

# UPMC Health Plan POLICY AND PROCEDURE MANUAL

POLICY NUMBER: PAY.008  
REVISION DATE: 05/10  
ANNUAL APPROVAL DATE: 06/10  
PAGE NUMBER: 1 of 6

**SUBJECT:** Home Apnea Monitoring  
**INDEX TITLE:** Medical Management  
**ORIGINAL DATE:** June 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 ( )		Individual Product ( )	
<b>DPW-MA:</b>					
Health Choices ( )			Voluntary ( )		All (X)
<b>CMS-MA:</b>					
OH ( )		WV ( )		PA ( )	Other ( )
HMO ( )		PPO ( )		Specialty Needs Plan ( )	All ( )
<b>PID-CHIP/AdultBasic:</b>					
Free ( ) CHIP only		Sub/CHIP ( ) Sub/AB ( )		Full/CHIP ( ) Full/AB ( )	All/CHIP (X) All/AB ( )
<b>ANCILLARY:</b>					
Dental ( )		Vision ( )			
<b>APPLICABLE TO:</b>					
Community Care ( )		Work Partners ( )			

## I. POLICY

It is the policy of UPMC Health Plan to recognize home apnea monitoring for infants as appropriate and consistent with good medical practice when performed for the specific indications detailed in this policy and according to the member's specific benefit plan.

Home apnea monitors are not considered medically necessary for children and adults, therefore, **this policy applies only to infants that are 12 months of age and under.**

## II. DEFINITIONS

**ALTE:** (apparent life threatening event) is defined as an episode that is frightening to the observer and is characterized by some combination of apnea, color change, marked change on muscle tone (marked limpness), choking or gagging.

**Apnea of infancy:** unexplained episode of cessation of breathing for 20 sec or longer or a shorter respiratory pause associated with bradycardia, cyanosis, pallor, and/or hypotonia. This usually refers to infants with a gestational age of 37 weeks or more at the onset of apnea.

**Apnea of prematurity:** sudden cessation of breathing for 15-20 seconds or is accompanied by bradycardia (heart rate less than 80 beats per minute) or oxygen desaturation (O<sub>2</sub> saturation less than 90% or cyanosis) in an infant less than 37 weeks gestational age.

**Home Apnea Monitor:** a durable medical equipment monitoring device that generally monitors both respiratory and heart rates. An alarm will sound if there is respiratory cessation (apnea) beyond a predetermined time limit (e.g., 20 secs) or if the heart rate falls below a preset rate (bradycardia)

**SIDS:** (sudden infant death syndrome) is the sudden death of an infant under one year of age which is unexplained after a thorough investigation that includes an autopsy, review of clinical history and examination of the death scene.

### **III. PURPOSE**

The purpose of this policy is to define the indications under which home apnea monitoring for infants would be indicated for coverage.

### **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**

The underlying etiology of infant apnea is varied. It can be classified into three types: central apnea, obstructive apnea, and mixed.

- Central apnea- is characterized by complete cessation of respiratory efforts and is usually related to central nervous system injury, very premature infants in whom the respiratory center in the brain is immature, depressant medications (e.g., narcotics, sedatives) and metabolic conditions (e.g., hypoglycemia).
- Obstructive apnea – is caused by an obstruction of the airway (such as enlarged tonsils and adenoids) and is most likely to occur during sleep when the soft tissue at the back of the throat is most relaxed.
- Mixed apnea –is a combination of central and obstructive and is seen in infants/children who have abnormal control of breathing.

Apnea monitors were first used in the 1960's for the management of apnea in premature infants in the hospital setting. Home apnea monitoring became widely used in the 1980's as a means of prevention for Sudden Infant Death Syndrome (SIDS) since extended apnea and bradycardia were thought to be a precursor to this event; however multiple studies have failed to validate this theory. In 1975 the American Academy of Pediatrics Committee on Infant and Preschool Child recommended that home monitoring to prevent SIDS be limited to ongoing research studies only. A Task Force on Prolonged Infantile Apnea in 1985 concluded that no relationship between prolonged apnea and SIDS had been established. A National Institute of Health Consensus Conference in 1986 concluded that although the effectiveness of home monitoring for reducing infant mortality and morbidity was not established- cardiopulmonary monitoring was indicated for certain groups of infants at high risk for sudden death.

In a 2003 revision policy from the American Academy of Pediatrics (AAP) specific recommendations were given on who could benefit from home monitoring, not from an increased risk of SIDS, but because of other factors. These infants include those that have:

- Experienced an apparent life-threatening event (ALTE) – this event may have been caused by a gastrointestinal, neurological, respiratory, cardiac, or metabolic abnormality or even child abuse.
- Tracheostomies or anatomic abnormalities that make them vulnerable to airway compromise.
- Neurologic disorders affecting respiratory control.
- Metabolic disorders affecting respiratory control.
- Chronic lung disease (such as bronchopulmonary dysplasia) particularly those requiring supplemental oxygen, continuous positive airway pressure or mechanical ventilation.

Home monitoring is usually indicated until the child is free of apneic spells for six (6) weeks to eight (8) weeks.

## **B. Indications**

**Home apnea monitoring must be provided with monitors equipped with an event recorder** and are indicated for a limited period of time for infants with any of the following indications:

- An infant who has experienced an ALTE;
- Premature infants who are at high risk for recurrent episodes of apnea, bradycardia, and hypoxia after discharge from the hospital;
- Infants who are technology dependent – tracheostomy, continuous positive airway pressure, mechanical ventilation;
- Infants with unstable airways;
- Infants with rare medical conditions that affect regulation of breathing;
- Chronic lung disease; **OR**

- Later siblings of infants who died of SIDS until the later siblings are 1 month older than the age at which the earlier sibling died and they remain event free.

The physician must establish a specific plan for periodic review and termination of the home monitor before initiating therapy. Parents require supportive care and education and need to be advised that home monitoring has never been demonstrated to reduce the rate of mortality caused by SIDS.

### **C. Limitations**

- Coverage is applicable only to those infants 12 months of age and younger.
- The use of the apnea monitor is not indicated for the sole purpose of prevention of SIDS without a history of sibling SIDS.
- This policy will follow a ten (10) month capped rental period.

### **D. Variations**

N/A

### **F. Quality 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.

### **G. Records Retention**

Records Retention for UPMC Health Plan documents, regardless of medium are provided within the UPMC Health System Policy and as indicated in the UPMC Insurance Services Division Policy and Procedure.

### **H. References**

1. American Academy of Pediatrics, Volume III No. 4, April 2003, *Apnea, Sudden Infant Death Syndrome, and Home Monitoring*, pp. 914-917
2. *Evaluation and Management of Apparent Life-Threatening Events in Children*, American Family Physician, June 15/2005
3. *Apparent Life-threatening Events (ALTEs) and the Role of Home Monitors*, Pediatrics in Review, 2007;28:203-208

**Disclaimer:**

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