

**EFFECTIVE DATE:** 10|01|2019

**POLICY LAST UPDATED:** 02|01|2023

### OVERVIEW

Hyperbaric oxygen therapy (HBOT) involves breathing 100% oxygen at pressures between 1.5 and 3.0 atmospheres. It is generally applied systemically with the patient inside a hyperbaric chamber. HBOT can also be applied topically; ie, the body part to be treated is isolated (eg, in an inflatable bag and exposed to pure oxygen). HBOT has been investigated for various conditions that have potential to respond to increased oxygen delivery to tissue.

### MEDICAL CRITERIA

Not applicable

### PRIOR AUTHORIZATION:

Not applicable

### POLICY STATEMENT:

#### Medicare Advantage Plans and Commercial Products

Hyperbaric oxygen therapy (HBOT) is medically necessary when filed with a covered indication.

Hyperbaric oxygen therapy (HBOT) is not covered for Medicare Advantage Plans and not medically necessary for Commercial Products for all other indications as the evidence is insufficient to determine the effects of the technology on health outcomes.

#### Medicare Advantage Plans

Topical hyperbaric oxygen therapy is not covered as the evidence is insufficient to determine the effects of the technology on health outcomes.

#### Commercial Products

Topical hyperbaric oxygen therapy is not medically necessary as the evidence is insufficient to determine the effects of the technology on health outcomes.

### COVERAGE:

Benefits may vary between groups/contracts. Please refer to the appropriate Evidence of Coverage, Subscriber Agreement, or Benefit Booklet for applicable Medical Treatment coverage.

### BACKGROUND

#### Hyperbaric Oxygen Therapy

Hyperbaric oxygen therapy (HBOT) is a technique for delivering higher pressures of oxygen to tissue. Two methods of administration are available: topical and systemic.

#### Topical Hyperbaric Oxygen Therapy

Topical hyperbaric therapy is a technique of delivering 100% oxygen directly to an open, moist wound at a pressure slightly higher than atmospheric pressure. It is hypothesized that the high concentrations of oxygen diffuse directly into the wound to increase the local cellular oxygen tension, which in turn promotes wound healing. Devices consist of an appliance to enclose the wound area (frequently an extremity) and a source of oxygen; conventional oxygen tanks may be used. The appliances may be disposable and may be used without supervision in the home by well-trained patients. Topical hyperbaric therapy has been investigated as a

treatment of skin ulcerations resulting from diabetes, venous stasis, postsurgical infection, gangrenous lesion, decubitus ulcers, amputations, skin graft, burns, or frostbite.

#### Systemic Hyperbaric Oxygen Therapy

In systemic or large hyperbaric oxygen chambers, the patient is entirely enclosed in a pressure chamber and breathes oxygen at a pressure greater than 1 atmosphere (the pressure of oxygen at sea level). Thus, this technique relies on systemic circulation to deliver highly oxygenated blood to the target site, typically a wound. Systemic HBOT can be used to treat systemic illness, such as air or gas embolism, carbon monoxide poisoning, or clostridial gas gangrene. Treatment may be carried out either in a monoplace chamber pressurized with pure oxygen or in a larger, multiplace chamber pressurized with compressed air, in which case the patient receives pure oxygen by mask, head tent, or endotracheal tube.

The evidence for the use of systemic HBOT in individuals with nonhealing diabetic wounds of the lower extremities, acute traumatic ischemia, soft-tissue radiation necrosis (eg, radiation enteritis, cystitis, proctitis), osteoradionecrosis (ie, pre- and posttreatment), planned dental surgery (non-implant-related) of an irradiated jaw, gas gangrene, and profound anemia with exceptional blood loss when blood transfusion is impossible or must be delayed includes systematic reviews and/or recommendations from the Undersea and Hyperbaric Medical Society's (UHMS). Relevant outcomes include overall survival, symptoms, change in disease status, and functional outcomes. For all indications in the PICO note, evidence and/or USMS guidelines support use of HBOT. The evidence is sufficient to determine qualitatively that the technology results in a meaningful improvement in health outcomes.

The evidence for the use of systemic HBOT in individuals with any condition other than those specified in the policy are not medically necessary as the available studies do not demonstrate that HBOT improves relevant outcomes. The evidence is insufficient to determine the effects of the technology on health outcomes.

The evidence for the use of topical HBOT in individuals who might respond to increased oxygen delivery to tissues includes primarily of case series and case reports. Relevant outcomes are symptoms and change in disease status. Only 1 randomized controlled trial (RCT) was published on any indication. This study, in patients with diabetic foot ulcers, had a small sample size and did not find a significant benefit of topical HBOT. The evidence is insufficient to determine the effects of the technology on health outcomes.

#### **CODING:**

##### **Medicare Advantage Plans and Commercial Products**

The following code(s) are medically necessary when filed with a covered ICD-10 Diagnosis Code\* listed below;

- 99183** Physician attendance and supervision of hyperbaric oxygen therapy, per session
- G0277** Hyperbaric oxygen under pressure full body chamber, per 30 minutes

**Note: The covered diagnosis must be filed on the claim line to ensure correct claim processing**

[\\*2023 Covered Diagnosis for HBO](#)

The following HCPCS code(s) are not covered for Medicare Advantage Plans and not medically necessary for Commercial Products:

- A4575** Topical hyperbaric oxygen chamber, disposable
- E0446** Topical oxygen delivery system, not otherwise specified, includes all supplies and accessories

#### **RELATED POLICIES**

None

#### **PUBLISHED**

Provider Update, April 2023

Provider Update, April 2022  
Provider Update, May 2021  
Provider Update, May 2020  
Provider Update, August 2019

## REFERENCES

1. National Coverage Determination (NCD) for Hyperbaric Oxygen Therapy (20.29):  
<https://www.cms.gov/medicare-coverage-database/details/ncd-details.aspx?NCDId=12&ncdver=4&bc=AAAAgAAAAAAAA&>

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