



Subject: Oxygen Therapy for Home Use*

Effective Date: December 6, 2006

Department(s): Utilization Management

Policy: Oxygen therapy for home use is reimbursable under Plans administered by QualCare, Inc. when requirements specified in this Policy are met.

Objective: To assure proper and consistent reimbursement and to delineate criteria for medically necessary use of oxygen

Procedure:

- A. For in-home oxygen to be reimbursable, hypoxemia must be present in a patient breathing room air (unless measurement in room air is medically contraindicated)
1. While awake and resting: arterial oxygen partial pressure (PaO_2) ≤ 55 mm Hg or arterial oxygen saturation (SaO_2) $\leq 88\%$
 2. During sleep: $\text{PaO}_2 \leq 55$ mm Hg or $\text{SaO}_2 \leq 88\%$ for at least 5 minutes in individuals who do not meet a criterion in A.1 above
 3. During sleep: decrease in PaO_2 of at least 10 mm Hg or decrease in SaO_2 of at least 5% for at least five minutes in individuals with a hypoxemia-related symptoms such as impaired cognitive function ,nocturnal restlessness or insomnia.
 4. Arterial PaO_2 of 56-59mm Hg or SaO_2 of 89% with any of the following:
 - a. Cor pulmonale
 - b. P pulmonale on electrocardiogram
 - c. Documented pulmonary hypertension
 - d. Erythrocytosis (hematocrit >56)

- e. Congestive heart failure-related dependent edema
- 5. During exercise: PaO₂ ≤ 55 mm Hg or SaO₂ ≤ 88%, for an individual in whom supplemental oxygen is shown to improve one of these measures during exercise

B. Medical conditions (and ICD-9 codes) for which home oxygen therapy is reimbursable include but are not limited to:

1. Asthma (493.00 – 493.92) (ICD 10-J45.20 through J45.50 And J45.901, J45.902, J45.909)
2. Bronchiectasis (494.0 – 494.1, 748.61) (ICD 10- J47.0, J47.1, J47.9)
3. Bronchiolitis OR Croup (466, 466.1) (ICD 10-J21.0, J21.1, J21.8, J21.9)
4. Bronchitis (490.0 – 491.8) (ICD 10- J41.0)
5. Bronchopulmonary dysplasia (pediatric) (770.7) (ICD 10- P27.0, P27.1, P27.8, P27.9)
6. Chronic obstructive pulmonary disease (492, 496) (ICD 10- J43.0, J43.1, J43.2, J43.8, J43.9)
7. Cluster headaches with or without hypoxemia (339.00 – 339.02) (ICD 10-G44.001, G44.009, G44.011, G44.019 G44.021, G44.029)
8. Cyanotic heart disease (745.0 – 745.9, 746.0 – 746.9) (ICD 10- Q20.0, Q20.1, Q 20.2, Q20.3, Q20.4, Q20.5, Q20.6, Q20.8, Q20.9 Q21.3, Q21.0, Q21.2, Q21.4, Q21.8, Q21.9, Q22.0, Q22.1, Q22.2, Q22.3, Q22.4, Q22.5, Q22.6, Q22.8, Q22.9, Q23.0, Q23.1, Q23.2, Q23.4, Q24.0, Q24.1, Q24.2, Q24.3, Q24.4, Q24.5, Q24.6, Q24.8, Q24.9)
9. Cystic fibrosis (277.00 – 277.09) (ICD 10- E84.0, E84.11, E84.19, E84.8)
10. Diffuse interstitial lung disease (500 – 506.9, 515, 516) (ICD 10- J60, J84.1, J84.10, J84.17, J84.111, J84.112, J84.113, J84.89)
11. Erythrocytosis (polycythemia) (hematocrit >56) (289.0, 289.6) (ICD 10 D75.0, D75.1)
12. Hemoglobinopathies other than sickle cell whose symptoms may be ameliorated by supplemental oxygen during a period of hypoxemia (282.1, 282.41 – 282.49, 282.7) (D56.0, D56.1, D58.1, D56.2, D56.3, D56.4, D56.5, D58.2, D56.8, D57.40, D57.411, D57.412, D57.419)
13. Persistent fetal circulation (747.83) (ICD 10 P29.3)
14. Pneumonia (480.0 – 486) (ICD 10 J12.0, J12.1, J12.2, J12.81, J12.3, J12.89, J13, J 18.1, J15.0, J15.1, J14, J15.3,

- J 15.4, J15.7, J16.0, J16.8, J17, J18.0, J18.8, J18.9, B25.0, A37.01, A37.11, A37.81, A37.91, A22.1, B44.0, B77.81)**
- 15. Pulmonary hypertension (416.0, 416.8, 416.9) (ICD 10 I27.0, I27.2, I 27.81, I27.89, I27.9)**
 - 16. Pulmonary neoplasm (primary or metastatic) (162.2 – 162.9, 197.0, 212.3, 231.2) (ICD 10 C33, C34.00, C34.01, C34.02, C34.10, C34.11, C34.12, C34.2 C34.30, C34.31, C34.32, C34.80, C34.81, C34.82, C34.90, C34.91, C34.92 , C78.00, C78.01, C78.02, D14.30, D14.31, d14.32, D 02.20, D02.21, D02.22)**
 - 17. Recurrent congestive heart failure due to chronic cor pulmonale (415.0, 416.0 – 416.9) (ICD 10 I27.0, I27.1, I 27.2, I27.81, I 27.82, I 27.89, I27.9)**
 - 18. Vaso-occlusive crises in sickle cell disease (282.60 – 282.69) (ICD 10 D57.00, D57.01, D57.02, D57.211, D57.212, D57.219, D57.811, D57.812, D57.819)**

C. The following oxygen equipment is addressed by this Policy:

1. Stationary home oxygen including oxygen concentrators, liquid reservoirs, or large cylinders and associated oxygen delivery equipment and accessories
2. Portable oxygen systems (*e.g.*, a steel cylinder attached to wheels) for individuals who are mobile within the home
3. Portable oxygen concentrators and combination stationary/portable oxygen systems for individuals who are active and mobile and frequently exceed the time constrictions inherent in traditional ambulatory oxygen systems
4. Spare tank for any individual who requires continuous oxygen and/or the use of an oxygen concentrator
5. Oxygen furnished by an airline is reimbursable when the individual is not permitted by the airline to use his/her own portable oxygen tank on the aircraft

D. Duration of home oxygen therapy

1. The initial order for oxygen therapy should include the anticipated duration of therapy
 - a. If indefinite oxygen therapy is ordered, the initial authorization will be for 3 months and a repeat PaO₂ or SaO₂ must be submitted after 3 months of home oxygen therapy.

- i. If the physician deems it not medically safe to perform this measure with the individual on room air, the dose of oxygen (in liters per minute or fraction of inspired oxygen (FiO₂) at the time the measure is taken must be reported.
 - ii. After this initial measure is reported, home oxygen therapy will be authorized for 12-month intervals
- b. For limited-term use of oxygen that exceeds one month (including, but not limited to conditions such as pneumonia, bronchitis, or bronchiolitis), a PaO₂ or SaO₂ must be submitted after the first month of home oxygen
- i. If the physician deems it not medically safe to perform this measure with the individual on room air, the dose of oxygen (in liters per minute or fraction of inspired oxygen (FiO₂) at the time the measure is taken must be reported.

References

Ameer F, Carson KV, Usmani ZA, Smith BJ. Ambulatory oxygen for people with chronic obstructive pulmonary disease who are not hypoxaemic at rest. *Cochrane Database Syst Rev*. 2014 Jun 24;6:CD000238

Gottlieb DJ1, Punjabi NM, Mehra R, Patel SR, et al CPAP versus oxygen in obstructive sleep apnea. *N Engl J Med*. 2014 12;370(24):2276-85(Jun)

Wiener RS, Ouellette DR, Diamond E, Fan VS, et al. An official American Thoracic Society/American College of Chest Physicians policy statement: the Choosing Wisely top five list in adult pulmonary medicine. *Chest*. 2014;145(6):1383-91(Jun)

Adde FV, Alvarez AE, Barbisan BN, Guimaraes BR. Recommendations for long-term oxygen therapy in children and adolescents. *J Pediatr(Rio J)* 2013;89(1):6-17(Jan-Feb)

Elphick HE, Mallory G. Oxygen therapy for cystic fibrosis. *Cochrane Database Syst Rev* 2013 Jul 25;7:CD003884. doi: 10.1002/14651858.CD003884.pub4

Uronis H, McCrory DC, SamsaG, Currow D, Abernethy A. Symptomatic oxygen for non-hypoxaemic chronic obstructive pulmonary disease. *Cochrane Database Syst Rev*. 2011; 6: CD006429 (Jun)

Cohen AS, Burns B, Goadsby PJ. High flow oxygen treatment of cluster headache: a randomized trial. *JAMA* 2009;302(22):2451-7 (Dec)

Casaburi R. Long-term oxygen therapy- state of the art. *Pulmonol Alergol Pol*. 2009;77:196-199

Centers for Medicare & Medicaid Services. National Coverage Determination for Home Use of Oxygen (240.2). Publication No. 100-3. Available at www.cms.hhs.gov/ accessed 04/02/09

Balfour-Lynn IM. Domiciliary oxygen for children. *Pediatr Clin North Am* 2009;56(1):275-296 (Feb)

Stoller JK. Traveling with oxygen aboard commercial air carriers. *UpToDate* 17.1: Jan 1, 2009 (last updated Oct 2, 2008) Available at <http://www.uptodate.com/online/content/topic.do?topicKey=copd/4562&view=print> Accessed 05/23/09

Celli BR. Update on the management of COPD. *Chest* 2008;133(6):1451-1462 (Jun)

Zuwallack R. The nonpharmacologic treatment of chronic obstructive pulmonary disease: Advances in our understanding of pulmonary rehabilitation. *Proc Am Thorac Soc* 2007;4(7):5490553 (Oct)

Tiep BL, Carter R. Long-term supplemental oxygen therapy. *UpToDate* 17.1: Jan 1, 2009 (last updated Sep17, 2007). Available at <http://www.uptodate.com/online/content/topic.do?topicKey=copd/2162&view=print> Accessed 05/23/09

Buckley T, Dudley J, Eberhart M, *et al.* AARC Clinical Practice Guideline : Oxygen Therapy in the Home or Alternate Site Health Care Facility—2007 Revision & Update. *Respir Care* 2007;52(1):1063-1068 (Aug)

Alam S, Palevsky HI. Standard therapies for pulmonary arterial hypertension. *Clin Chest Med* 2007;28(1):91-115 (Mar)

Shiber JR, Santana J. Dyspnea. *Med Clin North Am* 2006;90(3):453-479 (May)

McClure J, Lewarski J, Prentice W. American Thoracic Society Documents: Statement on Home Care for Patients with Respiratory Disorders. *Am J Respir Crit Care Med* 2005;171(12):1443-1464 (Jun 15)

National Institutes of Health. Critical Care Medicine Department. Critical Care Therapy and Respiratory Care Section. Oxygen Therapy Procedure. Policy #01. February 2002

Drafted By: Mark S.Cukierman, MD

Approved By/Date: QM Committee 12/06/06

Revised By/Date: B. Fisher, MD 05/23/09

Approved By/Date: QM Committee 07/28/09

Revised By/Date: M. McNeil, MD 08/08/11

Approved By/Date: QM Committee 9/13/11

Revised By/Date: M. McNeil, MD 08/20/13

Approved By/Date: QM Committee 9/10/13

Revised By/Date: MMcNeil MD 04/30/15

Approved By/Date: QM Committee, 05/19/15

Reviewed w/o Revision By/Date: MMcNeil, MD 03/31/17

Approved By/Date: QM Committee 4/25/17

*Consistent with Summary Plan Description (SPD). When there is discordance between this policy and the SPD, the provisions of the SPD prevail.