

01-99180-01

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Reviewed: 03/28/24

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## Subject: Hyperbaric Oxygen Therapy (Systemic & Topical)

THIS MEDICAL COVERAGE GUIDELINE IS NOT AN AUTHORIZATION, CERTIFICATION, EXPLANATION OF BENEFITS, OR A GUARANTEE OF PAYMENT, NOR DOES IT SUBSTITUTE FOR OR CONSTITUTE MEDICAL ADVICE. ALL MEDICAL DECISIONS ARE SOLELY THE RESPONSIBILITY OF THE PATIENT AND PHYSICIAN. BENEFITS ARE DETERMINED BY THE GROUP CONTRACT, MEMBER BENEFIT BOOKLET, AND/OR INDIVIDUAL SUBSCRIBER CERTIFICATE IN EFFECT AT THE TIME SERVICES WERE RENDERED. THIS MEDICAL COVERAGE GUIDELINE APPLIES TO ALL LINES OF BUSINESS UNLESS OTHERWISE NOTED IN THE PROGRAM EXCEPTIONS SECTION.

[Position Statement](#)

[Billing/Coding](#)

[Reimbursement](#)

[Program Exceptions](#)

[Definitions](#)

[Related Guidelines](#)

[Other](#)

[References](#)

[Updates](#)

### DESCRIPTION:

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

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.

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.

## POSITION STATEMENT:

Systemic hyperbaric oxygen therapy **meets the definition of medical necessity** for the treatment of the following conditions:

- Acute arterial insufficiency;
  - Acute carbon monoxide poisoning;
  - Acute thermal burn injury;
  - Acute traumatic ischemia (eg, crush injuries, reperfusion injury, compartment syndrome);
  - Air or gas embolism, acute;
  - Chronic refractory osteomyelitis;
  - Compromised skin graft and flap;
  - Cyanide poisoning, acute;
  - Decompression sickness;
  - Gas gangrene (ie, clostridial myonecrosis);
  - Idiopathic sudden sensorineural hearing loss;
  - Intracranial abscess;
  - Necrotizing soft tissue infection;
  - Nonhealing diabetic wounds of the lower extremities in members who meet the following 3 criteria:
    - a. Member has type 1 or type 2 diabetes and a lower-extremity wound due to diabetes;
    - b. Member has a wound classified as Wagner\* grade 3 or higher; and
    - c. Member has no measurable signs of healing after 30 days of an adequate course of standard wound therapy;
- \*(Wagner Classification: grade 0-intact skin; grade 1-superficial ulcer; grade 2-deep ulcer to tendon, bone, or joint; grade 3- deep ulcer with abscess or osteomyelitis; grade 4- forefoot gangrene; grade 5- whole foot gangrene.)
- Pre- and post-treatment for members undergoing dental surgery (non-implant-related) of an irradiated jaw;
  - Profound anemia with exceptional blood loss: only when blood transfusion is impossible or must be delayed;
  - Soft-tissue radiation necrosis (eg, radiation enteritis, cystitis, proctitis) and osteoradionecrosis.

Systemic hyperbaric oxygen therapy is considered **experimental or investigational** in all other situations, including but not limited to, the treatment of the following conditions:

- acute coronary syndromes and as an adjunct to coronary interventions, including but not limited to, percutaneous coronary interventions and cardiopulmonary bypass;

- acute ischemic stroke;
- acute osteomyelitis;
- acute surgical and traumatic wounds;
- autism spectrum disorder;
- Bell palsy;
- bisphosphonate-related osteonecrosis of the jaw;
- bone grafts;
- brown recluse spider bites;
- carbon tetrachloride poisoning, acute;
- cerebrovascular disease, acute (thrombotic or embolic) or chronic;
- cerebral edema, acute;
- cerebral palsy;
- chronic arm lymphedema following radiotherapy for cancer;
- chronic wounds, other than those in members with diabetes who meet the criteria specified above;
- delayed-onset muscle soreness;
- demyelinating diseases (eg, multiple sclerosis, amyotrophic lateral sclerosis);
- early treatment (beginning at completion of radiotherapy) to reduce adverse events of radiotherapy;
- fibromyalgia;
- fracture healing;
- herpes zoster;
- hydrogen sulfide poisoning;
- idiopathic femoral neck necrosis;
- inflammatory bowel disease (Crohn disease or ulcerative colitis);
- intra-abdominal abscess;
- in vitro fertilization;
- lepromatous leprosy;
- meningitis;
- mental illness (ie, posttraumatic stress disorder, generalized anxiety disorder or depression)
- migraine;
- motor dysfunction associated with stroke;
- pseudomembranous colitis (antimicrobial agent-induced colitis);

- pyoderma gangrenosum;
- refractory mycoses: mucormycosis, actinomycosis, conidiobolus coronato;
- retinopathy, adjunct to scleral buckling procedures in members with sickle cell peripheral retinopathy and retinal detachment;
- sickle cell crisis and/or hematuria;
- spinal cord injury;
- traumatic brain injury;
- tumor sensitization for cancer treatments, including but not limited to, radiotherapy or chemotherapy;
- vascular dementia.

The evidence is insufficient to determine the effects of the technology on health outcomes.

The following are considered **experimental or investigational** for all indications:

- Limb specific hyperbaric oxygen pressurization
- Ozone Therapy
- Topical hyperbaric oxygen therapy.

The evidence is insufficient to determine the effects of the technology on health outcomes.

## BILLING/CODING INFORMATION:

### CPT Coding:

99183	Physician or other qualified health care professional attendance and supervision of hyperbaric oxygen therapy, per session
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### HCPCS Coding:

A4575	Topical hyperbaric oxygen chamber, disposable ( <b>Investigational</b> )
G0277	Hyperbaric oxygen under pressure, full body chamber, per 30 minute interval

### ICD-10 Diagnosis Codes That Support Medical Necessity:

A48.0	Gas gangrene
D62	Acute posthemorrhagic anemia
E08.621	Diabetes mellitus due to underlying condition with foot ulcer
E08.622	Diabetes mellitus due to underlying condition with other skin ulcer
E09.621	Drug or chemical induced diabetes mellitus with foot ulcer
E09.622	Drug or chemical induced diabetes mellitus with other skin ulcer
E10.621	Type 1 diabetes mellitus with foot ulcer
E10.622	Type 1 diabetes mellitus with other skin ulcer
E11.621	Type 2 diabetes mellitus with foot ulcer

E11.622	Type 2 diabetes mellitus with other skin ulcer
E13.621	Other specified diabetes mellitus with foot ulcer
E13.622	Other specified diabetes mellitus with other skin ulcer
G06.0	Intracranial abscess
H90.3 – H90.5	Sensorineural hearing loss
I73.81 – I73.9	Other specified peripheral vascular diseases
I74.2 – I74.9	Embolism and thrombosis of arteries of extremities
K52.0	Gastroenteritis and colitis due to radiation
L97.101 – L97.929	Non-pressure chronic ulcer of lower limb
M27.2	Inflammatory conditions of jaws (radiation necrosis of jaw)
M46.20 – M46.28	Osteomyelitis of vertebra
M72.6	Necrotizing fasciitis
M86.40 – M86.69	Chronic osteomyelitis
N30.40, N30.41	Irradiation cystitis
S07.0XXA – S07.9XXS S17.0XXA – S17.9XXS S28.0XXA – S28.0XXS S38.001A – S38.1XXS S45.001A – S45.099S S45.801A – S45.999S S47.1XXA – S47.9XXS	Crushing Injuries
T20.00XA – T20.39XS T21.00XA – T21.39XS T22.00XA – T22.399S T23.001A – T23.399S T24.001A – T24.399S T25.011A – T25.399S T31.0 – T31.99	Burns
T58.01XA – T58.94XD	Toxic effect of carbon monoxide
T65.0X1A – T65.0X4D	Toxic effect of hydrocyanic acid and cyanides
T70.3XXA – T70.3XXS	Caisson disease [decompression sickness]
T79.0XXA – T79.0XXD	Air embolism
T79.6XXA – T79.6XXD	Traumatic ischemia of muscle
T79.A0XA – T79.A3XS	Traumatic compartment syndrome
T86.820 – T86.829	Complications of skin graft (allograft) (autograft)
W88.0XXS	Exposure to X-rays, sequela
W88.1XXS	Exposure to radioactive isotopes, sequela
W88.8XXS	Exposure to other ionizing radiation, sequela

## REIMBURSEMENT INFORMATION:

Reimbursement for HBOT (99183) is limited to thirty (30) treatments within a 12 month period.

Services in excess of this limitation are subject to medical review of documentation in support of medical necessity. The following information may be required documentation to support medical necessity: physician initial assessment, physician history and physical, physician visit notes, and laboratory studies. Medical record documentation should include measurable signs of healing within any 30-day period of treatment as well as wound location, size, description of wound bed and drainage.

**LOINC Codes:**

<b>DOCUMENTATION TABLE</b>	<b>LOINC CODES</b>	<b>LOINC TIME FRAME MODIFIER CODE</b>	<b>LOINC TIME FRAME MODIFIER CODES NARRATIVE</b>
Physician history and physical	28626-0	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim.
Attending physician visit note	18733-6	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim.
Laboratory studies	26436-6	18805-2	Include all data of the selected type that represents observations made six months or fewer before starting date of service for the claim.

**NOTE:** Each unit billed equals one treatment, regardless of the length of time spent in the HBOT chamber. **EXAMPLE:** 1 hour in the chamber equals one treatment; 2 hours in the chamber equals one treatment.

**PROGRAM EXCEPTIONS:**

**Federal Employee Program (FEP):** Follow FEP guidelines.

**State Account Organization (SAO):** Follow SAO guidelines.

**Medicare Advantage products:** The following National Coverage Determinations (NCDs) were reviewed on the last guideline reviewed date: Hyperbaric Oxygen Therapy (20.29) and Treatment of Decubitus Ulcers (270.4) located at cms.gov.

If this Medical Coverage Guideline contains a step therapy requirement, in compliance with Florida law 627.42393, members or providers may request a step therapy protocol exemption to this requirement if based on medical necessity. The process for requesting a protocol exemption can be found at [Coverage Protocol Exemption Request](#)

**DEFINITIONS:**

None

## RELATED GUIDELINES:

[Oxygen, 09-E0400-00](#)

## OTHER:

None Applicable.

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## COMMITTEE APPROVAL:

This Medical Coverage Guideline (MCG) was approved by the Florida Blue Medical Policy and Coverage Committee on 03/28/24.

## GUIDELINE UPDATE INFORMATION:

01/01/01	Reformatted and revised – clarification of non-covered indications.
08/15/01	Revised to add clarification for HBO used for the prevention of osteoradionecrosis.
04/15/03	Reviewed and revised; ICD-9 diagnosis codes added; limitation changed.
01/01/04	Annual HCPCS coding update.
02/15/04	Revised coverage statement regarding prophylactic HBO.
04/15/05	Scheduled review; no change in coverage statement.
04/15/06	Scheduled review: no change in coverage statement; added reference to crushing head injuries.
04/15/07	Scheduled review; added ICD-9 diagnosis code 993.2; no change in coverage statement.
06/15/07	Reformatted guideline.
07/15/08	Scheduled review; no change in position statement; references updated.
09/15/09	Scheduled review; added additional indications and criteria information for covered indications; added criteria for continuation of HBO2 therapy; updated ICD-9 codes; updated references.
08/15/10	Accelerated review: position statement revised; ICD-9 list updated: references updated.
01/01/11	Revision; related ICD-10 codes added.
04/15/11	Revision of Position Statement to add clarification for HBO used for treating acute retinal arterial occlusion.
07/15/11	Revision; formatting changes.

08/15/12	Scheduled review; Position Statement updated to include additional indication; formatting revisions; references updated.
01/01/13	Annual HCPCS coding update: revised descriptor for 99183.
08/15/13	Scheduled review; position statement unchanged; Program Exceptions section updated; Reimbursement section updated; formatting changes; references updated.
07/15/14	Scheduled review; position statement unchanged; references updated.
01/01/15	Annual coding update: added G0277.
10/01/15	Revision; updated ICD9 and ICD10 coding section.
11/01/15	Revision: ICD-9 Codes deleted.
10/01/16	ICD-10 coding update; codes H90.A21 & H90.A22 added.
04/15/18	Revision; description, position statements, coding, and references updated.
03/15/20	Review; position statements maintained and references updated.
03/15/22	Review: Position statements maintained; references updated.
05/22/23	Update to Program Exceptions section.
04/15/24	Review: Position statements maintained; program exception and references updated.