Medical Affairs Policy

**Service:** Hyperbaric Oxygen Therapy

*PUM 250-0017-1706*

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<th>Medical Policy Committee Approval</th>
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<td>Effective Date</td>
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<td>Prior Authorization Needed</td>
<td>Yes</td>
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**Disclaimer:** This policy is for informational purposes only and does not constitute medical advice, plan authorization, an explanation of benefits, or a guarantee of payment. Benefit plans vary in coverage and some plans may not provide coverage for all services listed in this policy. Coverage decisions are subject to all terms and conditions of the applicable benefit plan, including specific exclusions and limitations, and to applicable state and federal law. Some benefit plans administered by the organization may not utilize Medical Affairs medical policy in all their coverage determinations. Contact customer services as listed on the member card for specific plan, benefit, and network status information.

Medical policies are based on constantly changing medical science and are reviewed annually and subject to change. The organization uses tools developed by third parties, such as the evidence-based clinical guidelines developed by MCG to assist in administering health benefits. This medical policy and MCG guidelines are intended to be used in conjunction with the independent professional medical judgment of a qualified health care provider. To obtain additional information about MCG, email medical.policies@wpsic.com.

**Description:**

Hyperbaric oxygen therapy is a technique of delivering high concentrations of oxygen to tissues.

Two methods of administration are available. In systemic or large chamber hyperbaric oxygen therapy, the patient is entirely enclosed in a pressure chamber and breathes oxygen at a pressure greater than one atmosphere (the pressure of oxygen at sea level).

Topical hyperbaric oxygen 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. The hyperbaric oxygen device consists of an appliance to enclose the wound area (frequently an extremity) and a source of oxygen; conventional oxygen tanks may be used and devices are available for home use. There is insufficient published scientific evidence for this technology.

**Indications of Coverage:**

Hyperbaric oxygen therapy is considered medically necessary when at least ONE of the following conditions is documented:

A. Actinomycosis and actinomycotic brain abscess (when the hyperbaric oxygen therapy is used in conjunction with conventional therapy for a disease process that is refractory to antibiotics and surgical treatment)
B. Acute carbon monoxide intoxication

C. Acute peripheral arterial insufficiency

D. Acute traumatic peripheral ischemia when loss of function, limb, or life is threatened

E. Anemia: Emergent anemia in a patient unable or unwilling to receive red blood cell transfusion and one or more of the following:
   1. Active hemolysis with rapidly progressive anemia
   2. Active massive hemorrhage
   3. Severe signs or symptoms unresponsive to volume replacement (e.g., tachycardia, hypotension, chest pain, cognitive impairment)

F. Central Retinal Artery Occlusion

G. Chronic refractory osteomyelitis, unresponsive to conventional medical and surgical management

H. Compartment syndrome

I. Cyanide poisoning

J. Decompression sickness

K. Gas embolism

L. Gas gangrene

M. Idiopathic sudden sensorineural hearing loss (ISSHL) as an adjunct to systemic steroids, $\geq 41$ dB over at least three contiguous frequencies, occurring within three days, when initiated within 3 months of symptom onset (ideally within 2 weeks)

N. Intracranial Abscess with any of the following characteristics: multiple abscesses, deep or dominant location, immunocompromised host, contraindication to surgery or poor surgical candidate, and no clinical response or continued deterioration after surgical intervention (1 to 2 needle aspirates) and antibiotic therapy

O. Osteoradionecrosis (when the hyperbaric oxygen therapy is used in conjunction with conventional treatment)

P. Progressive necrotizing infections (necrotizing fasciitis)
Q. Radiation Induced:

1. Enteritis/ Proctitis
2. Hemorrhagic cystitis
3. Soft tissue and bone injury-head and neck (when the hyperbaric oxygen therapy is used in conjunction with conventional treatment)
4. Osteonecrosis before and after extraction of tooth in irradiated field

R. Skin grafts and flaps-Preparation and preservation of compromised grafts or flaps in which hypoxia or decreased perfusion has acutely compromised viability: not for primary management of wounds, maintenance of split thickness, or artificial skin substitutes

S. Treatment of crush injuries or severed limbs

T. Diabetic wounds of the lower extremities in patients who meet ALL the following:

1. Patient has type I or type II diabetes and has a lower extremity wound that is due to diabetes
2. The wound has shown no improvement after a 30-day trial (minimum) of standard wound therapy that includes correction of any vascular conditions in the affected limb where 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
3. The hyperbaric oxygen therapy is used in conjunction with standard wound care
4. Patient has a wound classified as Wagner Grade 3 or higher:
   a. Grade 1: superficial diabetic ulcer
   b. Grade 2: ulcer extension (involves ligament, tendon, joint capsule or fascia, but no abscess or osteomyelitis)
   c. Grade 3: deep ulcer with abscess or osteomyelitis
   d. Grade 4: gangrene to portion of forefoot
   e. Grade 5: extensive gangrene of foot
**Timeframes for approval:**

The frequency of treatments varies by conditions and severity. Acute conditions may warrant only one or two treatments while chronic conditions may need more than thirty. Acute infections and crush injuries may initially be treated 2-3 times per day in the IP setting.

- Note: If criteria are met, treatment may be approved up to a maximum of one month (thirty days) from the start of treatment. Inpatient days of treatment count toward the 30 days.

- Approval for further treatment will require documentation (with serial ruler/photographic measurement) of the effectiveness of the previous month’s treatments, and physician progress note for each date of service the physician was present during treatment.

**Limitations of Coverage:**

A. Review health plan and endorsements for exclusions and prior authorization or benefit requirements

B. If used for a condition/diagnosis other than is listed in the Indications of Coverage, deny as experimental, investigational, and unproven to affect health outcomes

C. If used for a condition/diagnosis that is listed in the Indications of Coverage, but the criteria are not met, deny as not medically necessary

D. The use of **topical hyperbaric oxygen therapy** is considered experimental, investigational, and unproven to affect health outcomes, as there is insufficient peer-reviewed scientific literature supporting its effectiveness

E. Hyperbaric oxygen therapy is considered investigational for any of the following conditions as there is insufficient peer-reviewed scientific literature supporting the effectiveness of hyperbaric oxygen therapy in individuals with these conditions (list is not considered all-inclusive):

1. Acute cerebral edema
2. Acute or chronic cerebral vascular insufficiency
3. Acute thermal and chemical pulmonary damage (for example, smoke inhalation with pulmonary insufficiency)
4. Aerobic septicemia
5. Anaerobic septicemia and infection other than clostridial

6. Anemia – other than for the indications listed above

7. Arthritic diseases

8. Autism- (often an exclusion of the member health plan)

9. Bell’s Palsy

10. Cardiogenic shock

11. Cerebral Palsy in children

12. Chronic peripheral vascular insufficiency

13. Cutaneous, decubitus, and stasis ulcers

14. Fibromyalgia

15. Fracture healing

16. Frostbite

17. Hearing loss other than as described in the indications above

18. Hepatic necrosis

19. Ischemic stroke

20. Lyme Disease

21. Malignant Otitis Externa (MEO: an aggressive non-cancer otitis externa infection with spread to the temporal bone)

22. Multiple Sclerosis

23. Meningioma

24. Migraine and cluster headache

25. Myocardial infarction

26. Nonvascular causes of chronic brain syndrome (for example, Pick’s disease, Alzheimer’s disease, Korsakoff’s disease)
27. Organ storage
28. Organ transplantation
29. Otitis media / uncomplicated otitis externa
30. Pulmonary emphysema
31. Radiation induced neurologic injury
32. Radiation induced retinopathy
33. Senility
34. Sickle cell anemia
35. Skin burns (thermal)
36. Systemic aerobic infection
37. Tetanus
38. Traumatic brain injury
39. Ulcerative Colitis
40. Vascular dementia

**Documentation Required:**

- Documentation supporting the criteria listed above (include serial ruler / photographic measurement for wound treatment)
- Physician Progress note for each date of service, if procedure code indicates the physician was present during treatment

**References:**


5. MCG 21st Edition. ACGA-0250 Hyperbaric Oxygen


7. Hayes Search and Summary: Hyperbaric Oxygen Therapy for Treatment of Central Retinal Artery Occlusion Published April 28, 2016


WPS/Arise Review History:

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➢ Note: For review/revision history prior to 2014 see previous Medical Policy or Coverage Policy Bulletin

Approved by the Medical Director