

Home Pulse Oximetry for Infants and Children

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Definitions

Pulse oximetry	Measures the amount of saturated hemoglobin in the tissue capillaries by transmitting a beam of light through the tissue to a receiver. As the amount of saturated hemoglobin alters the wavelengths of the transmitted light, analysis of the received light is translated into a percentage of oxygen saturation (SO ₂ or SPO ₂) of the blood.
Infants	< 12 months of age.
Children	> 1 year of age — 18 th birthday.

Guideline

1. Evaluation use

Home oximetry may be considered medically necessary to evaluate conditions that are commonly associated with oxygen desaturation (eg, chronic lung disease, chest trauma, severe cardiopulmonary disease or neuromuscular disease involving the muscles of respiration).

≥ 1:

- Initial evaluation to determine the severity of respiratory impairment.
- Evaluation of an acute change in condition.
- Evaluation of exercise tolerance in a patient with respiratory disease.
- Evaluation to establish medical necessity of an oxygen therapeutic regimen.
- To monitor for potential pulmonary toxicity effects associated medication therapy.
- Presence of a chronic condition resulting in hypoxemia and there is need to assess supplemental oxygen requirements and/or a therapeutic regimen.

2. Intermittent or short term use

Any:

- Recent hospitalization that required the use of oxygen for an acute condition or exacerbation of chronic condition.
- Weaning from home oxygen therapy.
- A change in physical condition that requires an adjustment in the oxygen liter flow needs.
- Determining appropriate home oxygen liter flow for ambulation, exercise or sleep.

These adjustments can be made by consulting with the physician during clinic visits or via telephone conversations.

3. Long term use

Any:

- a. Assisted ventilation and/or tracheostomy dependent members for whom the first sign of decannulation, disconnection or plugging would be desaturation.
- b. Weaning from assisted ventilation per a defined protocol.
- c. Members with idiopathic pulmonary hemosiderosis for whom the first sign of pulmonary hemorrhage would be desaturation.
- d. Members requiring apnea monitoring who are at risk for disconnection, strangulation, or injury from being tangled in the monitor wiring.
- e. The member has a medical condition for which intermittent arterial blood gas sampling is likely to miss important variations (eg, sleep apnea).
- f. Presence of a chronic condition resulting in hypoxemia, whereby a need exists to assess supplemental oxygen requirements and/or a therapeutic regimen (eg, bronchopulmonary dysplasia).

Limitations/Exclusions

1. Minimal suggested follow up is every six months.
2. The initial ordering and subsequent follow-up of a member on home monitoring can be accomplished by a neonatologist, pediatric pulmonologist, pediatric intensivist or pediatric cardiologist. These physicians are best able to order the proper diagnostic tests and write the prescription for a home pulse oximeter.
3. If a pulmonologist is not readily available, a pediatrician with knowledge and interest in neurologic, cardiac, airways and/or pulmonary disease that might benefit from home pulse oximetry is the next best choice.
4. The following indications are not considered medically necessary:
 - a. Asthma management.
 - b. In the absence of signs or symptoms suggestive of desaturation.
 - c. As a sole screening/diagnostic testing technique for obstructive sleep apnea.

Applicable Procedure Codes

94760	Noninvasive ear or pulse oximetry for oxygen saturation; single determination
94761	Noninvasive ear or pulse oximetry for oxygen saturation; multiple determinations (eg, during exercise)
94762	Noninvasive ear or pulse oximetry for oxygen saturation; by continuous overnight monitoring (separate procedure)
A4606	Oxygen probe for use with oximeter device, replacement
E0445	Oximeter device for measuring blood oxygen levels non-invasively

Applicable ICD-10 Diagnosis Codes

E84.0	Cystic fibrosis with pulmonary manifestations
E84.11	Meconium ileus in cystic fibrosis
E84.8	Cystic fibrosis with other manifestations
E84.9	Cystic fibrosis, unspecified
I27.0	Primary pulmonary hypertension

I27.2	Other secondary pulmonary hypertension
I27.20	Pulmonary hypertension, unspecified
I27.21	Secondary pulmonary arterial hypertension
I27.22	Pulmonary hypertension due to left heart disease
I27.23	Pulmonary hypertension due to lung diseases and hypoxia
I27.24	Chronic thromboembolic pulmonary hypertension
I27.29	Other secondary pulmonary hypertension
I27.81	Cor pulmonale (chronic)
I27.82	Chronic pulmonary embolism
I27.89	Other specified pulmonary heart diseases
I27.9	Pulmonary heart disease, unspecified
I50.1	Left ventricular failure, unspecified
I50.20	Unspecified systolic (congestive) heart failure
I50.22	Chronic systolic (congestive) heart failure
I50.30	Unspecified diastolic (congestive) heart failure
I50.32	Chronic diastolic (congestive) heart failure
I50.40	Unspecified combined systolic (congestive) and diastolic (congestive) heart failure
I50.42	Chronic combined systolic (congestive) and diastolic (congestive) heart failure
I50.9	Heart failure, unspecified
J41.1	Mucopurulent chronic bronchitis
J41.8	Mixed simple and mucopurulent chronic bronchitis
J47.0	Bronchiectasis with acute lower respiratory infection
J47.1	Bronchiectasis with (acute) exacerbation
J47.9	Bronchiectasis, uncomplicated
J81.1	Chronic pulmonary edema
J82	Pulmonary eosinophilia, not elsewhere classified
J84.01	Alveolar proteinosis
J84.02	Pulmonary alveolar microlithiasis
J84.03	Idiopathic pulmonary hemosiderosis
J84.09	Other alveolar and parieto-alveolar conditions
J84.10	Pulmonary fibrosis, unspecified

J84.111	Idiopathic interstitial pneumonia, not otherwise specified
J84.112	Idiopathic pulmonary fibrosis
J84.113	Idiopathic non-specific interstitial pneumonitis
J84.115	Respiratory bronchiolitis interstitial lung disease
J84.17	Other interstitial pulmonary diseases with fibrosis in diseases classified elsewhere
J84.89	Other specified interstitial pulmonary diseases
J84.9	Interstitial pulmonary disease, unspecified
J95.3	Chronic pulmonary insufficiency following surgery
J95.822	Acute and chronic postprocedural respiratory failure
J95.851	Ventilator associated pneumonia
J96.10	Chronic respiratory failure, unspecified whether with hypoxia or hypercapnia
J96.11	Chronic respiratory failure with hypoxia
J96.12	Chronic respiratory failure with hypercapnia
J96.20	Acute and chronic respiratory failure, unspecified whether with hypoxia or hypercapnia
J96.21	Acute and chronic respiratory failure with hypoxia
J96.22	Acute and chronic respiratory failure with hypercapnia
J96.90	Respiratory failure, unspecified, unspecified whether with hypoxia or hypercapnia
J96.91	Respiratory failure, unspecified with hypoxia
J96.92	Respiratory failure, unspecified with hypercapnia
P24.80	Other neonatal aspiration without respiratory symptoms
P24.81	Other neonatal aspiration with respiratory symptoms
P24.9	Neonatal aspiration, unspecified
P25.1	Pneumothorax originating in the perinatal period
P25.2	Pneumomediastinum originating in the perinatal period
P25.3	Pneumopericardium originating in the perinatal period
P26.8	Other pulmonary hemorrhages originating in the perinatal period
P27.0	Wilson-Mikity syndrome
P27.1	Bronchopulmonary dysplasia originating in the perinatal period
P27.8	Other chronic respiratory diseases originating in the perinatal period
P27.9	Unspecified chronic respiratory disease originating in the perinatal period
P28.2	Cyanotic attacks of newborn

P28.3	Primary sleep apnea of newborn
P28.4	Other apnea of newborn
P28.5	Respiratory failure of newborn
P28.81	Respiratory arrest of newborn
P28.89	Other specified respiratory conditions of newborn
Q33.4	Congenital bronchiectasis
Z94.2	Lung transplant status
Z94.3	Heart and lungs transplant status
Z99.11	Dependence on respirator [ventilator] status
Z99.81	Dependence on supplemental oxygen

References

Specialty-matched clinical peer review.