

Medical Policy



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Title: Chest Oscillation Vest

Professional

Original Effective Date: May 24, 2005

Revision Date(s): October 1, 2001; May 25, 2004; September 16, 2004; May 25, 2005; November 2, 2006

Current Effective Date: February 1, 2007

DESCRIPTION

Cystic fibrosis (CF) is an autosomal recessive condition, the pulmonary manifestations of which include the production of excessive tenacious tracheobronchial mucus, leading to airway obstruction and secondary infection, the principal causes of the morbidity and mortality of cystic fibrosis. A variety of mucus clearance techniques have been investigated as methods to increase the amount of expectorated sputum, maintain pulmonary function, and decrease the incidence of acute exacerbations of CF. Daily percussion and postural drainage (P/PD) is the most commonly used secretion clearance technique. A physical therapist or another trained adult in the home, typically a parent, may administer P/PD if the patient is a child.

The Vest™ Airway Clearance System (formerly known as the ABI Vest or the ThAIRapy Bronchial Drainage System) and Percussionaire device are oscillatory devices designed to provide self-administered airway clearance and have been investigated as an alternative to P/PD. 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 cause the vest to inflate and deflate against the thorax, creating high-frequency chest wall oscillation and mobilization of pulmonary secretions.

The Flutter device is another oscillatory device that has been used in patients with cystic fibrosis. It is a small pipe-shaped, easily portable hand-held 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, 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 airflow oscillation.

POLICY

There is no clinical data to show oscillatory devices provide any additional health benefit compared to conventional chest physical therapy. However, conservative therapy should be tried and failed (e.g. flutter valve) before an oscillatory device is considered medically necessary in cystic fibrosis patients who lack a caregiver to perform routine percussion and postural drainage (P/PD) or are intolerant of P/PD.

Other application of oscillatory devices including their use as an adjunct to chest physical therapy or their use in diseases other than cystic fibrosis, such as bronchiectasis or COPD, are considered investigational.

CODING**HCPCS**

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
S8185	Flutter device

DIAGNOSIS

These diagnoses are otherwise subject to medical policy as stated above

277.00	Cystic Fibrosis; without mention of meconium ileus
277.02	Cystic fibrosis; with pulmonary manifestations

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