

OPTIONAL SUPPLEMENTAL PROGRAM  
TRANSPORT OF VENTILATED PATIENTS  
PARAMEDIC ONLY

## M. TRANSPORT OF ACUTE VENTILATED INTERFACILITY PATIENTS

### 1. PURPOSE

To define the indications for use of a mechanical ventilator by a paramedic for the acute ventilated patient

- a) The level of care required for the interfacility transport of the “**acute ventilated interfacility patient**” is beyond the routine training curriculum for a paramedic; this type of patient must be transported by a higher level health care provider who is credentialed, educated, and competent in dealing with the ventilator and the ventilated patient. **OR**
- b) When a critical interfacility transfer is needed and a credentialed, educated, and competent higher level health care provider is **genuinely unavailable**, a credentialed, educated, and competent paramedic (through a MIEMSS-approved training program) may attend the ventilator and the ventilated patient with the addition of a second ALS provider or advanced airway trained health care provider when determined appropriate by the sending/referring physician.

### 2. INDICATIONS

**ACUTE VENTILATED PATIENTS** for the interfacility transport are defined as:

- a) Intubated **OR**
- b) Tracheostomy patient when the reason for transport is:
  - (1) For increased level of care from a hospital, **OR**
  - (2) To continue the same level of care in an acute care setting,  
**OR**
  - (3) The new tracheostomy patient, within the last 7 days

### 3. VENTILATOR STANDARDS

- a) **ACUTE VENTILATOR DEVICE STANDARDS**
  - (1) The ventilator that the service is to use for the acute ventilated patient should be able to match the existing ventilator settings. The following minimum device features (including circuit) must be present for this category of patient:
    - (a) Set rate of ventilations
    - (b) Adjust delivered Tidal Volume
    - (c) Adjustable Pressure Support Settings
    - (d) Adjustable Inspiratory and Expiratory ratios (I:E ratio)
    - (e) Positive End-Expiratory Pressure (PEEP)
    - (f) Peak airway pressure gauge
    - (g) Continuous Expiratory Volume measurement (Required)
    - (h) Modes
      - (i) Assist Control (AC)
      - (ii) Synchronized Intermittent Mandatory Ventilation (SIMV)
      - (iii) Controlled Mechanical Ventilation (CMV)

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- (i) Alarms
    - (i) Peak airway pressure
    - (ii) Disconnect
  - (2) Strongly recommended options are:
    - Blend percentage oxygen
  - (3) Must perform periodic maintenance (including calibration) meeting the manufacturer's specifications
- b) **ACUTE VENTILATOR USAGE**
  - (1) A ventilator maintained by the ambulance service or health care facility must be specifically designed for transport use and capable of providing the required settings.
  - (2) Continuous pulse oximeter and continuous capnography monitoring equipment must be used on all acute ventilated interfacility patients.
  - (3) Tracheal suctioning kits/catheters must be available.
  - (4) A tracheostomy replacement tube the same size and one size smaller shall be transported with the patient ventilated through a tracheostomy. (The endotracheal tube equivalent may be substituted.)

**4. POTENTIAL ADVERSE EFFECTS**

- a) Pneumothorax
- b) Barotrauma
- c) Hypoxemia
- d) Hyperventilation
- e) Hypoventilation
- f) Extubation of endotracheal or tracheostomy tube

**5. PRECAUTIONS**

If any problems arise with mechanical ventilation, the patient shall be disconnected from the ventilator and manually ventilated.

**6. OPTIONAL PROGRAM REQUIREMENTS**

- a) A special "Ventilated Patient" report form will be completed for each mechanically ventilated patient and will include vital signs, pulse oximeter readings, and lung sounds (recorded a minimum of every 5 minutes), and documentation of any of the following:
  - (1) cardiac arrest during transport,
  - (2) dislodgment of tracheostomy tube or endotracheal tube,
  - (3) equipment failure (with FDA report),
  - (4) discontinuance of ventilator and conversion to BVM,
  - (5) deterioration of patient, or
  - (6) the upgrading of patient care to critical care.
- b) The Optional Program will require a training program that meets or exceeds the "Acute Ventilated Interfacility Patient" curriculum and is approved by the operational program medical director with skills validation. A copy of the training program shall be reviewed and be approved or disapproved by MIEMSS.