

Medical Coverage Policy | Hyperbaric Oxygen Therapy



EFFECTIVE DATE: 10 | 01 2015

POLICY LAST UPDATED: 06 | 21 | 2016

Overview

Hyperbaric oxygen therapy (HBOT) involves breathing 100% oxygen at pressures between 1.5 and 3.0 atmospheres (atm). It is generally applied systemically with the patient inside a hyperbaric chamber. HBOT can also be applied topically; that is, 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 the tissues,

MEDICAL CRITERIA

Blue CHiP for Medicare and Commercial

Failure to respond to standard wound care

*Failure to respond to standard wound care is defined as no measurable signs of healing after a minimum of 30 consecutive days of treatment. In addition, the clinical information submitted must document that all of the following have been addressed:

- I. assessment of a patient's vascular status and correction of any vascular problems in the affected limb if possible,
- II. nutritional status,
- III. glucose control (if diabetic),
- IV. debridement by any means to remove devitalized tissue,
- V. maintenance of a clean, moist bed of granulation tissue with appropriate moist dressings, appropriate off-loading, and
- VI. necessary treatment to resolve any infection that might be present.

PRIOR AUTHORIZATION:

Blue CHiP for Medicare and Commercial

Prior authorization is recommended and obtained via the online tool for participating providers. See the Related Policies section.

POLICY STATEMENT:

Blue CHiP for Medicare and Commercial

HBOT is covered with for the following conditions when filed with the applicable diagnosis noted in the coding section.

- Actinomycosis
- Acute carbon monoxide intoxication
- Acute traumatic peripheral ischemia
- Crush injuries and suturing of severed limbs
- Decompression illness
- Cyanide poisoning
- Gas embolism
- Gas gangrene
- Osteoradionecrosis
- Progressive necrotizing infections (necrotizing fasciitis)
- Soft tissue radionecrosis
- For any condition in which the severity warrants inpatient care (e.g., profound anemia with exceptional blood loss: only when blood transfusion is impossible or must be delayed)

- Pre- and post-treatment for patients undergoing dental surgery (non-implant related) of an irradiated jaw

For wounds that fail to respond to standard wound care, HBOT is medically necessary when the medical criteria is met.

HBOT is not medically necessary for services not meeting the medical criteria or diagnosis list as due to limited peer reviewed studies to support its clinical efficacy have not been established.

Topical hyperbaric oxygen therapy is not medically necessary its clinical efficacy has not been established.

For Simultaneous use of systemic HBOT and Negative Pressure wound closure, medical criteria for each device must be met using the web based authorization tool.

COVERAGE:

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

BACKGROUND

Hyperbaric oxygen therapy (HBOT) is a technique of delivering higher pressures of oxygen to the tissues. Two methods of administration are available. In systemic or large hyperbaric oxygen chamber, the patient is entirely enclosed in a pressure chamber and breathes oxygen at a pressure greater than 1 atmosphere (atm; 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. In addition, 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.

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. Note that this evidence review does not address topical oxygen therapy in the absence of pressurization.

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:

The following code is medically necessary when filed with a covered diagnosis or medical criteria have been met:

99183 Physician attendance and supervision of hyperbaric oxygen therapy, per session

G0277 Hyperbaric oxygen under pressure full body chamber, per 30 minutes



HBO covered dx.xlsx

The following codes are not medically necessary:

A4575 Topical hyperbaric oxygen chamber, disposable

E0446 Topical oxygen delivery system, not otherwise specified, includes all supplies and accessories

RELATED POLICIES

Preauthorization via Web-Based Tool for Procedures

PUBLISHED

Provider Update, September 2016

Provider Update, November 2015

Provider Update, January 2015

Provider Update, September 2012

Provider Update, September 2011

Provider Update, December 2010

Provider Update, January 2010

Policy Update, October 2007

Policy Update, October 2006

Policy Update, January 2006

Policy Update, May 2004

REFERENCES

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Blue Cross Blue Shield Association Medical Policy Reference. Policy 2.01.04 - Hyperbaric Oxygen Pressurization (HBO)/. Reviewed with literature search/ February 2010.

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