

# UPMC Health Plan POLICY AND PROCEDURE MANUAL

**POLICY NUMBER: PAY.006**  
**REVISION DATE: 06/09**  
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**PAGE NUMBER: 1 of 5**

**SUBJECT:** Continuous Home Pulse Oximetry  
**INDEX TITLE:** Medical Management  
**ORIGINAL DATE:** July 2007

**This policy applies to the following lines of business: (Check those that apply.)**

<b>Commercial:</b>					
HMO ( )		POS ( )		PPO ( )	
Fully Insured ( )		Self-funded/ASO ( )		HSA ( )	
Medicare Select ( )		Medicare Supplement ( )			
<b>DPW-MA:</b>					
Health Choices ( )			Voluntary ( )		All (X )
<b>CMS-MA:</b>					
OH ( )		WV ( )		PA ( )	Other ( )
HMO ( )	PPO ( )	Specialty Needs Plan ( )	Part D ( )	PFFS ( )	All ( )
<b>PID-CHIP:</b>					
Free ( )		Sub ( )		Full ( )	All (X )
<b>APPLICABLE TO:</b>					
Community Care ( )		Work Partners ( )			

## I. POLICY

It is the policy of UPMC Health Plan to provide coverage for continuous home pulse oximetry as appropriate and consistent with good medical practice when medically necessary and covered by the member's specific benefit plan.

## II. DEFINITIONS

**Pulse oximetry:** a non-invasive method of measuring and monitoring arterial blood oxygenation. Pulse oximeters can be intermittent or continuous use devices.

**Arterial blood gas:** an invasive method of measuring oxygenation and acid/base status by obtaining a blood sample from an artery.

## III. PURPOSE

The purpose of this policy is to define the appropriate indications for use of continuous pulse oximetry in the home setting.

## IV. SCOPE

This policy applies to various UPMC Health Plan departments as indicated by the Benefit and Reimbursement Committee. These include but are not limited to: Medical Management, Benefit Configuration and Claims departments.

## **V. PROCEDURE**

### **A. Medical Description / Background**

Pulse oximetry is a transcutaneous measurement of the oxygen saturation of arterial blood through the use of a non-invasive probe and computerized monitor. Pulse oximetry devices work by passing red and infrared light through a device attached to a thin part of the body such as a fingertip or earlobe. Hemoglobin in the capillary beds absorbs the red and infrared light differently. A sensor measures the ratio of absorption of the red and infrared light and calculates an approximation of arterial oxygen content. Pulse oximetry is considered a safe procedure but the device does have limitations. Although an oximeter can detect hypoxia before the patient becomes clinically cyanosed, false negative results for hypoxemia and/or false-positive results for normoxemia may lead to inappropriate treatment of an individual. In addition, tissue injury may result at the site of the probe as a result of inappropriate use (e.g., pressure sores from prolonged use).

Pulse oximetry is a measure solely of oxygenation, not of ventilation and is not a substitute for arterial blood gases checked in a lab as it gives no indication of carbon dioxide levels, blood pH or sodium bicarbonate levels. Prior to the development of the clinical pulse oximeter, a patient's oxygenation was determined by a painful arterial blood gas which took a minimum of 20- 30 minutes to process. The commercial use of pulse oximetry in the 1980's revolutioned the practice of anesthesia and greatly improved patient safety. By 1987 the standard of care for administration of a general anesthetic in the United States included pulse oximetry. From the operating room, the use of pulse oximetry rapidly spread throughout the hospital setting.

Outside the hospital setting it can be used to help determine the need to wean from oxygen therapy, to determine the effectiveness of treatments such as bronchodilators, to determine the need for further treatments such as intubation, to assess a patient's response and tolerance to activities such as ambulation, to triage patients in a clinic or emergency room, to assess admission, transfer, discharge potentials of patients and to spot check patients for intermittent assessment of oxygenation.

### **B. Indications**

Pulse oximeters can be used just intermittently for a spot check (digital pulse oximeter) or used continuously which is mainly performed in the inpatient care setting. Due to the lack of scientific evidence to support the superiority or the medical necessity for continuous home pulse oximetry over intermittent digital pulse oximeter, continuous home pulse oximetry is restricted for use only under the following circumstances where there is a dependency on life extending respiratory therapies:

- Patients on prolonged home mechanical ventilation when the ventilator does not have a built in pulse oximeter or
- Home Care patients with tracheostomies or
- Premature or infants under 1 year with bronchopulmonary dysplasia **AND**

Continuous Pulse Oximetry performed in the home is covered only when **all** of the following indications are present:

- The recipient would otherwise require hospitalization solely for the purpose of continuous monitoring,
- The results are reliable in that setting,
- The patient's record documents that the oximeter is preset and self-sealed and cannot be adjusted by the patient,
- The device is able to provide a printout which documents an adequate number of sampling hours, percent of oxygen saturation and an aggregate of the results. This information must be available if requested, **AND**
- A trained caregiver is available to respond to changes in the oxygen saturation

### **C. Limitations**

Continuous pulse oximetry performed in the home is **not** covered for any of the following indications:

- For routine monitoring of an individual with oxygen (not medically appropriate).
- As part of an individual's asthma management (not medically appropriate).
- For management of Chronic Obstructive Pulmonary Disease (COPD)
- For management of transient hypoxemic events
- For screening of a diagnosis of sleep disorder (e.g., sleep apnea)

The oximetry device used is subject to the Food and Drug Administration (FDA) regulations/approval.

### **D. Variations**

**This benefit does not apply to the Medicare product.**

### **E. Audit**

Quality Audit may monitor policy compliance or billing accuracy at the request of the UPMC Health Plan's Technology Assessment Committee or the Benefits Reimbursement Committee.

### **F. References**

1. ECRI Health Technology Assessment Information Service, *Pulse Oximetry for Managing Home Oxygen Therapy*, 11/28/2007
2. Highmark, Policy Number E-25, *Durable Medical Equipment*, effective date 11/01/2004
3. The Regence Group, Medical Policy # 49, *Oximeters in Adults*, effective date 04/01/2003
4. Aetna, Clinical Policy Bulletin # 0339, *Pulse Oximeter for Home Use*, 06/15/2007

5. Cigna HealthCare, Coverage Position # 0376, *Pulse Oximetry for Home Use*, 06/15/2007
6. American Association Respiratory Care, *Clinical Practice Guidelines for Pulse Oximetry*, reprinted from August 1992 issue of Respiratory Care
7. Blue Cross Blue Shield of Tennessee, Medical Policy Manual, *Home Pulse Oximetry*, 05/01/2008
8. National Institute for Health (NIH), *Initiative for Asthma*, 2004

**Disclaimer:**

UPMC Health Plan medical payment and prior authorization policies do not constitute medical advice and are not intended to govern or otherwise influence the practice of medicine. The policies constitute only the reimbursement and coverage guidelines of UPMC Health Plan and its affiliated managed care entities. Coverage for services varies for individual members in accordance with the terms and conditions of applicable Certificates of Coverage, Summary Plan Descriptions, or contracts with governing regulatory agencies.

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