



Hyperbaric Oxygen Therapy for Wound Care Treatment

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Purpose:

To provide Hyperbaric Oxygen Therapy (HBO) guidelines for the Medical Department staff to reference when making benefit determinations.

Compliance Status

- Centers for Medicare & Medicaid Services (CMS)

Definitions

- Hyperbaric Oxygen Therapy is a modality in which the entire body is exposed to oxygen under increased atmospheric pressure.¹
- Transcutaneous oxygen measurement (TCOM level) is a noninvasive diagnostic technique that records the partial pressure of oxygen at the skin surface. This measurement provides information regarding the supply and delivery of oxygen to the underlying microvascular circulation. It can be used for adults in wound evaluation, hyperbaric therapy, plastic surgery, amputation level determination, and peripheral vascular disease assessment.²

Additional Information

- The use of HBO therapy is covered as adjunctive therapy only after there are no measurable signs of healing for at least 30 days of treatment with standard wound therapy and must be used in addition to standard wound care. Failure to respond to standard wound care occurs when there are no measurable signs of healing for at least 30 consecutive days. Wounds must be evaluated at least every 30 days during administration of HBO therapy. Continued treatment with HBO therapy is not covered if measurable signs of healing have not been demonstrated within any 30-day period of treatment.
- Wound Care-related HBO treatment requests should have a transcutaneous oxygen measurement (TCOM) level.



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Additional Information, continued

- The use of HBO is limited to the following conditions:
 1. Acute carbon monoxide intoxication;
 2. Decompression illness;
 3. Gas embolism;
 4. Gas gangrene;
 5. Acute traumatic peripheral ischemia. HBO therapy is a valuable adjunctive treatment to be used in combination with accepted standard therapeutic measures when loss of function, limb, or life is threatened;
 6. Crush injuries and suturing of severed limbs. As in the previous conditions, HBO therapy would be an adjunctive treatment when loss of function, limb, or life is threatened;
 7. Progressive necrotizing infections (necrotizing fasciitis);
 8. Acute peripheral arterial insufficiency;
 9. Preparation and preservation of compromised skin grafts (not for primary management of wounds);
 10. Chronic refractory osteomyelitis, unresponsive to conventional medical and surgical management;
 11. Osteoradionecrosis as an adjunct to conventional treatment;
 12. Soft tissue radionecrosis as an adjunct to conventional treatment;
 13. Cyanide poisoning;
 14. Actinomycosis, only as an adjunct to conventional therapy when the disease process is refractory to antibiotics and surgical treatment;
 15. Diabetic wounds of the lower extremities in patients [Members] who meet the following criteria:
 - a. Member has type I or type II diabetes and has a lower extremity wound that is due to diabetes;
 - b. Member has a wound classified as Wagner grade III or higher; and
 - c. Member has failed an adequate course of standard wound therapy.

Coverage Guidelines

- Member must be eligible and have applicable benefits (refer to the Certificate of Coverage contract for the Maximum treatment therapy for this modality).



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Recommendation, continued:

Exclusion Criteria

- The following conditions, which should not be considered all-inclusive, are not covered for HBO:
 1. Cutaneous, decubitus, and stasis ulcers;
 2. Chronic peripheral vascular insufficiency;
 3. Anaerobic septicemia and infection other than clostridial;
 4. Skin burns (thermal);
 5. Senility;
 6. Myocardial infarction;
 7. Cardiogenic shock;
 8. Sickle cell anemia;
 9. Acute thermal and chemical pulmonary damage (i.e., smoke inhalation with pulmonary insufficiency);
 10. Acute or chronic cerebral vascular insufficiency;
 11. Hepatic necrosis;
 12. Aerobic septicemia;
 13. Nonvascular causes of chronic brain syndrome (Pick's disease, Alzheimer's disease, Korsakoff's disease);
 14. Tetanus;
 15. Systemic aerobic infection;
 16. Organ transplantation;
 17. Organ storage;
 18. Pulmonary emphysema;
 19. Exceptional blood loss anemia;
 20. Multiple Sclerosis;
 21. Arthritic Diseases;
 22. Acute cerebral edema.

References:

1. *Medicare Coverage Issues Manual*, Section 20.29 Hyperbaric Oxygen Therapy.
2. *Journal of Vascular Nursing*, June 2001, Volume 19, Issue 2, Pages 55-61 K. Rich.



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Disclaimer Information:

Coverage Issues Guidelines and Medical Technology Assessment Recommendations are developed to determine coverage for AvMed's benefits, and are published to provide a better understanding of the basis upon which coverage decisions are made. AvMed makes coverage decisions using these guidelines, along with the Member's benefit document. The use of this guideline is neither a guarantee of payment nor a final prediction of how specific claim(s) will be adjudicated.

Coverage Issues Guidelines and Medical Technology Assessment Recommendations are developed for selected therapeutic or diagnostic services found to be safe, but proven effective in a limited, defined population of patients or clinical circumstances. They include concise clinical coverage criteria based on current literature review, consultation with practicing physicians in the AvMed service area who are medical experts in the particular field, FDA and other government agency policies, and standards adopted by national accreditation organizations.

Treating providers are solely responsible for the medical advice and treatment of Members. This guideline may be updated and therefore is subject to change.