Medical Necessity Guidelines: Hyperbaric Oxygen Treatment (HBO)

Effective: September 1, 2022

Prior Authorization Required
If REQUIRED, submit supporting clinical documentation pertinent to service request.

<table>
<thead>
<tr>
<th>Applies to:</th>
<th>Yes ☒ No ☐</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMMERCIAL Products</td>
<td></td>
</tr>
<tr>
<td>☒ Tufts Health Plan Commercial products; Fax: 617.972.9409</td>
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</tr>
<tr>
<td>• CareLink℠ – Refer to CareLink Procedures, Services and Items Requiring Prior Authorization</td>
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<tr>
<td>TUFTS HEALTH PUBLIC PLANS Products</td>
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<tr>
<td>☒ Tufts Health Direct – A Massachusetts Qualified Health Plan (QHP) (a commercial product); Fax: 888.415.9055</td>
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<tr>
<td>☒ Tufts Health Together – MassHealth MCO Plan and Accountable Care Partnership Plans; Fax: 888.415.9055</td>
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<tr>
<td>☒ Tufts Health RITogether – A Rhode Island Medicaid Plan; Fax: 857.304.6404</td>
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<tr>
<td>☒ Tufts Health Unify* – OneCare Plan (a dual-eligible product); Fax: 857.304.6304</td>
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<tr>
<td>*The MNG applies to Tufts Health Unify members unless a less restrictive LCD or NCD exists.</td>
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SENIOR Products
• Tufts Health Plan Senior Care Options (SCO), (a dual-eligible product) – Refer to the Tufts Health Plan SCO Prior Authorization List
• Tufts Medicare Preferred HMO, (a Medicare Advantage product) – Refer to the Tufts Medicare Preferred HMO Prior Authorization and Inpatient Notification List

Note: While you may not be the provider responsible for obtaining prior authorization, as a condition of payment you will need to make sure that prior authorization has been obtained.

OVERVIEW

Hyperbaric Oxygen Therapy (HBO) is used to treat a variety of conditions including carbon monoxide poisoning, tissue injuring due to radiation exposure, trauma, chronic wounds, surgery, or infection. During the therapy, the patient breathes in and is exposed to pure oxygen at a pressure typically 2 to 3 times greater than the atmospheric pressure. The elevated concentration and pressure of the oxygen results in higher levels of oxygen absorption by blood plasma and by non-poisoned hemoglobin, elevating oxygen delivery to the tissues. It is intended to either accelerate or cause healing that would not ordinarily occur. Depending on the condition being treated, HBO can work through increasing systemic blood oxygen levels, increasing ambient pressure while reducing blood nitrogen levels (countering the primary cause and mechanism of decompression sickness), increasing the oxygen levels in wounded tissue, and/or exposing anaerobic bacteria to a pure oxygen environment.

CLINICAL COVERAGE CRITERIA

The plan considers non-emergent hyperbaric oxygen therapy (HBO) as reasonable and medically necessary when documentation confirms ANY of the following non-emergent conditions:

1. Severe or profound anemia with exceptional blood loss: only when blood transfusion is impossible or must be delayed
2. Preparation and preservation of hypoxia- or decreased-prefusion-compromised skin grafts and flaps, supported by identification of flap/graft type, graft surgeon identification, surgical exploration results, and transcutaneous oxygen tension testing results indicating hypoxia (TcPO2 less than 40 mmHg on room air), when conventional treatment failure is indicated by ANY of the following:
   a. Etiology of compromise cannot be identified
   b. Etiology of compromise cannot be corrected surgically
   c. Compromise persists despite correction of all identified etiologies
3. Adjunctive treatment with conventional therapy for ANY of the following when unresponsive to conventional therapy alone:
a. Osteo- or soft tissue radionecrosis (e.g., radiation enteritis, cystitis, proctitis) when chronic and refractory to conventional medical treatment and/or surgical management that includes debridement or resection of nonviable tissue along with antibiotic therapy
   i. If treatment is for osteoradionecrosis of the jaw there is evidence of bony resorption or overt fracture in a previously irradiated mandible
b. Sudden sensorineural hearing loss (SSNHL) according to standard definition (hearing decline of at least 30 decibels in at least three sequential frequencies in no more than three days) in conjunction with corticosteroid treatment when initiation of HBO treatment is within fourteen days of onset
c. Actinomycosis refractory to antibiotics and surgical treatment
d. Progressive necrotizing infections (necrotizing fascitis, Meleny’s ulcer) with conventional treatment having included inpatient antibiotics, surgical debridement, and when indicated, skin grafts
e. Chronic refractory osteomyelitis unresponsive to (unless contraindicated) at least surgical debridement and six-week course of paternal antibiotics
4. Adjunctive treatment of diabetic ulcerations/wounds of the lower extremities when BOTH of the following are confirmed:
   i. Ulcerations have a severity of at least Wagner grade III
   ii. Ulcerations have not healed appreciably after thirty days of standard wound therapy, including ALL of the following when appropriate
      1. Assessment and correction of vascular condition in affected limb(s)
      2. Nutritional adjustment
      3. Glucose control improvement
      4. Debridement
      5. Maintenance of granulation tissue cleanliness and moisture with dressings
      6. Appropriate off-loading
      7. Treatment of any infection

**Coverage of hyperbaric oxygen therapy for the above non-emergent conditions requires**
- Prior authorization
- All conditions being treated with adjunctive HBO, including treatment of compromised grafts and diabetic ulcerations, must be evaluated, and documented at least every fifteen sessions and at least every thirty days of treatment.
- For members with compromised skin grafts or diabetic foot wounds, the following criteria must be met:
  - The treatment can be used as adjunctive therapy only when there has been no measurable improvement in the Member’s condition
  - A treatment plan has been submitted to THP/HPHC for review, which includes the proposed number of treatments as well as the goal of the therapy
- For Members with osteoradionecrosis, the plan will consider coverage for hyperbaric oxygen therapy as an adjunctive treatment. A letter of medical necessity must be submitted. The plan will not cover hyperbaric oxygen therapy as a prophylactic measure, including prior to the extraction of teeth or other oral surgery procedures.

**Note:**
- The plan considers adjunctive HBO as not medically necessary when following any thirty-day period in which measurable signs of healing have not been demonstrated.
- The plan will not cover hyperbaric oxygen therapy as a prophylactic measure, including prior to the extraction of teeth or other oral surgery procedures.

**LIMITATIONS**

The plan considers full-body hyperbaric oxygen therapy (HBO) as not medically necessary for all other indications. In addition, the plan does not cover HBO for:
- Aerobic septicemia
- Acute cerebral edema (non-emergent use)
- Acute chemical and thermal pulmonary damage
- Acute coronary syndrome
- Acute osteomyelitis
• Arthritic diseases
• Autism Spectrum Disorder
• Brown recluse spider bite
• Cardiogenic shock
• Cerebral Palsy
• Chronic peripheral vascular insufficiency
• Cutaneous, decubitus, and stasis ulcers
• Hepatic necrosis
• Inflammatory bowel disease
• Intraabdominal abscess
• Myocardial ischemia or infarction
• Multiple sclerosis
• Nonvascular factors in chronic brain syndromes (such as dementia senility, Pick’s disease, Alzheimer’s disease, Korsakoff’s disease)
• Organ storage and transplantation
• Preconditioning for coronary artery bypass graft surgery
• Pulmonary emphysema
• Sickle cell anemia
• Suspected central retinal artery occlusion
• Systemic aerobic infection
• Tetanus
• Wagner Grade 2 or lower diabetic foot ulcers

Note: The plan will not cover the topical application of hyperbaric oxygen. The plan will only cover the administration of hyperbaric oxygen therapy when the Member is placed inside a pressurized chamber. The use of smaller, limb-encasing devices will not be covered.

CODES
The following HCPCS/CPT code(s) require prior authorization for non-emergent conditions listed above:

<table>
<thead>
<tr>
<th>Code</th>
<th>Code Description</th>
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<tbody>
<tr>
<td>99183</td>
<td>Physician attendance and supervision of hyperbaric oxygen therapy, per session</td>
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<tr>
<td>G0277</td>
<td>Hyperbaric oxygen under pressure, full body chamber, per 30-minute interval</td>
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The following HCPCS code is **not** covered:

<table>
<thead>
<tr>
<th>Code</th>
<th>Code Description</th>
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<tbody>
<tr>
<td>A4575</td>
<td>Topical hyperbaric oxygen chamber, disposable</td>
</tr>
<tr>
<td>E0446</td>
<td>Topical oxygen delivery system, not otherwise specified, includes all supplies and accessories</td>
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Appendix A: Wagner Grading System
The Wagner Diabetic Foot Ulcer Grade Classification System is as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Definition</th>
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<tbody>
<tr>
<td>0</td>
<td>No open lesion</td>
</tr>
<tr>
<td>1</td>
<td>Superficial ulcer without penetration to deeper layers</td>
</tr>
<tr>
<td>2</td>
<td>Ulcer penetrates to tendon, bone, or joint</td>
</tr>
<tr>
<td>3</td>
<td>Lesion has penetrated deeper than grade 2 and there is abscess, osteomyelitis, pythrosis, plantar space abscess, or infection of the tendon and tendon sheaths</td>
</tr>
<tr>
<td>4</td>
<td>Wet or dry gangrene in the toes or forefoot</td>
</tr>
<tr>
<td>5</td>
<td>Gangrene involves the whole foot or such a percentage that no local procedures are possible and amputation (at least below the knee level) is indicated</td>
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</table>
REFERENCES


Hyperbaric Oxygen Treatment (HBO)

APPROVAL HISTORY
April 27, 2004: Reviewed by the Clinical Coverage Criteria Committee

Subsequent endorsement date(s) and changes made:
• August 19, 2005: Reviewed and renewed, no changes made
• October 2, 2006: Reviewed and renewed, no changes made
• October 1, 2007: Reviewed and renewed, no changes made
• March 26, 2008: Reviewed and renewed, no changes made
• May 4, 2009: A limitation for the coverage of HBOT for the treatment of autism spectrum disorders was added as it has not been proven to be effective.
• July 6, 2009: Limitation for the coverage of HBOT for the treatment of soft tissue radiation injuries was added as it has not been proven to be effective.
August 2010: Reviewed by Medical Policy: added acute peripheral arterial insufficiency, severe anemia and delayed radiation injury (soft tissue and bony necrosis) to covered/emergent diagnoses.

December 2010: "Autism" changed to "Autism Spectrum Disorders"


August 2011: Admin process changed to RN and LPN.

May 9, 2012: Reviewed and renewed at Integrated Medical Policy Advisory Committee (IMPAC), no changes. ICD-10 codes may be added prior to the next IMPAC approval

May 8, 2013: Reviewed by IMPAC, renewed without changes.

August 14, 2013: Reviewed by IMPAC, diabetic foot wounds and standard wound care clarified. Timeframe of a diabetic foot wound failing to show signs of healing changed from 30 days to 60 days with effective date of January 1, 2014.

May 14, 2014: Reviewed by IMPAC, renewed without changes.


December 31, 2014: Coding updated. Per AMA CPT®, effective December 31, 2014 the following code(s) deleted: C1300 ; and effective January 1, 2015 the following code(s) added G0277

April 8, 2015: Reviewed by IMPAC. Severe anemia and delayed radiation injury (soft tissue or bony necrosis) changed from 'Emergency Conditions Covered Without Prior Authorization' to 'Non-emergent Conditions Requiring Prior Authorization' for an effective date of October 1, 2015.

September 2015: Branding and template change to distinguish Tufts Health Plan products in "Applies to" section. Added Tufts Health Freedom Plan products, effective January 1, 2016.

November 16, 2015: Reviewed by IMPAC. Effective April 1, 2016: Wagner Grading System added to diabetic foot wound criteria 1a and 1b. Limitation added for diabetic foot ulcers that are Wagner Grade 2 or lower. Appendix A added referencing the Wagner Grading System.

March 10, 2016: Wording clarification for anemia added.

April 13, 2016: Reviewed by IMPAC. Prior Authorization initial authorization changed from 10 treatments to 20 treatments effective as of this review date.

April 12, 2017: Reviewed by IMPAC, renewed without changes

April 2017: Added RITogether Plan product to template. For MNGs applicable to RITogether, effective date is August 1, 2017

October 26, 2017: Minor wording changes


March 14, 2018: Reviewed by IMPAC, renewed without changes

October 2018: Template and disclaimer updated

March 20, 2019: Reviewed by IMPAC, renewed without changes

February 19, 2020: Reviewed at IMPAC. Table of ICD10 diagnosis codes added to MNG for clarification of prior authorization requirements

June 17, 2020: Reviewed by IMPAC, renewed with no changes

June 30, 2020: Fax number for Unify updated

March 17, 2021: Reviewed by IMPAC. Minor wording changes made in Clinical Coverage Criteria Section: Refractory mycoses: mucormycosis, actinomycosis, conidiobolus coronato and Clostridial myositis, Clostridial myonecrosis (Gas gangrene); references updated

February 1, 2022: Template updated

February 16, 2022: Reviewed by Medical Policy Approval Committee (MPAC) for integration purposes with Harvard Pilgrim Health Care. Added indication for Sudden sensorineural hearing loss (SSNHL) under "Non-emergent conditions requiring prior authorization" for effective date of April 1, 2022.

April 20, 2022; Reviewed by MPAC with an effective date of May 12, 2022; clarified "Osteo- or soft tissue radionecrosis" includes radiation enteritis, cystitis, and proctitis when chronic and refractory to conventional medical treatment and/or surgical management

July 20, 2022: Reviewed by MPAC with an effective date of September 1, 2022; Removed section," Emergency Conditions Required without Prior Authorization" and codes for these conditions.

**BACKGROUND, PRODUCT AND DISCLAIMER INFORMATION**

Medical Necessity Guidelines are developed to determine coverage for benefits, and are published to provide a better understanding of the basis upon which coverage decisions are made. We make coverage
decisions using these guidelines, along with the Member’s benefit document, and in coordination with the Member’s physician(s) on a case-by-case basis considering the individual Member’s health care needs.

Medical Necessity Guidelines are developed for selected therapeutic or diagnostic services found to be safe and 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 our service area who are medical experts in the particular field, FDA and other government agency policies, and standards adopted by national accreditation organizations. We revise and update Medical Necessity Guidelines annually, or more frequently if new evidence becomes available that suggests needed revisions.

For self-insured plans, coverage may vary depending on the terms of the benefit document. If a discrepancy exists between a Medical Necessity Guideline and a self-insured Member’s benefit document, the provisions of the benefit document will govern.

Treating providers are solely responsible for the medical advice and treatment of Members. The use of this guideline is not a guarantee of payment or a final prediction of how specific claim(s) will be adjudicated. Claims payment is subject to eligibility and benefits on the date of service, coordination of benefits, referral/authorization, utilization management guidelines when applicable, and adherence to plan policies, plan procedures, and claims editing logic.