



# Monroe-Livingston Regional EMS

## Advanced Practice and Specialty Care Paramedic

## Education and Competency Expectations for Credentialing

*Note: As best practices and/or clinical quality opportunities are identified, this document will be updated accordingly. The most recent version is expected for use at the time of a Paramedic's credentialing/re-credentialing.*

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## BLOOD PRODUCT CONTINUATION

### **EDUCATION**

To be developed

### **COMPETENCY**

To be developed

### **CONTINUING COMPETENCY**

Annual reaffirmation of competency on managing blood products (as outlined in initial competency) is required unless the paramedic has managed 2 or more patients requiring continued blood product administrations during transport in the previous 12 months.

### **QUALITY IMPROVEMENT**

All cases of blood product continuation shall be reviewed by the Agency Medical Director.



## THORACOSTOMY (CHEST) TUBE MANAGEMENT

### EDUCATION

The curriculum shall, at a minimum, include:

- Indications for chest tube placement
- Types of chest tubes
- Components of a chest tube drainage system
- Indications for suction vs water seal
- Securing of chest tubes/drains for transport
- Assessment of patients with indwelling tubes/catheters
- Actions in the event the patient decompensates during transport
- Actions in the event the drain/tube becomes dislodged
- Assessment of the patient for signs/symptoms of tension pneumothorax
- Actions in the event of tension pneumothorax
- Actions if the patient becomes hypotensive and tension pneumothorax is not suspected
- Actions if the collection device exceeds capacity

### INITIAL COMPETENCY

The paramedic must be able to:

- Demonstrate the setup of a chest tube drainage system
- Demonstrate connection of the chest tube drainage system to the chest tube
- Verbalize securing of connections from the patient to the chest tube drainage system
- Explain proper chest tube dressing application and management
- Demonstrate assessment for an air leak and localization
- Demonstrate and/or explain the procedure for changing a drainage system

A Competency Evaluation can be found at <https://mlrems.org/provider/sct-app-program/>

### CONTINUING COMPETENCY

Annual reaffirmation of competency on managing chest tubes (as outlined in initial competency) is required unless the paramedic has managed 2 or more chest tubes in the previous 12 months.

### QUALITY IMPROVEMENT

All cases of Chest Tube Management shall be reviewed by the Agency Medical Director.



## INFUSION MANAGEMENT

### EDUCATION

The curriculum shall, at a minimum, include:

- General principles and expectations of prehospital and interfacility medication infusion.
- Common classes of interfacility medications, the indications, contraindications, typical dose ranges, and complications to include recognition and management. Of note, an APP may only transport one vasoactive, and an agency and their Medical Director may choose to limit which vasoactives the APP may transport. Medications include, but are not limited to:
  - Epinephrine
  - Norepinephrine
  - Dopamine
  - Dobutamine
  - Amiodarone
  - Lidocaine
  - Antibiotics
  - Midazolam
  - Fentanyl
  - Hydromorphone
  - Propofol
  - Octreotide
  - Pantoprazole
  - Potassium
  - Insulin
  - Crystalloids
  - Magnesium
  - Nitroglycerin
- For agencies that will be transporting patients with Tissue Plasminogen Activator the:
  - Mechanism of action
  - Indications
  - Contraindications
  - Side effects
  - Adverse events
  - Interactions
  - Complications
  - Steps to take if an adverse event or reaction is noted
  - Training on the NIH Stroke Scale (NIHSS)

### INITIAL COMPETENCY

The Paramedic Shall

- Demonstrate navigation through the interface
  - Power on/off
  - Changing between dose and continuous modes
  - Battery status
  - Infusion pressure
  - Changing channels
- Demonstrate priming of a full infusion set using both pump guided and manual priming
- Demonstrate priming of a half and glass infusion set pump guided and manual priming
- Demonstrate pump set up for primary infusion using the continuous mode
- Demonstrate pump set up for continuous medication infusion utilizing the dose mode and a medication from the pump library
- Demonstrate pump set up for continuous medication infusion utilizing the dose mode and a medication that is not in the pump library
- Demonstrate medication titrations using the pump.



- Troubleshoot and correct the following alarms and errors:
  - Air/Up Occlusion
  - Down Occlusion
  - Door Open

A Competency Evaluation for the Sapphire Medication Infusion Pump can be found at  
<https://mlrems.org/provider/sct-app-program/>

## **CONTINUING COMPETENCY**

Annual reaffirmation of competency (as outlined in initial competency) is required unless the paramedic has managed 6 or more infusions in the previous 12 months.

## **QUALITY IMPROVEMENT**

All near misses or infusion errors shall be reported to the Regional Medical Director for integration into future education and competencies.



## VENTILATOR MANAGEMENT

### EDUCATION

The curriculum shall, at a minimum, include:

- Explain the indications for mechanical ventilation
- Modes of ventilation and how to choose the best one for your patient
  - Review of pathologies that lead to the need for mechanical ventilation
    - COPD, ARDS, CNS injury (normal lungs), etc.
    - Review ventilator models and how they correlate to disease processes
  - Patients who may fail mechanical ventilation – i.e. severe pulmonary disease
- How to oxygenate a patient on mechanical ventilation
  - PEEP, FIO<sub>2</sub>, etc
- How to ventilate a patient on mechanical ventilation
  - Rate, Tidal Volumes, I:E ratio's, etc
- How to identify and manage issues
  - Airway pressures
  - Oxygenation
  - Ventilation
  - Hemodynamic changes
  - ETT dislodgement
  - Pneumothorax
  - Complete ventilator failure (i.e. bagging)
- Review of the agency-specific ventilator
  - Ventilator pre-check and set-up
  - Ventilator modes specific to ventilator model and Medical Director Authorization
    - (e.g. CMV, SIMV, PCV, BiPAP, etc)
  - Alarm Monitoring
  - Alarm limits
- Review how to obtain, and the clinical importance of the following:
  - Actual respiratory rate (f)
  - I:E ratio
  - Peak Inspiratory Pressure (PIP)
  - Minute Volume (VE)
  - Exhaled Tidal Volume (Vte)
  - Plateau Pressure (Pplat)
  - Driving pressure

### INITIAL COMPETENCY

The Paramedic shall:

- Demonstrate knowledge and functionality of the agency-specific ventilator to include all of the above.
- Demonstrate the ability to choose the correct ventilator settings for the patient.
- Demonstrate ability to manage:
  - Hypoxia
  - Hypercarbia



- Increased pressures
- Hypotension
- Identification of ETT dislodgement or circuit failure
- Patient agitation
- Pneumothorax
- Ventilator Failure

A Competency Evaluation for the Hamilton T1 Ventilator can be found at  
<https://mlrems.org/provider/sct-app-program/>

### **CONTINUING COMPETENCY**

Annual reaffirmation of competency (as outlined in initial competency) is required unless the paramedic has managed 6 or more ventilator transports in the previous 12 months.

Agencies are expected to provide educational updates and if necessary, competency evaluation with any change in ventilator features or type, or identified educational or management gaps identified through quality improvement.

### **QUALITY IMPROVEMENT**

The Agency Medical Director shall review all transport ventilator care to include the following:

- Ventilation Mode was appropriate for the patient.
- Complications that occurred and if appropriate intervention was taken
- Appropriate documentation
  - Ventilator settings
  - Vital signs
  - Corrective actions and other ventilator adjustments

All near misses or ventilation management errors shall be reported to the Regional Medical Director for integration into future education and competencies



## SPECIALTY CARE TRANSPORT

### EDUCATION

Maintenance of FP-C or CCP-C certification as required by MLREMS Special Care Transport Paramedic Policy.

### INITIAL COMPETENCY

Successful completion of five, high-fidelity patient care scenarios that address the following minimum pathophysiology's:

- Multisystem trauma
- Sepsis
- Cardiogenic shock
- Intracranial hemorrhage
- Acute Respiratory Distress Syndrome

### COMPETENCY ASSESSMENT

Assessing initial SCT Paramedic Competency is delegated to the University of Rochester Division of Prehospital Medicine. All competencies are evaluated by a physician reviewer using a standard clinical scenario and assessment rubric. Competencies are scheduled through the Division of Prehospital Medicine on an as-needed basis following the endorsement of the agency's Clinical Care Manager/ALS Chief and Medical Director.

A fee may be required.

### CONTINUING COMPETENCY

Annual reaffirmation of competency (as outlined in initial competency) is required unless the paramedic has managed 6 or more SCT transports in the previous 12 months.