

EFFECTIVE DATE: 02|17|2015

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OVERVIEW

Home cardiorespiratory monitors track respiratory effort and heart rate to detect episodes of apnea. They have been used for a variety of indications that may be associated with increased risk of respiratory compromise.

PRIOR AUTHORIZATION

Prior authorization review is not required.

POLICY STATEMENT

Commercial Products

Home apnea monitors are covered. This item requires a prescription and must be provided by a Durable Medical Equipment (DME) vendor. Movement sensors purchased at retail establishments do not meet the definition of durable medical equipment.

Home cardiorespiratory monitoring is considered **not medically necessary** in infants with any siblings with a history of sudden infant death syndrome (SIDS), but without at least one of the indications cited.

Home cardiorespiratory monitoring in all other conditions, including but not limited to the diagnosis of obstructive sleep apnea, is considered **not medically necessary**.

BlueCHiP for Medicare

Not applicable

MEDICAL CRITERIA

Not applicable

COVERAGE

Benefits may vary between groups/contracts. Please refer to the appropriate Benefit Booklet, Evidence of Coverage or Subscriber Agreement for applicable coverage/benefits.

Reimbursement is not provided for:

- a backup electrical system;
- parental training sessions, including cardiopulmonary resuscitation (CPR), or in the use of the monitor when identified as a separate charge

BACKGROUND

Home Cardiorespiratory Monitoring for Apnea Monitoring

Home cardiorespiratory monitors track respiratory effort and heart rate and have been used 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' postconceptual age) and in other infants at risk of apnea. An alarm will sound if there is respiratory cessation (central apnea) beyond a predetermined time limit (eg, 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 2-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.

Home Monitoring for Sudden Infant Death Syndrome Prevention

Sudden infant death syndrome (SIDS) refers to the sudden death of an infant younger than 1 year of age; the circumstances are unexplained after a thorough investigation that includes autopsy, examination of the death scene, and review of the family history. As a means to decrease the incidence of SIDS, in the 1970s, cardiorespiratory monitoring was suggested. However, clinical studies have failed to establish that the use of home monitoring reduces the incidence of SIDS. In 2011, the American Academy of Pediatrics (AAP) reiterated its recommendations that home monitoring should not be used as a strategy to prevent SIDS. Instead, AAP recommended that proven practices should be promoted to reduce the incidence of SIDS, which include supine sleeping, use of a firm bed surface, routine immunizations, breast-feeding, and avoidance of exposure to tobacco smoke, alcohol, and illegal drugs. One of these proven practices (supine sleeping) has been promoted in the “Safe to Sleep” campaign (formerly called the “Back to Sleep” campaign) initiated in 1994 by AAP, as well as by the National Institute of Child Health and Development and the Maternal Child Health Bureau of Human Resources and Services Administration. The campaign is a national effort to educate health care professionals, parents, and caregivers about the significance of placing infants in the supine sleeping position to reduce SIDS. The incidence of SIDS in the United States decreased dramatically between 1992 and 2001, especially in the years after the first supine sleep position recommendations were issued.

Other Home Monitoring Indications

Home cardiorespiratory monitors are used for reasons other than preventing SIDS. They include monitoring infants at high risk of respiratory compromise due to chronic ventilator or oxygen requirements, tracheostomies or anatomic abnormalities that make them vulnerable to airway compromise, and central apnea, including apnea, bradycardia, and oxygen desaturations associated with prematurity. Former premature infants with bronchopulmonary dysplasia (ie, neonatal chronic lung disease), which may lead to chronic oxygen requirement, may have indications for home cardiorespiratory monitoring.

An additional potential use of home cardiorespiratory monitors is monitoring infants who have had acute events associated with apnea, color change, or loss of tone. Originally, these events were referred to as *apparent life-threatening events* (ALTEs). ALTE was defined by a 1986 National Institutes of Health Conference as “an episode that is frightening to the observer and that is characterized by some combination of apnea (central or occasionally obstructive), color change (usually cyanotic or pallid but occasionally erythematous or plethoric), marked change in muscle tone (usually marked limpness), choking, or gagging. In some cases, the observer fears that the infant has died.” In 2016, AAP issued updated clinical practice guideline, which proposed a replacement of the term ALTE with the term *brief resolved unexplained event* (BRUE), which is defined as follows:

“An event occurring in an infant younger than 1 year when the observer reports a sudden, brief, and now resolved episode of ≥ 1 of the following: (1) cyanosis or pallor; (2) absent, decreased, or irregular breathing; (3) marked change in tone (hyper- or hypotonia); and (4) altered level of responsiveness. A BRUE is diagnosed only when there is no explanation for a qualifying event after conducting an appropriate history and physical examination.”

Home cardiorespiratory monitoring may be considered **medically necessary** when initiated in infants younger than 12 months of age in the following situations:

- Those who have experienced a brief resolved unexplained event (previously known as *apparent life-threatening event*) and are not considered lower risk following clinical evaluation; 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 apnea and apnea of prematurity; OR

- Those with chronic lung disease (i.e., bronchopulmonary dysplasia), particularly those requiring supplemental oxygen; continuous positive airway pressure; or mechanical ventilation.

2016 Clinical Practice Guidelines from the American Academy of Pediatrics (Tieder et al, 2016) defined brief resolved unexplained event (BRUE; formerly *apparent life threatening event* [ALTE]) as: “An event occurring in an infant younger than 1 year when the observer reports a sudden, brief, and now resolved episode of ≥ 1 of the following:

- (1) cyanosis or pallor;
- (2) absent, decreased, or irregular breathing;
- (3) marked change in tone (hyper- or hypotonia); and
- (4) altered level of responsiveness.”

CODING

Commercial Products

The following CPT codes are covered:

94772 Circadian respiratory pattern recording (pediatric pneumogram), 12-24 hour continuous recording, infant

94774 Pediatric home apnea monitoring event recording including respiratory rate, pattern and heart rate per 30-day period of time; includes monitor attachment, download of data, review, interpretation, and preparation of a report

94775 Pediatric home apnea monitoring event recording including respiratory rate, pattern and heart rate per 30-day period of time; monitor attachment only (includes hook-up, initiation of recording and disconnection)

94776 Pediatric home apnea monitoring event recording including respiratory rate, pattern and heart rate per 30-day period of time; monitoring, download of information, receipt of transmission(s) and analyses by computer only

94777 Pediatric home apnea monitoring event recording including respiratory rate, pattern and heart rate per 30-day period of time; review, interpretation, and preparation of report only by a physician or other qualified health care professional

The following HCPCS codes are covered:

E0618 Apnea monitor, without recording feature

E0619 Apnea monitor, with recording feature

ICD-10 Diagnosis Codes that may support medical necessity:



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RELATED POLICIES

Not applicable

PUBLISHED

Provider Update, May 2017

Provider Update, January 2017

Provider Update, April 2015

Policy Update, May 2008

Policy Update, September 2007

BCBSRI.com, July 2007

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