BlueCross BlueShield of Alabama

Name of Policy:
Nutritional Treatment of Childhood Medical Conditions

Policy #: 215
Category: Medicine

Latest Review Date: October 2018
Policy Grade: Not Applicable

Background/Definitions:

As a general rule, benefits are payable under Blue Cross and Blue Shield of Alabama health plans only in cases of medical necessity and only if services or supplies are not investigational, provided the customer group contracts have such coverage.

The following Association Technology Evaluation Criteria must be met for a service/supply to be considered for coverage:

1. *The technology must have final approval from the appropriate government regulatory bodies;*
2. *The scientific evidence must permit conclusions concerning the effect of the technology on health outcomes;*
3. *The technology must improve the net health outcome;*
4. *The technology must be as beneficial as any established alternatives;*
5. *The improvement must be attainable outside the investigational setting.*

Medical Necessity means that health care services (e.g., procedures, treatments, supplies, devices, equipment, facilities or drugs) that a physician, exercising prudent clinical judgment, would provide to a patient for the purpose of preventing, evaluating, diagnosing or treating an illness, injury or disease or its symptoms, and that are:

1. *In accordance with generally accepted standards of medical practice; and*
2. *Clinically appropriate in terms of type, frequency, extent, site and duration and considered effective for the patient's illness, injury or disease; and*
3. *Not primarily for the convenience of the patient, physician or other health care provider; and*
4. *Not more costly than an alternative service or sequence of services at least as likely to produce equivalent therapeutic or diagnostic results as to the diagnosis or treatment of that patient's illness, injury or disease.*

Description of Procedure or Service:

There are many chronic diseases or conditions of childhood that require special dietary intervention. These diseases may be associated with increased nutritional requirements and metabolic demands or with decreased nutrient intakes, limitations of digestion and absorption, and/or increased nutrient losses.

Inborn Errors of Metabolism

There are metabolic diseases such as inborn errors of metabolism that have special nutritional needs resulting from genetic disorders of the digestive cycle. These disorders are treatable by dietary modifications, which can prevent complications like mental retardation and death. The nutritional treatment may include restriction of one or more amino acids, restriction of total nitrogen, or the supplementation of specific substances.

Children with other metabolic diseases, such as disorders of carbohydrate metabolism, lipid metabolism, or vitamin or cofactor metabolism, may also benefit from dietary interventions. The treatment process should be monitored by a physician and a clinical nutritionist familiar with the particular disease. Each individual child's caloric and nutritional requirements should be determined.

Some childhood medical conditions may require certain medications and/or a change in infant formula or nutrition for treatment. However, these conditions are usually not considered life-threatening conditions and may improve with time. These conditions include, but are not limited to, colic, gastroesophageal reflux disease (GERD), cow's milk protein allergy, soy protein allergy, lactose intolerance, viral gastroenteritis, eczema, asthma/wheezing and eosinophilic gastroenteritis.

Eosinophilic Esophagitis (EE) and Eosinophilic Gastroenteritis (EG)

Allergic eosinophilic gastroenteropathies are a group of heterogenous disorders characterized by eosinophilic infiltration of the gut. The 2 main disorders are eosinophilic esophagitis (EE) and eosinophilic gastroenteritis (EG). Eosinophilic gastroenteritis (EG) can affect patients of any age, but typically presents in the third through fifth decade and has a peak age of onset in the third decade. Symptoms of these disorders are similar to those of other GI diseases and include nausea, vomiting, dysphagia, diarrhea, epigastric or abdominal pain, and poor weight gain. The diagnosis requires confirmation of an eosinophilic infiltration of the gut by biopsy and the exclusion of other causes, such as parasitic infestation or inflammatory bowel disease.

The diagnosis of eosinophilic esophagitis can only be made by endoscopy and biopsy. Eosinophilic esophagitis is an increasingly recognized cause of dysphagia and possibly heartburn that is unresponsive to anti-reflux measures. It is thought to be a chronic illness requires persistent dietary restrictions and/or consistent medication therapy. Treatment options include corticosteroids, acid suppression, dietary restriction, esophageal dilation to treat strictures or complete dietary elimination using an amino acid based formula.

Glycogen Storage Disease

Patients with Glycogen Storage Disease may experience hypoglycemia at night, which can lead to seizures, brain damage, and even death. Glycosade is a long-acting starch that allows patients

to maintain a normal blood glucose level and avoid nighttime hypoglycemia. This supplement may be covered for a period of time with documentation that the patient's symptoms have improved and the blood glucose levels are steady.

Phenylketonuria (PKU)
Classic phenylketonuria (PKU) is a rare metabolic disorder that usually results from a deficiency of a liver enzyme known as phenylalanine hydroxylase (PAH). This enzyme deficiency leads to elevated levels of the amino acid phenylalanine (Phe) in the blood and other tissues. Mental retardation, microcephaly, delayed speech, seizures, eczema, behavior abnormalities and other symptoms characterize the untreated state. Approximately 1 of every 10,000 to 15,000 infants in the United States is born with PKU.

Dietary therapy with restriction of dietary PHE intake remains the mainstay of therapy for PAH deficiency, requiring a decrease in the intake of natural protein and replacing it with a protein (amino acid mixture) source devoid of PHE. An experienced metabolic physician and nutritionist team should manage this therapy. Because foods normally consumed as protein sources contain other essential nutrients, it is important that a diet modified for PAH deficiency provides sources for all other nutrients necessary for normal growth and health maintenance.

Implementing a Phe-restricted diet early in life can significantly reduce mental deficiencies associated with PKU. Metabolic control via medical nutrition therapy involves the use of medical foods including medical protein sources and modified low-protein products in addition to the provision of required amounts of Phe through small amounts of natural protein. The response is monitored throughout periodic measurement of blood Phe levels in conjunction with analysis of nutritional intake and review of nutritional status. Most experts advocate lifelong dietary treatment for metabolic control of blood Phe levels. Data suggest that elevated Phe levels in adolescents and adults adversely affect cognitive function and case reports have documented deterioration of adult patients with PKU after diet discontinuation. Women with PKU must also maintain strict metabolic control before and during pregnancy to prevent fetal damage. Metabolic control of PKU can be difficult to achieve, and poor control can result in significant decline of mental and behavioral performance.

Exempt Infant Formula
An exempt infant formula is an infant formula intended for commercial or charitable distribution that is represented and labeled for use by infants who have inborn errors of metabolism or low-birth weight, or who otherwise have unusual medical or dietary problems. There are certain practices, procedures, and processes that must be followed by any company or person manufacturing or marketing any new infant formula. There are also specific terms and conditions that must be met for exempt infant formulas. The FDA has provided a list of all products classified as exempt infant formulas currently available in the U.S. The list includes, but is not limited to, the following products that are grouped by the company that manufactures or distributes them and by the type of product.

Updated list: FDA updated list on April 2017:

I. Abbot Nutrition

A. Metabolic Formulas

1. Cyclinex-1
2. Glutarex-1
3. Hominex-1
4. I-Valex-1
5. Ketonex-1
6. Phenex-1
7. Propimex-1
8. Tyrex-1

B. Formulas for Premature Infants

1. Similac Special Care 20 Cal w/Iron
2. Similac Special Care 24 Cal w/Iron
3. Similac Special Care 24 Cal High Protein
4. Similac Special Care 30 Cal w/Iron
5. Similac NeoSure

C. Protein Hydrolysate Formulas

1. Similac Alimentum

D. Amino Acid-Based Formula

1. EleCare

E. Miscellaneous

1. Calcilo XD
2. Liquid Protein Fortifier
3. Pro-Phree
4. ProViMin
5. RCF No Added Carbohydrate Soy Infant Formula Base
6. Similac for Diarrhea
7. Similac Human Milk Fortifier
8. Similac Extensively Hydrolyzed Protein Human Milk Fortifier Concentrated Liquid
9. Similac Human Milk Fortifier Concentrated Liquid
10. Similac PM 60/40

II. Mead Johnson Nutritionals, Bristol-Myers Squibb Company

A. Metabolic Formulas

1. Phenyl Free 1
2. BCAD 1
3. GA
4. HCY 1
5. LMD
6. OA 1
7. TYROS 1
8. WND 1

B. Formulas for Premature Infants

1. Enfamil Premature Low Iron 20 Calorie
2. Enfamil Premature w/Iron 20 Calorie
3. Enfamil Premature Low Iron 24 Calorie
4. Enfamil Premature w/Iron 24 Calorie
5. Enfamil EnfaCare
6. Enfamil Premature High Protein 24 Calorie
7. Enfamil Premature 30 Calorie

C. Protein Hydrolysate Formulas

1. Nutramigen
2. Pregestimil 20 Calorie
3. Pregestimil 24 Calorie
4. Nutramigen with Enflora LGG

D. Amino Acid-Based Formula

1. PurAmino

E. Miscellaneous

1. Product 3232A
2. Enfamil Human Milk Fortifier Acidified Liquid
3. Enfamil Human Milk Fortifier Powder
4. Enfaport

III. Nestle Infant Nutrition

A. Formulas for Premature Infants

1. Gerber Good Start Nourish
2. Gerber Good Start Premature 20
3. Gerber Good Start Premature 24 High Protein
4. Gerber Good Start Premature 24
5. Gerber Good Start Premature 30

B. Extensively Hydrolyzed Whey Protein Isolate

1. Gerber Extensive HA

C. Amino Acid-Based Formula

1. Alfamino

IV. PBM Nutritionals

A. Formulas for Premature Infants

1. 22 cal/oz. milk-based infant formula with DHA and ARA for Conditions such as Prematurity (sold under private labels)

V. Prolacta Biosciences, Inc.

A. Miscellaneous

1. Prolact Plus Human Milk Fortifiers (+4, +6, +8, and +10)
2. Prolact CR Human Milk Caloric Fortifier
3. Prolact RTF 24 Human Milk-Based Premature Infant Formula
4. Prolact RTF 26 Human Milk-Based Premature Infant Formula
5. Prolact RTF 28 Human Milk-Based Premature Infant Formula

VI. SHS International Limited*

A. Metabolic Formulas

1. MSUD Anamix Early Years
2. IVA Anamix Early Years
3. GA1 Anamix Early Years
4. HCU Anamix Early Years
5. MMA/PA Anamix Early Years
6. Periflex Early Years
7. Tyr Anamix Early Years
8. SOD Anamix Early Years

B. Amino Acid-Based Formula

1. Neocate Infant w/DHA and ARA
2. Neocate Syneo w/DHA and ARA

*Nutricia North America is listed on the product labels. Nutricia North America is the distribution company and "brand" name for the products manufactured by SHS International in the United Kingdom.

Policy:

Nutritional treatment of certain childhood medical conditions and chronic diseases meets Blue Cross and Blue Shield of Alabama's medical criteria for coverage when the following criteria are met:

1. The appropriate diagnosis is confirmed by testing and is documented in the medical record.
2. The individual will sustain severe health complications or will not survive without this nutritional treatment.
3. The nutritional treatment is prescribed by a physician and monitored by a physician and/or a clinical nutritionist.

Some of the medical conditions that require special dietary intervention include the following:

- Phenylketonuria (PKU)*******
- Cystinosis
- Homocystinuria
- Glutaric Acidemia (Types I and II)
- Disorders of leucine metabolism
- Isovaleric acidemia
- Maple Syrup Urine Disease
- Tyrosinemia Types I and II
- Urea Cycle Disorders
- Methylmalonic Acidemia
- Propionic Acidemia
- Glycogen Storage Disease
- Galactosemia
- Hereditary Fructose Intolerance
- Pyruvate dehydrogenase complex deficiency
- Phosphoenolpyruvate carboxykinase deficiency
- Mitochondrial fatty acid oxidation defects
- Partial villus atrophy due to food protein sensitivity
- Exocrine pancreatic insufficiency
- Long Chain Acyl Co A Dehydrogenase Deficiency (LCHAD)
- Eosinophilic Esophagitis*****

*****This condition may be covered for an elemental formula, such as Elecare or Neocate, up to age 1 year, if the following criteria are documented in the medical record:

1. The diagnosis is biopsy-proven.
2. The patient has persistent GI symptoms including nausea, vomiting, diarrhea, abdominal pain, dysphagia, weight loss, and/or failure to thrive.
3. The patient has failed an elimination diet or a hypoallergenic diet (e.g., Alimentum, Nutramigen, or Pregestimil).

*****Nutritional supplements for phenylketonuria (PKU)** (ICD-10 code E70.0) **meet** Blue Cross and Blue Shield of Alabama's medical criteria for coverage throughout the **lifespan of the patient.**

The available medical foods for PKU may include:

- Phenyl Free 1
- Phenyl Free 2
- Phenyl Free 2 HP
- Milupa PKU-1
- Milupa PKU-2
- Milupa PKU-3
- Crystalline amino acid mix plus Protein Free Diet Powder
- Periflex
- X Phe Analog
- X Phe Maxamaid
- X Phe Maxamum
- Phenex-1
- Phenex-2
- Phlexy-10
- Phenylade Blend, PheBLOC tablets
- Lophlex
- Phlexy-Vits
- Add-Ins
- Phenyl Ade
- PKU Gel
- PKU Express
- PKU Cooler
- Camino Pro

The following **childhood medical conditions do not meet** Blue Cross Blue Shield of Alabama's medical criteria for coverage for any type of formula or medical food supplement:

- Colic
- Gastroesophageal reflux (GERD)
- Cow's milk protein allergy or intolerance
- Soy protein allergy or intolerance
- Lactose intolerance
- Viral gastroenteritis
- Eczema
- Asthma/wheezing
- Eosinophilic Gastroenteritis

These medical food nutrients are not prescription drugs; they are, however, not products that one can walk into a drug store and purchase off the shelf. They must be special ordered through a pharmacy or pharmaceutical organization.

Blue Cross and Blue Shield of Alabama does not approve or deny procedures, services, testing, or equipment for our members. Our decisions concern coverage only. The decision of whether or not to have a certain test, treatment or procedure is one made between the physician and his/her patient. Blue Cross and Blue Shield of Alabama administers benefits based on the members' contract and corporate medical policies. Physicians should always exercise their best medical judgment in providing the care they feel is most appropriate for their patients. Needed care should not be delayed or refused because of a coverage determination.

Key Points:

Not applicable

Key Words:

Childhood medical conditions, childhood chronic diseases, inborn errors of metabolism, nutritional treatment, exempt infant formula, Lipistart, Eosinophilic Esophagitis, GERD, Glycogen Storage Disease, cow's milk protein allergy, colic, lactose intolerance, Phenylketonuria , PKU

Approved by Governing Bodies:

An FDA listing is maintained for exempt infant formulas. Verification of status may be necessary via FDA.gov.

Benefit Application:

Coverage is subject to member's specific benefits. Group specific policy will supersede this policy when applicable.
ITS: Home Policy provisions apply.
FEP: Special benefit consideration may apply. Refer to member's benefit plan. FEP does not consider investigational if FDA approved and will be reviewed for medical necessity.

Coding:

CPT/HCPCS:	**S9433**	Medical food nutritionally complete, administered orally, providing 100% of nutritional intake
	S9435	Medical foods for inborn errors of metabolism

References:

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Policy History:

Medical Policy Group, December 2004 **(1)**
Medical Policy Administration Committee, February 2005
Available for comment February 14-March 30, 2005
Medical Policy Group, July 2006 **(1)**
Medical Policy Group, December 2008 **(1)**
Medical Policy Group, April 2009 **(1)**
Medical Policy Group, October 2009 **(3)**
Medical Policy Administration Committee, November 2009
Available for comment November 6-December 21, 2009
Medical Policy Group, February 2010 **(3)**
Medical Policy Administration Committee, February 2010
Available for comment February 5-March 22, 2010
Medical Policy Group May 2011 **(2)**: Updated Forms list to cover 1&2
Medical Policy Group, June 2012 **(2)**: Updated Forms list, No policy changes
Medial Policy Administration Committee, July 2012
Medical Policy Group, June 2013 **(2)**: Updated Forms list with two new FDA changes to Mead Johnson Nutrition section. No policy changes.
Medical Policy Group, November 2013 **(2):** Added non-FDA approved Glycosade. No policy changes.
Medical Policy Group, January 2017 **(6)**: Updated FDA exempt formula list, Description, Key Words and Governing Bodies. No change to policy statement.
Medical Policy Group, July 2018 **(6)**: Updated FDA exempt formula list. No change to policy statement.
Medical Policy Group, October 2018 **(6):** Combined MP #029 Nutritional Supplements for Phenylketonuria (PKU). Updates to Description, Policy Statement, and References. Added Key Word "PKU".
