CLINICAL MEDICAL POLICY	
Policy Name:	Home Oxygen Therapy (HOT)
Policy Number:	MP-069-MD-PA
Responsible Department(s):	Medical Management
Provider Notice/Issue Date:	11/01/2025; 07/01/2025; 08/01/2024; 09/01/2022; 08/20/2021; 08/10/2020; 10/21/2019; 12/15/2018; 12/01/2017
Effective Date:	08/01/2025; 09/01/2024; 10/01/2022; 09/20/2021; 09/07/2020; 10/21/2019; 12/15/2018; 12/01/2017
Retirement Effective date:	12/01/2025
Revision Date:	09/17/2025; 07/17/2024; 07/19/2023; 07/20/2022; 07/21/2021; 07/15/2020; 07/17/2019; 07/18/2018
Products:	Highmark Wholecare℠ Medicaid
Application:	All participating hospitals and providers
Page Number(s):	1 of 13

Policy History

Date	Activity
12/01/2025	Provider Effective date
09/17/2025	QI/UM Committee review
09/17/2025	Urgent Review: Policy up for Retirement. InterQual® criteria exists for home oxygen therapy.
08/01/2025	Provider Effective date
05/21/2025	QI/UM Committee review
05/21/2025	Annual Review: Reformatted 'Procedure' section and clinical guidelines. Added the following procedure codes: E0425, E0430, E0433, E0435, E0440, E0550, E0560, E0585, & E1356. Changed the following procedure codes from noncovered to covered: E0445, A4606, A4608, A4615, A4616, A4617, A4619, A4620, E0455, E1352, E1353, E1354, E1355, E1356, E1357, & E1358. The following procedures codes have been removed: A4575, E0446, A7525, A9900, E0580, & E1356. All diagnosis codes have been removed.
09/01/2024	Provider Effective date
07/17/2024	QI/UM Committee review
07/17/2024	Annual Review: No changes to clinical criteria. Updated 'Summary of Literature' and 'Reference Sources' sections.

09/01/2023	Provider Effective date
07/19/2023	QI/UM Committee review
07/19/2023	Annual Review: No changes to clinical criteria. Updated 'Summary of Literature' and 'Reference Sources' sections.
10/01/2022	Provider Effective date
07/20/2022	QI/UM Committee review
09/20/2017	Initial policy developed

Disclaimer

Highmark Wholecare℠ medical policy is intended to serve only as a general reference resource regarding coverage for the services described. This policy does not constitute medical advice and is not intended to govern or otherwise influence medical decisions.

Policy Statement

Highmark Wholecare℠ may provide coverage under the Durable Medical Equipment (DME) benefits of the Company's Medicaid products for medically necessary oxygen therapy in the home. This policy addresses documentation and clinical requirements necessary for use of oxygen gas cylinders, liquid oxygen, and oxygen concentrators.

This policy is designed to address medical necessity guidelines that are appropriate for the majority of individuals with a particular disease, illness or condition. Each person's unique clinical circumstances warrant individual consideration, based upon review of applicable medical records.

(Current applicable Pennsylvania HealthChoices Agreement Section V. Program Requirements, B. Prior Authorization of Services, 1. General Prior Authorization Requirements.)

Definitions

Durable Medical Equipment (DME) – Any equipment that provides therapeutic benefits to a patient because of certain medical conditions and/or illnesses that can withstand repeated use, is primarily and customarily used to serve a medical purpose, and is appropriate for use in the home.

Reasonable Useful Lifetime (RUL) – A time period that starts on the initial date of service and runs for five years from that date. RUL is not based on the chronological age of the equipment and does not take into account exchanges of equipment, new suppliers, or changes of modality (concentrator, gaseous, liquid).

Arterial Blood Gas (ABG) – The direct measurement of the partial pressure of oxygen on a sample of arterial blood.

Oxygen Gas Cylinder – Oxygen gas is compressed under high pressure and stored in tanks or metal cylinders. Large H cylinders weigh approximately 200 pounds and provide continuous oxygen at two liters per minute for 2.5 days.

Liquid Oxygen – Oxygen is stored in a reservoir as a very cold liquid (-300° F) that converts to gas when released from the tank. Liquid oxygen takes up less space and can be more easily transferred to a portable tank than compressed gaseous oxygen.

Oxygen Concentrator – An oxygen delivery system that operates electrically to separate oxygen from the air, concentrates it, and stores it by using a molecular sieve and electricity. A concentrator does not require filling or refilling with gaseous or liquid oxygen.

Obstructive Sleep Apnea (OSA) – A sleep disorder marked by pauses in breathing of 10 seconds or more during sleep and causes unrestful sleep. The airway collapses or becomes blocked during sleep, which causes shallow breathing or breathing pauses.

Hypoxemia – Deficiency in the amount of oxygen in arterial blood. Expressed as PO2 below normal (PO2 = 80-100 mmHg). Hypoxemia can lead to hypoxia, which is the deficiency in the amount of oxygen that reaches the tissues.

Obstructive Lung Disease – A narrowing of the airways inside the lungs, which causes air to come out more slowly than normal during exhale. Common obstructive lung diseases include COPD, asthma, bronchiectasis, and cystic fibrosis.

Restrictive Lung Disease – The lungs are restricted from fully expanding, which does not allow them to fully fill with air. Restrictive lung conditions result in lung stiffness or a loss of elasticity in the lungs. Common restrictive lung diseases include interstitial lung disease (e.g., idiopathic pulmonary fibrosis) and sarcoidosis.

Cluster Headaches – An episodic, or chronic unilateral headache syndrome that begins with one to three short-lived headaches per day over many weeks followed by a period of remission. There may be a regular recurrence in the vast majority of attacks

BPD (Bronchopulmonary Dysplasia) – A chronic lung condition that affects newborn babies who were either put on a breathing machine after birth or were born very early (prematurely). In some cases, BPD may follow other lung conditions of the newborn, such as pneumonia or bronchiolitis.

Procedures

1. Oxygen and oxygen supplies may be considered medically necessary for appropriately selected individuals only in cases when oxygen is prescribed by a physician. The prescription must specify:
   A. A diagnosis of the disease requiring use of oxygen; AND
   B. Oxygen concentration and flow rate; AND
   C. Frequency of use (if an intermittent or leave in oxygen therapy, order must include time limits and specific indications for initiating and terminating therapy); AND
   D. Method of delivery; AND
   E. Duration of use (if the oxygen is prescribed on an indefinite basis, care must be periodically reviewed to determine whether a medical need continues to exist).

2. Oxygen therapy may be considered medically necessary for:
   A. Cluster headaches; OR
   B. Severe lung disease, defined as either:
      1) A resting arterial oxygen partial pressure (PaO2) below 55 mm Hg; OR
      2) O2 saturation less than 90%; OR
      3) Symptoms associated with oxygen deprivation, (e.g., impairment of cognitive processes, restlessness, or insomnia). Examples of severe lung disease include, but are not limited to:
         - Chronic obstructive pulmonary disease (COPD)
         - Pulmonary fibrosis
         - Cystic fibrosis
         - Bronchiectasis
         - Recurring cognitive heart failure due to chronic cor pulmonale
         - Chronic lung disease complicated by erythrocytosis (hematocrit greater than 56%).

3. Supplemental home oxygen therapy may be considered medically necessary during sleep in an individual with ANY of the following conditions:
   A. Unexplained pulmonary hypertension, cor pulmonale, edema secondary to right heart failure, or erythrocytosis and hematocrit is greater than 50%; OR
   B. When obstructive sleep apnea (OSA), other nocturnal apnea, or a hypoventilation syndrome has been ruled out and there is documentation of desaturation during sleep to an SaO2 of equal to or less than 88% for at least five (5) minutes while asleep; OR
   C. When an individual with documented OSA, other nocturnal apnea, or a hypoventilation syndrome experiences desaturation during sleep to a SaO2 of equal to or less than 88% for at least five (5) minutes while asleep which persists despite use of continuous positive airway pressure (CPAP) or non-invasive positive pressure ventilation (NIPPV) devices.

4. Pediatric Patients
   Home oxygen therapy will be considered medically necessary in the treatment of pediatric patients with severe lung disease. The initial oxygen order must be written by an appropriate physician specialist. ANY ONE of the following pulmonary conditions are considered medically necessary:
   A. Bronchopulmonary dysplasia; OR
   B. Prolonged seizures; OR
   C. Congenital heart disease; OR
   D. Cystic fibrosis; OR
   E. Any condition that causes significant hypoxia in the pediatric patient.

   Note: Infants with bronchopulmonary dysplasia (BPD) who have variable oxygen needs will be considered by a Medical Director on a case-by-case basis in the absence of documentation of otherwise qualifying oxygen values.

5. Conditions Not Considered Medically Necessary for Home Oxygen Therapy
   Home oxygen therapy is not considered medically necessary for conditions other than those listed above because the scientific evidence has not been established. These conditions include, but are not limited to ANY of the following:
   - Angina pectoris in the absence of hypoxemia. This condition is generally not the result of a low oxygen level in the blood, and there are other preferred treatments.
   - Breathlessness/dyspnea without cor pulmonale or evidence of hypoxemia

- Severe peripheral vascular disease resulting in clinically evident desaturation in one or more extremities. There is no evidence that increased PO2 improves the oxygenation of tissues with impaired circulation.
- Terminal illnesses that do not affect the lungs
- Treatment of headaches other than cluster headaches

Note: Oxygen saturations cannot be performed by a Durable Medical Equipment (DME) company or a respiratory equipment provider.

6. Post-payment Audit Statement
   The medical record must include documentation that reflects the medical necessity criteria and is subject to audit by Highmark Wholecare℠ at any time pursuant to the terms of your provider agreement.

7. Place of Service
   The proper place of service for home oxygen therapy is in the home setting.

8. Length of Coverage
   - Reimbursement for oxygen concentrator equipment is limited to monthly capped rental payments for 36 months.
   - The reasonable useful lifetime (RUL) for oxygen concentrator equipment is five (5) years, which includes the 36-month capped rental period. Rental payments stop at 36 months and will not resume until the five (5) year RUL oxygen equipment replacement occurs.

Governing Bodies Approval

CMS
The Centers for Medicare and Medicaid Services (CMS) has published the following guidance on home oxygen therapy:

- National Coverage Determination (NCD) Home Use of Oxygen (240.2)

Summary of Literature

Home oxygen therapy is the administration of oxygen at concentrations greater than that in ambient air (20.9%) with the intent of treating or preventing the symptoms and manifestations of hypoxia. Oxygen is a medical gas and should only be dispensed in accordance with all federal, state, and local laws and regulations. Oxygen therapy has only limited benefit for the treatment of hypoxia due to anemia and benefit may be limited when circulatory disturbances are present. Oxygen therapy should not be used in lieu of but in addition to mechanical ventilation when ventilatory support is indicated (AARC, 2007).

Supplemental oxygen is provided for short-term oxygen therapy, intermittent use, long-term oxygen therapy (LTOT), and ambulatory oxygen therapy (portable). For a stable patient with a chronic condition causing dyspnea on optimal medical therapy, LTOT is a likely life-long commitment. Ambulatory oxygen therapy (portable oxygen therapy) provides LTOT patients who are mobile and need to leave the home on a regular basis with oxygen during exercise and activities of daily living (ADLs). Patient outcomes are

determined by clinical and physiological assessment to establish adequacy of patient response to therapy (American Thoracic Society [ATS], 2016).

According to the U.S. Government Accountability Office (GAO), patients can obtain supplemental oxygen through three different types of oxygen therapy, which include oxygen concentrators, liquid oxygen systems, and compressed gaseous systems (i.e., oxygen cylinders). All three oxygen therapies can provide a patient with oxygen using stationary or portable equipment (GAO, 2011). The appropriate oxygen system for a patient depends on the following:

- How much oxygen the patient needs (flow rate)
- When the patient needs the oxygen (day, evening, or both)
- The patient's living circumstances
- How the patient receives his or her electrical supply
- The patient's activity and mobility levels (ATS, 2016).

A compressed gaseous oxygen system is the oldest method of home oxygen therapy and is not a current common practice due to the frequency of required tank replacement. Liquid oxygen systems are similar to compressed gaseous oxygen systems in use. Two important advantages to using the liquid oxygen system over the gaseous system are (1) the patient has the ability to transfer liquid oxygen into a smaller, portable vessel, enabling the patient to leave home with the device, and (2) oxygen refills are less frequent (AARC, 2007).

Oxygen concentrators are the most common and frequently used equipment in home oxygen therapy. An oxygen concentrator requires minimal servicing, and no oxygen refill is required because the device is designed to concentrate oxygen from ambient air (World Health Organization [WHO], 2015). Oxygen concentrators were first invented for home use in the late 1970s. Patients began to receive oxygen prescriptions earlier in their disease than in prior decades, which required an advancement to portable oxygen concentrator technology to meet younger, more active patients. The portable oxygen concentrator is intended for use everywhere, with many being approved by the FAA for use on airplanes (Inogen, 2015). Many patients need stationary oxygen concentrators for night use and portable oxygen concentrators during the day. The advantages of oxygen concentrators include high reliability and low cost compared to liquid oxygen systems and compressed gaseous systems. There is minimal, regular maintenance on the oxygen concentrators, and reliable power supply seems to be the only outstanding issue, which has been addressed with effective device management and training (WHO, 2015).

It is important that treating physicians are involved in the process of prescribing patients with home oxygen therapy, because it is a key factor in appropriate physician documentation for DME devices. A prescription with incorrect oxygen levels can be very dangerous to a patient with a chronic condition, which supports the importance of accurate physician documentation. Appropriate physician documentation also protects the physicians from adverse legal issues and allows the physician to set up the most economical and tailored oxygen therapy for patients (AARC, 2007).

Some patients who are hypoxemic during the day spend 30% of sleep time with oxygen saturation levels less than 90%, even while on CPAP; therefore, home oxygen therapy may be considered for second-line therapy in patients that have a co-existing chronic pulmonary condition and experience nocturnal hypoxemia (Khatri, 2016). Although home oxygen therapy (i.e., LTOT) is considered as second-line therapy, the treatment may prolong the duration of apnea episodes, worsen hypercapnia, and significantly reduce blood pressure (Gottlieb, 2014).

There are conditions that benefit from short-term oxygen therapy and intermittent oxygen therapy. Short-term oxygen therapy can be used in the treatment of some infants with BPD due to low blood oxygen levels from conditions such as congenital heart disease, prematurity, or severe respiratory infections. BPD patients may require supplemental oxygen to decrease respiratory symptoms (e.g., pulmonary hypertension, abnormal vascular development) in the acute phase, after leaving the hospital (Hadjiliadis, 2013).

The American Thoracic Society (ATS) published the clinical practice guideline (CPG) Home Oxygen Therapy for Adults with Chronic Lung Disease. This CPG is a comprehensive review and analysis of the available evidence surrounding the clinical indications, appropriate prescribing, and effective use of home oxygen therapy in adults with chronic lung disease, specifically chronic obstructive pulmonary disease (COPD) or interstitial lung disease (ILD). The CPG provides for the following major recommendations based on a range of moderate to very low-quality evidence:

- **Chronic Obstructive Pulmonary Disease**
  - In adults with COPD who have severe chronic resting room air hypoxemia,* it is recommended to prescribe LTOT for at least 15 h/d (*strong recommendation, moderate-quality evidence*). *Severe hypoxemia is defined as meeting either of the following criteria: 1) PaO2 ≤ 55 mm Hg (7.3 kPa) or oxygen saturation as measured by pulse oximetry (SpO2) ≤ 88%; 2) PaO2 = 56–59 mm Hg (7.5–7.9 kPa) or SpO2 = 89% plus one of the following: edema, hematocrit ≥ 55%, or P pulmonale on an ECG.)
  - In adults with COPD who have moderate chronic resting room air hypoxemia,* it is suggested to not prescribe LTOT (*conditional recommendation, low-quality evidence*). *Moderate hypoxemia is defined as an SpO2 of 89–93%.
- **Interstitial Lung Disease**
  - For adults with ILD who have severe chronic resting room air hypoxemia, it is recommended prescribing LTOT for at least 15 h/d (*strong recommendation, very-low-quality evidence*).
  - For adults with ILD who have severe exertional room air hypoxemia, it is suggested to prescribe ambulatory oxygen (*conditional recommendation, low-quality evidence*).
- **Liquid Oxygen**
  - In patients with chronic lung disease who are mobile outside of the home and require continuous oxygen flow rates of >3 L/min during exertion, it is suggested prescribing portable liquid oxygen (LOX) (*conditional recommendation, very-low-quality evidence*).
- **Education and Safety**
  - For patients prescribed home oxygen therapy, we recommend that the patient and their caregivers receive instruction and training on the use and maintenance of all oxygen equipment and education on oxygen safety, including smoking cessation, fire prevention, and tripping hazards (*best-practice statement*).

Cluster Headaches

Cluster headaches is another condition that can benefit from short-term home oxygen therapy. There is no cure for cluster headaches, and the goal of treatment is to decrease the severity of pain, shorten the headache period, and prevent the attacks (Mayo Clinic Staff, 2017). The inhalation of 100% oxygen via a tight-fitting mask at a flow rate of 8-10 liters per minute for 10-15 minutes at the beginning of a cluster headache is effective in 80% of patients; oxygen is particularly effective for nocturnal attacks. Oxygen inhalations may be repeated up to five times per day. Cluster headaches are classified as one of the trigeminal autonomic cephalalgias (TACs). The age of onset of this condition is usually between 20 to 40

years of age and, for unknown reasons, men are afflicted three time more often than women. Cluster headaches can be considered episodic or chronic (Robbins, 2016).

In the episodic form, the cluster headache attacks can last from seven days to one year, separated by pain-free periods lasting at least three months. The headaches occur in bouts and there are at least two cluster periods lasting from seven days to one year (when untreated) and are separated by pain-free remission periods ≥ 3 months. Typically, the cluster periods range between two weeks and three months. The chronic cluster headache attacks occur for one year or longer without remission, or with remission periods lasting less than three months. The attacks include the symptoms of episodic headaches, and the attacks occur without a remission period, or with remission lasting < 3 months, for a least one year (Robbins, 2016).

The International Classification of Headache Disorders (ICHD-3) has provided the following diagnostic criteria for cluster headaches:

- At least five attacks fulling the following criteria B-D
- Severe or very severe unilateral orbital, supraorbital and/or temporal pain lasting 15-180 minutes (when untreated);
- Either or both of the following:
    - At least one of the following symptoms or signs, ipsilateral to the headache
        - conjunctival injection and/or lacrimation
        - nasal congestion and/or rhinorrhea
        - eyelid edema
        - forehead and facial sweating
        - forehead and facial flushing
        - sensation of fullness in the ear
        - miosis and/or ptosis
    - A sense of restlessness or agitation
- Occurring with a frequency between one every day and eight per day
- Not better accounted for by another ICHD-3 diagnosis

During part, but less than half of the active time, cluster headache attacks may be less severe and/or of shorter or longer duration. During part, but less than half of the active time, cluster headache attacks may be less frequent (ICHD, 2018).

There is no known cure for cluster headaches, however, existing treatments are known to decrease pain, prevent an attack and shorten the duration. Common treatments prescribed for this condition include oxygen delivered by mask, injectable sumatriptan (Imitrex), calcium channel blockers, benzodiazepines, alkali metal, intranasal lidocaine, intravenous magnesium sulfate, and steroids. There are many home treatments which may include Vitamin B-2, Kudzu extract, melatonin, capsaicin cream, essential oils, and ginger tea. In addition, surgical procedures for the chronic form have been utilized such as hypothalamic deep brain stimulation (ICHD, 2018).

UpToDate (2019) recommends initial treatment for acute cluster headache attacks with either 100% oxygen or a triptan, which is in alignment with national guidelines and expert consensus. Specifically, it is recommended that oxygen should be tried first, if available, since it is without side effects. Otherwise, subcutaneous sumatriptan 6 mg can be used as initial therapy.

Home oxygen therapy is deemed a standard of care for patients with hypoxia. The symptoms of hypoxia are dependent on the rapidity and severity of the decrease of arterial PO2. The causes of hypoxia vary and could be due to arterial hypoxemia or failure of the oxygen hemoglobin transport system. An individual has a normal oxygen level if the oxygen saturation in the blood (S_aO_2) is above 95%. An individual that has a S_aO_2 below 85% without oxygen is indicated for supplemental long term oxygen therapy (LTOT) to treat hypoxemia (NHOPA, 2020). The American College of Chest Physicians and the National Heart Lung and Blood Institute recommend instituting oxygen therapy in the following events:

- Cardiac and respiratory arrest
- Hypoxemia
- Hypotension (Systolic BP < 100 mmHg)
- Low Cardiac Output and metabolic acidosis
- Respiratory distress (RR > 24/min) (Fulmer, 1984)

The American College of Physicians (ACP) clinical guidelines has advised that supplemental LTOT is strongly recommended in patients with COPD that causes severe resting hypoxemia *(PO2 ≤ 55 mmHg or SpO2 ≤ 88%)*. There are four well-established randomized, controlled trials that have evaluated the effect of LTOT on mortality in patients with COPD. Two of the trials, the Nocturnal Oxygen Therapy Trial (NOTT) and the Medical Research Council (MRC), demonstrated improved survival among patients that received LTOT (Croxton, 2006).

Most LTOT studies focus on COPD, but many patients with other chronic hypoxemia causes benefit from the use of LTOT (Petty, 2006). Hypoxemia can be caused by pulmonary hypertension, interstitial lung disease, cystic fibrosis, and other restrictive pulmonary diseases, which can all be improved by LTOT (Hopkins, 2017). LTOT should be considered for the second line of therapy in Obstructive Sleep Apnea (OSA) patients. OSA has a similar connection to specific cardiopulmonary conditions including COPD, asthma, and pulmonary hypertension, also referred to as “overlap syndrome.” Most clinical trials and societal recommendations indicate the first line of therapy for the treatment of OSA-associated cardiovascular episodes is Continuous Positive Airway Pressure (CPAP) (Khatri, 2016).

High-flow oxygen has been found to be effective and safe for the treatment of cluster headaches. Typically, oxygen is 100% high-flow, 12-15 LPM flow rate, and supplied with a non-rebreather mask. A randomized trial was published comparing high-flow inhaled oxygen to placebo in the acute treatment of cluster headache. The authors reported that 78% of patients using the high-flow oxygen (12 LPM) were able to abort 71-85% of 150 cluster headache attacks compared to 20% of patients using room air. The greatest advantage with oxygen inhalation was that there were no adverse effects that are of concern with other treatments. The conclusion was the treatment of patients with cluster headache at symptom onset using inhaled high-flow oxygen compared to placebo resulted in patients being pain-free at 15 minutes (Goadsby, Cohen and Burns, 2009).

Coding Requirements

Procedure Codes
Codes are subject to initial certification and recertification.

Code	Description
A4606	Oxygen probe for use with oximeter device, replacement
A4608	Transtracheal oxygen catheter, each

A4615	Cannula, nasal
A4616	Tubing (oxygen) per foot
A4617	Mouthpiece
A4619	Face tent
A4620	Variable concentration mask
E0424	Stationary compressed gaseous oxygen system, rental; includes container, contents, regulator, flowmeter, humidifier, nebulizer, cannula or mask, and tubing
E0425	Stationary compressed gas system, purchase; includes regulator, flowmeter, humidifier, nebulizer, cannula or mask, and tubing
E0430	Portable gaseous oxygen system, purchase; includes regulator, flowmeter, humidifier, cannula or mask, and tubing
E0431	Portable gaseous oxygen system, rental; includes portable container, regulator, flowmeter, humidifier, cannula or mask, and tubing
E0433	Portable liquid oxygen system, rental; home liquefier used to fill portable liquid oxygen containers, includes portable containers, regulator, flowmeter, humidifier, cannula or mask and tubing, with or without supply reservoir and contents gauge
E0434	Portable liquid oxygen system, rental; includes portable container, supply reservoir, humidifier, flowmeter, refill adaptor, contents gauge, cannula or mask, and tubing
E0435	Portable liquid oxygen system, purchase; includes portable container, supply reservoir, flowmeter, humidifier, contents gauge, cannula or mask, tubing and refill adaptor
E0439	Stationary liquid oxygen system, rental; includes container, contents, regulator, flowmeter, humidifier, nebulizer, cannula or mask, & tubing
E0440	Stationary liquid oxygen system, purchase; includes use of reservoir, contents indicator, regulator, flowmeter, humidifier, nebulizer, cannula or mask, and tubing
E0441	Stationary oxygen contents, gaseous, 1 month's supply = 1 unit
E0442	Stationary oxygen contents, liquid, 1 month's supply = 1 unit
E0443	Portable oxygen contents, gaseous, 1 month's supply = 1 unit
E0445	Oximeter device for measuring blood oxygen levels noninvasively
E0444	Portable oxygen contents, liquid, 1 month’s supply = 1 unit
E0447	Portable oxygen contents, liquid, 1 month's supply = 1 unit, prescribed amount at rest or nighttime exceeds 4 liters per minute (LPM)
E0455	Oxygen tent, excluding croup or pediatric tents
E0550	Humidifier, durable for extensive supplemental humidification during IPPB treatments or oxygen delivery
E0555	Humidifier, durable, glass or autoclavable plastic bottle type, for use with regulator or flowmeter
E0560	Humidifier, durable for supplemental humidification during IPPB treatment or oxygen delivery
E0585	Nebulizer, with compressor and heater
E1352	Oxygen accessory, flow regulator capable of positive inspiratory pressure
E1353	Regulator
E1354	Oxygen accessory, wheeled cart for portable cylinder or portable concentrator, any type, replacement only, each

E1355	Stand/rack
E1356	Oxygen accessory, battery pack/cartridge for portable concentrator, any type, replacement only, each
E1357	Oxygen accessory, battery charger for portable concentrator, any type, replacement only, each
E1358	Oxygen accessory, DC power adapter for portable concentrator, any type, replacement only, each
E1390	Oxygen concentrator, single delivery port, capable of delivering 85 percent or greater oxygen concentration at the prescribed flow rate
E1391	Oxygen concentrator, dual delivery port, capable of delivering 85 percent or greater oxygen concentration at the prescribed flow rate, each
E1392	Portable oxygen concentrator, rental
E1405	Oxygen and water vapor enriching system with heated delivery
E1406	Oxygen and water vapor enriching system without heated delivery
K0738	Portable gaseous oxygen system, rental; home compressor used to fill portable oxygen cylinders; includes portable containers, regulator, flowmeter, humidifier, cannula or mask, and tubing

Reimbursement

Participating facilities will be reimbursed per their Highmark Wholecare℠ contract.

Reference Sources

American Association for Respiratory Care (AARC) Journal. AARC Guideline: Oxygen Therapy in the Home or Alternative Site Health Care Facility, Vol 52 (1). August 2007. Accessed on June 22, 2022.

Croxton TL, Bailey WC. Long-term Oxygen Treatment in Chronic Obstructive Pulmonary Disease: Recommendations for Future Research. American Journal of Respiratory and Critical Care Medicine. Accessed on September 19, 2017.

Fulmer JD, Snider GL. American College of Chest Physicians/National Heart, Lung, and Blood Institute National Conference on Oxygen Therapy. American College of Chest Physicians (ACCP). September 1984. Accessed on September 21, 2017.

Gottlieb DJ, Punjabi NM, Mehra R, et al. CPAP versus Oxygen in Obstructive Sleep Apnea. The New England Journal of Medicine. June 12, 2014. Accessed on October 13, 2017.

Hopkins W, Rubin LE. Treatment of pulmonary hypertension in adults. UpToDate. Last updated: April 21, 2017. Accessed on September 20, 2017.

Khatri SB, Octavian LC. The intersection of obstructive lung disease and sleep apnea. Cleveland Clinic Journal of Medicine. Accessed on October 12, 2017.

Lareau SC, Fahy B. Patient Education: Information Series. American Thoracic Society. April 2016. Accessed on September 20, 2017.

Centers for Medicare and Medicaid Services (CMS), National Coverage Determination (NCD) Home Use of Oxygen (240.2). Effective September 27, 2021. Implementation date January 3, 2023. Accessed on June 24, 2024.

Hadjiliadis D. Health Guide: Bronchopulmonary Dysplasia. The New York Times. May 30, 2013. Accessed on September 21, 2017.

Inogen. History of Oxygen Concentrators. December 2015. Accessed on September 13, 2017.

Mayo Clinic Staff. Cluster headache: Disease & Conditions. August 9, 2017. Accessed on September 21, 2017.

National Home Oxygen Patients Association (NHOPA). Understanding Oxygen Therapy: A patient guide to Long-term Supplemental Oxygen. 2013. Updated June 23, 2020. Accessed on June 23, 2021.

Petty TL, McCoy RW, Doherty DE. Long Term Oxygen Therapy (LTOT): History, Scientific Foundations, and Emerging Technologies. National Lung Health Education Program (NLHEP): 6th Oxygen Consensus Conference Recommendations. Accessed on June 23, 2021.

Qaseem A, Wilt TJ, Weinberger SE, et al. Diagnosis and Management of Stable Chronic Obstructive Pulmonary Disease: A Clinical Practice Guideline Update from the American College of Physicians, American College of Chest Physicians, American Thoracic Society, and European Respiratory Society. American College of Physicians (ACP). 2011. Accessed on September 20, 2017.

Robbins MS, Starling AJ, Pringsheim TM, et al. Treatment of Cluster Headache: The American Headache Society Evidence-Based Guidelines. American Headache Society. July 19, 2016. Accessed on September 21, 2017.

United States Government Accountability Office (GAO): Report to Congressional Requesters. Medicare Home Oxygen: Refining Payment Methodology has Potential to Lower Program and Beneficiary Spending. January 2011. Accessed on June 23, 2021.

The VGM Group: Member Service Organization. Changes in Maintenance and Servicing Due to Deficit Reduction Act (DRA) Legislation for Capped Rentals and Oxygen Equipment. Accessed on September 10, 2017.

World Health Organization (WHO). Technical Specifications for Oxygen Concentrators: WHO Medical Device Technical Series. 2015. Accessed on September 11, 2017.

Global Initiative for Chronic Obstructive Lung Disease (GOLD). Global strategy for the diagnosis, management, and prevention of chronic obstructive pulmonary disease. 2024. Accessed on June 18, 2024.

The International Headache Society. The International classification of headache disorders. 3rd edition. Cephalgia. 2018. Accessed on June 23, 2021.

Cohen AS, Burns B, Goadsby PJ. High-flow oxygen for treatment of cluster headache: a randomized trial. JAMA. 2009. Accessed on July 16, 2019.

UpToDate. Cluster headache: treatment and prognosis. Last updated March 11, 2019. Last Update March 10, 2020. Accessed on June 22, 2022.

Lewarski J. American Association for Respiratory Care (AARC). Brief Review of the ATS CPG: Home Oxygen Therapy for Adults with Chronic Lung Disease. March 10, 2021. Accessed on July 6, 2023.