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Section:	Prescription Drugs	**Effective Date:**	April 1, 2021
Subsection:	Endocrine and Metabolic Drugs	**Original Policy Date:**	January 1, 2014
Subject:	Buphenyl	**Page:**	1 of 4

Last Review Date: March 12, 2021

Buphenyl

Description

Buphenyl (sodium phenylbutyrate)

Background
Urea cycle disorders include a group of diseases, each having a specific liver enzyme deficiency. Because they are inherited, other family members may be affected. These disorders vary in severity and may be first detected at various ages, from newborn infants to adults. They lead to increased amounts of ammonia in the blood, which may cause disturbed brain function and severe brain damage (1).

Buphenyl is available both as tablets and a powder for oral use (via mouth, gastrostomy, or nasogastric tube) with meals or feedings and helps dispose of ammonia in the body. It is intended for patients who have UCD that cannot be managed by a protein-restricted diet or amino acid supplements alone. Buphenyl must be used with a protein-restricted diet and, in some cases, dietary supplements (1).

Regulatory Status
FDA approved indication: Buphenyl is indicated as adjunctive therapy in the chronic management of patients with urea cycle disorders involving deficiencies of carbamylphosphate synthetase (CPS), ornithine transcarbamylase (OTC), or argininosuccinic acid synthetase (AS) (1).

Limitations of Use**:**

Buphenyl is not indicated for treatment of acute hyperammonemia in patients with UCDs (1). Caution should be used when using haloperidol and valproic acid. Buphenyl should be used with great care, if at all, in patients with congestive heart failure or severe renal insufficiency and in clinical states in which there is sodium retention with edema. Probenecid may inhibit renal transport of Buphenyl. Use of corticosteroids may cause the breakdown of body protein and increase plasma ammonia levels. The use of tablets for neonates, infants, and children under the weight of 20kg is not recommended (1).

Related policies
Ravicti

Policy

This policy statement applies to clinical review performed for pre-service (Prior Approval, Precertification, Advanced Benefit Determination, etc.) and/or post-service claims.

Buphenyl may be considered **medically necessary** in patients with the diagnosis of urea cycle disorders (UCDs) involving deficiencies of carbamylphosphate synthetase (CPS), ornithine transcarbamylase (OTC), or argininosuccinic acid synthetase (AS) and if the conditions indicated below are met.

Buphenyl is considered **investigational** for all other indications.

Prior-Approval Requirements

Diagnosis

Patient must have the following:

Urea cycle disorders (UCDs) involving deficiencies of carbamylphosphate synthetase (CPS), ornithine transcarbamylase (OTC), or argininosuccinic acid synthetase (AS)

AND ALL of the following:

a. Failure to control ammonia level with dietary restrictions and / or amino acid supplementation
b. Prescribing physician should be experienced in the management of UCDs
c. Must be used with dietary protein restrictions
d. **NO** acute hyperammonemic encephalopathy

Prior – Approval *Renewal* Requirements

Diagnosis

Patient must have the following:

Urea cycle disorders (UCDs) involving deficiencies of carbamylphosphate synthetase (CPS), ornithine transcarbamylase (OTC), or argininosuccinic acid synthetase (AS)

AND the following:

a. Must be used with dietary protein restrictions

Policy Guidelines

Pre - PA Allowance

None

Prior - Approval Limits

Duration 2 years

Prior – Approval *Renewal* Limits

Same as above

Rationale

Summary

Buphenyl is indicated as adjunctive therapy in the chronic management of patients with urea cycle disorders involving deficiencies of carbamylphosphate synthetase (CPS), ornithine transcarbamylase (OTC), or argininosuccinic acid synthetase (AS). Patients with urea cycle disorders should not take valproic acid, haloperidol, or steroids as these drugs have been reported to increase blood ammonia levels, and probenecid may affect the kidneys' excretion. Use with great care, if at all, in patients with congestive heart failure or severe renal insufficiency, and in clinical states where there is sodium retention with edema. Use caution when administering to patients with hepatic or renal insufficiency or inborn errors of beta oxidation. The safety or efficacy of doses in excess of 20 grams (40 tablets) per day has not been established (1).

Prior approval is required to ensure the safe, clinically appropriate and cost-effective use of Buphenyl while maintaining optimal therapeutic outcomes.

References

1. Buphenyl [package insert]. Lake Forest, IL: Horizon Therapeutics, Inc. March 2020.

Policy History

Date	Action
January 2014	New addition to PA
March 2014	Annual review
March 2015	Annual criteria review and reference update
September 2016	Annual editorial review and reference update Policy code changed from 5.08.30 to 5.30.30
December 2017	Annual editorial review
November 2018	Annual review
December 2019	Annual editorial review and reference update. Changed approval duration from lifetime to 2 years
December 2020	Annual review and reference update
March 2021	Annual review

Keywords

This policy was approved by the FEP® Pharmacy and Medical Policy Committee on March 12, 2021 and is effective on April 1, 2021.