

Medical Policy



Pulse Oximeter for Home Use

Description

Pulse oximetry is based on the principle that oxygen is carried in the bloodstream, bound primarily to hemoglobin. Hemoglobin absorbs light differently at various wavelengths. This absorption pattern differs depending upon the degree of oxygenation. The level of oxygenation is determined by measuring the absorption at two specific wavelengths. As the light passes through tissues, it has a pulsatile component. The oximeter measures the oxygen saturation of hemoglobin in arterial blood as well as the pulse rate in beats per minute. Pulse oximeters provide a rapid indication of an individual's level of oxygenation.

The pulse oximeter is noninvasive consisting of a sensor attached to an individual's finger, nose, ear or toe. It is linked to a processing unit which delivers a read-out indicating an individual's oxygen saturation.

Policy

For Medicare Members:

Per Medicare guidelines, oximeters (E0445) and replacement probes (A4606) will be considered non-covered because they are monitoring devices that provide information to physicians to assist in managing the member's treatment. **Refer to Medicare's medical policy (L33797) and article (A52514) for coverage criteria.**

For Non-Medicare Members:

The use of pulse oximetry in the home setting may be considered a useful diagnostic option in select cases primarily for premature infants who are at high risk of recurrent episodes of apnea, bradycardia and hypoxemia, or for infants up to one year of age who have medical conditions affecting breathing and meeting the coverage criteria outlined below.

See NH Medicaid coverage criteria box on page 2.

Policy Guidelines

Coverage Criteria:

1. Must be ordered by the member's treating practitioner.
2. The use of continuous home pulse oximetry:
 - a. A trained caregiver should be available to respond to changes in the oxygen saturation.

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- b. Should include an event recorder
 - c. Is limited to one-month rental or
 - d. Up to six months for infants continuing on oxygen or with a tracheostomy.
3. It may be considered an established option for newborns and children up to one year of age if one of the following criteria is met and a trained caregiver is available to respond to changes in the oxygen saturation:
 - a. Diagnosed with a chronic respiratory or cardiovascular disease requiring continuous oxygen supplementation
 - b. Oxygen need varies from day to day or per activity (e.g., feeding, sleeping, movement)
 - c. Medical need exists to maintain oxygen saturation within a narrow range
 - d. Infants who have experienced an apparent life-threatening event (ALTE)
 - e. Infants with tracheostomies or anatomical abnormalities that make them vulnerable to airway compromise
 - f. Infants with neurologic or metabolic disorders affecting respiratory control
 - g. Infants with chronic lung disease (bronchopulmonary dysplasia), especially those requiring supplemental oxygen, continuous airway pressure or mechanical ventilation
 - h. Infant with a craniofacial anomaly or a neuromuscular disorder which results in upper airway obstruction
 - i. Infant at high risk for hypoxic events

Exclusions

The use of home pulse oximetry is considered experimental and investigational for all other indications, including the following because its effectiveness for these indications has not been established:

1. Prevention of sudden infant death syndrome (SIDS)
2. Members over one year of age (**NH guidelines do not specify age restriction**).
3. There is insufficient clinical evidence to support the use of pulse oximeters in the home for the following indications, therefore it is not reasonable and necessary for:
 - a. Asthma management
 - b. Diagnosing nocturnal hypoventilation associated with neuromuscular disorders
 - c. Evaluating and teaching continuous positive airway pressure (CPAP)
 - d. Evaluation of exertional desaturation in individual with COVID-19
 - e. Screening or diagnostic testing for obstructive sleep apnea or other sleep disturbance

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- f. Maintenance or continuous monitoring of Members (other than for persons on a ventilator)
- g. Predicting the need of adenotonsillectomy in children

HCPCS Level II Codes and Description

E0445	Oximeter device for measuring blood oxygen levels non-invasively
A4606	Oxygen probe for use with oximeter device, replacement

Important Note:

Northwood's Medical Policies are developed to assist Northwood in administering plan benefits and determining whether a particular DMEPOS product or service is reasonable and necessary. Equipment that is used primarily and customarily for a non-medical purpose is not considered durable medical equipment.

Coverage determinations are made on a case-by-case basis and are subject to all of the terms, conditions, limitations, and exclusions of the member's contract including medical necessity requirements.

The conclusion that a DMEPOS product or service is reasonable and necessary does not constitute coverage. The member's contract defines which DMEPOS product or service is covered, excluded or limited. The policies provide for clearly written, reasonable and current criteria that have been approved by Northwood's Medical Director.

The clinical criteria and medical policies provide guidelines for determining the medical necessity for specific DMEPOS products or services. In all cases, final benefit determinations are based on the applicable contract language. To the extent there are any conflicts between medical policy guidelines and applicable contract language, the contract language prevails. Medical policy is not intended to override the policy that defines the member's benefits, nor is it intended to dictate to providers how to direct care. Northwood Medical policies shall not be interpreted to limit the benefits afforded to Medicare or Medicaid members by law and regulation and Northwood will use the applicable state requirements to determine required quantity limit guidelines.

Northwood's policies do not constitute medical advice. Northwood does not provide or recommend treatment to members. Members should consult with their treating physician in connection with diagnosis and treatment decisions.

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Northwood follows all CMS National Coverage Determinations (NCD) and Local Coverage Determinations (LCD), as applicable.

References

1. Centers for Medicare and Medicaid Services, Medicare Coverage Database, National Coverage Documents. Last accessed and reviewed December 5, 2022.
2. CGS Administrators, LLC. Oxygen and Oxygen Equipment. Local Coverage Determination No. L33797. Durable Medical Equipment Medicare Administrative Carrier Jurisdiction B; Last reviewed and accessed December 3, 2024.
3. National Heritage Insurance Company (NHIC), Oxygen and Oxygen Equipment. Local Coverage Determination No. L33797. Durable Medical Equipment Medicare Administrative Carrier Jurisdiction A. Chico, CA: NHIC; revised January 1, 2023. Accessed December 9, 2021. Last reviewed and accessed December 5, 2022.
4. American Association for Respiratory Care (AARC), (1992, August), AARC Clinical Practice Guidelines, *Pulse Oximetry*, Retrieved Sept. 5, 2008 from <http://www.rcjournal.com/cpgs/pulseecpg.html> (September 11, 2009).
5. American Lung Association of California, "Guidelines for the Use of Home Pulse Oximetry in Infants and Children," *California Thoracic Society*, Medical Section of the. Position Paper, 2007.
6. Gelinas, Jean-Francois, et al., "Prolonged, documented Home-Monitoring of Oxygenation in Infants and Children," *Pediatric Pulmonology*, Vol. 43, 2008, pp. 288-296.
7. HAYES Search and Summary, "Pulse Oximetry for Managing Home Oxygen Therapy," Lansdale, PA: HAYES, Inc., December 15, 2007, Archived January 13, 2009.
8. Nassi, N., et al., "Comparison between pulse oximetry and transthoracic impedance alarm traces during home monitoring," *Archives of Disease in Childhood*, Vol. 93, No. 2, pp. 126-132.

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9. Wisconsin Physicians Service (WPS), “Non Invasive Pulse Oximetry for Oxygen Saturation,” *WPS Local Medical Review Policy*, 52280, original effective date 9/13/03, most recent revision date 11/5/07, < http://www.cms.hhs.gov/MCD/viewlcd.asp?lcd_id=14311&lcd_version=10&show=all> (September 11, 2009).
10. Aetna: Pulse Oximetry for Home Use. http://www.aetna.com/cpb/medical/data/300_399/0339.html Last accessed and reviewed December 3, 2024.

SPECIAL COVERAGE INFORMATION PER PLAN:

NH Medicaid	<p>Authorization will be given when one of the following criteria are met:</p> <ol style="list-style-type: none"> a. The recipient is being assessed by his or her primary care practitioner or pulmonary specialist, to determine if supplemental oxygen is required; b. The recipient has been on supplemental oxygen and an oximeter is requested to determine if he or she can be weaned from the supplemental oxygen; or c. The recipient is receiving supplemental oxygen and is experiencing widely fluctuating oxygen saturation levels and an oximeter is required to assist in determining the cause, frequency, and duration of the fluctuation to properly determine the oxygen flow rate.
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Change/Authorization History

Revision Number	Date	Description of Change	Prepared / Reviewed by	Approved by	Review Date:	Effective Date:
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A	11-20-06	Initial Release	Rosanne Brugnoni	Ken Fasse	n/a	
01		Annual Review- no changes	Susan Glomb	Ken Fasse	Dec.2008	
02	12-22-09	Annual Review/ no changes	Susan Glomb	Ken Fasse	Dec.2009	
03	12-03-10	Annual Review – No changes	Susan Glomb	Ken Fasse	Dec.2010	
04	04-27-11	Updated to current policy	Susan Glomb	Dr. B. Almasri		
05	07-20-11	Added Important Note to all Medical Policies	Susan Glomb	Dr. B. Almasri		
06	1-6-12	Annual Review. Added References to Policy	Susan Glomb	Dr. B. Almasri	Jan. 2012	
07	04-04-12	Added reference to NH Medicaid	Susan Glomb	Dr. B. Almasri		
08	12-3-12	Annual Review – No changes	Susan Glomb	Dr. B. Almasri	Dec 12	
09	12-18-13	Annual review. No changes	Susan Glomb	Dr. B. Almasri		
10	11-25-14	Annual Review. No changes	Susan Glomb	Dr. B. Almasri		
11	12-04-15	Annual Review. Updated to reflect noncovered for Medicare members. Added Medicare reference.	Lisa Wojno	Dr. B. Almasri	December 2015	
12	12-02-16	Annual Review. No Changes.	Lisa Wojno	Dr. B. Almasri	December 2016	
13	12-11-17	Annual review. Revised to state use of home pulse oximetry considered experimental and investigational for predicting the need of adenotonsillectomy in	Carol Dimech	Dr. C. Lerchin	December 2017	

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		children.				
14	12-17-18	Annual review. No changes.	Carol Dimech	Dr. C. Lerchin	December 2018	
15	12-11-19	Annual review. Updated Medicare reference.	Carol Dimech	Dr. C. Lerchin	December 2019	December 11, 2019
16	12-03-20	Annual Review. No Changes.	Lisa Wojno	Dr. C. Lerchin	December 2020	December 2020
17	12-9-21	Annual review. Changed physician to treating practitioner. Added NCD, LCD verbiage to "Important Note".	Carol Dimech	Dr. C. Lerchin	December 9, 2021	December 9, 2021
18	12-5-22	Annual review. Updated list of Exclusions to indicate they are considered E/I and added that the use of home pulse oximetry is considered experimental and investigational for evaluation of exertional desaturation (i.e., a fall of 3 % or more in pulse oximetry reading on exercise) in individuals with COVID-19.	Lisa Wojno	Dr. C. Lerchin	December 5, 2022	December 2022
19	12-7-23	Annual review. No changes.	Carol Dimech	Dr. C. Lerchin	December 7, 2023	December 7, 2023
20	12-3-24	Annual review. No changes	Susan Glomb	Dr. C. Lerchin	December 3, 2024	December 3, 2024