Hertfordshire and West Essex Integrated Care System

NHS Hertfordshire and West Essex Integrated Care Board

Evidence Based Intervention

Mechanical Insufflation-Exsufflation (MI-E) Devices / Cough Assist

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Policy: Mechanical Insufflation-Exsufflation (MI-E) Devices / Cough Assist

[This policy has been developed from the Commissioning Policies for Cough Assist developed by Walsall Clinical Commissioning Group, Swindon Clinical Commissioning Group and East Staffordshire Clinical Commissioning Group]

Funding of cough assist devices can only be obtained on a case-by-case basis via application to the Hertfordshire and West Essex Integrated Care Board Evidence Based Interventions and Individual Funding Requests (EBI & IFR) Team

This policy applies to patients (adults and children) who have an ineffective/weak cough due to neuromuscular disease or cervical spinal cord injury. This includes patients with conditions such as muscular dystrophy, spinal muscular atrophy, motor neurone disease and spinal cord injury.

A mechanical insufflator-exsufflator (MI-E) device / CoughAssist assists the clearance of bronchopulmonary secretions in those patients with an ineffective cough by the use of both positive and negative pressure. CoughAssist is a non-invasive therapy that removes secretions in patients with an ineffective ability to cough (peak cough flow <270 l/m). The CoughAssist device clears secretions by gradually applying a positive pressure to the airway, then rapidly shifting to negative pressure. The rapid shift in pressure produces a high expiratory flow, simulating a natural cough.

A multidisciplinary team should assess, manage and review the patient's respiratory function, respiratory symptoms, non-invasive ventilation and cough effectiveness, including the person's response to treatment.

Funding for a MI-E device / CoughAssist will be considered for patients who meet all the following criteria and where the MDT involved in their care recommends the device will be of clinical benefit.

Applications for funding should be submitted to the EBI and IFR team.

CRITERIA FOR CHILDREN

CoughAssist devices are funded for paediatric patients with neuromuscular conditions in the following circumstances:

- Children who are clinically very weak
- Children with loss of bulbar function
- Children who cannot co-operate with manual cough assist or air-stacking methods or these methods have not been effective
  AND
- The patient suffers from recurrent respiratory tract infections, diagnosed and treated by a primary or secondary care doctor. Recurrent infection defined as three or more episodes over a single winter period or on-going infections greater than once every two months throughout the year.

CRITERIA FOR ADULTS

1. An established diagnosis as paralytic / restrictive disorder, including but not exclusively
    - spinal cord injuries (SCI)
    - neuromuscular diseases such as ALS
    - Guillain-Barré Syndrome
    - myasthenia gravis
    - muscular dystrophy
    - multiple sclerosis
    - post polio
    - kypho-scoliosis
    - syringomyelia

AND

2. Patient is unable to cough or clear secretions effectively with a Peak Cough Flow (PCF) less than 160L/min using Lung Volume Recruitment (LVR) with bag, Glossopharyngeal Breathing (GPB) or volume ventilator (& assisted cough manoeuvre when indicated)

AND

3. Patient is overly fatigued when performing LVR with the resuscitation bag, GPB or volume ventilator.

Requests for MI-E / CoughAssist devices for patients who do not meet the above criteria are considered low priority and will not be routinely funded.

Absolute Contra-Indications:

- Presence of haemoptysis, untreated or recent pneumothorax, bullous emphysema, nausea and emesis, severe COPD, severe asthma and recent lobectomy
- Increased intra cranial pressure (ICP) including ventricular drains .
- Impaired consciousness / inability to communicate in instances where the patient does NOT have an artificial airway

Relative Contraindications:

- therapy immediately following meals .
- tachypnea
- history of COPD and pneumothorax
- large pleural effusion
- cervical spinal injury unclear
- hemodynamic instability
- impaired consciousness / inability to communicate where the patient has an artificial airway

Supplemental oxygen should not be bled into the MI-E circuit. Oxygen passing through the fan system during the exsufflation phase results in a potential fire hazard.

Patients who are not eligible for treatment under this policy may be considered on an individual basis where their GP or consultant believes exceptional circumstances exist that warrant deviation from the rule of this policy. Individual cases will be reviewed as per the ICB policy.

Change History:

Version	Date	Reviewer(s)	Revision Description
1.1	18/11/2024	J Oliver	Changed wording as this is criteria-based access IFR not required. Applications to come to the EBI & IFR team.

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