Title: Cyanocobalamin inhalation (Nascobal®)
Policy #: Rx.01.181

Application of pharmacy policy is determined by benefits and contracts. Benefits may vary based on product line, group, or contract. Some medications may be subject to precertification, age, quantity, or formulary restrictions (ie limits on non-preferred drugs). Individual member benefits must be verified.

This pharmacy policy document describes the status of pharmaceutical information and/or technology at the time the document was developed. Since that time, new information relating to drug efficacy, interactions, contraindications, dosage, administration routes, safety, or FDA approval may have changed. This Pharmacy Policy will be regularly updated as scientific and medical literature becomes available. This information may include new FDA-approved indications, withdrawals, or other FDA alerts. This type of information is relevant not only when considering whether this policy should be updated, but also when applying it to current requests for coverage.

Members are advised to use participating pharmacies in order to receive the highest level of benefits.

Goal:
The intent of this policy is to communicate the medical necessity criteria for cyanocobalamin inhalation (Nascobal®) as provided under the member's prescription drug benefit.

Description:
Cells that rapidly divide such as bone marrow and myeloid cells require vitamin B₁₂ to mature and proliferate. Vitamin B₁₂ is necessary for hematopoiesis, nucleoprotein synthesis, and myelin synthesis. Additionally, it is required for fat and carbohydrate breakdown and protein synthesis. Vitamin B₁₂ is bound to protein rich foods and comes from the diet. Hydrochloric acid and gastric protease break it down into its free form. The free form of vitamin B₁₂ must be combined with intrinsic factor, which is produced by gastric parietal cells, in order to be absorbed in the distal ileum. Pernicious anemia is an autoimmune disease that is associated with the destruction of the parietal cells that secrete intrinsic factor. The inability to absorb vitamin B₁₂ results in a severe deficiency which, if left untreated, can lead to megaloblastic anemia, GI lesions, or neurologic defects.

Cyanocobalamin is the most widely used form of vitamin B₁₂ to treat and maintain normal hematologic status in patients with pernicious anemia. It has identical hematopoietic activity to the anti-anemic factor that is present in the liver. Cyanocobalamin is also indicated as a supplement for other vitamin B₁₂ deficiencies, such as dietary deficiency and malabsorption of vitamin B₁₂.

Cyanocobalamin is available in oral, sublingual, and injection dosage forms. Cyanocobalamin nasal spray, a new route of administration, provides an alternative route of administration for vitamin B₁₂ deficiency.

Policy:
Cyanocobalamin inhalation (Nascobal®) is approved when ALL of the following are met:
1. Diagnosis of one of the following:
   a. Pernicious anemia with no nervous system involvement
   b. Dietary deficiency of vitamin B12 due to strict vegetarian diet
   c. Malabsorption of vitamin B12 due to a structural or functional damage to the stomach or ileum
   d. Inadequate secretion of intrinsic factor
   e. Competition for vitamin B12 by intestinal parasites or bacteria (e.g., tapeworm, blind loop syndrome)
   f. Inadequate utilization of vitamin B12 (e.g., antimetabolites are employed in treatment of neoplasia)

2. Inadequate response or inability to tolerate oral and sublingual cyanocobalamin

**Black Box Warning:**
None

**Guidelines:**
Refer to the specific manufacturer's prescribing information for administration and dosage details and any applicable Black Box warnings.

**BENEFIT APPLICATION**

Subject to the terms and conditions of the applicable benefit contract, the applicable drug(s) identified in this policy is (are) covered under the prescription drug benefits of the Company's products when the medical necessity criteria listed in this pharmacy policy are met. Any services that are experimental/investigational or cosmetic are benefit contract exclusions for all products of the Company.

**References:**


**Applicable Drugs:**
Inclusion of a drug in this table does not imply coverage. Eligibility, benefits, limitations, exclusions, precertification/referral requirements, provider contracts, and Company policies apply.

<table>
<thead>
<tr>
<th>Brand Name</th>
<th>Generic Name</th>
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<tbody>
<tr>
<td>Nascobal</td>
<td>Cyanocobalamin</td>
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**Cross References:**
N/A

**Policy Version Number:** 3.00
**P&T Approval Date:** July 13, 2017
**Policy Effective Date:** September 01, 2017
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