR.57 - Global Biopharm Policy.

II. Continued Approval

A. Urea Cycle Disorder: CPS, OTC, AS (must meet all)**:**

1. Currently receiving medication via Pennsylvania Health and Wellness benefit or member has previously met all initial approval criteria; or the Continuity of Care policy (PA.LTSS.PHAR.01) applies;
2. Member is responding positively to therapy;
3. Prescribed dose does not exceed 20 grams of sodium phenylbutyrate per day;

Approval duration: 12 months

B. Other diagnoses/indications (1 or 2)**:**

1. Currently receiving medication via Pennsylvania Health and Wellness benefit and documentation supports positive response to therapy; or the Continuity of Care policy (PA.LTSS.PHAR.01) applies;

Approval duration: Duration of request or 6 months (whichever is less); or

2. Refer to PA.CP.PHAR.57 - Global Biopharm Policy.

Background
Description/Mechanism of Action:
Sodium phenylbutyrate is a pro-drug and is rapidly metabolized to phenylacetate. Phenylacetate is a metabolically-active compound that conjugates with glutamine via acetylation to form phenylacetylglutamine. Phenylacetylglutamine then is excreted by the kidneys. On a molar basis, it is comparable to urea (each containing two moles of nitrogen). Therefore, phenylacetylglutamine provides an alternate vehicle for waste nitrogen excretion. Sodium phenylbutyrate is an oral product that provides an alternative vehicle for nitrogen waste removal in patients with UCDs.

Formulations:
Buphenyl is supplied as
- Oral tablets containing 500 mg of sodium phenylbutyrate;
- Oral powder containing 3.0 grams of sodium phenylbutyrate per level teaspoon.

Sodium phenylbutyrate is supplied as
- Oral powder containing 3.0 grams of sodium phenylbutyrate per level teaspoon.

FDA Approved Indications:
Buphenyl is a urea substitute/oral tablet or powder formulation indicated as:
- Adjunctive therapy in the chronic management of patients with urea cycle disorders involving deficiencies of CPS, OTC, or AS.
  - It is indicated in all patients with neonatal-onset deficiency (complete enzymatic deficiency, presenting within the first 28 days of life).
  - It is also indicated in patients with late-onset disease (partial enzymatic deficiency, presenting after the first month of life) who have a history of hyperammonemic encephalopathy.
  - It is important that the diagnosis be made early and treatment initiated immediately to improve survival. Any episode of acute hyperammonemia should be treated as a life-threatening emergency. Buphenyl must be combined with dietary protein restriction and, in some cases, essential amino acid supplementation.

Appendices
Appendix A: Abbreviation Key
AS: argininosuccinate synthetase
CPS: carbamylphosphate synthetase
OTC: ornithine transcarbamylase
UCD: urea cycle disorder

Coding Implications
Codes referenced in this clinical policy are for informational purposes only. Inclusion or exclusion of any codes does not guarantee coverage. Providers should reference the most up-to-

date sources of professional coding guidance prior to the submission of claims for reimbursement of covered services.

HCPCS Codes	Description
N/A	

Reviews, Revisions, and Approvals	Date	Approval Date

References

1. Buphenyl prescribing information. Lake Forest, IL: Horizon Pharma USA, Inc.; April 2016. Available at http://www.horizonpharma.com/wp-content/uploads/2016/06/BUPHENYL_PI_April-2016.pdf. Accessed March 15, 2017.
2. Lee B. Urea cycle disorders: Clinical features and diagnosis. In: UpToDate, Waltham, MA Wolters Kluwer Health; 2017. Available at UpToDate.com. Accessed March 15, 2017.
3. Lee B. Urea cycle disorders: Management. In: UpToDate, Waltham, MA Wolters Kluwer Health; 2017. Available at UpToDate.com. Accessed March 15, 2017.
4. Sodium phenylbutyrate: Drug information. In: UpToDate (Lexicomp), Waltham, MA Wolters Kluwer Health; 2017. Available at UpToDate.com. Accessed March 15, 2017.