



## Hyperbaric Oxygen Therapy (HBOT)

LOB(s): <input checked="" type="checkbox"/> Commercial <input checked="" type="checkbox"/> Medicare	State(s): <input checked="" type="checkbox"/> Idaho <input checked="" type="checkbox"/> Montana <input checked="" type="checkbox"/> Oregon <input checked="" type="checkbox"/> Washington <input type="checkbox"/> Other:
<input checked="" type="checkbox"/> Medicaid	<input checked="" type="checkbox"/> Oregon

### Enterprise Policy

PacificSource is committed to assessing and applying current regulatory standards, widely-used treatment guidelines, and evidenced-based clinical literature when developing clinical criteria for coverage determination. Each policy contains a list of sources (references) that serves as the summary of evidence used in the development and adoption of the criteria. The evidence was considered to ensure the criteria provide clinical benefits that promote patient safety and/or access to appropriate care. Each clinical policy is reviewed, updated as needed, and readopted, at least annually, to reflect changes in regulation, new evidence, and advancements in healthcare.

Clinical Guidelines are written when necessary to provide guidance to providers and members in order to outline and clarify coverage criteria in accordance with the terms of the Member's policy. This Clinical Guideline only applies to PacificSource Health Plans, PacificSource Community Health Plans, and PacificSource Community Solutions in Idaho, Montana, Oregon, and Washington. Because of the changing nature of medicine, this list is subject to revision and update without notice. This document is designed for informational purposes only and is not an authorization or contract. Coverage determinations are made on a case-by-case basis and subject to the terms, conditions, limitations, and exclusions of the Member's policy. Member policies differ in benefits and to the extent a conflict exists between the Clinical Guideline and the Member's policy, the Member's policy language shall control. Clinical Guidelines do not constitute medical advice nor guarantee coverage.

### Background

Hyperbaric oxygen therapy (HBOT) involves the systemic administration of pure gaseous oxygen in a pressurized room or tube. During therapy, patients breathe pure oxygen gas at a pressure that is typically 2 to 3 times greater than atmospheric pressure. The potential benefits of HBOT therapy arise from a combination of increased hydrostatic pressure and tissue oxygen tension. In the hyperbaric chamber, the elevated concentration and pressure of oxygen increase the plasma oxygen concentration by 10 to 15 times, increasing oxygen delivery to the tissues. HBOT may be delivered in a single-patient (monoplace) chamber or a multi-patient (multiplace) chamber through a facemask or similar device.

### Criteria

#### Commercial

##### **Prior authorization is required.**

PacificSource considers systemic hyperbaric oxygen therapy (HBOT) medically necessary for any of the following conditions with initial visit authorization limits as noted per section:

##### **I. Up to 5 HBOT visits for one of the following diagnoses:**

- A. Carbon monoxide poisoning
- B. Idiopathic sudden sensorineural hearing loss

**II. Up to 10 HBOT visits for one of the following diagnoses:**

- A. Air or gas embolism
- B. Decompression sickness
- C. Severe blood loss anemia (only when there is overwhelming blood loss and transfusion is impossible because there is no suitable blood available, or religion does not permit transfusions)
- D. Crush injury, compartment syndrome or other acute traumatic ischemia
- E. Central retinal artery occlusion

**III. Up to 20 HBOT visits for one of the following diagnoses:**

- A. Clostridial myositis or myonecrosis (gas gangrene)
- B. Necrotizing soft tissue infections (including gas gangrene)
- C. Compromised skin grafts and flaps, where hypoxia or decreased perfusion has compromised viability acutely (not for maintenance of split thickness skin grafts or artificial skin substitutes)
- D. Thermal burns when **ONE** of the following is met:
  - 1. >20% Body Surface Area (BSA)
  - 2. full-thickness burns to hands, feet, face, or perineum
- E. Intracranial abscess
- F. Osteomyelitis (refractory) in patients that meet the following criteria:
  - 1. Chronic osteomyelitis that persists or recurs after 8 weeks of antimicrobial therapy
- G. Radiation injury (delayed), when **ONE** or more of the following is met:
  - 1. Radiation-induced head and neck soft tissue injury
  - 2. Radiation-induced hemorrhagic cystitis
  - 3. Radiation-induced osteonecrosis before and after extraction of tooth in irradiated field
  - 4. Radiation-induced proctitis
- H. Diabetic wounds of the lower extremities when **ALL** of the following criteria is met:
  - Wound classified as Wagner grade III or higher
  - Member has failed an adequate course of standard wound therapy (e.g., topical treatment with hydrogels, hydrocolloids or alternatives, pressure reducing surfaces and wound debridement) including arterial assessment, with no measurable signs of healing after at least thirty days.

**IV. HBOT for osteoradionecrosis prophylaxis (pre- and post-treatment for dental surgery) involving a previously irradiated jaw requires Medical Director/Dental Medical Director review and must have the following:**

- A. Documentation of relationship between extraction site and radiation site. (prior to image-guided or intensity-modulated radiation therapy);

**B. Planned use Pre- and Postoperatively (e.g., MARX protocol)**

- Five days per week, as follows:
  - 20 HBOT sessions preoperatively, followed by 10 sessions immediately postoperatively.

**V. HBOT visits beyond the above guidelines require Medical Director review and must have the following:**

- A.** Measurable signs of healing demonstrated within any 30-day period of treatment
- B.** Wounds must be evaluated at least every 30 days during administration of hyperbaric oxygen therapy.

### **Medicaid**

PacificSource Community Solutions follows an internal hierarchical process in the “Clinical Criteria Used in UM Decisions” policy for coverage of Hyperbaric Oxygen Therapy. PCS covers these services when the condition and service(s) pair on a funded line on the HERC Prioritized List of Health Services, any relevant Guideline criteria is fulfilled, and service(s) are medically/orally necessary and appropriate for the specific member. Additional coverage options for unfunded conditions and services are provided as described in Covered Services OAR 410-141-3820. Treatment of Hyperbaric Oxygen Therapy may be limited or excluded if the service meets the criteria outlined in OARs 410-141-3825 and 410-120-1200, except as otherwise provided in the Covered Services Rule.

PacificSource follows the “Early and Periodic Screening, Diagnostic, and Treatment (EPSDT)” criteria for members under 21 and Young Adults with Special Health Care Needs (YSHCN).

### **Medicare**

PacificSource Medicare follows National Coverage Determination 20.29 for Hyperbaric Oxygen Therapy.

### **Experimental/Investigational/Unproven**

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PacificSource considers the use of systemic HBOT for all other indications experimental, investigational, or unproven

Topical or “Mild” HBOT delivered in soft sided inflatable chambers is also considered experimental, investigational, or unproven.

PacificSource considers Hyperbaric Oxygen Therapy (HBOT) for the treatment of post-COVID conditions to be experimental, investigational, or unproven.\*

**Note:** \* indicates the item remains E/I/U but will not be reviewed annually by the NTOC Committee, unless requested.

**Note:** PacificSource Community Solutions and PacificSource Medicare require items listed on this policy’s E/I/U list, to be reviewed by medical necessity review guidelines. Please see related policy, “*Clinical Criteria Used in UM Decisions*” to review criteria hierarchy and “*Medical Necessity Reviews*” for determination of coverage and medical necessity guidelines.

## Coding Information

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The following list of codes are for informational purposes only and may not be all-inclusive. Deleted codes and codes which are not effective at the time the service is rendered may not be eligible for reimbursement.

- 99183 Physician or other qualified health care professional attendance and supervision of hyperbaric oxygen therapy, per session-
- A4575 Topical hyperbaric oxygen chamber, disposable
- E0446 Topical oxygen delivery system, not otherwise specified, includes all supplies and accessories
- G0277 Hyperbaric oxygen under pressure, full body chamber, per 30-minute interval

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HCPCS® codes, descriptions and materials are copyrighted by Centers for Medicare and Medicaid Services (CMS).

## Definitions

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**Atmospheric Pressure** - Pressure caused by the weight of the atmosphere. At sea level it has a mean value of one atmosphere but reduces with increasing altitude.

**Carbon Monoxide** - Colorless, odorless, poisonous gas; when inhaled, it combines with blood hemoglobin and prevents oxygen transfer.

**Cyanide Poisoning** - Occurs when cyanide is ingested or inhaled. Cyanide is a highly toxic chemical that exists in gas or crystal form.

**Debridement** - The surgical removal of foreign material or dead, damaged, or infected tissue from a wound.

**Decompression Illness (DCI)** - Any of the diving disorders caused by the presence of bubbles of gas in a diver's body; bubbles may be caused by gas embolism producing breaks in the tissues surrounding body cavities due to high pressure gas.

**Decubitus Ulcer** - Chronic ulcer of the skin caused by prolonged pressure on it; also known as a pressure sore or "bed sore."

**Devitalized Tissue** - Slough, necrotic or non-viable tissue or eschar; tissue death resulting from injury, disease, or impaired blood supply.

**Gangrene** - Death of tissue usually in considerable mass and generally associated with loss of vascular (nutritive) supply and followed by bacterial invasion and putrefaction.

**Granulation** - Minute red granules of new capillaries formed on the surface of a wound in healing.

**Ischemia** - Deficient supply of arterial blood to a body part due to obstruction.

**Necrotizing Fasciitis** - A bacterial infection that attacks the soft tissue and the fascia (sheath of tissue covering the muscle).

**Osteomyelitis** - An acute or chronic bone infection that can be caused by bacteria or fungi and can lead to destruction of the bone.

**Osteoradionecrosis** - Necrosis (death) of bone caused by exposure to ionizing radiation.

**Oxyhemoglobin** - A chemical compound of hemoglobin and oxygen that is present in arterial blood and transports oxygen to the tissues.

**Refractory Osteomyelitis** - Bone infection which has not responded to appropriate treatment.

**Venous Stasis Ulcer** - Wound caused by congestion and slowing of circulation in veins due to blockage by either obstruction or high pressure in the venous system; usually seen in the feet and legs.

**Wagner Classification - Staging/Grading of Diabetic Foot Ulcers** - a classification system used to assess wound parameters in individuals with diabetes, including the depth of penetration, the presence of osteomyelitis or gangrene, and the extent of tissue necrosis. The wound grades are defined as follows:

**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, plantar space abscess, 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 involves the whole foot or such a percentage that no local procedures are possible and amputation (at least at the below the knee level) is indicated.

## Related Policies

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Clinical Criteria Used in UM Decisions

Clinical Resources Used for Medical Necessity Determinations When No Other UM Clinical Criteria or Guideline Exists

Early and Periodic Screening, Diagnostic, and Treatment (EPSDT)

## References

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## Appendix

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**Policy Number:**

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**Policy type:** Enterprise

**Author(s):**

**Depts:** Health Services

**Applicable regulation(s):** OARs 410-120-1200, 410-141-3820, 140-141-3825, 410-151-0001, 410-151-0002, 410-151-0003, NCD 20.29

**OPs Approval:** 12/2025