



## Hyperbaric Oxygen Treatment (HBOT)

### I. Policy

University Health Alliance (UHA) will reimburse for hyperbaric oxygen treatment (HBOT) when it is determined to be medically necessary and when it meets the medical criteria guidelines (subject to limitations and exclusions) indicated below.

### II. Criteria/Guidelines

A. Systemic hyperbaric oxygen treatment is covered (subject to Limitations/Exclusions and Administrative Guidelines) for treatment of the following conditions:

1. Non-healing wounds of the lower extremities in patients with type 1 or type 2 diabetes who meet all of the following criteria:
  - a. Patient has a wound classified as Wagner grade 3 or higher as defined in the table below:

Grade Number	Description
0	No open lesion
1	Superficial ulcer without penetration to deeper layers
2	Ulcer penetrates to tendon, bone, or joint
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
4	Wet or dry gangrene in the toes or forefoot
5	Gangrene involves the whole foot or such a percentage that no local procedures are possible, and amputation (at least at below the knee level) is indicated

- b. Patient has no measurable signs of healing after a 30-day course of standard wound therapy, which includes the following:
      - i. The following standard wound treatment measures have been accomplished for all chronic ulcers and complex wounds:
        - Evaluation of wound with documentation of measurements (length, width, and depth) at baseline and at least weekly by a licensed medical professional.
          - Photographs uploaded into the Electronic Medical Record are preferred. The photographs must convey the above measurements and be date stamped.
        - Debridement of necrotic tissue, if present
        - Treatment of infection, if present
        - Management of diabetes mellitus, if applicable
        - Evaluation and management of peripheral artery disease, if applicable

ii. The following standard wound treatment measures have been accomplished for chronic ulcers:

- For stage III or IV pressure ulcer:
  - The patient has been appropriately turned and positioned; and
  - The patient has used a support surface for pressure ulcers on the posterior trunk or pelvis (pressure reducing mattress or pad), (a support surface is not required if the ulcer is not on the trunk or pelvis); and
  - Moisture and incontinence have been appropriately managed.
- For neuropathic ulcer:
  - The patient's diabetes is managed by a physician who is responsible for diagnosing and treating the diabetes through a comprehensive plan of care; and
  - Reduction in pressure on a foot ulcer has been accomplished with appropriate modalities.
- For venous insufficiency ulcer:
  - Compression bandages and/or garments have been consistently applied; and
  - Leg elevation and ambulation have been encouraged.

2. Acute traumatic ischemia (e.g., crush injuries, reperfusion injury, compartment syndrome)

3. Decompression sickness

4. Gas embolism, acute

5. Cyanide poisoning, acute

6. Acute Carbon Monoxide poisoning

7. Gas gangrene (i.e., clostridial myonecrosis)

8. Profound anemia with exceptional blood loss: only when blood transfusion is impossible or must be delayed

9. Soft-tissue radiation necrosis (e.g., radiation enteritis, cystitis, proctitis) and osteoradionecrosis

10. Pre- and post-treatment for patients undergoing non-implant related dental surgery (including tooth extraction) of an irradiated jaw

- a. The patient has had prior radiation to the head or neck and has received greater than or equal to a cumulative dose of 60 gray of radiation.

11. Chronic osteomyelitis refractory to conventional medical and surgical management

B. A treatment plan must be submitted for wounds, osteoradionecrosis, soft tissue radiation necrosis, and chronic refractory osteomyelitis.

C. Wounds, osteoradionecrosis, and soft tissue radiation necrosis must be evaluated and documented by the treating physician for signs of healing after every 15 treatments or every 14 days of treatment (whichever comes first).

D. Continued treatment with HBOT therapy is covered if signs of healing have been demonstrated and documented in the medical record.

**NOTE:**

*This UHA payment policy is a guide to coverage, the need for prior authorization and other administrative directives. It is not meant to provide instruction in the practice of medicine and it should not deter a provider from expressing his/her judgment.*

*Even though this payment policy may indicate that a particular service or supply is considered covered, specific provider contract terms and/or member's individual benefit plans may apply, and this policy is not a guarantee of payment. UHA reserves the right to apply this payment policy to all UHA companies and subsidiaries.*

*UHA understands that opinions about and approaches to clinical problems may vary. Questions concerning medical necessity (see Hawaii Revised Statutes §432E-1.4) are welcome. A provider may request that UHA reconsider the application of the medical necessity criteria in light of any supporting documentation.*

### **III. Limitations/Exclusions**

- A. HBOT is not covered for any indication not supported by scientific evidence. This includes but is not limited to:
1. Compromised skin grafts or flaps
  2. Acute osteomyelitis, refractory to standard medical management
  3. Bisphosphonate-related osteonecrosis of the jaw
  4. Necrotizing soft-tissue infections
  5. Acute thermal burns, surgical wounds, and traumatic wounds
  6. Spinal cord injury
  7. Traumatic brain injury
  8. Inflammatory bowel disease (Crohn's disease or ulcerative colitis)
  9. Brown recluse spider bites
  10. Bone grafts
  11. Carbon tetrachloride poisoning, acute
  12. Cerebrovascular accident, acute (thrombotic or embolic) or chronic
  13. Fracture healing
  14. Hydrogen sulfide poisoning
  15. Intra-abdominal and intracranial abscesses
  16. Lepromatous leprosy
  17. Meningitis
  18. Pseudomembranous colitis (antimicrobial agent-induced colitis)
  19. Radiation myelitis,
  20. Sickle cell crisis and/or hematuria
  21. Demyelinating diseases, (e.g., multiple sclerosis, amyotrophic lateral sclerosis)
  22. Retinal artery insufficiency, acute

23. Retinopathy, adjunct to scleral buckling procedures in patients with sickle cell peripheral retinopathy and retinal detachment
  24. Pyoderma gangrenosum
  25. Acute arterial peripheral insufficiency
  26. Acute coronary syndromes and as an adjunct to coronary interventions, including but not limited to percutaneous coronary interventions and cardiopulmonary bypass
  27. Idiopathic femoral neck necrosis
  28. Chronic arm lymphedema following radiotherapy for cancer
  29. Radiation-induced injury in the head and neck excluding radiation-induced soft tissue necrosis or osteoradionecrosis
  30. Idiopathic sudden sensorineural hearing loss
  31. Refractory mycoses: mucormycosis, actinomycosis, candidobolus coronato
  32. Cerebral edema, acute
  33. Migraine
  34. In vitro fertilization
  35. Cerebral palsy
  36. Tumor sensitization for cancer treatments, including but not limited to, radiotherapy or chemotherapy
  37. Delayed onset muscle soreness
  38. Early treatment (beginning at completion of radiation therapy) to reduce side effects of radiation therapy; and
  39. Autism Spectrum Disorders
  40. Bell's Palsy
  41. Motor dysfunction associated with stroke
  42. Herpes zoster
  43. Vascular dementia
  44. Fibromyalgia
  45. Mental Illness (i.e., post-traumatic stress disorder, generalized anxiety disorder, depression)
- B. Topical hyperbaric oxygen therapy is not a covered benefit

#### **IV. Administrative Guidelines**

- A. Prior authorization is required for systemic hyperbaric oxygen pressurization treatment when done in an outpatient setting.
- B. A treatment plan must be submitted for wounds, osteoradionecrosis, soft tissue radiation necrosis, and chronic refractory osteomyelitis.
- C. Documentation of previous medical and surgical interventions including outcomes must be submitted.
- D. For continuation of therapy, documentation from the medical record showing objective signs of wound healing from wounds, osteoradionecrosis, soft tissue radiation necrosis and chronic refractory osteomyelitis must be submitted.

- E. To request prior authorization, please submit via UHA's online portal. If a login has not been established, you may contact UHA at 808-532-4000 to establish one.

#### **V. Policy History**

**Policy Number:** MPP-0046-120301

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