I. Description

Home oxygen therapy is used to treat and prevent symptoms and sequelae associated with hypoxemia. Long-term home oxygen therapy may be indicated in appropriately selected patients with severe chronic lung disease such as chronic obstructive lung disease (COPD), diffuse interstitial lung disease, cystic fibrosis, bronchiectasis or widespread pulmonary neoplasm. Short-term home oxygen therapy may be indicated for pneumonia or acute exacerbation of chronic lung disease.

II. Criteria/Guidelines

A. Home oxygen and oxygen equipment are covered (subject to Limitations and Administrative Guidelines) for patients age 13 years and older when the following criteria are met:
   1. The treating physician has determined that the patient has severe chronic respiratory disease with hypoxemia that is expected to improve with long-term oxygen therapy:
      a. Chronic obstructive pulmonary disease (COPD)
      b. Diffuse interstitial lung disease
      c. Cystic fibrosis
      d. Bronchiectasis
      e. Widespread pulmonary neoplasm
      f. Pulmonary hypertension
      g. Obstructive sleep apnea (OSA) that is being treated with positive airway pressure
   2. The treating physician has determined that the patient has an acute illness with hypoxemia resulting in the need for short-term oxygen therapy:
      a. Pneumonia
      b. Exacerbation of underlying chronic lung disease
      c. Congestive heart failure
   3. Alternative treatment measures have been tried and deemed clinically ineffective.
   4. Hypoxemia is evidenced by any of the following qualifying blood gas studies, i.e., arterial blood gas (ABG) test or oximetry test:
Oxygen and Oxygen Equipment

a. Arterial PaO2 less than or equal to 55 millimeters of mercury (mm Hg), or arterial oxygen saturation of less than or equal to 88 percent at rest; or

b. Arterial PaO2 less than or equal to 55 mmHg, or arterial oxygen saturation less than or equal to 88 percent for at least five minutes (does not need to be continuous) taken during sleep for a patient who demonstrates an arterial PaO2 of greater than or equal to 56 mm Hg or arterial oxygen saturation of greater than or equal to 89 percent while awake; or

c. A decrease in arterial PaO2 of more than 10 mm Hg, or a decrease in arterial oxygen saturation of more than 5 percent for at least five minutes (does not need to be continuous) taken during sleep, associated with signs reasonably attributed to hypoxemia including, but not limited to, cor pulmonale, documented pulmonary hypertension, erythrocytosis (polycythemia); or

d. Arterial PaO2 less than or equal to 55 mm Hg, or arterial oxygen saturation less than or equal to 88 percent during exercise for an individual who demonstrates arterial PaO2 greater than or equal to 56 mm Hg or arterial oxygen saturation greater than or equal to 89 percent during the day while at rest AND when it is documented that oxygen improves the hypoxemia demonstrated during exercise with the patient breathing room air; or

e. Arterial PaO2 of 56 to 59 mm Hg or an arterial oxygen saturation of 89 percent at rest while awake, during sleep for at least five minutes, or during exercise as described above, and any of the following:
   i. Recurring right heart failure due to cor pulmonale
   ii. Pulmonary hypertension determined by measurement of pulmonary artery pressure or echocardiogram
   iii. Erythrocytosis with a hematocrit greater than 56 percent

5. Qualifying blood gas test meets the following criteria:
   a. For chronic conditions resulting in a need for long-term oxygen therapy, the test is performed while the patient is receiving optimal medical management and is in a chronic stable state, i.e., not during a period of acute illness or an exacerbation of their underlying disease. The test must be the most recent test performed within 30 days of initiation of therapy.
   b. For acute illness resulting in a need for short-term oxygen therapy, the test is performed in an emergency department from which the patient is discharged to home OR within two days of discharge from an inpatient hospital stay. The reported test must be the one obtained closest to the hospital discharge date.
   c. The test is performed on room air unless medically contraindicated. If done with the patient on oxygen, the qualifying arterial blood gas or oxygen saturation values must still be met.

B. Home oxygen and oxygen equipment are covered (subject to Limitations and Administrative Guidelines) for patients below the age of 13 (i.e. before the patient’s 13th birthday) when the following criteria are met:
   1. The patient has a chronic condition that is expected to improve with oxygen therapy; and
2. Oxygen saturation rate is persistently or episodically 92 percent or lower measured in a chronic, stable state (as defined in II.5.a.), or
3. Oxygen saturation rate is 95 percent or lower and the patient has a diagnosis of pulmonary hypertension demonstrated by EKG, echocardiogram and/or cardiac catheterization.

C. Oxygen and oxygen equipment capable of delivering 100% oxygen, i.e., at least seven liters per minute (LPM) via a non-rebreather mask, are covered for the treatment of cluster headache.

D. Continuation of therapy for the indications noted above is covered when documentation supports that the patient continues to require oxygen when in a chronic stable state and is compliant with therapy.

E. A portable oxygen system is covered if the patient is mobile within the home and the qualifying blood gas study was performed while at rest (awake) or during exercise.

F. Liter flow greater than four LPM is covered only if a blood gas study performed while the patient is on four LPM and meets criteria II.A.4. above.

III. Limitations

A. Home oxygen is not covered for the following conditions:
   1. Angina pectoris in the absence of hypoxemia.
   2. Dyspnea without evidence of hypoxemia.
   3. Severe peripheral vascular disease resulting in clinically evident oxygen desaturation in one or more extremities, but in the absence of systemic hypoxemia.
   4. Terminal illnesses that do not affect the respiratory system.
   5. Airway diseases including asthma, bronchiolitis and croup.

B. The use of home oxygen therapy as the sole treatment of OSA, i.e., in the absence of positive airway pressure (PAP), is not covered as it is not the most appropriate delivery of service. Patients with OSA and oxygen desaturation that is not related to their OSA are candidates for home oxygen therapy.

C. Oxygen for use with a PAP device for the treatment of OSA is covered only when oximetry demonstrates an oxygen saturation less than or equal to 88 percent for at least 5 minutes (which need not be continuous) on optimal PAP settings which is defined as the settings that result in a decrease of AHI/RDI to less than 10.

D. When both ABG and oximetry tests have been performed on the same day under the same conditions, i.e., at rest (awake), during exercise, or during sleep, the ABG result will be used to determine if coverage criteria are met. If an ABG result at rest/awake does not meet criteria, but an exercise or sleep oximetry test result on the same day meets criteria, the oximetry test will determine coverage.

E. When oxygen is covered based on an oxygen study obtained during exercise, there must be documentation of the following three oxygen studies which must be performed within the same testing session:
   1. At rest without oxygen
   2. During exercise without oxygen
3. During exercise with oxygen (to demonstrate the improvement of the hypoxemia).

F. The qualifying blood gas study may not be performed or paid for by the supplier.

G. Portable oxygen is not covered if the only qualifying blood gas study was performed while the patient was asleep.

H. It is the patient's responsibility to arrange for oxygen when traveling outside of their supplier's usual service area. Payment for oxygen will be made to only one supplier during any one rental month. Oxygen furnished by an airline is not covered.

I. Emergency or stand-by oxygen systems for patients who are not regularly using oxygen (with the exception of cluster headache as in criterion II.B.) and back-up oxygen systems are not covered since they are precautionary and not therapeutic in nature. Duplicate oxygen systems are not covered.

J. If oxygen equipment reaches its five year reasonable lifetime, but is in good working order and meets the patient's medical needs, replacement equipment will not be covered.

K. Oxygen equipment is only covered as a rental item.

L. Payment for accessories (cannula, tubing, etc.) is included in the rental allowance.

IV. Administrative Guidelines

A. For PPO and HMO patients below the age of 13, precertification is not required for initial or continued therapy. HMSA reserves the right to perform retrospective review using the above criteria to validate if services rendered met payment determination criteria. Documentation supporting medical necessity should be legible, maintained in the patient's medical record and made available to HMSA upon request.

B. For PPO and HMO patients age 13 and older and for all QUEST patients:
   1. Precertification is not required for the initial three months of coverage. Documentation from the patient's medical record supporting that the patient has severe respiratory disease and that alternative treatment measures have been tried and determined to be clinically ineffective and the qualifying blood gas study result must be maintained in the patient's medical record.
   2. Precertification for continuation of oxygen for up to an additional nine months is required after the initial three month period. Documentation that must be submitted with the precertification request includes:
      
      Oxygen that was provided for a patient with an acute illness
      a. Initial and Recertification CMN
      b. Initial and repeat blood gas study (ABG or oximetry test)
      c. Clinical notes within 30 days prior to the initiation of oxygen
      d. Face-to-face reevaluation within 30 days prior to the end of the third month supporting that the patient continues to require oxygen and is compliant with therapy

      Oxygen that was provided for a patient in a chronic stable state
      a. Initial CMN
      b. Initial blood gas study (ABG or oximetry test)
c. Clinical notes within 30 days prior to the initiation of oxygen

3. Precertification for continuation of oxygen for up to an additional 24 months is required after the first 12 months. Documentation that must be submitted with the precertification request includes:
   a. Recertification CMN
   b. Blood gas study performed within 90 days of the end of 12th month
   c. Face-to-face reevaluation performed within 90 days of the end of the 12th month supporting that the patient continues to require oxygen and is compliant with therapy

C. Precertification is required for oxygen used with a positive airway pressure (PAP) device:

   1. Precertification is required for continuation of oxygen used with a PAP device for up to an additional nine months after the initial three month period. Documentation that must be submitted with the precertification request includes:
      a. A copy of the polysomnogram report that supports that use of a PAP device alone is insufficient to resolve hypoxemia; i.e., that Criteria II.A.4.a or b are met when the patient is using a PAP device
      b. Face-to-face clinical reevaluation by the treating physician performed between the 31st and 91st day of use documenting improvement in symptoms
      c. Documentation supporting that direct download of data from the device has been performed and that the patient has been adherent to therapy. Adherence to therapy is defined as use of PAP device greater than or equal to four hours per night on 70% of nights during a consecutive thirty day period during the first three months of initial usage. A repeat qualifying blood gas study is not necessary.

   2. Precertification is required for continuation of oxygen used with a PAP device for up to an additional 24 months after the first 12 months. Clinical notes supporting that the patient continues to use the PAP device and continues to use oxygen must be submitted with the precertification request. A repeat qualifying blood gas study is not necessary.

D. Precertification is required for replacement of oxygen equipment. Documentation supporting the following must be submitted with the precertification request:
   1. Equipment is malfunctioning, no longer under warranty and cannot be repaired, or
   2. Equipment no longer meets the needs of the patient.

E. For PPO and HMO precertification is not required for patients with cluster headache. HMSA reserves the right to perform retrospective review using the above criteria to validate if services rendered met payment determination criteria. Documentation supporting medical necessity should be legible, maintained in the patient’s medical record and made available to HMSA upon request.

F. For QUEST, precertification is required for patients with cluster headache. Documentation supporting a diagnosis of cluster headache must be submitted.

G. HMSA reserves the right to perform retrospective review using the above criteria to validate if services rendered met payment determination criteria. Documentation supporting that criteria are met must be kept in the patient’s medical record and be made available on request.
<table>
<thead>
<tr>
<th>HCPCS</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>E0424</td>
<td>Stationary compressed gaseous oxygen system, rental; includes container,</td>
</tr>
<tr>
<td></td>
<td>contents, regulator, flowmeter, humidifier, nebulizer, cannula or mask, and</td>
</tr>
<tr>
<td></td>
<td>tubing</td>
</tr>
<tr>
<td>E0431</td>
<td>Portable gaseous oxygen system, rental; includes portable container,</td>
</tr>
<tr>
<td></td>
<td>regulator, flowmeter, humidifier, cannula or mask, and tubing</td>
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<tr>
<td>E0434</td>
<td>Portable liquid oxygen system, rental; includes portable container, supply</td>
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<tr>
<td></td>
<td>reservoir, humidifier, flowmeter, refill adaptor, contents gauge, cannula or</td>
</tr>
<tr>
<td></td>
<td>mask, and tubing</td>
</tr>
<tr>
<td>E0439</td>
<td>Stationary liquid oxygen system, rental; includes container, contents,</td>
</tr>
<tr>
<td></td>
<td>regulator, flowmeter, humidifier, nebulizer, cannula or mask, and tubing</td>
</tr>
<tr>
<td>E1353</td>
<td>Oxygen related equipment regulator</td>
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<tr>
<td>E1390</td>
<td>Oxygen concentrator, single delivery port, capable of delivering 85 percent</td>
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<tr>
<td></td>
<td>or greater oxygen concentration at the prescribed flow rate</td>
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<tr>
<td>E1391</td>
<td>Oxygen concentrator, dual delivery port, capable of delivering 85 percent</td>
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<td>or greater oxygen concentration at the prescribed flow rate, each</td>
</tr>
<tr>
<td>E1392</td>
<td>Portable oxygen concentrator, rental</td>
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<tr>
<td>E1405</td>
<td>Oxygen and water vapor enriching system with heated delivery</td>
</tr>
<tr>
<td>E1406</td>
<td>Oxygen and water vapor enriching system without heated delivery</td>
</tr>
<tr>
<td>K0738</td>
<td>Portable gaseous oxygen system, rental; home compressor used to fill portable</td>
</tr>
<tr>
<td></td>
<td>oxygen cylinders; includes portable containers, regulator,</td>
</tr>
<tr>
<td></td>
<td>flowmeter, humidifier, cannula or mask, and tubing</td>
</tr>
</tbody>
</table>

V. **Important Reminder**

The purpose of this Medical Policy is to provide a guide to coverage. This Medical Policy is not intended to dictate to providers how to practice medicine. Nothing in this Medical Policy is intended to discourage or prohibit providing other medical advice or treatment deemed appropriate by the treating physician.

Benefit determinations are subject to applicable member contract language. To the extent there are any conflicts between these guidelines and the contract language, the contract language will control.

This Medical Policy has been developed through consideration of the medical necessity criteria under Hawaii’s Patients’ Bill of Rights and Responsibilities Act (Hawaii Revised Statutes §432E-1.4), generally accepted standards of medical practice and review of medical literature and government approval status. HMSA has determined that services not covered under this Medical Policy will not be medically necessary under Hawaii law in most cases. If a treating physician disagrees with
HMSA’s determination as to medical necessity in a given case, the physician may request that HMSA reconsider the application of the medical necessity criteria to the case at issue in light of any supporting documentation.

VI. References