

Oscillatory Devices for the Treatment of Cystic Fibrosis and Other Respiratory Conditions

Policy # 00090

Original Effective Date: 03/24/2003

Current Effective Date: 06/01/2026

Applies to all products administered or underwritten by Blue Cross and Blue Shield of Louisiana and its subsidiary, HMO Louisiana, Inc. (collectively referred to as the "Company"), unless otherwise provided in the applicable contract. Medical technology is constantly evolving, and we reserve the right to review and update Medical Policy periodically.

Investigational or experimental services are not covered. This includes any drug, device, procedure, or service provided under the investigational arm of a clinical trial or clinical study. These services are excluded from coverage under benefits.

When Services May Be Eligible for Coverage

Coverage for eligible medical treatments or procedures, drugs, devices or biological products may be provided only if:

- *Benefits are available in the member's contract/certificate, and*
- *Medical necessity criteria and guidelines are met.*

Based on review of available data, the Company may consider initial use of a high frequency chest compression device to be **eligible for coverage.****

Patient Selection Criteria

Coverage eligibility for initial use of a high frequency chest compression device will be considered when **ALL** of the following criteria are met:

- The device is cleared by the U.S. Food and Drug Administration; **AND**
- Documented presence of bronchopulmonary secretions, need for airway clearance and condition affecting the ability to cough or clear secretions; **AND**
- The individual has **one** of the following diagnoses:
 - Cystic fibrosis; **OR**
 - Chronic diffuse bronchiectasis defined by daily productive cough for at least 6 continuous months or more than 2 times per year exacerbations requiring antibiotic therapy and confirmed by high-resolution or spiral chest computed tomography scan; **OR**
 - Chronic neuromuscular disorder (e.g., muscular dystrophy, spinal muscular atrophy, multiple sclerosis, quadriplegia, and amyotrophic lateral sclerosis) affecting the ability to cough or clear respiratory secretions with prior history of pneumonia or other significant worsening of pulmonary function; **AND**
- There is documentation of:
 - Failure of standard treatments with frequent severe exacerbations of respiratory distress due to inability to clear mucus despite chest physical therapy and oscillatory PEP device if appropriate, **OR**

Oscillatory Devices for the Treatment of Cystic Fibrosis and Other Respiratory Conditions

Policy # 00090

Original Effective Date: 03/24/2003

Current Effective Date: 06/01/2026

- Inability to use other airway clearance therapies including manual chest physical therapy due to **one** or more of the following:
 - The caregiver is unable (physically or mentally) to perform chest physical therapy at the required frequency; **OR**
 - There is no available parental or partner resource to perform chest physical therapy; **AND**
- There is documentation of a 3-month rental trial during which the affected individual and the family (when applicable) demonstrate ability to comply with prescribed usage, documented individual's tolerance and efficacy of device (response to therapy).

When Services Are Eligible for Coverage

Coverage for eligible medical treatments or procedures, drugs, devices or biological products may be provided only if:

- *Benefits are available in the member's contract/certificate, and*
- *Medical necessity criteria and guidelines are met.*

Based on review of available data, the Company considers continued use of a high frequency chest compression device when ongoing use is documented at 6-to-12-month intervals, documentation supports compliance with use at least 67% of the prescribed time, and decrease or stabilization of exacerbations and/or hospitalizations related to respiratory complications to be **eligible for coverage**.**

***Note:** For high frequency chest compression devices with usage meters, documentation should reflect use, in general, at least 67% of the prescribed time.*

Based on review of available data, the Company considers the use of an oscillatory positive expiratory pressure (PEP) device (such as Flutter[®] Mucous Clearance system and Acapella[®] Vibratory PEP Therapy System)‡ in individuals with hyper-secretory lung disease (i.e., production of excessive mucus) who have difficulty clearing the secretions and recurrent disease exacerbations to be **eligible for coverage**.**

When Services Are Considered Investigational

Coverage is not available for investigational medical treatments or procedures, drugs, devices or biological products.

Based on review of available data, the Company considers other applications of high-frequency chest wall compression devices, including but not limited to, their use in individuals with cystic fibrosis or chronic diffuse bronchiectasis other than as specified above, their use as an adjunct to chest physical therapy or their use in other lung diseases, such as chronic obstructive pulmonary disease (COPD), to be **investigational**.*

Based on review of available data, the Company considers intrapulmonary percussive ventilation devices (such as the Bronchotron^{®‡} Transport, Impulsator^{®‡}, IPV^{®‡}-1C, IPV^{®‡}-2C, Phasitron^{®‡},

Oscillatory Devices for the Treatment of Cystic Fibrosis and Other Respiratory Conditions

Policy # 00090

Original Effective Date: 03/24/2003

Current Effective Date: 06/01/2026

Travel Air^{®†}, TXP^{®†}5, and the VDR^{®†}-4) to be **investigational*** for all indications, including but not limited to, cystic fibrosis, bronchiectasis, COPD, and neuromuscular conditions.

Based on review of available data, the Company considers oscillation and lung expansion (OLE) devices (e.g., Volara System, BiWaze Clear, MetaNeb4 System) for treatment of respiratory conditions to be **investigational***.

Based on review of available data, the Company considers the use of an oscillatory positive expiratory pressure (PEP) device when above criteria are not met to be **investigational*.**

When Services Are Considered Not Medically Necessary

High frequency chest compression device replacement or upgrade is considered **not medically necessary**** when requested for convenience or to upgrade to newer technology when the current components remain functional.

Policy Guidelines

For this policy, chronic diffuse bronchiectasis is defined by daily productive cough for at least 6 continuous months or more than 2 times per year exacerbations requiring antibiotic therapy and confirmed by high-resolution or spiral chest computed tomography scan.

For the chest wall compression devices, a trial period to determine patient and family compliance may be considered.

Those who appear to benefit most from the compression devices are adolescents and adults due to lifestyle factors in which manual percussion and postural drainage (P/PD) may essentially not be available. A trial period may also be helpful because individuals' responses to the various types of devices can be variable.

Examples of high frequency chest compression devices:

- ABI Vest Cystic Fibrosis High Frequency Chest Compression (HFCC)
- AffloVest^{®†}
- Frequencer
- inCourage System
- Medpulse Respiratory Vest System
- Monarch^{™†} Airway Clearance System
- Oscillatory Devices
- Respin11^{®†} Bronchial Clearance system
- SmartVest Airway Clearance System
- ThAIRapy Bronchial Drainage System
- ThAIRapy Vest
- Vest Airway Clearance System
- Vest APX System (PVAPX1)

Policy # 00090

Original Effective Date: 03/24/2003

Current Effective Date: 06/01/2026

Background/Overview

Oscillatory devices are designed to move mucus and clear airways; the oscillatory component can be intra- or extrathoracic. Some devices require the active participation of patients. They include oscillating positive expiratory pressure devices, such as Flutter and Acapella, in which the patient exhales multiple times through a device. The Flutter device is a small pipe-shaped, easily portable handheld device, with a mouthpiece at one end. It contains a high-density, stainless steel ball that rests in a plastic circular cone. During exhalation, the steel ball moves up and down, creating oscillations in expiratory pressure and airflow. When the oscillation frequency approximates the resonance frequency of the pulmonary system, the vibration of the airways occurs, resulting in loosening of mucus. The Acapella device is similar in concept but uses a counterweighted plug and magnet to create air flow oscillation.

Other airway clearance techniques also require active patient participation. For example, autogenic drainage and an active cycle breathing technique both involve a combination of breathing exercises performed by the patient. Positive expiratory pressure therapy requires patients to exhale through a resistor to produce positive expiratory pressures during a prolonged period of exhalation. It is hypothesized that the positive pressure supports the small airway such that the expiratory airflow can better mobilize secretions.

Intrapulmonary Percussive Ventilation (IPV) devices are a type of pneumatic pressure breathing device used to facilitate airway clearance and assist with the mobilization and removal of mucus and secretions by internally percussing the airways using high frequency, high flow, and low-pressure bursts of gas delivered via a mouthpiece, mask or endotracheal tube. The user actuates a thumb control to trigger 15 to 25 high frequency pulses of air during inspiration and releases the control to allow for passive exhalation. Airway pressures oscillate between 5 and 35 cm H₂O, and the walls of the airways vibrate synchronously with these oscillations. A Venturi type system, powered by compressed gas, generates oscillations at a rate of 100 to 300 cycles per minute. Some devices are designed to deliver aerosolized medications, such as bronchodilators and mucolytics, as well as other pulmonary therapies such as bi-level positive airway pressure (BiPAP) and continuous positive expiratory pressure (CPEP). The aim of this type of device is to loosen retained secretions by means of these airway oscillations, and it has been investigated in the treatment of individuals with conditions that result in pulmonary secretion retention (particularly that associated with CF), as well as atelectasis. IPV devices can be used in various settings, including hospitals, clinics, and home care.

Oscillation and lung expansion devices (e.g., Volara System, MetaNeb 4 System, and BiWase Clear System) purportedly provide three therapies in a single device: continuous positive expiratory pressure (CPEP), continuous high flow oscillations (CHFO), and nebulizer provided aerosolized medications in a home care setting. These devices are intended for the mobilization of secretions, lung expansion, prevention and treatment of atelectasis, and for the delivery of medication and oxygen during CPEP and CHFO.

Oscillatory Devices for the Treatment of Cystic Fibrosis and Other Respiratory Conditions

Policy # 00090

Original Effective Date: 03/24/2003

Current Effective Date: 06/01/2026

High-frequency chest wall oscillation devices (eg, the Vest Airway Clearance System) are passive oscillatory devices designed to provide airway clearance without active patient participation. The Vest Airway Clearance System provides high-frequency chest compression using an inflatable vest and an air-pulse generator. Large-bore tubing connects the vest to the air-pulse generator. The air-pulse generator creates pressure pulses that inflate and deflate the vest against the thorax, creating high-frequency chest wall oscillation and mobilization of pulmonary secretions.

All of these techniques may be alternatives to daily percussion and postural drainage in patients with cystic fibrosis, also known as chest physical therapy. Daily percussion and postural drainage need to be administered by a physical therapist or another trained adult in the home, often a parent if the patient is a child. The necessity for regular therapy can be particularly burdensome for adolescents or adults who lead independent lifestyles. Oscillatory devices can also potentially be used by patients with other respiratory disorders to promote bronchial secretion drainage and clearance, such as diffuse bronchiectasis and chronic obstructive pulmonary disease. Additionally, they could benefit patients with neuromuscular disease who have impaired cough clearance.

This evidence review addresses the outpatient use of oscillatory devices. This review does not address inpatient device use (e.g., in the immediate postsurgical period).

FDA or Other Governmental Regulatory Approval

U.S. Food and Drug Administration (FDA)

Several oscillatory devices have been cleared for marketing by the U.S. Food and Drug Administration through the 510(k) process, including those listed in Table 1.

Table 1. Select Oscillatory Devices Cleared by the Food and Drug Administration

Device	Manufacturer	Clearance Date
Flutter Mucus Clearance Device	Axcan Scandipharm (for marketing in the United States)	1994
Vest Airway Clearance System	Hill-Rom	1998
Acapella device	DHD Healthcare	1999
RC Cornet ^{®†} Mucus Clearing Device	PARI Respiratory Equipment	1999
inCourage ^{®†} System	RespirTech	2005
Lung Flute ^{®†}	Medical Acoustics LLC	2006
Smartvest Airway Clearance System	Electromed	2013
AerobiKA ^{®†} oscillating PEP device	Trudell Medical	2013

Oscillatory Devices for the Treatment of Cystic Fibrosis and Other Respiratory Conditions

Policy # 00090

Original Effective Date: 03/24/2003

Current Effective Date: 06/01/2026

Vibralung ^{®†} Acoustical Percussor	Westmed	2014
The Vest Airway Clearance System	Hill-Rom	2015
iPEP ^{®†} system including PocketPEP ^{®†} and vPEP ^{®†}	D R Burton Healthcare	2016
The Monarch [™] Airway Clearance System	Hill-Rom	2017
Pulsehaler ^{™†}	Respinova	2021
The Vest APX System	Baxter Healthcare Corporation	2024
LibAirty Airway Clearance System	Synchrony Medical Ltd	2024
AIPEP	Enchant Tek Co. Ltd	2024

PEP: positive expiratory pressure.

U.S. Food and Drug Administration product codes: BYI, BYT, BWF

Devices with IPV capability currently available on the market include multiple Sentec, Inc. products (Lincoln, RI) including the Bronchotron^{®†} Transport, Impulsator^{®†}, IPV^{®†}-1C, IPV^{®†}-2C, Phasitron^{®†}, Travel Air^{®†}, TXP^{®†}5, and the VDR^{®†}-4.

In 2022, the FDA granted 510(k) clearance (K213564) for the marketing of BiWaze Clear System as it was considered substantially equivalent to a predicate device (Volara System and MetaNeb4 System). It is indicated for the “mobilization of secretions, lung expansion therapy, the treatment and prevention of pulmonary atelectasis, and has the ability to provide supplemental oxygen when used with an oxygen supply. It’s intended use is for adults and children over the age of 5 years in the home care setting. It is noted to provide 3 therapies: Positive Expiratory Pressure (PEP), Oscillation, and Nebulize. It can be used with a facemask, mouthpiece, or a trach adapter.

In 2020, the FDA granted 510(k) clearance (K200988) for the marketing of the Volara Oscillation and Lung Expansion device (formerly known as Maximus System) as it was considered substantially equivalent to the predicate device, MetaNeb 4 System. It is indicated for the “mobilization of secretions, lung expansion therapy, the treatment and prevention of pulmonary atelectasis, and it can provide supplemental oxygen when used with oxygen supply. This modification from an earlier predicate device (K192143) was to add the ability to provide aerosol from a nebulizer via a Ventilator Tee adapter during Continuous High Frequency Oscillations (CHFO) mode when connected to a ventilator. It is intended for use in adults and children over 5 years old in the home care setting.

On July 16, 2024, the FDA published a class 1 recall for certain lots of the Volara system single-patient use circuit and blue ventilator adapter assembly. This is due to reports of the handset plug disconnecting from the nebulizer port on the blue ventilator adapter. Baxter Healthcare notified customers to immediately stop all use of the affected lot numbers.

Oscillatory Devices for the Treatment of Cystic Fibrosis and Other Respiratory Conditions

Policy # 00090

Original Effective Date: 03/24/2003

Current Effective Date: 06/01/2026

On June 23, 2022, the FDA published a Class I recall for the Volara system with in-line ventilator adapter (OPTIMUS Handset 2) or Volara patient circuit kit (OPTIMUS OLE AC Patient Circuit Kit). Baxter Healthcare Corporation and its subsidiary company Hill-Rom recalled the Volara system because the in-line ventilator adaptor may prevent home-use individuals from getting enough oxygen from their ventilators.

In 2016, the FDA granted 510(k) clearance (K151689) for the marketing of the MetaNeb 4 System as it was considered substantially equivalent to predicate devices, MetaNeb (K124032) and IPV Bird (K895485). It is indicated for “mobilization of secretions, lung expansion therapy, the treatment and prevention of pulmonary atelectasis, and it can provide supplemental oxygen when used with compressed oxygen. It is intended for use in adults and children over 5 in the home care setting. The system has three modes: aerosol-for delivery of aerosol only. In this mode CHFO and CPEP are not available. CHFO (Continuous High Frequency Oscillation) and CPEP (Continuous Positive Expiratory Pressure).

Rationale/Source

This medical policy was developed through consideration of peer-reviewed medical literature generally recognized by the relevant medical community, U.S. Food and Drug Administration approval status, nationally accepted standards of medical practice and accepted standards of medical practice in this community, technology evaluation centers, reference to regulations, other plan medical policies, and accredited national guidelines.

Oscillatory devices are alternatives to the standard daily percussion and postural drainage method of airway clearance for individuals with cystic fibrosis. There are several types of devices including high-frequency chest compression with an inflatable vest and oscillating positive expiratory pressure devices, such as the Flutter and Acapella devices. Respiratory therapists and other providers may also use oscillatory devices for other respiratory conditions such as diffuse bronchiectasis, chronic obstructive pulmonary disease (COPD), and respiratory conditions associated with neuromuscular disorders.

Summary of Evidence

For individuals who have cystic fibrosis who receive oscillatory devices, the evidence includes randomized controlled trials (RCTs) and a systematic review. Relevant outcomes are symptoms, quality of life, hospitalizations, and medication use. The RCTs reported mixed findings and limitations such as small sample sizes and large dropout rates. A systematic review identified 39 RCTs comparing oscillatory devices with other recognized airway clearance techniques; some were published only as abstracts. Reviewers could not pool findings due to heterogeneity in study designs and outcome measures and concluded that additional adequately powered RCTs with long-term follow-up would be needed to make conclusions about oscillatory devices for cystic fibrosis. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

Oscillatory Devices for the Treatment of Cystic Fibrosis and Other Respiratory Conditions

Policy # 00090

Original Effective Date: 03/24/2003

Current Effective Date: 06/01/2026

For individuals who have bronchiectasis who receive oscillatory devices, the evidence includes RCTs and a systematic review. Relevant outcomes are symptoms, quality of life, hospitalizations, and medication use. A 2015 systematic review identified 7 small RCTs on several types of oscillatory devices; only 1 reported the clinically important outcomes of exacerbations or hospitalizations. Only 3 RCTs reported on quality of life, and findings were mixed. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have chronic obstructive pulmonary disease (COPD) who receive oscillatory devices, the evidence includes RCTs and systematic reviews. Relevant outcomes are symptoms, quality of life, hospitalizations, and medication use. Only a few controlled studies have evaluated oscillatory devices for the treatment of COPD, and they tend to have small sample sizes, short follow-up periods, and limitations in their analyses (eg, lack of intention-to-treat analysis and between-group comparisons). Moreover, the published studies reported mixed findings and did not consistently support the use of oscillatory devices in this population. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have respiratory conditions related to neuromuscular disorders who receive oscillatory devices, the evidence includes 2 RCTs and a systematic review. Relevant outcomes are symptoms, quality of life, hospitalizations, and medication use. One of the RCTs was not powered to detect statistically significant differences. The other RCT, conducted in patients with amyotrophic lateral sclerosis, did not find significant improvements after high-frequency chest wall compression devices versus usual care in primary outcomes, in pulmonary function measures, or in most secondary outcomes. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who receive IPV devices there is limited published data by which to establish the effectiveness for airway clearance. In the available studies, the numbers of subjects have been small, with variable study populations and treatment settings (in-hospital versus outpatient). Outcome measures differed among the studies, including factors such as sputum volume, sputum viscosity, pulmonary function data or radiographic changes, depending on the study design and study population. Studies did not compare IPV to different alternative airway clearance modalities (e.g., Flutter valve, and/or high frequency chest compression [HFCC] device, chest physiotherapy and percussion and postural drainage). The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who receive OLE devices there is limited published data by which to establish the effectiveness for airway clearance. Evidence includes a non-randomized pre-post intervention study at 3 academic facilities in surgical patients (2019), and a systematic review and meta-analysis (2023). Systematic review evaluated the effectiveness (e.g., pulmonary function tests, number of exacerbations per year, objective change in exercise capacity) and acceptability (e.g., individual preference, adherence, quality of life) of conventional chest physiotherapy (CCPT) for people with cystic fibrosis compared to various alternative airway clearance techniques. Outcomes were reported as short-term (7-20 days), medium-term (> 20 days and up to 1 year) and long-term (over 1 year). A total of 21 studies (778 participants) were included (randomized or quasi-randomized controlled

Oscillatory Devices for the Treatment of Cystic Fibrosis and Other Respiratory Conditions

Policy # 00090

Original Effective Date: 03/24/2003

Current Effective Date: 06/01/2026

trials including cross-over design). Participant ages ranged from newborns to 45 years, most studies included children and young people. The interventions varied in the duration of treatments, times per day and periods of comparison making meta-analysis challenging. All evidence was very low certainty. Nineteen studies reported the primary outcomes forced expiratory volume in one second (FEV1) and forced vital capacity (FVC) and found no difference in change from baseline in FEV1 % predicted or rate of decline between groups for either measure. Most studies suggested equivalence between CCPT and alternative ACTs, including positive expiratory pressure (PEP), extrapulmonary mechanical percussion, active cycle of breathing technique (ACBT), oscillating PEP devices (O-PEP), autogenic drainage (AD) and exercise. Where single studies suggested superiority of one ACT, these findings were not corroborated in similar studies; pooled data generally concluded that effects of CCPT were comparable to those of alternative ACTs. This review is limited by a paucity of well-designed, adequately powered, long-term studies. This review cannot yet recommend any single ACT above others. The evidence is insufficient to determine that the technology results in an improvement in the net health outcomes.

Additional Information

2008 Input

Clinical input obtained in 2008 supported the use of oscillatory devices to treat patients with cystic fibrosis and bronchiectasis, in certain situations. The most commonly mentioned clinical criteria were patients who failed or were intolerant of other methods of mucus clearance and patients who lacked caregivers to provide chest physical therapy. Thus, these devices may be considered medically necessary when chest physical therapy has failed, is unavailable, or is not tolerated by the patient.

2024 Input

Clinical input obtained in 2024 supported the use of oscillatory devices to treat patients with respiratory conditions related to neuromuscular disorders, in certain situations. The device should be cleared by the U.S. Food and Drug Administration (FDA), patient should have a documented need for airway clearance, neuromuscular diagnosis leading to ineffective cough and inability to cough well and clear secretions, with documented failure of manual chest physiotherapy, or inability to use manual chest physiotherapy. In the absence of cystic fibrosis or bronchiectasis, there should be evidence of impaired pulmonary function testing and/or history of recurrent hospitalizations due to declining lung function.

Supplemental Information

Clinical Input From Physician Specialty Societies and Academic Medical Centers

While the various physician specialty societies and academic medical centers may collaborate with and make recommendations during this process, through the provision of appropriate reviewers, input received does not represent an endorsement or position statement by the physician specialty societies or academic medical centers, unless otherwise noted.

In response to requests, input was received from 2 academic medical centers while this policy was under review in 2008. Input indicated the available studies demonstrated that these oscillatory

Oscillatory Devices for the Treatment of Cystic Fibrosis and Other Respiratory Conditions

Policy # 00090

Original Effective Date: 03/24/2003

Current Effective Date: 06/01/2026

devices are comparable with chest physical therapy for cystic fibrosis and bronchiectasis. The most commonly mentioned clinical criteria were patients who failed or were intolerant of other methods of mucus clearance and patients who lacked caregivers to provide chest physical therapy. Input did not support the use of oscillatory devices for treatment of chronic obstructive pulmonary disease.

Practice Guidelines and Position Statements

Guidelines or position statements will be considered for inclusion in ‘Supplemental Information’ if they were issued by, or jointly by, a US professional society, an international society with US representation, or National Institute for Health and Care Excellence (NICE). Priority will be given to guidelines that are informed by a systematic review, include strength of evidence ratings, and include a description of management of conflict of interest.

American College of Chest Physicians

In 2006, the guidelines from the American College of Chest Physicians recommended (level of evidence: low) that, in patients with cystic fibrosis, devices designed to oscillate gas in the airway, either directly or by compressing the chest wall, can be considered as an alternative to chest physical therapy.

A 2018 document from the American College of Chest Physicians recommends that airway clearance strategies in children and adults with productive cough due to bronchiectasis related to any cause be individualized to the patient (ungraded, consensus statement).

Cystic Fibrosis Foundation

In 2009, the Cystic Fibrosis Foundation published guidelines on airway clearance therapies based on a systematic review of evidence. The Foundation recommended airway clearance therapies for all patients with cystic fibrosis but stated that no therapy had been demonstrated to be superior to others (level of evidence: fair; net benefit: moderate; grade of recommendation: B).

U.S. Preventive Services Task Force Recommendations

Not applicable.

Medicare National Coverage

There is no national coverage determination. In the absence of a national coverage determination, coverage decisions are left to the discretion of local Medicare carriers.

Ongoing and Unpublished Clinical Trials

Some currently ongoing trials that might influence this review are listed in Table 2.

Table 2. Summary of Key Trials

NCT No.	Trial Name	Planned Enrollment	Completion Date
<i>Ongoing</i>			

Oscillatory Devices for the Treatment of Cystic Fibrosis and Other Respiratory Conditions

Policy # 00090

Original Effective Date: 03/24/2003

Current Effective Date: 06/01/2026

NCT03299231	Oscillating Positive Expiratory Pressure Device for Mucous Clearing in Severe Exacerbation of COPD Requiring Hospitalization Targeting Outcome: A Randomized, Double Blind, Sham Controlled Trial (SIMPLE)	160	Oct 2024
NCT07037303	Comparison of Effectiveness Between Active Cycle of Breathing Techniques (ACBT) and Oscillating Positive Expiratory Pressure (OPEP, Aerobika) Device Assisted Treatment in Patients With Bronchiectasis in Korea: A Randomized Controlled Trial	100	Jul 2028
Unpublished			
NCT05034900	Does Addition of Oscillatory Positive Expiratory Pressure (OPEP) Device to a Chest Physiotherapy Program Provide Further Health Benefits in Children With Bronchiectasis?	42	Sept 2022
NCT04271969	Clinical Effectiveness Of High Frequency Chest Wall Oscillation (HFCWO) In A Bronchiectasis Population	125	Dec 2023
NCT04582214	A Pilot Study of the Use of Oscillation and Lung Expansion (OLE) Therapy in Patients Hospitalized with COVID-19	6	June 2022 (status unknown)
NCT05366010	Evaluation of Oscillation and Lung Expansion (OLE) Using the Volara System for Treatment of Respiratory Complications in Patients with Neuromuscular Disease in the Home Setting	41	June 2023 (terminated)

NCT: national clinical trial.

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Oscillatory Devices for the Treatment of Cystic Fibrosis and Other Respiratory Conditions

Policy # 00090

Original Effective Date: 03/24/2003

Current Effective Date: 06/01/2026

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Oscillatory Devices for the Treatment of Cystic Fibrosis and Other Respiratory Conditions

Policy # 00090

Original Effective Date: 03/24/2003

Current Effective Date: 06/01/2026

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Policy History

Original Effective Date: 03/24/2003

Current Effective Date: 06/01/2026

12/19/2002 Medical Policy Committee review

Oscillatory Devices for the Treatment of Cystic Fibrosis and Other Respiratory Conditions

Policy # 00090

Original Effective Date: 03/24/2003

Current Effective Date: 06/01/2026

03/24/2003	Managed Care Advisory Council approval
12/16/2003	Medical Director review
01/27/2004	Managed Care Advisory Council approval
03/08/2004	Medical Director review
03/16/2004	Medical Policy Committee review. Policy revision addresses investigation status of the use of oscillatory devices for the treatment outside of cystic fibrosis.
03/29/2004	Managed Care Advisory Council approval
03/01/2005	Medical Director review
03/15/2005	Medical Policy Committee review
04/04/2005	Managed Care Advisory Council approval
04/05/2006	Medical Director review
04/19/2006	Medical Policy Committee approval. Format Revisions: FDA/Governmental Regulations, Rationale/Source
03/14/2007	Medical Director review
03/21/2007	Medical Policy Committee approval. Coverage eligibility unchanged.
07/02/2008	Medical Director review
07/16/2008	Medical Policy Committee approval. Coverage eligibility unchanged.
07/02/2008	Medical Director review
07/22/2009	Medical Policy Committee approval. Extensively revised the coverage section.
12/01/2010	Medical Policy Committee review
12/15/2010	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
12/08/2011	Medical Policy Committee review
12/21/2011	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
12/06/2012	Medical Policy Committee review
12/19/2012	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
12/12/2013	Medical Policy Committee review
12/18/2013	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
08/03/2015	Coding update: ICD10 Diagnosis code section added; ICD9 Procedure code section removed.
09/03/2015	Medical Policy Committee review
09/23/2015	Medical Policy Implementation Committee approval. Added IPV to policy statements, replaced Flutter and Acapella with “oscillatory PEP devices” in policy statements. Updated rationale and references.
09/08/2016	Medical Policy Committee review
09/21/2016	Medical Policy Implementation Committee approval. Patients with respiratory conditions associated with neuromuscular disorders added to investigational statement. In title, “disorders” changed to “conditions”.
01/01/2017	Coding update: Removing ICD-9 Diagnosis Codes
09/07/2017	Medical Policy Committee review

Oscillatory Devices for the Treatment of Cystic Fibrosis and Other Respiratory Conditions

Policy # 00090

Original Effective Date: 03/24/2003

Current Effective Date: 06/01/2026

09/20/2017	Medical Policy Implementation Committee approval. ‘Not medically necessary’ statement removed and “patients with cystic fibrosis or chronic diffuse bronchiectasis other than as specified above” added to the investigational statement.
09/06/2018	Medical Policy Committee review
09/19/2018	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
09/05/2019	Medical Policy Committee review
09/11/2019	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
09/03/2020	Medical Policy Committee review
09/09/2020	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
09/02/2021	Medical Policy Committee review
09/08/2021	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
09/01/2022	Medical Policy Committee review
09/14/2022	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
03/02/2023	Medical Policy Committee review
03/08/2023	Medical Policy Implementation Committee approval. Added examples of oscillatory PEP devices. Added a new investigational statement. “Based on review of available data, the Company considers intrapulmonary percussive ventilation devices (such as the Percussionaire® devices and the Volara™ System)‡ to be investigational* for all indications, including but not limited to, cystic fibrosis, bronchiectasis, COPD, and neuromuscular conditions associated with retained airway secretions or atelectasis.”
03/07/2024	Medical Policy Committee review
03/13/2024	Medical Policy Implementation Committee approval. Added investigational statement for oscillatory positive expiratory pressure (PEP) device to deny when criteria not met.
03/28/2024	Coding update
09/18/2024	Coding update
03/06/2025	Medical Policy Committee review
03/12/2025	Medical Policy Implementation Committee approval. Criteria extensively rewritten.
03/05/2026	Medical Policy Committee review
03/11/2026	Medical Policy Implementation Committee approval. Last criteria bullet changed to “There is documentation of a 3-month rental trial during which the affected individual and the family (when applicable) demonstrates ability to comply with prescribed usage, documented individual’s tolerance and efficacy of device (response to therapy).”. Also added new investigational statement. “Based on review of available data, the Company considers oscillation and lung expansion (OLE) devices (e.g., Volara System, BiWaze Clear, MetaNeb4 System) for

Oscillatory Devices for the Treatment of Cystic Fibrosis and Other Respiratory Conditions

Policy # 00090

Original Effective Date: 03/24/2003

Current Effective Date: 06/01/2026

treatment of respiratory conditions to be investigational.” Also added investigational position for OLE devices.

Next Scheduled Review Date: 03/2027

Coding

The five character codes included in the Louisiana Blue Medical Policy Coverage Guidelines are obtained from Current Procedural Terminology (CPT®)†, copyright 2025 by the American Medical Association (AMA). CPT is developed by the AMA as a listing of descriptive terms and five character identifying codes and modifiers for reporting medical services and procedures performed by physician.

The responsibility for the content of Louisiana Blue Medical Policy Coverage Guidelines is with Louisiana Blue and no endorsement by the AMA is intended or should be implied. The AMA disclaims responsibility for any consequences or liability attributable or related to any use, nonuse or interpretation of information contained in Louisiana Blue Medical Policy Coverage Guidelines. Fee schedules, relative value units, conversion factors and/or related components are not assigned by the AMA, are not part of CPT, and the AMA is not recommending their use. The AMA does not directly or indirectly practice medicine or dispense medical services. The AMA assumes no liability for data contained or not contained herein. Any use of CPT outside of Louisiana Blue Medical Policy Coverage Guidelines should refer to the most current Current Procedural Terminology which contains the complete and most current listing of CPT codes and descriptive terms. Applicable FARS/DFARS apply.

CPT is a registered trademark of the American Medical Association.

Codes used to identify services associated with this policy may include (but may not be limited to) the following:

Code Type	Code
CPT	No codes
HCPCS	A7021, A7025, A7026, E0469, E0480, E0481, E0483, E0484, E1399 Delete code effective 06/01/2026: E0468
ICD-10 Diagnosis	E84.0-E84.9, J47.0-J47.9

*Investigational – A medical treatment, procedure, drug, device, or biological product is Investigational if the effectiveness has not been clearly tested and it has not been incorporated into standard medical practice. Any determination we make that a medical treatment, procedure, drug, device, or biological product is Investigational will be based on a consideration of the following:

- A. Whether the medical treatment, procedure, drug, device, or biological product can be lawfully marketed without approval of the U.S. Food and Drug Administration (FDA) and whether such approval has been granted at the time the medical treatment, procedure, drug, device, or biological product is sought to be furnished; or

Oscillatory Devices for the Treatment of Cystic Fibrosis and Other Respiratory Conditions

Policy # 00090

Original Effective Date: 03/24/2003

Current Effective Date: 06/01/2026

B. Whether the medical treatment, procedure, drug, device, or biological product requires further studies or clinical trials to determine its maximum tolerated dose, toxicity, safety, effectiveness, or effectiveness as compared with the standard means of treatment or diagnosis, must improve health outcomes, according to the consensus of opinion among experts as shown by reliable evidence, including:

1. Consultation with technology evaluation center(s);
2. Credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community; or
3. Reference to federal regulations.

****Medically Necessary (or “Medical Necessity”)** - Health care services, treatment, procedures, equipment, drugs, devices, items or supplies that a Provider, exercising prudent clinical judgment, would provide to a patient for the purpose of preventing, evaluating, diagnosing or treating an illness, injury, disease or its symptoms, and that are:

- A. In accordance with nationally accepted standards of medical practice;
- B. Clinically appropriate, in terms of type, frequency, extent, level of care, site and duration, and considered effective for the patient's illness, injury or disease; and
- C. Not primarily for the personal comfort or convenience of the patient, physician or other health care provider, and not more costly than an alternative service or sequence of services at least as likely to produce equivalent therapeutic or diagnostic results as to the diagnosis or treatment of that patient's illness, injury or disease.

For these purposes, “nationally accepted standards of medical practice” means standards that are based on credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community, Physician Specialty Society recommendations and the views of Physicians practicing in relevant clinical areas and any other relevant factors.

‡ Indicated trademarks are the registered trademarks of their respective owners.

NOTICE: If the Patient’s health insurance contract contains language that differs from the BCBSLA Medical Policy definition noted above, the definition in the health insurance contract will be relied upon for specific coverage determinations.

NOTICE: Medical Policies are scientific based opinions, provided solely for coverage and informational purposes. Medical Policies should not be construed to suggest that the Company recommends, advocates, requires, encourages, or discourages any particular treatment, procedure, or service, or any particular course of treatment, procedure, or service.

NOTICE: Federal and State law, as well as contract language, including definitions and specific contract provisions/exclusions, take precedence over Medical Policy and must be considered first in determining eligibility for coverage.

NOTICE: If an authorization for an ongoing course of treatment has been provided to a member and the member changes from one health plan to another health plan (e.g., a member moves from carrier A to Louisiana Blue), Louisiana Blue may honor the previous health plan’s authorization for

Oscillatory Devices for the Treatment of Cystic Fibrosis and Other Respiratory Conditions

Policy # 00090

Original Effective Date: 03/24/2003

Current Effective Date: 06/01/2026

the same service under the same type of in-network benefit for a 90-day transition period. Documentation of the authorization for the ongoing course of treatment from the previous health plan must be provided to us by the member or their provider and the services provided for the course of treatment must otherwise be a covered service under the Louisiana Blue health plan. This provision does not apply to medications covered under the plan's pharmacy benefit.