

CRITICAL CARE TRANSPORT INTRODUCTION

PURPOSE

To provide a definition of “Critical Care Transport” (CCT) for the understanding of such transports by crew members.

BACKGROUND

Critically injured or ill is defined by the AMA’s CPT as... *“A critical illness or injury acutely impairs one or more vital organ systems such that the patient’s survival is jeopardized.”*

“The care of such patients involves decision making of high complexity to assess, manipulate, and support central nervous system failure, circulatory failure, shock-like conditions, renal, hepatic, metabolic, or respiratory failure, postoperative complications, overwhelming infection, or other vital system functions to treat single or multiple vital organ system failure or to prevent further deterioration. It may require extensive interpretation of multiple databases and the application of advanced technology to manage the patient.”

“Critical care services include but are not limited to, the treatment or prevention or further deterioration of central nervous system failure, circulatory failure, shock-like conditions, renal, hepatic, metabolic or respiratory failure, postoperative complications, or overwhelming infection.”¹

For purposes of CCT transport, there should be no distinction between critically ill or injured patients that are stable or unstable. A stable patient’s condition may no longer be deteriorating, having responded to appropriate resuscitative/supportive measures, but this does not mean they are no longer at risk and it will usually be necessary to continue with additional intensive treatment and management in order to maintain stability and prevent further deterioration—especially during the transportation process when any number of anticipated or unanticipated events may occur.

Also for purposes of CCT transport, this will also include OB emergencies and those patients in active labor.

Therefore, if coverage in the EMT-P: National Standard Curriculum did not provide sufficient time and depth of material to warrant proficiency in those skills, therapeutic interventions or medications encountered during an inter-facility transport of a critically ill or injured patient/beneficiary, regional expectations suggest additional training beyond the curriculum is required for safe and effective implementation.

¹ AMA CPT, National Coverage Provision, Critical Care, PHYS-022

CRITICAL CARE TRANSPORT INTRODUCTION

(For instance, transport ventilator use is covered in the Medical: Pulmonary section along with twenty other interventions (e.g., multi-lumen airways, bag valve mask, surgical cricothyroidotomy, etc.). The proficient use of transport ventilators requires additional training outside of this recommended curriculum.)

As a result, LaSalle Ambulance has developed an extensive CCT training course which addresses those interventions, medications and treatment modalities that may be encountered in interfacility transports. After completion of the CCT training course, each student must then pass a comprehensive examination and will be awarded a certificate to indicate his/her successful completion and elevation to a CCT paramedic. CCT recertification will be required every two years.

In addition, each LaSalle Ambulance CCT unit is equipped with a transport ventilator, an infusion pump, as well as various medications and their associated protocols not usually used in the emergency setting.

Any call designated and billed as a CCT call will be handled by one of the specially educated CCT paramedics. If, due to time constraints or the unavailability of a CCT paramedic, an otherwise qualifying call is handled by a BLS or ALS (MICU) level ambulance, the call will not be billed as a CCT call.

A licensed physician will be designated as CCT Medical Director to oversee and monitor the AASI CCT program. His/her duties will include, but not limited to:

- Overseeing the CCT curriculum and training course
- Evaluating the individual CCT paramedic and signing off on his/her completion of said training course
- Periodic review of the CCT curriculum and updating as needed
- Periodic auditing of individual patient care calls and QA analysis
- Available to dispatch and/or individual medics for clinical consultation regarding a CCT call
- Other duties that become necessary as the CCT program matures

Below are some of the therapeutic interventions that meet the CCT definition of services to a critically ill or injured patient that fall outside of the scope of a recent paramedic graduate, and that require “additional training” outside the National Standard Curriculum. As no list can be comprehensive and as medicine is continually changing and evolving, this list is not meant to be final or all inclusive. Periodically, the CCT Medical Director will review and update the CCT interventions as needed.

CCT THERAPEUTIC INTERVENTIONS

1. General:

Patients with:

One or more of the following IV infusions:

- Antiarrhythmics – (Pronestyl, Amiodarone, Milrinone, etc.)
- Chemotherapeutic agents
- Blood or blood products
- Endocrine system adjuncts – (Insulin, etc)

CRITICAL CARE TRANSPORT INTRODUCTION

- Thrombolytics or fibrinolytics – (TPA, Retavase, Heparin, etc.)
- Tocolytics – (Magnesium Sulfate, Ritodrine, etc.)
- Vasopressors – (Isuprel, Dobutamine, Dopamine, Epinephrine, Norepinephrine, Phenylephrine, etc.)
- Vasoactive Compounds – (Beta Blockers, Nitroprusside, Nitroglycerine, etc.)
- Titration of chemical paralysis/sedation Any other parenteral pharmaceutical unique to the patient's special health care needs

2. Respiratory:

- Mechanical Ventilation
 - Pressure or volume controlled ventilation
 - Pressure support ventilation
 - Non-invasive mechanical ventilation (CPAP, BiPAP)
 - High frequency ventilation
 - Any other ventilatory support unique to the patient's special health care needs
- Chest tubes
- Acute cricothyrotomy or tracheostomy
- Any other specialized respiratory support unique to the patient's special health care needs

3. Cardiac:

- External Cardiac Support (Ventricular assist devices, temporary external pacing, etc.)
- Internal Cardiac Support (Intra aortic balloon pump, temporary transvenous pacing, etc.)
- Extracorporeal membrane oxygenation (ECMO)
- Pericardial catheters
- Any other specialized cardiac support unique to the patient's special health care needs

4. Monitoring Modalities

- Pulmonary artery pressure monitoring (Swan Ganz)
- Central venous pressure line
- Intracranial pressure monitoring
- Arterial lines
- Femoral arterial sheath
- Any other specialized monitoring modality unique to the patient's special health care needs

5. Infusion Ports

- Quentin catheters
- Dialysis catheters
- Central line
- Peritoneal Dialysis
- Any other specialized infusion port unique to the patient's special health care needs

6. Obstetric:

CRITICAL CARE TRANSPORT INTRODUCTION

- Preterm labor with tocolytics required
- Management of preeclampsia/eclampsia
- Fetal monitoring required
- Condition which may result in birth of less than 2000 grams or less than 34 week gestation infant
- Infusion via epidural catheters
- Any other specialized obstetric procedure or condition unique to the patient's special health care needs

7. Neonates/Pediatrics:

- Less than 2000 grams or less than 34 week gestation infant
- Cardiac disorder with hemodynamic/respiratory compromise
- Infant Respiratory Distress Syndrome
- Metabolic acidosis greater than 2 hours post-delivery
- Sepsis and meningitis in newborns
- Any other specialized neonatal or pediatric procedure or condition unique to the patient's special health care needs