

	<p align="center"><b>Secretion and Mucous Clearance Devices Guideline</b></p>	
<p align="center"><b>Guideline #</b> 10577</p>	<p align="center"><b>Categories</b> Administration / Non-Clinical →TCHP Utilization Management</p>	<p align="center"><b>This Guideline Applies To:</b> Texas Children's Health Plan</p>
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**GUIDELINE STATEMENT:** Texas Children's Health Plan (TCHP) performs authorization on the following secretion and mucous clearance devices:

- Mechanical insufflator-exsufflator devices, e.g. cough assist machine (procedure code E0482)
- High-frequency Chest Wall Oscillation (HFCWO) System (procedure code E0483)
- Intrapulmonary percussive ventilation (IPV) system
- Electrical percussors (procedure code E0480)
- Intermittent Positive Pressure Breathing (IPPB) devices (procedure code E0500)

**DEFINITIONS:**

**Electrical Percussor:** Electrical device used chest percussion or vibration

**High-frequency Chest Wall Oscillation (HFCWO) System:** Airway clearance device that loosens mucus by applying vibrations at different frequencies to the chest wall via a wearable vest.

**Cough augmentation devices (e.g., mechanical insufflator-exsufflator or cough assist machine):** Airway clearance device that gives positive pressure to the airway and then negative pressure; stimulating natural cough.

**Percussion Cup:** Cup used for manual chest physical therapy (also called pounding and postural drainage)

**Intrapulmonary percussive ventilation (IPV) system:** An airway clearance device that delivers short bursts of air through a mouthpiece or mask in order to loosen mucus

**Intermittent Positive Pressure Breathing (IPPB):** A device used to provide short-term or intermittent positive pressure breaths for the purpose of augmenting lung expansion, delivering aerosol medication, or assisting ventilation. IPPB is not the therapy of first choice for delivering aerosol or as a method of lung hyperinflation in spontaneously breathing patients

## PRIOR AUTHORIZATION GUIDELINE

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1. All requests for prior authorization for Secretion and mucous clearance devices are received via online submission, fax, phone or mail by the Utilization Management Department and processed during normal business hours.
2. To request prior authorization for a Secretion and mucous clearance device, clinical documentation to support the medical necessity for the selected Secretion and mucous clearance device must be provided
  - 2.1. Prior authorization requests for the rental or purchase of secretion and mucus clearance devices requires submission of a Texas Medicaid Prior Authorization Request for Secretion and Mucus Clearance Devices - Initial Request form or a Texas Medicaid Prior Authorization Request for Secretion and Mucus Clearance Devices -Renewal Request form completed, signed, and dated by the member's treating physician
3. Secretion and mucus clearance devices may be considered medically necessary when the documentation clearly shows that the member has one of:
  - 3.1. Evidence of retained respiratory secretions
  - 3.2. Evidence that the client is having difficulty with the clearance of respiratory secretions
  - 3.3. Atelectasis caused by mucus plugging
4. The following secretion and mucus clearance devices or procedures **DO NOT** require prior authorization:
  - 4.1. Incentive spirometers (procedure code A9284)
  - 4.2. Mucous clearance valved chamber (oscillating positive expiratory pressure (PEP), such as the Flutter, Accapella, or AeroBika devices) (procedure code S8185)
  - 4.3. Percussion Cups (Procedure code E1399)
  - 4.4 Heat moisture exchangers (procedure code A4483) only when used for mechanically ventilated clients who own their ventilator
  - 4.5 Tracheostoma filters, such as Thermovent T( procedure code A4481) for clients with a tracheostomy who are not mechanically ventilated.
5. The following secretion and mucus clearance devices **DO** require prior authorization:

- 5.1. High-frequency chest wall oscillation (HFCWO or CPT Vest) system (procedure code E0483)
  - 5.2. Insufflation-exsufflation devices (e.g. Cough Assist, Vital Cough) (procedure code E0482)
  - 5.3. Electrical percussors (procedure code E0480)
  - 5.4. Intrapulmonary percussion ventilation (IPV) system (procedure code E0481)
  - 5.5. Intermittent positive pressure breathing (IPPB) devices (procedure code E0500)
6. An electrical percussor (procedure code E0480) may be considered for rental or purchase with documentation of medical necessity including a description of all previous courses of therapy (such as manual percussion and postural drainage (P&PD) or valved devices) and why they did not adequately assist the member with airway mucus clearance.
- 6.1. An electrical percussor (procedure code E0480) will be considered purchased after 10 months of rental through the same provider and a request for purchase or further rental will not be considered.
  - 6.2. Continued rental requests from an out of network provider may be approved through the 10 month rent-to-purchase period if any of the following apply:
    - 6.2.1. The provider was in-network at the time of initial rental request
    - 6.2.2. The member received the requested services through a prior authorization from either another Managed Care Organization (MCO) or Fee for Service (FFS) provider
7. A cough augmentation device (mechanical insufflator-exsufflator or cough assist machine) (procedure code E0482) may be considered for prior authorization for rental for members who have chronic pulmonary disease or neuromuscular disorders (including but not limited to spinal cord injury with quadriplegia, muscular dystrophies and spinal muscular atrophy) that affect the respiratory musculature, causing a weak, ineffectual, or absent cough.
- 7.1. Prior authorization of a cough augmentation device may be considered for an initial three-month rental period with all of the following documentation completed, signed, and dated by the client's treating physician:
    - 7.1.1. Diagnosis and medical history including: recent illnesses, complications, medications used, history of recent hospitalizations, and results of pulmonary function studies (if applicable) due to diagnosis related complications.
    - 7.1.2. Clinical evidence supporting natural deterioration to the level of requiring the use of a cough augmentation device to clear the airways, such as pulmonary function studies (PFTs) or peak cough flow (PCF) to assess cough strength in an adolescent or adult with a result < 270 lpm.

- 7.1.3. Medical reasons why the member parent, guardian, or caregiver cannot perform chest physiotherapy, or why such therapies were previously not effective.
  - 7.1.4. Following the initial three-month trial period, requests for prior authorization recertification for continued rental must include documentation by the member's treating physician that the member is compliant with the use of the equipment and that the treatment is effective.
  - 7.1.5. Continued rental requests from an out of network provider may be approved for up to 90 days if any of the following apply:
    - 7.1.5.1 The provider was in-network at the time of initial rental request
    - 7.1.5.2 The member received the requested services through a prior authorization from either another Managed Care Organization (MCO) or Fee for Service (FFS) provider
8. A high-frequency chest wall oscillation (HFCWO) system (procedure code E0483) may not be prior authorized as first line treatment. The member must have trialed other percussion and postural drainage therapy, for a minimum of three months before a request for a HFCWO system will be considered for prior authorization. Exception may be considered for members with Cystic Fibrosis and bronchiectasis with chronic mucopurulent bronchitis
- 8.1. A request for a HFCWO system may be considered for prior authorization for initial three-month rental when submitted with documentation addressing why prior therapy was ineffective and documentation of one of the following conditions.
    - 8.1.1. Bronchiectasis confirmed by CT scan and characterized by either a continuous daily productive cough for 6 months or frequent exacerbations of pulmonary infections (i.e., more than 2 times per year) requiring antibiotic therapy.
    - 8.1.2. Cystic fibrosis or other documented chronic suppurative endobronchitis.
    - 8.1.3. Chronic neuromuscular disorder affecting the member's ability to cough or clear respiratory secretions.
    - 8.1.4. Weak ineffective or absent cough caused by chronic pulmonary disease or a neuromuscular disorder leading to respiratory complications as a result of inability to clear mucous.
    - 8.1.5. Other appropriate (age, ability, skill) modes of chest physiotherapy (such as percussion and postural drainage therapy or mechanical device) that have been trialed by the member, parent, guardian, or caregiver before the HFCWO request and the reasons the trialed therapy was ineffective or contraindicated.
    - 8.1.6. Documentation that any previous use of an HFCWO device did not result in aspiration, exacerbation of a gastrointestinal or pulmonary condition, or exacerbation of seizure activity.
    - 8.1.7. If at the end of the initial three-month rental a determination of purchase cannot be made, an additional three month-rental may be considered for prior

authorization when the request is submitted with the above documentation and documentation of compliance with ordered therapy.

8.2. If at the end of the initial three-month rental, the HFCWO system (procedure code E0483) is documented to be effective, purchase of the system may be considered for prior authorization when submitted with all the following required documentation:

8.2.1 The results of the HFCWO system therapy

8.2.2 The effectiveness and tolerance of the system that includes evidence of vest tolerance

8.2.3 The treating physician's description and assessment of the effectiveness and tolerance of the system that includes the member's diagnosis and the following background history:

8.2.3.1 Respiratory related complications and evidence of a decrease in these complications.

8.2.3.2 Recent hospitalizations related to the member's respiratory condition and evidence of shorter hospital length(s) of stay

8.2.3.3 Evidence of decreased hospitalizations

8.2.3.4 Evidence of the frequency of use and compliance graphs for the 3-month period showing the frequency prescribed by the physician for each day and use of the system at least 50 percent of the prescribed time.

8.2.3.5 A statement from the treating physician that the previous use of the HFCWO device has not resulted in aspiration, exacerbation of a gastrointestinal or pulmonary issue, or exacerbation of seizure activity.

8.3 A HFCWO system will be considered purchased after 10 months of rental through the same provider and a request for purchase or further rental will not be considered.

8.4 A HFCWO system purchase will be reimbursed only once per lifetime, due to the lifetime warranty provided by the manufacturer.

8.4.1 Requests for a vest replacement (procedure code A7025) must include documentation that supports the client can no longer wear the vest due to changes in the client's condition such as changes in height, weight, or skin abrasions.

9. An Intrapulmonary percussive ventilation (IPV) system (procedure code E0481) may be considered for prior authorization for initial three-month rental.

9.1 IPV may be considered for prior authorization for members where a high-frequency chest wall oscillation (HFCWO) system is contraindicated and who have chronic pulmonary disease or neuromuscular disorders (including spinal cord injury with

quadriplegia) that affect the respiratory musculature, causing a weak, ineffectual, or absent cough with documentation of one of the following conditions:

- Bronchiectasis confirmed by CT scan and characterized by either a continuous daily productive cough for 6 months or frequent exacerbations of pulmonary infections (i.e., more than 2 times per year) requiring antibiotic therapy
- 9.1.2 History of a chronic respiratory illness with inability to adequately clear respiratory secretions leading to complications such as chronic bronchitis or recurrent pneumonia

9.2 Documentation of other appropriate (age, ability, skill) modes of chest physiotherapy (such as percussion and postural drainage therapy or mechanical device) that have been trialed by the member's parent, guardian, or caregiver for a minimum of three months before the IPV request and the reasons the trialed therapy was ineffective or contraindicated.

9.3 Documentation from the member's pulmonologist describing medical reasons for why a high-frequency chest wall oscillation (HFCWO) system is contraindicated.

9.4 Request for Intrapulmonary percussive ventilation (IPV) system are not a benefit if requested primarily for the convenience of the caregiver.

9.5 An Intrapulmonary percussive ventilation (IPV) system is a rental only device

9.5.1 Following the initial three month trial period, requests for prior authorization recertification for continued rental must include documentation by the member's treating physician that the member is compliant with the use of the equipment and that the treatment is effective.

9.5.2 Continued rental requests from an out of network provider may be approved for up to 90 days if any of the following apply:

9.5.2.1 The provider was in-network at the time of initial rental request

9.5.2.2 The member received the requested services through a prior authorization from either another Managed Care Organization (MCO) or Fee for Service (FFS) provider

9.6 A member may **not** have both a high-frequency chest wall oscillation (HFCWO) system and intrapulmonary percussive ventilation IPV system as these devices have similar actions on mucus clearance

9.6.1 Exception may be considered with detailed letter of medical necessity from the member's treating pulmonologist describing how one device which has been purchased has failed to meet the member's airway clearance needs and the medical necessity for the other device. If during the rental period, one device must be discontinued to obtain the other device.

9.6.2 A member with severe neuromuscular disease, ineffective cough, and recurrent pneumonia may require both mechanical insufflator-exsufflator (cough assist) and a

chest wall oscillation system (HFCWO or IPV). This combination may be requested with letter of medical necessity from the member's treating pulmonologist describing the history of recurrent pneumonia, ineffective cough, and need to loosen mucus to adequately clear respiratory secretions.

10. Intermittent Positive-Pressure Breathing (IPPB) Devices. IPPB is **NOT** the therapy of first choice for delivering aerosol or as a method of lung hyperinflation when other therapies can reliably meet the clinical objectives prescribed for the member.

10.1 Rental of the IPPB device includes all supplies, such as humidification and tubing.

10.2 IPPB may be considered with documentation of ineffective response to treatment when other modalities, such as a cough assist device, have failed, when prescribed in accordance with the American Association for Respiratory Care (AARC) recommendations, and there is medical necessity to improve lung expansion due to one of the following:

10.2.1 The presence of clinically significant pulmonary atelectasis when other forms of therapy have been unsuccessful or the member cannot cooperate with the treatment.

10.2.2 The inability to clear secretions adequately due to pathology that severely limits the member's ability to ventilate or cough effectively and failure to respond to other modes of treatment, including but not limited to:

10.2.2.1 Neuromuscular disorders or kyphoscoliosis with associated decreases in lung volumes and capacities.

10.2.2.2 Presence of acute severe bronchospasm or exacerbated COPD that fails to respond to other therapy

10.2.3 Deliver aerosol medication when other methods of delivery have been unsuccessful including, but not limited to:

10.2.3.1 The member who has fatigue as a result of ventilatory muscle weakness such as neuromuscular disease, kyphoscoliosis, or spinal cord injury.

10.2.3.2 The member with severe hyperinflation where IPPB may decrease dyspnea and discomfort during nebulized therapy.

11. Requests that do not meet the criteria established by this guideline will be reviewed by a TCHP Medical Director/Physician Reviewer on a case by case basis.

12. Preauthorization is based on medical necessity and not a guarantee of benefits or eligibility. Even if preauthorization is approved for treatment or a particular service, that authorization applies only to the medical necessity of treatment or service. All services are subject to benefit limitations and exclusions. Providers are subject to State and Federal Regulatory compliance and failure to comply may result in retrospective audit and potential financial recoupment.

**RELATED DOCUMENTS:**

**REFERENCES:**

**Government Agency, Medical Society, and Other Publications:**

Texas Medicaid Provider Procedure Manual – Durable Medical Equipment, Medical Supplies, and Nutritional Products Handbook. Accessed July 24, 2023. [2\\_06\\_DME\\_and\\_Supplies.fm \(tmhp.com\)](https://www.tmhpa.com/206-DME-and-Supplies)

**Peer Reviewed Publications:**

Lauwers E, Ides K, Van Hoorenbeeck K, Verhulst S. The effect of intrapulmonary percussive ventilation in pediatric patients: A systematic review. *Pediatric Pulmonology*. 2018;53:1463–1474

Chapter 45: Pulmonary Complications of Neuromuscular Disorders and Chapter 46: Airway Clearance Techniques in Light MJ ed. *Pediatric Pulmonology American Academy of Pediatrics*, 2011

Hardy KA. Chapter 113: Airway Clearance Devices and Techniques. In Stokes DC and Dozor AJ, eds. *Pediatric Pulmonology, Asthma, and Sleep Medicine: A Quick Reference Guide*. American Academy of Pediatrics, Itasca IL, 2018

Schechter MS. Airway clearance applications in infants and children. *Respiratory Care*. 2007;52:1382–1391

Perrin C, Unterborn JN, Ambrosio CD, Hill NS. Pulmonary complications of chronic neuromuscular diseases and their management. *Muscle Nerve*. 2004; 29:5–27

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