Coverage Summary

Hyperbaric Oxygen Therapy

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<tbody>
<tr>
<td>Approved by: UnitedHealthcare Medicare Benefit Interpretation Committee</td>
<td>Last Review Date: 11/20/2018</td>
<td></td>
</tr>
</tbody>
</table>

Related Medicare Advantage Policy Guideline: Hyperbaric Oxygen Therapy (NCD 20.29)

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The benefit information in this Coverage Summary is based on existing national coverage policy, however, Local Coverage Determinations (LCDs) may exist and compliance with these policies is required where applicable.

There are instances where this document may direct readers to a UnitedHealthcare Commercial Medical Policy, Medical Benefit Drug Policy, and/or Coverage Determination Guideline (CDG). In the absence of a Medicare National Coverage Determination (NCD), Local Coverage Determination (LCD), or other Medicare coverage guidance, CMS allows a Medicare Advantage Organization (MAO) to create its own coverage determinations, using objective evidence-based rationale relying on authoritative evidence (Medicare IOM Pub. No. 100-16, Ch. 4, §90.5).

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I. COVERAGE

Coverage Statement: Hyperbaric oxygen (HBO) therapy is covered when Medicare coverage criteria are met.

Guidelines/Notes:
The following guidelines are based on the NCD for Hyperbaric Oxygen Therapy (20.29). Local Coverage Determinations (LCDs)/Local Coverage Articles (LCAs) for Hyperbaric Oxygen Therapy exist and compliance with these policies is required where applicable. See the LCD Availability Grid (Attachment A). (Accessed June 3, 2019)

1. HBO therapy when administered in a chamber (including a one man unit) is covered for all of the following conditions:
   a. Acute carbon monoxide intoxication
   b. Decompression illness
   c. Gas embolism
   d. Gas gangrene
e. Acute traumatic peripheral ischemia as an adjunctive treatment in combination with accepted standard therapeutic measures when loss of function, limb, or life is threatened
f. Crush injuries and suturing of severed limbs as an adjunctive treatment in combination with accepted standard therapeutic measures when loss of function, limb, or life is threatened.
g. Progressive necrotizing infections (necrotizing fasciitis)
h. Acute peripheral arterial insufficiency
i. Preparation and preservation of compromised skin grafts (not for primary management of wounds)
j. Chronic refractory osteomyelitis, unresponsive to conventional medical and surgical management
k. Osteoradionecrosis as an adjunct to conventional treatment
l. Soft tissue radionecrosis as an adjunct to conventional treatment
m. Cyanide poisoning
n. Actinomycosis (only as an adjunct to conventional therapy when the disease process is refractory to antibiotics and surgical treatment)
o. Diabetic wounds of the lower extremities
   HBO therapy is only covered as an adjunct to conventional therapy for patients who meet all three of the following criteria:
   1) Patient has type I or type II diabetes and has a lower extremity wound that is due to diabetes;
   2) Patient has a wound classified as Wagner grade III (see below) or higher; and
   3) Patient has failed an adequate course of standard wound therapy.

The use of HBO therapy is covered as adjunctive therapy only after there are no measurable signs of healing for at least 30–day periods of treatment with standard wound therapy and must be used in addition to standard wound care. Standard wound care in patients with diabetic wounds includes: assessment of a patient’s vascular status and correction of any vascular problems in the affected limb if possible, optimization of nutritional status, optimization of glucose control, debridement by any means to remove devitalized tissue, maintenance of a clean, moist bed of granulation tissue with appropriate moist dressings, appropriate off-loading, and necessary treatment to resolve any infection that might be present. Failure to respond to standard wound care occurs when there are no measurable signs of healing for at least 30 consecutive days. Wounds must be evaluated at least every 30 days during administration of HBO therapy. Continued treatment with HBO therapy is not covered if measurable signs of healing have not been demonstrated within any 30-day period of treatment.

_Staging/grading of wounds in this policy is as follows and is a modified Wagner Cianci grading system (Wagner 1981, Cianci 1997):_

- **Grade 0**  No open lesion; skin changes including erythema (reddening), whitening, mild exfoliation (scaling), or luminous variations (shining, glowing, or dullness in relation to surrounding skin)
- **Grade 1**  Superficial ulcer without penetration to deeper layers
- **Grade 2**  Ulcer penetrates to tendon, bone, or joint
- **Grade 3**  Lesion has penetrated deeper than grade 2 and there is abscess, osteomyelitis,
pyarthrosis, or infection of the tendon and tendon sheaths

**Grade 4** Wet or dry gangrene in the toes, forefoot, knee area, buttocks, elbow, or fingers

**Grade 5** Gangrene involving the whole foot, or hand, or hind quarter such that no local procedures are possible and limb amputation or major hind quarter reconstruction is indicated

2. HBO therapy **is not covered** for the following conditions
   a. Cutaneous, decubitus, and stasis ulcers
   b. Chronic peripheral vascular insufficiency
   c. Anaerobic septicemia and infection other than clostridial
   d. Skin burns (thermal)
   e. Senility
   f. Myocardial infarction
   g. Cardiogenic shock
   h. Sickle cell anemia
   i. Acute thermal and chemical pulmonary damage (i.e., smoke inhalation with pulmonary insufficiency)
   j. Acute or chronic cerebrovascular insufficiency
   k. Hepatic necrosis
   l. Aerobic septicemia
   m. Nonvascular causes of chronic brain syndromes such as Pick’s disease, Alzheimer’s disease, and Korsakoff’s disease
   n. Tetanus
   o. Systemic aerobic infection
   p. Organ transplantation
   q. Organ storage
   r. Pulmonary emphysema
   s. Exceptional blood loss anemia
   t. Multiple Sclerosis
   u. Arthritic diseases
   v. Acute cerebral edema

3. Topical Application of Oxygen
   - Medicare does not have a National Coverage Determination (NCD) for topical application of oxygen.
   - Local Coverage Determinations (LCDs)/Local Coverage Articles (LCAs) exist and compliance with these policies is required where applicable. For state-specific LCDs/LCAs, see the **LCD Availability Grid (Attachment A)**.
   - For states with no LCDs/LCAs, refer to the Novitas **LCD for Hyperbaric Oxygen (HBO Therapy (L35021))** for coverage guideline. (IMPORTANT NOTE: After checking the LCD Availability Grid and searching the Medicare Coverage Database, if no state LCD/LCA is found, then use the above referenced policy.)
   - **Committee approval date: November 20, 2018**
   - **Accessed June 3, 2019**

4. All other conditions/indications not specified as covered **will not be covered**.
II. DEFINITIONS

**Hyperbaric Oxygen (HBO) Therapy**: A medical treatment in which the patient is entirely enclosed in a pressure chamber breathing 100% oxygen (O2) at greater than one atmosphere (atm) pressure. Either a monoplace chamber pressurized with pure O2 or a larger multiplace chamber pressurized with compressed air where the patient receives pure O2 by mask, head tent, or endotracheal tube may be used. *First Coast LCD for Hyperbaric Oxygen (HBO) Therapy (L36504).* (Accessed March 26, 2019)

III. REFERENCES

See above

IV. REVISION HISTORY

04/01/2019 Updated policy introduction; added language to clarify:
- There are instances where [the Coverage Summary] may direct readers to a UnitedHealthcare Commercial Medical Policy, Medical Benefit Drug Policy, and/or Coverage Determination Guideline (CDG)
- In the absence of a Medicare National Coverage Determination (NCD), Local Coverage Determination (LCD), or other Medicare coverage guidance, CMS allows a Medicare Advantage Organization (MAO) to create its own coverage determinations, using objective evidence-based rationale relying on authoritative evidence (*Medicare IOM Pub. No. 100-16, Ch. 4, §90.5*)

11/20/2018 Annual review with no updates.

09/18/2018 Updated Local Coverage Determination (LCD) Availability Grid; removed instruction to “use the applicable LCD based on member’s residence/place and type of service” (this note only applies when selecting the appropriate DME LCD Policy)

11/20/2017 Annual review with no updates.

04/18/2017 Re-review with the following update: Guideline 2 (Topical Application of Oxygen)
- Deleted the statement “Topical application of oxygen does not meet the definition of HBO therapy and will not be covered” based on the CMS Decision Memo for Hyperbaric Oxygen (HBO) Therapy (Section C, Topical Oxygen) (CAG-00060R) which removed Section C (Topical Oxygen) from NCD 20.29
- Added new guideline with default to the Novitas LCD for Hyperbaric Oxygen (HBO) Therapy (L35021) for states with no LCDs.

11/15/2016 Annual review with no updates.

07/26/2016 Re-review with the following updates: Updated LCD Availability Grid (Attachment A); reference link(s) to Novitas LCDs updated to reflect the new/condensed LCD ID numbering.

11/17/2015 Annual review with no updates.

10/01/2015 Updated reference link(s) to the applicable Medicare Administrative Contractor (MAC) LCDs to reflect the new/condensed LCD ID numbering effective October 1, 2015.
12/16/2014 Annual review with the following updates:
- Removed all reference verbiage to First Coast’s LCD for Hyperbaric Oxygen Therapy (HBO Therapy) (L28887) from coverage guidelines. As coverage is based on the NCD for Hyperbaric Oxygen Therapy (20.29).
- Added CMS reference to definition of Hyperbaric Oxygen (HBO) Therapy.

12/17/2013 Annual review with no updates.

12/17/2012 Annual review with no updates.

12/19/2011 Annual review with no updates.

11/16/2010 Annual review with no updates.

V. ATTACHMENT(S)

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<tr>
<th>LCD ID</th>
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<td>L35021</td>
<td>Hyperbaric Oxygen (HBO) Therapy</td>
<td>A and B MAC</td>
<td>Novitas Solutions, Inc.</td>
<td>AR, CO, DE, DC, LA, MD, MS, NJ, NM, OK, PA, TX</td>
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<tr>
<td>L36504</td>
<td>Hyperbaric Oxygen (HBO) Therapy</td>
<td>A and B MAC</td>
<td>First Coast Service Options, Inc</td>
<td>PR, PR, VI</td>
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End of Attachment A