



High Frequency Chest Compression Devices

LOB(s): <input checked="" type="checkbox"/> Commercial <input checked="" type="checkbox"/> Medicare	State(s): <input checked="" type="checkbox"/> Idaho <input checked="" type="checkbox"/> Montana <input checked="" type="checkbox"/> Oregon <input checked="" type="checkbox"/> Washington <input type="checkbox"/> Other:
<input checked="" type="checkbox"/> Medicaid	<input checked="" type="checkbox"/> Oregon <input type="checkbox"/> Washington

Enterprise Policy

PacificSource is committed to assessing and applying current regulatory standards, widely-used treatment guidelines, and evidenced-based clinical literature when developing clinical criteria for coverage determination. Each policy contains a list of sources (references) that serves as the summary of evidence used in the development and adoption of the criteria. The evidence was considered to ensure the criteria provide clinical benefits that promote patient safety and/or access to appropriate care. Each clinical policy is reviewed, updated as needed, and readopted, at least annually, to reflect changes in regulation, new evidence, and advancements in healthcare.

Clinical Guidelines are written when necessary to provide guidance to providers and members in order to outline and clarify coverage criteria in accordance with the terms of the Member's policy. This Clinical Guideline only applies to PacificSource Health Plans, PacificSource Community Health Plans, and PacificSource Community Solutions in Idaho, Montana, Oregon, and Washington. Because of the changing nature of medicine, this list is subject to revision and update without notice. This document is designed for informational purposes only and is not an authorization or contract. Coverage determinations are made on a case-by-case basis and subject to the terms, conditions, limitations, and exclusions of the Member's policy. Member policies differ in benefits and to the extent a conflict exists between the Clinical Guideline and the Member's policy, the Member's policy language shall control. Clinical Guidelines do not constitute medical advice nor guarantee coverage.

Background

Bronchial hygiene therapy is a broad term used to describe various airway clearance techniques that are indicated for patients with compromised airway clearance. The purpose of bronchial hygiene therapy is to improve ventilation and gas exchange by clearing secretions, thus reducing airway obstruction. This therapy is useful in diseases such as cystic fibrosis and bronchiectasis, and may include the following techniques:

1. Chest physiotherapy, which consists of postural drainage, percussion, vibration, coughing, and suctioning
2. Breathing exercises, such as huffing and diaphragmatic breathing used in spontaneously breathing patients
3. Manual hyperventilation, used for intubated patients

High frequency chest compression (HFCC) devices, also known as high frequency chest wall oscillation devices, are indicated as alternatives to conventional chest physiotherapy in patients with impaired ability to clear secretions from the respiratory tract. Oscillatory devices be used by patients with respiratory disorders in the home to promote bronchial secretion drainage and clearance. Additionally, they could benefit patients with neuromuscular disease who have impaired secretion management and cough clearance.

HFCC devices consist of an air-pulse generator, a connector hose, and an inflatable vest which is worn by the patient over the thorax. Pressure pulses created by the generator cause the vest to alternately

inflate and deflate which creates high frequency chest wall oscillation. The oscillation loosens the sputum so it can be more easily expectorated by the patient.

Examples of available HFCC devices include but are not limited to the following:

- ABI Vest Airway Clearance System (Entela, Inc.)
- Frequencer TM v2x Airway Clearance Device (DYMESO, Inc.)
- MedPulse® Respiratory Vest System Model 2000ez (Electromed, Inc.)
- Respln 11 Bronchial Airway Clearance System (Resplnnovation SAS)
- SmartVest Airway Clearance System (Electromed Inc.)
- The inCourage system (Respirtech Inc.)
- The Vest Airway Clearance System (Hill-Rom)

Criteria

Commercial

Prior authorization is required for rental or purchase

- I. PacificSource may consider high frequency chest compression (HFCC) devices medically necessary for treatment of cystic fibrosis when **ALL** of the following criteria are met:
 1. The member has a diagnosis of cystic fibrosis
 2. The member has failed standard chest physiotherapy or standard chest physiotherapy is unavailable or contraindicated
- II. PacificSource may consider high frequency chest compression (HFCC) devices medically necessary for treatment of chronic bronchiectasis when **ALL** of the following criteria are met:
 1. Bronchiectasis has been confirmed by CT scan
 2. The member has had daily productive cough for at least 6 continuous months, or the member has had more than two exacerbations of bronchiectasis requiring antibiotic therapy in the past twelve months
- III. PacificSource may consider high frequency chest compression (HFCC) devices medically necessary for lung transplant recipients when **ALL** of the following criteria are met:
 1. Member is within the first 6 months post-operatively
 2. When member is unable to tolerate standard chest physiotherapy
- IV. PacificSource may consider high frequency chest compression (HFCC) devices medically necessary for treatment of neuromuscular diseases when the following criteria is met:
 1. When the member has failed standard chest physiotherapy **OR** standard chest physiotherapy is unavailable or contraindicated.

Medicaid

PacificSource Community Solutions follows Guideline Note 229 of the Health Evidence Review Commission (HERC) Prioritized List of Health Services and the general coverage requirements, limitations, and exclusions outlined in OARs 410-141-3820, 410-141-3825, and 410-120-1200 to determine coverage of High Frequency Chest Compression Devices in adult members, 21 years and older.

PacificSource Community Solutions (PCS) follows EPSDT coverage requirements in OAR 410-151-0002 for members under the age of 21. Coverage of High Frequency Chest Compression Devices is determined through case-by-case reviews for EPSDT Medical Necessity and EPSDT Medical Appropriateness defined in OAR 410-151-0001. Guideline Note 229 may be used to assist in informing a determination of medical necessity and medical appropriateness during the individual case review.

Medicare

PacificSource Medicare uses Local Coverage Determination L33785 for High Frequency Chest Wall Oscillation Devices.

Experimental/Investigation/Unproven

PacificSource considers high frequency chest compression systems to be experimental, investigational, or unproven for other indications:

Coding Information

The following list of codes are for informational purposes only and may not be all-inclusive. Deleted codes and codes which are not effective at the time the service is rendered may not be eligible for reimbursement.

- A7025 High frequency chest wall oscillation system vest, replacement for use with patient owned equipment, each
- A7026 High frequency chest wall oscillation system hose, replacement for use with patient owned equipment, each
- E0483 High frequency chest wall oscillation air-pulse generator system, (includes hoses and vest), each.

*HCPCS codes, descriptions and materials are copyrighted by Centers for Medicare and Medicaid Services (CMS)

References

Chakravorty, I., Chahal, K., & Austin, G. (2011). A pilot study of the impact of high-frequency chest wall oscillation in chronic obstructive pulmonary disease patients with mucus hypersecretion. *International journal of chronic obstructive pulmonary disease*, 6, 693–699.

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Fainardi, V., Longo, F., Faverzani, S., Tripodi, M. C., Chetta, A., & Pisi, G. (2011). Short-term effects of high-frequency chest compression and positive expiratory pressure in patients with cystic fibrosis. *Journal of clinical medicine research*, 3(6), 279–284.

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Oregon Health Authority. Health Evidence Review Commission (HERC). (8/11/2022). Coverage Guidance: High Frequency Chest Wall Oscillation Devices. https://www.oregon.gov/oha/HPA/DSI-HERC/EvidenceBasedReports/High-frequency-chest-wall-oscillation-devices-Coverage-Guidance-APPROVED_8-11-22.pdf

Washington State Health Care Authority, Health Technology Reviews, 2023. <https://www.hca.wa.gov/about-hca/programs-and-initiatives/health-technology-assessment/health-technology-reviews>

Wilson, L. M., Morrison, L., & Robinson, K. A. (2019). Airway clearance techniques for cystic fibrosis: an overview of Cochrane systematic reviews. *The Cochrane database of systematic reviews*, 1(1), CD011231 <https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD011231.pub2/full>

The Health Evidence Review Commission (HERC) Prioritized List of Health Services <https://www.oregon.gov/oha/HSD/OHP/Pages/Prioritized-List.aspx>

Oregon Administrative Rules (OARs). Oregon Health Authority. Health Systems: Medical Assistance Programs – Chapter 410 <https://secure.sos.state.or.us/oard/displayChapterRules.action?selectedChapter=87>

Appendix

Policy Number:

Policy Type: Enterprise

Effective: 10/1/2020

Next review: 2/1/2026

Author(s):

Depts.: Health Services

Applicable regulation(s): OARs 410-120-1200, 410-141-3820, 410-141-3825410-141-3830, 410-151-0000 through 410-151-0003, Guideline Note 229 OHP Prioritized List of Health Services.

Commercial OPs: 12/2024

Government OPs: 01/2025