NHS
Bedfordshire, Luton and Milton Keynes
Integrated Care Board

Policy title	**Cough assist / Mechanical Insufflation-Exsufflation (MI-E) device** **v1.1**
Policy position	**Criteria Based Access**
Date of Forum recommendation	**June 2019**

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 / Cough Assist assists the clearance of bronchopulmonary secretions in those patients with an ineffective cough by the use of both positive and negative pressure. The rapid shift in pressure produces a high expiratory flow, simulating a natural cough.

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

CRITERIA FOR CHILDREN

Cough Assist 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
- Guillain-Barré Syndrome (rare neurological disorder)
- myasthenia gravis (chronic autoimmune, neuromuscular disease)
- muscular dystrophy
- multiple sclerosis
- post polio
- kypho-scoliosis
- syringomyelia (rare disorder affecting spinal cord)

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.

Absolute Contra-Indications:

- Presence of haemoptysis, untreated or recent pneumothorax, bullous emphysema, nausea and emesis, severe chronic obstructive pulmonary disease (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.

NOTE:

- This policy will be reviewed in the light of new evidence or new national guidance e.g. from NICE
- Where a patient does not meet the policy criteria or the intervention is not normally funded by the NHS, an application for clinical exceptionality can be considered via the ICB's Individual Funding Request (IFR) Policy and Process

Clinical coding:
Device code not available.

Key words: Mechanical Insufflation-Exsufflation, MI-E device, cough assist