

The Department of Vermont Health Access Medical Policy

Subject: Pulse Oximeter for Home Use
Last Review: December 30, 2015
Revision 4: January 2, 2015
Revision 3: September 12, 2012
Revision 2: April 27, 2011
Revision 1: September 16, 2010
Original Effective: October 15, 2006

Description of Service or Procedure

Pulse Oximeter measures the oxygen saturation (oxyhemoglobin) by using wavelengths of light via a noninvasive probe. The probe can be attached to a finger, toe or earlobe. A wire leading to the monitor shows the measurement and sounds an alarm if it is in an abnormal range.

The use of a Pulse Oximeter is considered safe but has some limitations. False-negative and false positive results for both hypoxemia and normoxemia may lead to inappropriate treatment of an individual. In addition, tissue injury may occur at the site of the probe, as a result of inappropriate use of the device (e.g. pressure sores from prolonged application or electric shock and burns from the substitution of incompatible probes between instruments).

Disclaimer

Coverage is limited to that outlined in Medicaid Rule that pertains to the member's aid category. Prior Authorization (PA) is only valid if the member is eligible for the applicable item or service on the date of service.

Medicaid Rule

[7102.2](#) Prior Authorization Determination

[7103](#) Medical Necessity

[7505.2](#) Covered Services

Medicaid Rules can be found at <http://humanservices.vermont.gov/on-line-rules>



Coverage Position

A pulse oximeter may be covered for members:

- When the pulse oximeter is prescribed by a licensed medical provider, enrolled in the Vermont Medicaid program, operating within their scope of practice in accordance with Vermont State Practice Act, who is knowledgeable in the use of pulse oximetry and who provides medical care to the member AND
- When the clinical coverage guidelines below are met.

Coverage Guidelines

A pulse oximeter for home use may be covered for members who meet these guidelines:

Intermittent or short term:

- To determine the appropriate home oxygen requirement for ambulation, exercise and sleep OR
- To determine the appropriate home oxygen level for beneficiaries with neuromuscular disease involving respiration muscles, with chronic lung disease, or with severe cardiopulmonary disease OR
- For beneficiaries being weaned from home oxygen OR
- For periodically checking oxygen saturation levels in beneficiaries using long term oxygen therapy OR
- For infants less than 12 months of age using home oxygen OR
- For a change in the beneficiary's physical condition requiring an adjustment in the liter flow of their home oxygen

And

- A trained caregiver is available to respond to changes in oxygen saturation.

Continuous or long term:

- For beneficiaries that require mechanical ventilation OR
- For beneficiaries with a tracheostomy OR
- For beneficiaries born premature, newborn, or an infant less than 12 months of age requiring ongoing therapy for apnea OR
- For medical need to maintain oxygen saturation within a very narrow range OR
- For infants with chronic lung disease (for example, bronchopulmonary dysplasia (BPD))
- For beneficiaries with spinal muscular atrophy (SMA) OR
- For beneficiaries with congenital central hypoventilation syndrome (CCHS)

And

- That a trained caregiver is available to respond to changes in oxygen saturation.

Vendor Responsibilities

The vendor will be responsible for expert oversight of the equipment:

- The vendor will have their Respiratory Therapist (RT) visit the beneficiary while still in the hospital and/or once the beneficiary is at home, at time of delivery of the oximeter (except for the spot oximeter) to: set-up, instruct in proper use, alarms and other features and to review emergency procedure should the equipment fail.

- A follow-up visit by the RT will be repeated in **7** days and then every **3** months as long as the equipment is needed and remains in the home. These visits should be documented and kept in the beneficiary's file at the vendor's facility.
- The vendor will instruct those beneficiaries, when a spot oximeter is purchased, in the proper care and storage, the correct use, and warranty information.
- The vendor will also instruct the beneficiary **not to** throw the oximeter away if s/he no longer needs it.
- Vermont Medicaid may request a 60 day download when extension of a pulse oximeter with downloadable memory is available, please make this information available with rental extension requests of E0445TG.

Provider Responsibilities

The Provider will be responsible:

- To develop and instruct the primary care person in the plan of care as it relates to the oximeter and responses to low readings.
- To complete the prescription form to avoid delay of delivery of the equipment to the beneficiary.
- To update the prescription form every 6 months and send to the vendor so the correct equipment and oversight can be continued in the home and so the vendor receives the correct re-imbusement rate from the DVHA. Vermont Medicaid expects that relevant clinical documentation to support need will be included in each request. If continued rental is required, updated clinical must be provided with each request.
- When ordering a pulse oximeter with alarm capability, specific monitoring parameters should be present in documentation as well as any interventions that are performed when the member is outside of ordered parameters.

Clinical guidelines for repeat service or procedure

The same criteria apply as for the initial use.

Type of service or procedure covered

Pulse oximeter and related supplies and services. For machines that are rented only, Vermont Medicaid expects that supplies associated with the use of a pulse oximeter are included in the rental fee and are not to be requested in excess to be covered by Vermont Medicaid.

Type of service or procedure not covered (this list may not be all inclusive)

- Asthma management
- Sudden Infant Death Syndrome (SIDS) monitoring
- When used as a screening/testing technique for suspected sleep apnea.
Routine monitoring (for continuous or long term) of a beneficiary on oxygen

Billing and Prior Authorization

Oximeters			
Billing and Prior Authorization Instructions*			
Current Procedural Terminology (CPT)	Description	Allowed Amount	Prior Authorization (PA)
E0445 and E0445NU	Spot check oximeter	Purchase only	PA <i>is not</i> required.
E0445RR	Spot check oximeter	Rental only Limited to 3 months	PA <i>is not</i> required for the first 3 months. PA <i>is</i> required for a rental extension beyond 3 months.
E0445TG RR	Continuous with 24 hour trending, downloadable memory	Rental only	PA <i>is not</i> required for the first 6 months. PA <i>is</i> required for a rental extension beyond 6 months.
E0445TF RR	Continuous with 8 hour memory, alarms, etc.	Rental only	PA <i>is not</i> required.
*Regardless of the PA requirement, a current prescription and DME provider medical necessity form must be completed and available in the beneficiary's chart should a retrospective review be done.			

References

American Association for Respiratory Care (AARC). (1991). *Respiratory Care*, 36(12), 1406-1409.
Clinical use of pulse oximetry: Pocket reference. (2010). *International COPD Coalition: Helping the work to Breathe Free and Wonca: World family doctors. Caring for people*. Retrieved April 12, 2012, from: <http://www.copd-alert.com/OximetryPG.pdf>

Clinical practice guideline: Diagnosis and management of childhood obstructive sleep apnea syndrome. (2002). *Pediatrics*, 109(4). Retrieved December 30, 2014, from: <http://pediatrics.aappublications.org/content/109/4/704.full.pdf+html>

DeMeulenaere, S. (2007). Pulse oximetry: Uses and limitations. *The Journal for Nurse Practitioners*. Retrieved April 12, 2012, from: [http://www.npjjournal.org/article/S1555-4155\(07\)00210-3/pdf](http://www.npjjournal.org/article/S1555-4155(07)00210-3/pdf)

Guidelines for the use of home pulse oximetry in infants and children. (2012). California Thoracic Society Medical Section of the American Lung Association of California. Retrieved December 30, 2014, from: http://www.calthoracic.org/sites/default/files/pdfs/CTSpositionPaper_Guidelines%20for%20the%20Use%20of%20Home%20Pulse%20Oximetry%20InfantsChildren_2012.pdf

Golpe, R., Jimenez, A., Carpizo, R., & Cifrian, J. (1999). Utility of home oximetry as a screening test for patients with moderate to severe symptoms of obstructive sleep apnea. *Sleep*, 22(7). Retrieved August 27, 2010, from: <http://www.journalsleep.org/ViewAbstract.aspx?pid=24123>

Grap, M., (2002). Pulse oximetry. *Critical Care Nurse*, 22. Retrieved August 27, 2010, from: <http://ccn.aacnjournals.org/cgi/reprint/22/3/69>

Hayes, Inc. Health Technology Brief. Continuous Pulse Oximetry for Managing Home Oxygen Therapy in Adults. Lansdale, PA: Hayes, Inc.; December 2008.

Home oxygen therapy. Appropriate candidates for long-term oxygen therapy. (2014). American Thoracic Society. Retrieved December 30, 2014, from: <http://www.thoracic.org/clinical/copd-guidelines/for-health-professionals/management-of-stable-copd/long-term-oxygen-therapy/home-oxygen-therapy.php>

Hospital Discharge of the High-Risk Neonate. (2008). *Pediatrics*, 122(5). Retrieved December 23, 2009, from: <http://pediatrics.aappublications.org/content/122/5/1119.full.pdf+html>

Kelleher, J. F., (1998). Pulse oximeter. *Journal of Clinical Monitoring and Computing*, 5(37). Retrieved December 18 2009, from: <http://www.springerlink.com/content/w4tk322v4615g2j7/fulltext.pdf?page=1>

LCD for Oxygen and Oxygen Equipment. (L11468). (2014). Retrieved October 30, 2014, from: <http://www.cms.gov/medicare-coverage-database/details/lcd-details.aspx?LCDId=11468&ContrId=137&ver=69&ContrVer=1&Date=10%2f01%2f1993&DocID=L11468&bc=iAAAAAgAAAAAA%3d%3d&>

Lewis, C.A., et al. Home overnight pulse oximetry in patients with COPD: More than one recording may be needed. *Chest*, 123(4). Retrieved August 27, 2010, from: http://localcoverage.cms.gov/mcd_archive/cpt_license.asp?type=lcd&page=results_idsearch.asp&from=idsearch&what=L11468:01%2F01%2F2014&lmp_id=11468&lmp_version=69&basket=lcd:11468:69:Oxygen+and+Oxygen+Equipment:DME+MAC:NHIC%7C%7C+Corp%2E+%2816003%29

National Institutes of Health. (1986). *Infantile apnea and home monitoring*. National Institute Health Consensus Development Program, 6(6). Retrieved August 27, 2010, from: <http://www.ncbi.nlm.nih.gov/bookshelf/br.fcgi?book=hsnihcdc&part=A2122>

Series, F., et al. (2005). Prospective evaluation of nocturnal oximetry for detection of sleep-related breathing disturbances in patients with chronic heart failure. *Chest*. 2005;127(5). Retrieved August 27, 2010, from: <http://journal.publications.chestnet.org/data/Journals/CHEST/22025/1507.pdf>

Series, F., et al. (1993). Utility of nocturnal home oximetry for case finding in patients with suspected sleep apnea hypopnea syndrome. *Annals of Internal Medicine*, 93(1), 449-453.

Valdez-Low, C. et al. (2009). Pulse oximetry in adults. *American Journal of Nursing*, 109(6). Retrieved August 27, 2010, from: http://journals.lww.com/ajnonline/Abstract/2009/06000/Pulse_Oximetry_in_Adults.37.aspx

This document has been classified as public information.