

## Evidence Based Guideline

### Apnea Monitor for Use in the Home

**File Name:** apnea\_monitor\_for\_use\_in\_the\_home  
**Origination:** 12/1994  
**Last CAP Review:** 5/2003  
**Last Review:** 4/2010

**Active Guideline, no longer scheduled for routine literature review.**

#### Description of Procedure or Service

---

Home apnea monitors generally monitor respiratory effort and heart rate, and are typically utilized to monitor central apnea of prematurity in newly discharged at-risk or high-risk premature infants (infants are at increased risk of cardiorespiratory events until 43 weeks post-gestational age). An alarm will sound if there is respiratory cessation (central apnea) beyond a predetermined time limit (e.g., 20 seconds) or if the heart rate falls below a preset rate (bradycardia) to notify the parent that intervention (stimulation, mouth-to-mouth resuscitation, cardiac compressions) is required. Unless an oximeter is added to the two-channel devices, home apnea monitors are not effective at detecting obstructive sleep apneas. False alarms due to movement artifact are common with pulse oximeters, and these devices are not intended for the diagnosis of sleep-disordered breathing in a child.

See also Corporate Medical Policy titled, “Diagnosis and Medical Management of Obstructive Sleep Apnea Syndrome”.

**\*\*\*Note: This Evidence Based Guideline is complex and technical. For questions concerning the technical language and/or specific clinical indications for its use, please consult your physician.**

#### Evidence Based Guideline for Apnea Monitors for Use in the Home

---

Home cardiorespiratory monitoring (pneumogram) may be considered appropriate for use in infants younger than 12 months of age in the following situations:

- Those who have experienced an apparent life-threatening event; OR
- Those with tracheostomies or anatomic abnormalities that make them vulnerable to airway compromise; OR
- Those with neurologic or metabolic disorders affecting respiratory control, including central sleep apnea; OR
- Those with chronic lung disease (i.e., bronchopulmonary dysplasia), particularly those requiring supplemental oxygen; continuous positive airway pressure; or mechanical ventilation.

An apparent life-altering event is defined as an episode that is frightening to observe and is characterized by some combination of apnea, color change, marked change in muscle tone, choking, or gagging.

As suggested by a Policy Statement from the American Academy of Pediatrics the physician should establish a review of the problem, a plan of care, and a specific plan for periodic review and termination. Clear documentation of the reasons for continuing monitoring is necessary should monitoring beyond 43 weeks' postmenstrual age be recommended. Home monitoring is generally not considered appropriate for pediatric patients older than 1 year of age.

Home monitors should be equipped with an event recorder.

## Apnea Monitor for Use in the Home

Note: Home cardiorespiratory monitoring is intended, in part, to alert caregivers of the need for intervention at the time of an event in patients with apnea, and is not appropriate for diagnosis of sleep-disordered breathing (central or obstructive).

### **Medical Evidence regarding Apnea Monitors for Use in the Home indicates it is not recommended in the following situations**

---

This policy is updated and revised based on a 2003 policy statement by the American Academy of Pediatrics (AAP) regarding home cardiorespiratory monitoring (i.e., apnea monitoring). The policy statement does not recommend apnea monitoring in SIDS siblings, noting that the theory that apneic episodes are related to sudden infant death syndrome (SIDS) has never been proven in spite of extensive research over several decades. In addition, epidemiologic studies have failed to document any impact of home cardiorespiratory monitoring for apnea and/or bradycardia on the incidence of SIDS. Moreover, the document noted that there is no evidence that the presence of apnea and/or bradycardia can identify a group at increased risk of SIDS, that home monitoring can provide warning in time for intervention to prevent sudden death, or that intervention would be successful in preventing unexpected death. The statement concludes that “given the lack of evidence that home cardiorespiratory monitoring has any impact on SIDS, prevention of SIDS is not an acceptable indication for home cardiorespiratory monitoring.” The American Academy of Pediatrics recommends that pediatricians should promote proven practices that decrease the risk of SIDS – supine sleep position, safe sleeping environments, and elimination of prenatal and postnatal exposure to tobacco smoke. Parents should also be advised that home cardiorespiratory monitoring has not been proven to prevent sudden unexpected deaths in infants.”

The policy statement also identified infants who could benefit from home monitoring, not because of an increased risk of SIDS, but because of other factors that increase the risk of sudden death. These infants include those that have:

- experienced an apparent life-threatening event
- tracheostomies or anatomic abnormalities that make them vulnerable to airway compromise
- neurologic or metabolic disorders affecting respiratory control
- chronic lung disease (i.e., bronchopulmonary dysplasia), particularly those requiring supplemental oxygen; continuous positive airway pressure; or mechanical ventilation.

A 2008 review of coding, billing, and prescribing information for pediatric home apnea monitors indicates that evidence remains limited regarding whether home apnea monitors improve health outcomes in comparison with the unmonitored infant. The author also notes that during the 30-year period when home cardiorespiratory monitors were used (prior to AAP safe sleep recommendations), the occurrence of SIDS was not reduced.

### **Benefits Application**

---

This medical policy relates only to the services or supplies described herein. Please refer to the Member's Benefit Booklet for availability of benefits. Member's benefits may vary according to benefit design; therefore member benefit language should be reviewed before applying the terms of this medical policy.

Home Apnea Monitors are covered under Durable Medical Equipment (DME) benefits. See Professional Services, Other Services for Durable Medical Equipment.

Durable Medical Equipment (DME) must meet eligibility and/or credentialing requirements as defined by the Plan to be eligible for reimbursement.

# Apnea Monitor for Use in the Home

## **Billing/Coding/Physician Documentation Information**

---

This policy may apply to the following codes. Inclusion of a code in this section does not guarantee that it will be reimbursed. For further information on reimbursement guidelines, please see Administrative Policies on the Blue Cross Blue Shield of North Carolina web site at [www.bcbsnc.com](http://www.bcbsnc.com). They are listed in the Category Search on the Medical Policy search page.

*Applicable codes: E0618, E0619*

BCBSNC may request medical records for determination of medical necessity. When medical records are requested, letters of support and/or explanation are often useful, but are not sufficient documentation unless all specific information needed to make a medical necessity determination is included.

## **Scientific Background and Reference Sources**

---

Independent Review, Senior Director of Medical Affairs

BSBSA Medical Policy Reference Manual - 3/96

Independent Review, Senior Medical Director - 10/99

Medical Policy Advisory Group 10/99

Specialty Matched Consultant Advisory Panel - 5/2001

Infantile Apnea and Home Monitoring. NIH Consensus Statement Online 1986 Sep 29-Oct 1 [2001, May 7];6(6):1-10.

Specialty Matched Consultant Advisory Panel - 5/2003

BCBSA Medical Policy Reference Manual [Electronic Version]. 1.01.06, 7/17/03

American Academy of Pediatrics. Committee on Fetus and Newborn Policy Statement. Apnea, Sudden Infant Death Syndrome, and Home Monitoring. *Pediatrics* 2003;111(4 Pt 1):914-917.

Halbower AC. Pediatric home apnea monitors: coding, billing, and updated prescribing information for practice management. *Chest* 2008; 134(2):425-9

BCBSA Medical Policy Reference Manual [Electronic Version]. 1.01.06, 1/14/2010

## **Policy Implementation/Update Information**

---

7/96	Reviewed: National Association reviewed 3/96. No changes in policy. Implement local policy which includes the infant whose birth weight was 1500 grams or less.
8/97	Reviewed: Combined with Medical Policy regarding Sudden Infant Death Syndrome (SIDS) Monitors.E0608.ARC.
2/98	Revised: Added information to the Benefit Application section
8/99	Reviewed, Reformatted, Medical Term Definitions added.
10/99	Medical Policy Advisory Group
1/00	Revised to correct coding to E0608.
3/01	System changes.
5/01	Specialty Matched Consultant Advisory Panel review (5/2001). Formatting changes made to

## Apnea Monitor for Use in the Home

- criteria concerning apnea. Further clarification given concerning length of time monitoring is usually required.
- 7/01 Changed title of policy from Home Apnea Monitor to Apnea Monitor for Use in the Home.
- 12/01 Changed to Policy Implementation section of 5/01. Word sleep removed from sleep apnea. Typos corrected.
- 5/03 Specialty Matched Consultant Advisory Panel review. Code E0608 deleted and codes E0618 and E0619 added to Billing/Coding section. Format changes. Policy status changed to: "Active policy, no longer scheduled for routine literature review".
- 12/03 Benefits Application and Billing/Coding sections updated for consistency.
- 12/18/06 Medical Policy reformatted and changed to Evidence Based Guideline. Expanded description of service for clarity. Added criteria for when home monitoring for apnea may be appropriate. Added medical terms and definitions. Added information regarding SIDS from the American Academy of Pediatrics policy statement. References and CPT codes updated. (adn)
- 5/25/10 Description section revised. Evidence Based Guideline revised to read: "Home cardiorespiratory monitoring (pneumogram) may be considered appropriate for use in infants younger than 12 months of age in the following situations: Those who have experienced an apparent life-threatening event; OR Those with tracheostomies or anatomic abnormalities that make them vulnerable to airway compromise; OR Those with neurologic or metabolic disorders affecting respiratory control, including central sleep apnea; OR Those with chronic lung disease (i.e., bronchopulmonary dysplasia), particularly those requiring supplemental oxygen; continuous positive airway pressure; or mechanical ventilation." Also added the following statement: "Note: Home cardiorespiratory monitoring is intended, in part, to alert caregivers of the need for intervention at the time of an event in patients with apnea, and is not appropriate for diagnosis of sleep-disordered breathing (central or obstructive)." Information in the When It Is Not Recommended section updated. References updated. (adn)

---

Medical policy is not an authorization, certification, explanation of benefits or a contract. Benefits and eligibility are determined before medical guidelines and payment guidelines are applied. Benefits are determined by the group contract and subscriber certificate that is in effect at the time services are rendered. This document is solely provided for informational purposes only and is based on research of current medical literature and review of common medical practices in the treatment and diagnosis of disease. Medical practices and knowledge are constantly changing and BCBSNC reserves the right to review and revise its medical policies periodically.