

<b>Clinical Policy Title:</b>	sodium phenylbutyrate
<b>Policy Number:</b>	RxA.354
<b>Drug(s) Applied:</b>	Buphenyl®
<b>Original Policy Date:</b>	03/06/2020
<b>Last Review Date:</b>	09/14/2020
<b>Line of Business Policy Applies to:</b>	All lines of business

## Background

Sodium phenylbutyrate (Buphenyl®) is a nitrogen-binding agent. It is indicated as adjunctive therapy in the chronic management of patients with urea cycle disorders (UCDs) involving deficiencies of carbamylphosphate synthetase (CPS), ornithine transcarbamylase (OTC), or argininosuccinic acid synthetase (ASS).

Limitation(s) of use: Buphenyl should not be used to manage acute hyperammonemia, which is a medical emergency.

## Dosing Information

Drug Name	Indication	Dosing Regimen	Maximum Dose
Sodium phenylbutyrate (Buphenyl®)	UCD	<p>Weight &lt; 20 kg: 450-600 mg/kg/day PO in equally divided doses with each meal or feeding</p> <p>Weight ≥ 20 kg: 9.9-13 g/m2/day PO in equally divided doses with each meal or feeding</p>	20 g/day

## Dosage Forms

- Tablet: 500 mg
- Powder: 250 g bottle

## Clinical Policy

Provider must submit documentation (such as office chart notes, lab results or other clinical information) supporting that member has met all approval criteria.

### I. Initial Approval Criteria

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

1. Diagnosis of a UCD caused by one or more of the following, confirmed by enzymatic, biochemical or genetic analysis:
  - a. CPS deficiency;
  - b. OTC deficiency;

This clinical policy has been developed to authorize, modify, or determine coverage for individuals with similar conditions. Specific care and treatment may vary depending on individual need and benefits covered by the plan. This policy is not intended to dictate to providers how to practice medicine, nor does it constitute a contract or guarantee regarding payment or results. This document may contain prescription brand name drugs that are trademarks of pharmaceutical manufacturers that are not affiliated with RxAdvance.

- c. ASS deficiency;
2. Prescribed by or in consultation with a physician experienced in treating metabolic disorders;
3. Dose does not exceed 20 g per day.

**Approval duration**

**Commercial:** 6 months

**Medicaid:** 6 months

## II. Continued Therapy Approval

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

1. Currently receiving medication that has been authorized by RxAdvance or member has previously met initial approval criteria listed in this policy;
2. Member is responding positively to therapy;
3. If request is for a dose increase, new dose does not exceed 20 g per day.

**Approval duration**

**Commercial:** 12 months

**Medicaid:** 12 months

## III. Appendices

### APPENDIX A: Abbreviation/Acronym Key

ASL: argininosuccinate lyase

ASS: argininosuccinate synthetase

CPSI: carbamyl phosphate synthetase I

CTLN1: type I citrullinemia

FDA: Food and Drug Administration

NAGS: N-acetyl glutamate synthetase

OTC: ornithine transcarbamylase

UCD: urea cycle disorder

### APPENDIX B: Therapeutic Alternatives

- Not applicable

### APPENDIX C: Contraindications/Boxed Warnings

- Contraindication(s):
  - Should not be used to manage acute hyperammonemia
- Boxed warning(s):
  - None reported

### APPENDIX D: General Information

UCDs are caused by a deficiency in any of the below enzymes in the pathway that transforms nitrogen to urea:

- Carbamyl phosphate synthetase I (CPSI) deficiency
- Ornithine transcarbamylase (OTC) deficiency
- Argininosuccinate synthetase (ASS) deficiency (also known as classic citrullinemia or type I citrullinemia, CTLN1)
- Argininosuccinate lyase (ASL) deficiency (also known as argininosuccinic aciduria)
- N-acetyl glutamate synthetase (NAGS) deficiency

- Arginase deficiency

**References**

1. Buphenyl Prescribing Information. Lake Forest, IL: Horizon Pharma USA, Inc.; February 2020. Available at <https://www.hzndocs.com/BUPHENYL-Prescribing-Information.pdf>. Accessed June 22, 2020.

Review/Revision History	Review/Revised Date	P&T Approval Date
Policy established.	01/2020	03/06/2020
Policy was reviewed: 1. Clinical Policy Title was updated 2. Drug(s) Applied was updated 3. Line of Business Policy Applies to was updated 4. Continued Therapy criteria II.A.1 was rephrased to "Currently receiving medication that has been authorized by RxAdvance..." 5. Commercial approval duration and Medicaid approval duration updated. 6. References were updated	06/22/2020	09/14/2020