

State of Vermont
Department of Vermont Health Access
280 State Drive, NOB 1 South
Waterbury, VT 05671-1010

Agency of Human Services
[Phone] 802-879-5903
[Fax] 802-879-5963
[Email] AHS.DVHAClinicalUnit@vermont.gov
www.dvha.vermont.gov

The Department of Vermont Health Access Clinical Criteria

Subject: Apnea Monitor

Last Review: February 22, 2024*

Past Revisions: January 11, 2023, January 8, 2021, October 3, 2019, June 14, 2017, August 26, 2015, January 2, 2015, November 1, 2013, October 25, 2011, March 29, 2010, March 31, 2009, and September 10, 2008

***Please note: Most current content changes will be highlighted in yellow.**

Description of Service or Procedure

An apnea monitor is a device which monitors abnormal cessation of breathing and abnormal cardiac status for high-risk children. It contains an alarm function which is triggered when the measured rate (respiratory rate, slow heart rate, and/or fast heart rate) differs from the pre-determined respiratory or cardiac parameters set by the treating provider. It is important that parents complete cardiopulmonary resuscitation (CPR) and apnea response training. Caregivers should have access to technical support for equipment issues and professional support to answer questions about the member's health status.

Disclaimer

Coverage is limited to that outlined in Medicaid Rule or Health Care Administrative Rules that pertain to the member's aid category. Prior Authorization (PA) is only valid if the member is eligible for the applicable item or service on the date of service.

Medicaid Rule

Medicaid and Health Care Administrative Rules can be found at <https://humanservices.vermont.gov/rules-policies/health-care-rules/health-care-administrative-rules-hcar/adopted-rules>

- 7102.2 Prior Authorization Determination
- 4.101 Medical Necessity for Covered Services
- 4.104 Medicaid Non-Covered Services
- 4.209.2 Durable Medical Equipment Covered Services

Also review the VT Medicaid Durable Medical Equipment (DME) Supplement at: <http://vtmedicaid.com/assets/manuals/DMESupplement.pdf>



Coverage Position

An apnea monitor may be covered for members:

- When this device is prescribed by a licensed medical provider, enrolled in the Vermont Medicaid program, operating within their scope of practice as described on the Vermont Office of Professional Regulation's website*, Statute, or rule, who is knowledgeable in the use of apnea monitors and who provides medical care to the member AND
- Only FDA approve devices
- When the clinical guidelines below are met.

* Vermont's Office of Professional Regulation's website: <https://sos.vermont.gov/opr/>

Coverage Criteria

Definitions

- **SIDS:** Sudden, unexpected death before 12 months of age occurring in a previously healthy infant, in which the cause remains unknown despite thorough investigations (including an appropriate autopsy, death scene investigation, and analysis of the clinical history).
- **Brief Resolved Unexplained Event (BRUE):** Sudden, brief (<1 min) episode without other explainable cause occurring in an infant younger than 12 months of age characterized by one or more symptoms including, cyanosis, pallor, absent/decreased/ or irregular breathing, marked change in muscle tone, altered level of responsiveness. The infant returns to normal state of health after episode occurrence. This term replaces ALTE, below, per recommendation of the American Academy of Pediatrics (2016).
- **Apparent Life-Threatening Event (ALTE):** Episode that is frightening to the observer, characterized by ≥ 1 apnea (central or occasionally obstructive), color change, marked change in muscle tone, choking or gagging.

An apnea monitor may be covered for members (infants under the age of 1 year) who have one of the following diagnoses or high-risk conditions:

- Infants who have experienced some combination of the following brief resolved unexplained event (BRUE):
 - Absent, decreased, or irregular breathing
 - Cyanosis or pallor
 - Marked changes in muscle tone, either hyper or hypotonia
 - Altered level of responsiveness
 - Continued use is considered medically necessary for infants that have experienced BRUE until the infant remains event-free for six weeks
- Infants with tracheotomies that make them vulnerable to airway compromise
- Infants with anatomical abnormalities that make them vulnerable to airway compromise
- Infants with metabolic disorder affecting respiratory control
- Infants with neurologic disorder affecting respiratory control
- Infants with chronic lung disease (e.g., bronchopulmonary dysplasia) especially those requiring mechanical ventilation, positive airway pressure, or supplemental oxygen
- Apnea unresponsive to treatment
- Apnea of prematurity, defined as sudden cessation of breathing that lasts for at least 20 seconds or is accompanied by bradycardia hypoxemia, or cyanosis in infants younger

than 37 weeks gestational age. Continued use is considered medically necessary until infants are past post-conception age of 43 weeks and are event-free for six weeks

- Preterm infant with bradycardia and/or desaturation
- Infants diagnosed with pertussis with positive cultures, upon discharge from acute care facility. If monitored for pertussis, use of an apnea monitor is considered medically necessary for up to one-month post-diagnosis.
- Infants with gastroesophageal reflux disease that results in apnea, bradycardia or oxygen desaturation, until the infant remains event-free for six weeks
- For infants with apnea accompanied by marked hypotonia, use of an apnea monitor until the infant remains event-free for six weeks
- Infants discharged home on a schedule of weaning narcotics
- Infants with bradycardia on caffeine, theophylline, or similar agents, until event free for 2 weeks once off these medications
- SARS-CoV-2 pneumonia

Considerations:

1. Coverage should be discontinued when clinical evaluation shows that the condition(s) requiring a monitor have been resolved or stabilized as indicated by:
 - a. The member has been free of events requiring stimulation or resuscitation as defined above, OR
 - b. The member has experienced significant stressors such as respiratory illness or immunizations without apnea.
2. Prior authorization is required for members one year of age and older
3. Home cardiorespiratory monitoring should not be prescribed to prevent sudden infant death syndrome (SIDS).
4. The monitor should be equipped with an event recorder.
5. The physician should establish a specific plan for periodic review and termination of the home monitor before initiating therapy. The end point of monitoring is determined by the physician. Usually, discontinuation may end when no clinical events have occurred for 6-8 weeks. Parental readiness must also be determined.

Early and Periodic Screening, Diagnostic and Treatment (EPSDT): Vermont Medicaid will provide comprehensive services and furnish all Medicaid coverable, appropriate, and medically necessary services needed to correct and ameliorate health conditions for Medicaid members under age 21.

Please note, Vermont Medicaid Clinical Criteria is reviewed based on available literature, evidence-based guidelines/standards, Medicaid rule and policy, and Medicare coverage determinations that may be appropriate to incorporate when applicable.

Clinical criteria for repeat service or procedure

If the member is still under one year of age and requires an apnea monitor for an additional period, the same criteria apply as for the initial approval.

Type of service or procedure covered

Apnea monitor and related supplies and services.

Type of service or procedure not covered (this list may not be all inclusive)

Apnea monitor is not covered for siblings of SIDS infants.

Coding guidelines

Please see the Medicaid Portal at <http://vtmedicaid.com/#/feeSchedule> for fee schedules, code coverage, and applicable requirements.

References

- Centers for Medicare and Medicaid Services. (2017). *Early and Periodic Screening, Diagnostic, and Treatment*. Medicaid.gov. <https://www.medicaid.gov/medicaid/benefits/early-and-periodic-screening-diagnostic-and-treatment/index.html>
- Kondamudi, N. P., & Wilt, A. S. (2023). Infant Apnea. In *StatPearls*. StatPearls Publishing. Retrieved January 18, 2024, from <https://www.ncbi.nlm.nih.gov/books/NBK441969/>
- Martin, R. (2022, September 30). *Management of apnea of prematurity*. *UpToDate*. Retrieved January 18, 2024, from <https://www.uptodate.com/contents/management-of-apnea-of-prematurity#H778059835>
- Montenegro, B. L., Amberson, M., Veit, L., Freiberger, C., Dukhovny, D., & Rhein, L. M. (2016). Economics of home monitoring for apnea in late preterm infants. *Respiratory Care*, 62(1), 42–48. <https://doi.org/10.4187/respcare.04954>
- Nosetti, L., Agosti, M., Franchini, M., Milan, V., Piacentini, G., & Zaffanello, M. (2021). Long-term pulmonary damage from SARS-CoV-2 in an infant with brief unexplained Resolved events: A case report. *Frontiers in Medicine*, 8(2021). <https://doi.org/10.3389/fmed.2021.646837>
- Prezioso, G., Perrone, S., Biasucci, G., Pisi, G., Fainardi, V., Strisciuglio, C., Marzano, F. N., Moretti, S., Pisani, F., Tchana, B., Argentiero, A., Neglia, C., Caffarelli, C., Bertolini, P., Bersini, M. T., Canali, A., Voccia, E., Squarcia, A., Ghi, T., & Verrotti, C. (2021). Management of infants with brief resolved unexplained Events (BRUE) and apparent life-threatening Events (ALTE): A RAND/UCLA appropriateness approach. *Life*, 11(2), 171. <https://doi.org/10.3390/life11020171>
- Sodini, C., Paglialonga, L., Antoniol, G., Perrone, S., Principi, N., & Esposito, S. (2022). Home cardiorespiratory monitoring in infants at risk for sudden infant death syndrome (SIDS), apparent life-threatening event (ALTE) or brief resolved unexplained event (BRUE). *Life*, 12(6), 883. <https://doi.org/10.3390/life12060883>
- Tieder, J. S., Bonkowsky, J. L., Etzel, R. A., Franklin, W. H., Gremse, D. A., Herman, B., Katz, E. S., Krilov, L. R., Merritt, J. L., Norlin, C., Percelay, J., Sapien, R. E., Shiffman, R. N., & Smith, M. B. H. (2016). Brief resolved unexplained events (formerly apparent life-threatening events) and evaluation of lower-risk infants. *PEDIATRICS*, 137(5), e20160590–e20160590. <https://doi.org/10.1542/peds.2016-0590>

This document has been classified as public information.