



Utilization *ALERT*

- Prior to use of this MCP for evaluation of medical necessity, benefit coverage **MUST** be verified in the member's EOC or benefit document.
 - For Medicare members, please refer to CMS guidelines through Medicare Coverage Database requirements.
 - Note: After searching the Medicare Coverage Database, if no NCD/LCD/LCA is found, then use the policy referenced above for coverage guidelines
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I. Procedure: Hyperbaric Oxygen Therapy (HBOT) in single or multiple chambers

Related medical coverage policies: Dental services covered under medical benefit

II. Clinical indications and requirements

- A. Kaiser Permanente Mid-Atlantic States considers hyperbaric oxygen therapy in single or multiple chambers medically necessary for any of the following conditions:
1. Acute carbon monoxide poisoning;
 2. Cyanide poisoning;
 3. Decompression sickness;
 4. Diabetic wounds/ulcers of the lower extremities, using Wagner grade III or higher (see section IV.B below) that have failed at 1 month of standard wound care (including debridement, antibiotic treatment, glycemic control and, if indicated, arterial revascularization);
 5. Fournier's gangrene;
 6. Acute Air or Gas embolism;
 7. Gas gangrene (Clostridial myositis and myonecrosis);
 8. Necrotizing soft tissue infections (e.g., necrotizing fasciitis, Meleney's ulcer);
 9. Osteomyelitis, chronic refractory, unresponsive to conventional medical and surgical management;
 10. Osteoradionecrosis and prophylactic pre or post treatment for members undergoing dental surgery of a radiated jaw (standard protocol is 20-30 dives pre-operatively and 10 dives post operatively);
 11. Peripheral arterial insufficiency, acute;
 12. Radionecrosis, soft tissue, as an adjunct to conventional treatment including radiation induced hemorrhagic cystitis, radiation proctitis, radiation necrosis of brain, muscle, and bone;
 13. Skin grafts and flaps, compromised (i.e., preexisting grafts or flaps that are showing signs of failure or necrosis);
 14. Traumatic peripheral ischemia, acute, including crush injuries, compartment syndrome, and suturing of severed limbs, in conjunction with standard therapy; *or*
 15. Idiopathic sudden/acute sensorineural hearing loss within 14 days of symptom onset
- B. Wounds must be evaluated at least every 30 days during administration of HBOT, and continued



coverage will be denied if there have been no measurable signs of healing.

III. Exclusions

Kaiser Permanente Mid-Atlantic States considers hyperbaric oxygen therapy in single or multiple chambers *experimental and investigational* for any of the following conditions:

- A.** Acute cerebral edema;
- B.** Acute chemical or thermal pulmonary damage;
- C.** Acute coronary syndrome/myocardial infarction;
- D.** Acute or chronic cerebral vascular insufficiency;
- E.** Arthritic diseases;
- F.** Autism Spectrum Disorder;
- G.** Cardiogenic shock;
- H.** Cerebral palsy;
- I.** Chronic peripheral vascular insufficiency;
- J.** Cognitive impairment (i.e., senility, senile dementia);
- K.** Cutaneous, decubitus and stasis ulcers;
- L.** Hepatic necrosis;
- M.** Multiple sclerosis;
- N.** Nonvascular causes of chronic brain syndrome (i.e., Alzheimer's, Pick's disease);
- O.** Organ transplantation and storage;
- P.** Sepsis (other than clostridial);
- Q.** Sickle cell disease;
- R.** Tetanus;
- S.** Pulmonary emphysema; *or*
- T.** Traumatic Brain Injury (concussion, mild TBI, or severe TBI)

IV. Wagner Grading System

This scale serves as the criteria for diabetic wounds/ulcers of the lower extremities for hyperbaric oxygen therapy.

- A.** Wounds must be Grade III or higher, have failed 1 month of standard wound care (including debridement, antibiotic treatment, glycemic control), and, if indicated, arterial revascularization.
- B.** Grade Levels:
 - Grade 1: Superficial Diabetic Ulcer;
 - Grade 2: Ulcer extension, which:
 - a.* Involves ligament, tendon, joint capsule, or fascia; *and*
 - b.* Has no abscess or osteomyelitis
 - Grade 3: Deep ulcer with abscess or osteomyelitis;
 - Grade 4: Gangrene to portion of forefoot;
 - Grade 5: Extensive gangrene of foot



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 KAISER PERMANENTE® Mid-Atlantic States	Hyperbaric Oxygen Therapy Medical Coverage Policy
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Approval History

Date approved by RUMC*	Date filed with the State of Maryland**	Date of Implementation (Ten days after filing)
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Approval History

Effective June 01, 2016, state filing is no longer required per Maryland House Bill [HB 798](#) – Health Insurance – Reporting

Date approved by RUMC	Date of Implementation
06/30/2016	06/30/2016
06/28/2017	06/28/2017
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06/24/2021	06/24/2021
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05/29/2023	05/29/2023
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*The Regional Utilization Management Committee received **delegated authority** to review and approve designated Utilization Management and Medical Coverage Policies by the Regional Quality Improvement Committee in 2011.

Note: Kaiser Permanente Mid-Atlantic States (KPMAS) include referral and authorization criteria to support primary care and specialty care practitioners, as appropriate, in caring for members with selected conditions. Whenever possible, Medical Coverage Policies are evidence-based and may also include expert opinion. Medical Coverage Policies are not intended or designed as a substitute for the reasonable exercise of independent clinical judgment by a practitioner in any particular set of circumstances for an individual member.

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