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Oscillating Devices for the Treatment of Respiratory Conditions

DESCRIPTION

This policy addresses the use of oscillating devices in the outpatient setting only.

Oscillatory devices are intended to promote the clearance of respiratory secretions. These devices include high-frequency chest compression with an inflatable vest, oscillating positive expiratory pressure devices, and intrapulmonary percussive ventilation. These devices have been primarily investigated as an alternative (not adjunct) to the standard daily percussion and postural drainage method of airway clearance for individuals with cystic fibrosis. They have been proposed for use in other respiratory conditions such as chronic obstructive pulmonary disorder (COPD), bronchiectasis, or neuromuscular conditions. The oscillatory component can be intra- or extrathoracic.

- The oscillatory positive expiratory pressure devices (e.g., Flutter® and Acapella®) are small pipe-shaped, portable hand-held devices, with a mouthpiece at one end. The Flutter device 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, 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.

- High frequency chest wall oscillation devices (e.g., the Vest Airway Clearance System®) are passive oscillatory devices designed to provide airway clearance without active 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.

- The intrapulmonary percussive ventilator (IPV) device, e.g., Impulsator® (Percussionaire) is another type of passive oscillatory device. This device combines internal thoracic percussion through rapid mini-bursts of inhaled air and continuous therapeutic aerosol delivered through a nebulizer.

POLICY

- Oscillating devices for the treatment of respiratory conditions are considered ***medically necessary*** if the medical appropriateness criteria are met. **(See Medical Appropriateness below.)**

- High frequency chest wall oscillation devices and intrapulmonary percussive ventilation devices for other uses or for the treatment of other conditions/diseases including, but not limited to the following are considered ***investigational*****:**
  - As an adjunct to chest physical therapy
  - For use in other lung diseases, including but not limited to chronic obstructive pulmonary disease (COPD)

- Any device utilized for this procedure must have FDA approval specific to the indication, otherwise it will be considered ***investigational.***

MEDICAL APPROPRIATENESS

- Oscillating devices are considered medically appropriate if **ALL** of the following are met:
  - Types of devices used are **ANY ONE** of the following:

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- Hand-held oscillatory positive expiratory pressure device when **ALL** of the following are met:
  - Documented diagnosis of hypersecretory lung disease that requires assisted mucus clearing, for example: bronchiectasis, cystic fibrosis or a neuromuscular disease (e.g., Duchenne Muscular Dystrophy)
  - Documentation of failure of standard chest physical therapy to clear secretions
  - Documentation of recurrent disease exacerbations
  - Device is used as an alternative to conventional chest physical therapy
- High-frequency chest wall oscillation devices when **ALL** of the following are met:
  - No absolute contraindications for external manipulation of the thorax including **ABSENCE** of **ALL** the following:
    - Head and/or neck injury that has not yet been stabilized
    - Active hemorrhage with hemodynamic instability
  - Treatment is indicated for **ANY ONE** of the following conditions:
    - Cystic fibrosis when **ALL** of the following are met:
      - Documentation of **ANY ONE** of the following:
        - Less intensive treatments have been tried and failed (e.g., chest physical therapy and/or the electric home model percussor [E0480])
        - Inability of caregiver to provide effective chest drainage as prescribed
    - Bronchiectasis when **ALL** of the following are met:
      - Confirmed diagnosis by standard or high resolution CT scan
      - Documented failure of standard treatments (e.g., chest physical therapy) including **ANY ONE** of the following**:**
        - Frequent severe exacerbations of respiratory distress involving inability to clear mucus
        - Inability of caregiver to provide effective chest drainage as prescribed
    - Neuromuscular disease (e.g., Duchenne Muscular Dystrophy) when **ALL** of the following are met:
      - Documentation of ineffective clearance of airway mucous
      - Documentation that less intensive treatments have been tried and failed (e.g., chest physical therapy)
- Intrapulmonary percussive ventilation for **ANY ONE** of the following conditions:
  - Cystic fibrosis when **ALL** of the following are met:
    - Documentation of **ANY ONE** of the following:
      - Less intensive treatments have been tried and failed (e.g., chest physical therapy and/or the electric home model percussor [E0480])
      - Inability of caregiver to provide effective chest drainage as prescribed
  - Bronchiectasis when **ALL** of the following are met:
    - Confirmed diagnosis by standard or high resolution CT scan
    - Documented failure of standard treatments (e.g., chest physical therapy) including **ANY ONE** of the following:
      - Frequent severe exacerbations of respiratory distress involving inability to clear mucus
      - Inability of caregiver to provide effective chest drainage as prescribed
  - Neuromuscular diseases (e.g., Duchenne Muscular Dystrophy) when **ALL** of the following are met:
    - Documentation of ineffective clearance of airway mucous
    - Documentation that less intensive treatments have been tried and failed (e.g., chest physical therapy)

IMPORTANT REMINDERS

- Any specific products referenced in this policy are just examples and are intended for illustrative purposes only. It is not intended to be a recommendation of one product over another, and is not intended to represent a complete listing of all products available. These examples are contained in the parenthetical e.g. statement.

- We develop Medical Policies to provide guidance to Members and Providers. This Medical Policy relates only to the services or supplies described in it. The existence of a Medical Policy is not an authorization, certification, explanation of benefits or a contract for the service (or supply) that is referenced in the Medical Policy. For a determination of the benefits that a Member is entitled to receive under his or her health plan, the Member's health plan must be reviewed. If there is a conflict between the Medical Policy and a health plan, the express terms of the health plan will govern.

ADDITIONAL INFORMATION

The use of high-frequency chest wall compression and home use of intrapulmonary percussive ventilation devices in other chronic pulmonary diseases, such as chronic obstructive pulmonary disorder, is considered investigational due to insufficient evidence on the impact of treatment on health outcomes.

SOURCES

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EFFECTIVE DATE 4/30/2019

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