I. Policy:
Berinert (C1 esterase inhibitor, human)

II. Purpose/Objective:
To provide a policy of coverage regarding Berinert (C1 esterase inhibitor, human)

III. Responsibility:
A. Medical Directors
B. Medical Management
C. Pharmacy Department

IV. Required Definitions
1. Attachment – a supporting document that is developed and maintained by the policy writer or department requiring/authoring the policy.
2. Exhibit – a supporting document developed and maintained in a department other than the department requiring/authoring the policy.
3. Devised – the date the policy was implemented.
4. Revised – the date of every revision to the policy, including typographical and grammatical changes.
5. Reviewed – the date documenting the annual review if the policy has no revisions necessary.

V. Additional Definitions
Medical Necessity or Medically Necessary means Covered Services rendered by a Health Care Provider that the Plan determines are:

a. appropriate for the symptoms and diagnosis or treatment of the Member's condition, illness, disease or injury;
b. provided for the diagnosis and the direct care and treatment of the Member's condition, illness disease or injury;
c. in accordance with current standards good medical treatment practiced by the general medical community;
d. not primarily for the convenience of the Member, or the Member's Health Care Provider; and

e. the most appropriate source or level of service that can safely be provided to the Member. When applied to hospitalization, this further means that the Member requires acute care as an inpatient due to the nature of the services rendered or the Member's condition, and the Member cannot receive safe or adequate care as an outpatient.

Medicaid Business Segment
Medical Necessity shall mean a service or benefit that is compensable under the Medicaid Assistance Program and if it meets any one of the following standards:

(i) the service or benefit will, or is reasonably expected to, prevent the onset of an illness, condition or disability.

(ii) the service or benefit will, or is reasonably expected to, reduce or ameliorate the physical, mental or development effects of an illness, condition, injury or disability.

(iii) the service or benefit will assist the Member to achieve or maintain maximum functional capacity in performing daily activities, taking into account both the functional capacity of the Member and those functional capacities that are appropriate for members of the same age.
DESCRIPTION:
Berinert (C1 esterase inhibitor, human) is a plasma-derived C1 Esterase Inhibitor (Human) indicated for the treatment of acute abdominal, facial, or laryngeal attacks of hereditary angioedema (HAE) in adult and pediatric patients. Berinert increases C1 inhibitor levels which play a role in the inflammatory process by inactivating it’s substrate by binding to the reactive site.

CRITERIA FOR USE: Requires Prior Authorization by Medical Director or Designee

GRANDFATHER PROVISION – Members already established on therapy are eligible for approval as long as there is medical record documentation that the safety and effectiveness of use for the prescribed indication is supported by Food and Drug Administration (FDA) approval or adequate medical and scientific evidence in the medical literature

Berinert (C1 esterase inhibitor, human) will be considered medically necessary for the treatment of acute abdominal, facial, or laryngeal attacks of hereditary angioedema in adults and pediatrics when the following criteria are met:

- Prescription is written by an allergist, immunologist, hematologist or dermatologist; and
- Medication is being used for the treatment of an acute attack of hereditary angioedema; and
- Not used in combination with other approved treatments for acute HAE attacks; and
- Physician provided documentation of a diagnosis of hereditary angioedema evidenced by:
  - Recurrent, self-limiting non-inflammatory subcutaneous angioedema without urticarial, lasting more than 12 hours; or
  - Laryngeal edema; or
  - Recurrent, self-remitting abdominal pain lasting more than 6 hours, without clear organic etiology
  And
- the presence of specific abnormalities in complement proteins, in the setting of a suggestive clinical history of episodic angioedema without urticaria; supported by
  - Medical record documentation of 2 or more sets of complement studies, separated by one month or more, showing consistent results of
    - Low C4 levels and
    - Less than 50% of the lower limit of normal C1-INH antigenic protein levels OR
    - Less than 50% of the lower limit of normal C1-INH function levels
  AND
- Physician provided documentation of concurrent or failure on, intolerance to, or contraindication to prophylactic therapy (danazol).*

*Only applies to patients with more than one severe episode of angioedema per month, or those with a history of laryngeal attacks

Comparison of complemen studies in angioedema disorders

<table>
<thead>
<tr>
<th>Angioedema disorder</th>
<th>C4*</th>
<th>C1 inhibitor level</th>
<th>C1 inhibitor function</th>
<th>C1q</th>
<th>C3</th>
<th>Other tests (not routinely needed for diagnosis)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAE I</td>
<td>Low</td>
<td>Low</td>
<td>Low (usually &lt;50 percent of normal)</td>
<td>Normal</td>
<td>Normal</td>
<td>Genetic testing</td>
</tr>
<tr>
<td>HAE II</td>
<td>Low</td>
<td>Normal or elevated</td>
<td>Low (usually &lt;50 percent of normal)</td>
<td>Normal</td>
<td>Normal</td>
<td>Genetic testing</td>
</tr>
<tr>
<td></td>
<td>HAE III</td>
<td>Normal</td>
<td>Normal</td>
<td>Normal</td>
<td>Normal</td>
<td>Mutations in gene for factor XII detected in some patients</td>
</tr>
<tr>
<td>----------------</td>
<td>---------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td>AAE</td>
<td>Low</td>
<td>Normal or low</td>
<td>Low (usually &lt;50 percent of normal)</td>
<td>Normal or low'</td>
<td>Normal or low</td>
<td>Anti-C1 inhibitor antibodies</td>
</tr>
<tr>
<td>Idiopathic angioedema</td>
<td>Normal</td>
<td>Normal</td>
<td>Normal</td>
<td>Normal</td>
<td>Normal</td>
<td></td>
</tr>
</tbody>
</table>

**QUANTITY LIMIT:** 2 doses initially. Additional doses approved at the discretion of the Medical Director.

**AUTHORIZATION DURATION:** Initial approval will be for 6 months or less if the reviewing provider feels it is medically appropriate. Subsequent approvals will be for an additional 6 months or less if the reviewing provider feels it is medically appropriate and will require medical record documentation of continued disease improvement or lack of disease progression. The medication will no longer be covered if patient experiences toxicity or worsening of disease.

**LINE OF BUSINESS:**
Eligibility and contract specific benefit limitations and/or exclusions will apply. Coverage statements found in the line of business specific benefit document will supersede this policy.

This policy will be revised as necessary and reviewed no less than annually.

**Devised:** 9/8/10

**Revised:** 12/12; 08/14; 3/24/15 (updated criteria, QL) 5/15/15 (medically necessary), 5/17 (removed age per DHS), 3/28/19 (grandfather)

**Reviewed:** 10/11; 12/13, 08/14, 3/16, 3/30/17, 5/1/18, 2/1/20