I. POLICY/Criteria

A. Hyperbaric Oxygen Therapy (HBOT) for non-wound related indications is a covered benefit for the conditions listed below. It should not be a replacement for other standard successful therapeutic measures.

- Acute carbon monoxide intoxication
- Decompression illness
- Gas embolism
- Acute peripheral artery insufficiency
- Chronic refractory osteomyelitis, unresponsive to conventional medical and surgical management
- Osteoradionecrosis as an adjunct to conventional treatment
- Soft tissue radionecrosis as an adjunct to conventional treatment
- Cyanide poisoning
- Actinomycosis, only as an adjunct to conventional therapy when the disease process is refractory to antibiotics and surgical treatment

B. Wound Therapy

1. The use of Systemic Hyperbaric Oxygen Therapy is covered for initial therapy as follows:

   a. Preparation and preservation of compromised skin grafts (not for primary management of wounds)
      - Acute traumatic peripheral ischemia
      - Crush injuries and suturing of severed limbs
      - Progressive necrotizing infections (necrotizing fasciitis)
      - Gas gangrene

2. For the following indications HBOT is only covered as adjunctive therapy after there are no measurable signs of healing for at least 30-days of treatment with standard wound therapy and must be used with standard wound therapy.

   a. Diabetic wounds of the lower extremities in patients who meet the following three criteria:
      1. Patient has type 1 or type 2 diabetes and has a lower extremity wound that is due to diabetes;
2. Patient has a wound classified as Wagner grade III or higher; and
3. Patient has failed an adequate course of standard wound therapy

C. Topical Hyperbaric Oxygen Therapy is considered investigational and is not a covered benefit. There is lack of evidence to demonstrate that topical hyperbaric oxygen therapy accelerates wound healing, whether alone or as an adjunct to standard wound care.

II. MEDICAL NECESSITY REVIEW

☐ Required ☒ Not Required ☐ Not Applicable

III. APPLICATION TO PRODUCTS

Coverage is subject to member's specific benefits. Group specific policy will supersede this policy when applicable.

- HMO/EPO: This policy applies to insured HMO/EPO plans.
- POS: This policy applies to insured POS plans.
- PPO: This policy applies to insured PPO plans. Consult individual plan documents as state mandated benefits may apply. If there is a conflict between this policy and a plan document, the provisions of the plan document will govern.
- ASO: For self-funded plans, consult individual plan documents. If there is a conflict between this policy and a self-funded plan document, the provisions of the plan document will govern.
- INDIVIDUAL: For individual policies, consult the individual insurance policy. If there is a conflict between this medical policy and the individual insurance policy document, the provisions of the individual insurance policy will govern.
- MEDICARE: Coverage is determined by the Centers for Medicare and Medicaid Services (CMS); if a coverage determination has not been adopted by CMS, this policy applies.
- MEDICAID/HEALTHY MICHIGAN PLAN: For Medicaid/Healthy Michigan Plan members, this policy will apply. Coverage is based on medical necessity criteria being met and the appropriate code(s) from the coding section of this policy being included on the Michigan Medicaid Fee Schedule located at: http://www.michigan.gov/mdch/0,1607,7-132-2945-42542-42543-42546-42551-159815--,00.html. If there is a discrepancy between this policy and the Michigan Medicaid Provider Manual located at: http://www.michigan.gov/mdch/0,1607,7-132-2945-5100-87572--,00.html, the Michigan Medicaid Provider Manual will govern. For Medical Supplies/DME/Prosthetics and Orthotics, please refer to the Michigan Medicaid Fee Schedule to verify coverage.

IV. DESCRIPTION:

Hyperbaric oxygen therapy is a technique of delivering higher pressures of oxygen to the tissues either systemically or topically.

In systemic hyperbaric oxygen therapy, the patient is entirely enclosed in a pressure chamber and breathes oxygen at a pressure greater than one atmosphere. This
technique relies on the systemic circulation to deliver highly oxygenated blood to the
target site, typically a wound, but can also be used to treat systemic illness such as air 
or gas embolism, carbon monoxide poisoning, and gas gangrene.

Topical hyperbaric oxygen therapy is a technique of delivering 100% oxygen in a limb-
encasing device 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 local cellular oxygen tension to promote wound 
healing. There is lack of literature and evidence to support this hypothesis.

V. CODING INFORMATION

Revenue code:
0413 Hyperbaric Oxygen Therapy for Outpatient

CPT/HCPCS Codes:
99183 Physician attendance and supervision of hyperbaric oxygen therapy, per session.
G0277 Hyperbaric oxygen under pressure, full body chamber, per 30 minute interval

Not Covered:
A4575 Topical hyperbaric oxygen chamber, disposable
E0446 Topical oxygen delivery system, not otherwise specified, includes all supplies and 
accessories

ICD-10 Codes that are covered for these procedures when criteria are met:

- Acute carbon monoxide intoxication
  T58.01xA – T58.94xS Toxic effect of carbon monoxide

- Decompression illness
  T70.29xA Other effects of high altitude
  T70.3xxA – T70.3xxS Caisson disease [decompression sickness]
  T70.9xxA - T70.9xxS Effect of air pressure and water pressure, unspecified

- Gas embolism
  T79.0xxA - T79.0xxS Air embolism (traumatic)
  T80.0xxA - T80.0xxS Air embolism following infusion, transfusion and 
  therapeutic injection, initial encounter

- Acute peripheral artery insufficiency
  I74.2 – I74.5 Embolism and thrombosis of arteries
  I70.231 – I70.249 Atherosclerosis of native arteries of leg with ulceration
  I70.331 – I70.349 Atherosclerosis of unspecified type of bypass graft(s) of 
  leg with ulceration
  I70.431 – I70.469 Atherosclerosis of autologous vein bypass graft(s) of leg with ulceration
  I70.531 – I70.549 Atherosclerosis of nonautologous biological bypass 
  graft(s) of leg with ulceration
I70.631 – I70.669  Atherosclerosis of nonbiological bypass graft(s) of leg with ulceration
I70.731 – I70.769  Atherosclerosis of other type of bypass graft(s) of extremity with ulceration/gangrene
L97.101 – L97.929  Non-pressure chronic ulcer of lower limb

- Chronic refractory osteomyelitis
  M86.30 – M86.69  Chronic osteomyelitis

- Osteoradionecrosis
  Soft tissue radionecrosis as an adjunct to conventional treatment
  T66.xxxA - T66.xxxS  Radiation sickness, unspecified
  M27.8  Other specified diseases of jaws
  L59.9  Disorder of the skin and subcutaneous tissue related to radiation, unspecified

- Cyanide poisoning
  T57.3x1A – T57.3x4S  Toxic effect of hydrogen cyanide, undetermined
  T65.0x1A – T65.0x4S  Toxic effect of cyanides, accidental (unintentional)

- Actinomycosis
  A42.0 – A42.9  Actinomycosis
  A43.0 – A43.9  Nocardiosis
  B47.1  Actinomycetoma
  B47.9  Mycetoma, unspecified
  L08.1  Erythrasma

- Preparation and preservation of compromised skin grafts
  T86.820 – T86.829  Skin graft (allograft) rejection

- Acute traumatic peripheral ischemia
  Crush injuries and suturing of severed limbs
  S07.0xxA – S07.9xxS  Crushing injury of head
  S17.0xxA – S17.9xxS  Crushing injury of neck
  S28.0xxA – S28.0xxS  Crushed injury of chest
  S35.511A – S35.513S  Injury of iliac artery
  S38.001A - S38.1xxS  Crushing injury of abdomen, lower back, pelvis and external genitals
  S45.001A – S45.299S  Injury of axillary or brachial blood vessels
  S47.1xxA – S47.9xxS  Crushing injury of shoulder and upper arm
  S57.00xA - S57.82xS  Crushing injury of arm
  S67.00xA – S67.92xS  Crushing injury of wrist, hand and fingers
  S75.001A – S75.099S  Injury of femoral artery
  S77.00xA – S77.22XS  Crushing injury of hip and thigh
  S85.001A - S85.189S  Injury of lower leg blood vessels
  S87.00xA – S87.82xS  Crushing injury of lower leg
  S97.00xA – S97.82xS  Crushing injury of ankle and foot
  T87.0x1 – T87.1x9  Complications peculiar to reattachment and amputation
• Progressive necrotizing infections (necrotizing fasciitis)
  M72.6  Necrotizing fasciitis
  M87.00 – M87.9  Idiopathic aseptic necrosis of bone
  M90.50-M90.59  Osteonecrosis in diseases classified elsewhere

• Gas gangrene
  A48.0  Gas gangrene

• Diabetic wounds of the lower extremities
  E08.51 – E08.59  Diabetes mellitus due to underlying condition with
circulatory complications
  E09.51 – E09.59  Drug or chemical induced diabetes mellitus with
circulatory complications
  E10.51 – E10.59  Type 1 diabetes mellitus with circulatory complications
  E10.621  Type 1 diabetes mellitus with foot ulcer
  E10.622  Type 1 diabetes mellitus with other skin ulcer
  E10.628  Type 1 diabetes mellitus with other skin complications
  E10.69  Type 1 diabetes mellitus with other specified
  complication
  E11.51 –E11.59  Type 2 diabetes mellitus with diabetic peripheral
  angiopathy without gangrene
  E11.621  Type 2 diabetes mellitus with foot ulcer
  E11.622  Type 2 diabetes mellitus with other skin ulcer
  E11.628  Type 2 diabetes mellitus with other skin complications
  E11.649  Type 2 diabetes mellitus with hypoglycemia without
  coma
  E13.51 – E13.59  Other specified diabetes mellitus with circulatory
  complications
  E13.621  Other specified diabetes mellitus with foot ulcer
  E13.622  Other specified diabetes mellitus with other skin ulcer
  E13.628  Other specified diabetes mellitus with other skin
  complications

L88  Pyoderma gangrenosum
L08.1  Erythrasma

Coverage for Medicare members:  This policy does not apply to Medicare members.

VI. REFERENCES


“Hyperbaric Oxygen Therapy” HAYES, Inc. May 2002


Hyperbaric Oxygen Therapy, Systemic & Topical Cigna Medical Coverage Policy @ [https://cignaforhcp.cigna.com/public/content/pdf/coveragePolicies/medical/mm_0053_coveragepositioncriteria_hyperbaric_oxygen.pdf](https://cignaforhcp.cigna.com/public/content/pdf/coveragePolicies/medical/mm_0053_coveragepositioncriteria_hyperbaric_oxygen.pdf) (Retrieved February 26, 2015)
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