

Critical Care Transport Program Requirements



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Bureau for Public Health
Office of Emergency Medical Services**

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Critical Care Transport

Introduction

In the past, critically ill or injured patients have had few options available to them if they required continuity of care from one critical care setting to another while being transported between facilities. With the continued development of advanced and sophisticated therapies and techniques, the medical, nursing and EMS professions have enhanced the ability to monitor and maintain the physiologic requirements of the body in situations of extreme stress, illness, injury and compromise. We also have the ability to intervene in situations where the patient has suffered severe, life-threatening insults while preventing irreversible damage. We now realize and understand that it is not acceptable to “transport and monitor” extremely sick and injured patients from one facility to another. The primary goal is to offer patients a specialized and unique service to maintain or improve a patient’s condition. In order to meet this demand, it will require sincere commitment and dedication to the development and implementation of a statewide network for those wanting to participate. Each and every EMS Agency involved must understand the magnitude of such advanced and highly skilled personnel required to maintain a qualified program and to accept and dedicate themselves to the advanced requirements to maintain a superior transport team.

This resource is a highly specialized but limited service and must be utilized appropriately to meet the goal of advanced transport services. A major advantage to the use of critical care air and ground medical transport services is the ability to provide care prior to and during transport at a level of sophistication previously available only in a regional referral center’s emergency and critical care units. The use of any level other than that as the principal medical crew member for critical air and ground medical transports between hospitals significantly reduces the level of care already established by the referring hospital. There are many instances in which the CCT services can actually provide more advanced treatment and care than the referring facility with advanced equipment, monitoring devices, pharmacological agents and skills.

The air and ground medical transport service providing critical care has become a functional extension of hospital emergency and critical care services. In the hospital setting, physicians and nurses are the primary care providers for patients requiring the most advanced medical technology and care. They are highly trained and skilled at caring for unstable patients. We now have the ability to offer similar levels of service to those requiring transport to a tertiary care facility.

Teams must, at a minimum, have training and experience in management of patients in the prehospital and critical care settings and must also have the ability and training to function autonomously in a variety of settings with treatment protocols if immediate communication with a physician is not possible or if immediate life-saving actions are required.

The use of any crew configuration less than that of a Class 0, 1 or 2 for a critically ill or injured patient as the principle medical crew will not provide a level of care commensurate with hospital emergency and critical care services. For that reason, it is imperative that these services are not abused and are appropriately dispatched.

CCT is a very costly investment for those participating. Initial funding for equipment, personnel and training is significant. Maintenance of the program must be factored into an operating budget. Reimbursement is not currently recognized by most insurance carriers and return of costs to the service is sometimes absorbed by the agency itself.

In order to optimize the delivery of care to those who are critically ill or injured, a statewide network needs to be developed and implemented. Again, patients should not have to wait for an extended amount of time for these advanced services. We must strive to quickly connect rural areas to services at our regional tertiary medical centers. Aeromedical transport is the optimal mode of transportation for those who receive life-threatening injuries or illnesses, but these services are not always available. When a statewide network is completed, training, education, protocols and services will be maximized. All areas of the State of West Virginia will have access to state-of-the-art personnel and equipment capable of making life-saving changes before reaching the tertiary care facility. Critical care transport, whether by air or ground, will be capable of providing top-notch delivery of care that can make the difference between life and death.

Job Description

- Job Title:** Critical Care Transport Medical Director
- Job Purpose:** Provides medical direction for an EMS Agency CCT Program.
- Job Summary:** The purposes of the position is to oversee an EMS Agency CCT Program and to ensure that the implementation and maintenance of the local critical care transport (CCT) program meets all requirements set forth by the West Virginia Office of Emergency Medical Services (WVOEMS).
- Duties:**
- Responsible for recognizing, synthesizing, interpreting and communicating new medical developments with the potential to provide opportunities or otherwise affect critical care transport. The CCT Medical Director is also responsible for establishing and maintaining appropriate communication systems, including accessible databases of CQI/QA and clinical information, both in the statewide sector and proprietary to the organization he/she represents.
 - Report to the Assistant State EMS Medical Director for CCT (assigned by the WVOEMS State EMS Medical Director).
 - Mandatory participation in the development and implementation of quality assurance activities as outlined by the WVOEMS for CCT.
 - Establish relationships with medical leaders statewide who are working in the CCT arena and propose new ideas for improvement as it relates to patient care and transport.
 - Serve as liaison with healthcare facilities/medical experts as it relates to CCT.
 - Responsible for the overall management of the delivery of care in the CCT Program.
 - Responsible for the oversight and daily operations as well as the development, implementation, training, education and overall management of the CCT Program.

Contributes aggressively to the planning and implementation of the local CCT Program by attending key leader meetings and teaching programs. Mandatory attendance at annual/biannual meetings to assist in developing, reviewing, and approving all service operating policies and procedures pertaining to patient care, advancement and improvement of overall functioning and program management.

Perform 100% chart audit review.

Compile monthly reports and forward the data to the Assistant State EMS Medical Director for CCT on all quality issues pertinent to the CCT Program. In addition, submit all of the following to the Assistant State EMS Medical Director for CCT no later than the 10th of every month.

- Number of CCT calls.
- Type of CCT calls.
 - ♦ Pediatric.
 - ♦ Neonatal.
 - ♦ Adult medical.
 - ♦ Adult trauma.
- Time of CCT calls.
 - ♦ Total time on scene must be calculated (at transferring facility).
 - ♦ Total (loaded) transporting time.

Ensure appropriate care rendered on each call.

Supervise, train and evaluate program staff monthly.

Maintain program administrative documents in order to ensure successful passing of administrative audits.

Oversee communication systems and policies for the appropriate dissemination of relevant new medical information within the CCT arena and related functions.

- Requirements:** Must have a strong background in prehospital/EMS care.
- Must be approved by the Assistant State EMS Medical Director for CCT.
- Hold a valid license to practice in the State of West Virginia as a doctor of medicine.
- Must possess knowledge of the capabilities and limitations of ambulances, including air ambulance and the pre-hospital personnel.
- Interpersonal skills are also required because of the need to build relationships with outside agencies and healthcare facilities. Management and leadership skills are required to develop and oversee effective communication systems and policies as well as future advances in CCT.
- *Note:** The CCT Medical Director may not necessarily be the same as the squad Medical Director.

Job Description

- Job Title:** Critical Care Transport Nurse
- Job Purpose:** Promote and restore patients' health by completing the nursing process; collaborating with physicians and specialty team members; providing physical and psychological support to patients, friends, and families.
- Job Summary:** The purposes of the position are to serve as a CCT team member and to ensure that the implementation and maintenance of the local critical care transport (CCT) program meets all requirements set forth by the West Virginia Office of Emergency Medical Services (WVOEMS).
- Duties:**
- Identify patient care requirements by establishing personal rapport with patients and other persons in a position to understand care requirements.
 - Establish a compassionate environment by providing emotional and psychological support to patients, friends, and families.
 - Promote patient awareness by establishing patient care goals, teaching patient and family in regards to illness or disease process, treatment rendered while in the care of the CCT team.
 - Assure quality of care by adhering to therapeutic standards; making or recommending necessary adjustments by collaborating with team members and multidisciplinary members; staying current with CCT guidelines and required in-services, training and staff meetings.
 - Formulate a plan of care.
 - In compliance with the guidelines of the critical care transport practices and procedures set forth by the state.
 - Quickly and effectively deal with any and all potentially life-threatening situations that may occur before and during transport to increase the likelihood of a positive patient outcome.
 - Stay current with CCT guidelines and required in-services, training and staff meetings.
 - Establish and maintain relationships with specialty transport teams and ancillary personnel in outlying hospitals.

Maintain nursing supplies inventory by checking stock daily to ensure inventory level; using supplies and equipment as needed to accomplish job results.

Maintain professional and technical knowledge by attending educational workshops; reviewing professional publications; and attending all required in-services, quarterly staff meetings, and skills training.

Maintain a cooperative relationship among health care teams by communicating information and responding to requests, building rapport and participating in team problem-solving methods.

Qualifications: Capable of performing general and advanced procedural nursing duties.

Must be a “self-starter” and assertively take on challenging responsibilities and hold self ultimately accountable for results and performance.

Must have superb diagnostic and clinical skills. Able to obtain an excellent history, perform an extensive physical and formulate a treatment plan while including the team members.

Have extensive knowledge of the uses, dosages and side effects of medications as they apply to different disease states. Able to assess clinically whether or not a medication is effective.

Promote team spirit and work collaboratively with others in the medical team.

Exhibit excellent multi-tasking skills. Able to prioritize and perform a variety of concurrent tasks with minimal direction.

Must have excellent, in-depth knowledge of physiological functions and processes as they relate to issues of patient care.

Display professionalism, compassion, and sound medical practice when dealing with challenging situations.

Requirements: Must be currently licensed by the West Virginia State Board of Nursing with no violations or restrictions.

Must have a minimum of three years of critical care experience (preferably ICU, ER experience may be considered).

Must be currently certified by WVOEMS as an EMSA–RN or EMSA–FN within the first year of employment.

If certified as a CEN or CCRN, must successfully pass the West Virginia Office of Emergency Medical Service (WVOEMS) approved Critical Care Transport Program (refresher course).

- If **not** certified as a CEN or CCRN, must successfully pass the West Virginia Office of Emergency Medical Services approved Critical Care Transport Course.
 - ♦ The nurse is required to take the next available approved course by WVOEMS.
- If **not** currently certified, highly recommend within 1 year of employment:
 - ♦ Become a Certified Emergency Nurse (CEN).
 - ♦ Obtain Critical Care Registered Nurse (CCRN) certification.
- Must maintain current certification in:
 - ♦ ACLS.
 - ♦ BTLS or PHTLS.
 - ♦ PALS or PEPP.
- To remain at Class 1, the RN must complete all in-services on any drugs or procedures that become reclassified to Class 1 and attend **all** mandatory skills as required.
- Must audit or successfully complete emergency vehicle operation course (EVOC) within 1 year of employment.

Job Description

Job Title: Critical Care Transport Paramedic

Job Purpose: Promote and restore patients' health by completing the paramedic process, collaborate with physicians and specialty team members, provide physical and psychological support to patients, friends and families, and supervise assigned team members.

Job Summary: Serve as a CCT team member while identifying patient care requirements, establishing a compassionate environment, assuring quality of care, documenting services and developing and carrying out a plan of care.

Duties: Identify patient care requirements by establishing personal rapport with patients and other persons in a position to understand care requirements.

Establish a compassionate environment by providing emotional and psychological support to patients, friends and families.

Promote patient awareness by establishing patient care goals, and inform patient and family of the illness or disease process, treatment rendered while in the care of the CCT team and answer questions.

Assure quality of care by adhering to therapeutic standards, make or recommend necessary adjustments by collaborating with team members and multidisciplinary members, and stay current with CCT guidelines and required in-services, training and staff meetings.

Formulate a plan of care.

- In compliance with the guidelines of the critical care transport practices and procedures set forth by the state.
- Quickly and effectively deal with any and all potentially life-threatening situations that may occur before and during transport to increase the likelihood of a positive patient outcome.

Represent the agency by establishing and maintaining relationships with specialty transport teams and ancillary personnel in all outlying hospitals.

Maintain professional and technical knowledge by attending educational workshops, review professional publications, benchmarking state-of-the-art practices and all required in-services, meetings and skills training.

Document patient care services by charting in patient and department records.

Maintain supply inventory by checking stock daily to ensure inventory level; use supplies and equipment as needed to accomplish job results.

Maintain a cooperative relationship among health care teams by communicating information, respond to requests, build rapport; and participate in team problem-solving methods.

Safely operate the ambulance before, during and after all transports.

Qualifications:

Must be capable of performing general and advanced procedural Critical Care Transport Paramedic duties.

Must be a “self-starter”, assertively take on challenging responsibilities and hold self ultimately accountable for results and performance.

Must have superb diagnostic and clinical skills and able to obtain an excellent history, perform an extensive physical and formulate a treatment plan while including the team members.

Must have extensive knowledge of the uses, dosages, and side effects of medications as they apply to different disease states. Must be able to clinically assess whether or not the medication is effective.

Promote team spirit and work collaboratively with others on the medical team.

Must have excellent multi-tasking skills. Prioritize and perform a variety of concurrent tasks with minimal direction.

Must have excellent, in-depth knowledge of physiological functions and processes as they relate to issues of patient care.

Display professionalism, compassion and sound medical practice when dealing with challenging situations.

Must be recommended by the CCT Agency Medical Director.

Requirements: Must be currently certified as an EMT– Paramedic with no violations or restrictions.

Successful completion of a WVOEMS approved Critical Care Transport (CCT) Course.

Must have a minimum of three years of approved active (as determined by CCT Medical Director) emergency experience as a Paramedic.

Maintain a current certification in:

- ACLS.
- BTLS or PHTLS.
- PALS or PEPP.
- NREMTP or WVOEMS EMT-Paramedic.

Obtain a passing score on a West Virginia Office of Emergency Medical Services (WVOEMS) approved Critical Care Transport (CCT) exam.

To remain at Class 2, the Paramedic must complete **all** in-services on any drugs or procedures that become reclassified to Critical Care Transport Paramedic (CCT-P) and attend **all** mandatory skills as required.

Must successfully complete an emergency vehicle operations course (EVOC).

Job Description

- Job Title:** Critical Care Transport Coordinator (Nurse or Paramedic)
- Job Purpose:** Supervise, coordinate, educate and manage the Agency Critical Care Transport Program.
- Job Summary:** The Coordinator provides the vision and leadership to provide direction and motivation of the Critical Care Transport (CCT) staff and continually enhances the educational curriculum in a constantly changing healthcare environment.
- Duties:**
- Define nursing/paramedic practices by encouraging and supporting potential quality improvement efforts.
 - Identify future CCT nursing, paramedic and EMT requirements by establishing rapport across interdisciplinary services; interpreting information from potential and actual clientele and customers.
 - Ensure continuity of services while adhering to the laws, rules, policies and procedures of the WV Office of EMS pertinent to staff and the local CCT Program.
 - Maintain CCT nursing, paramedic and EMT staff by determining strategic recruiting focus, review and develop selection criteria, establish hiring practices cohesive to the CCT environment and evaluate effectiveness of newly hired nurses.
 - Maintain credentialed staff by keeping abreast of advances and specialty opportunities in new and emerging medical services and technologies, oversee continuing education and skills checkoff to maintain a highly skilled and trained staff to function at their highest level.
 - Represent organization by establishing and maintaining relationships with outlying hospitals.
 - Coordinate staff meetings with input from the Medical Director.
 - Maintain professional and technical knowledge by attending educational workshops through the review of professional publications and by benchmarking state-of-the-art practices.
 - Influence medical policy by continually consulting with staff and Medical Director.

Identify future nursing services.

Maintain a positive and cooperative work environment with specialty transport teams and build community relationships.

Provide overall leadership and direction of the CCT staff.

Develop and implement a training schedule.

- To be completed for one (1) calendar year.

Develop and implement a CCT department plan to include all of the following components.

- Training.
- Education.
- CQI/QA.
- Recruitment and orientation.

Coordinate monthly staff meetings as needed to ensure tasks are completed and the needs of the employees are being met.

Complete a monthly schedule for the CCT Program to ensure adequate coverage.

Continually reassess the needs of the CCT Program.

Monitor the chart audits for CCT daily.

Communicate and collaborate with the CCT Medical Director on pertinent issues.

Research and introduce healthcare education and training speakers from specialty areas to be offered to the employees of the organization, the community and other facilities on a regular basis.

Qualifications: Must be a “self-starter” and assertively take on challenging responsibilities and hold self ultimately accountable for results and performance.

Must have superb diagnostic and clinical skills and able to obtain an excellent history, perform an extensive physical and formulate a treatment plan while including the team members.

Has extensive knowledge of the uses, dosages and side effects of medications as they apply to different disease states, and able to assess clinically whether or not the medication is effective.

Promote team spirit and work collaboratively with others on the medical team.

Must have excellent multi-tasking skills. Prioritize and perform a variety of concurrent tasks with minimal direction.

Must have excellent, in-depth knowledge of physiological functions and processes as they relate to issues of patient care.

Display professionalism, compassion and sound medical practice when dealing with challenging situations.

Must be able to instruct /teach subjects pertinent to the CCT environment

Requirements: Paramedic

Experience, education or proven ability to function in a leadership capacity. Able to experience, coordinate, educate and manage the CCT Team.

Currently certified as an EMT–Paramedic with no violations or restrictions.

Successful completion of a WVOEMS approved Critical Care Transport Paramedic (CCT-P) Course.

A minimum of three years of active emergency experience as a Paramedic.

Must be currently certificated in:

- ACLS.
- BTLS or PHTLS.
- PALS or PEPP.
- NREMT or WVOEMS EMT-Paramedic.

To remain at Class 2, the Paramedic must complete all inservices on any drugs or procedures that become reclassified to Critical Care Transport Paramedic (CCT-P) and attend **all** mandatory skills as required.

Must successfully complete EVOG.

Requirements: Registered Nurse

Experience, education or proven ability to function in a leadership capacity. Able to supervise, coordinate, educate and manage the CCT Team.

Must be currently licensed by the West Virginia State Board of Nursing with no violations or restrictions.

Successful completion of a WVOEMS approved Critical Care Transport (CCT) Course.

- If CEN/CCRN certified, completion of a written/practical exam/oral board must be completed.

Must have a minimum of three years of critical care experience (ER, ICU) in a large tertiary care facility that provides high acuity patients with a wide range of diagnoses.

Must be currently certificated in:

- ACLS.
- BTLS or PHTLS.
- PALS or PEPP.
- NREMT.

To remain at Class 1, the Nurse must complete all in-services on any drugs or procedures that become reclassified to Class 1 and attend **all** mandatory skills as required.

Must successfully complete EVOG.

Highly recommend CEN/CCRN certification.

Configuration of a Critical Care Transport

The recommended configuration is as follows:

Class 0.

There are two types of Class 0 transports:

- A. **Class 0 (using a non-CCT Agency to transport):** The sending facility may elect to retain medical responsibility for the patient by sending a physician or qualified registered nurse from the sending facility to care for the patient during transport. The EMS system may provide the vehicle, emergency vehicle operator and one certified EMSA.

- B. **Class 0 (using a licensed CCT Agency to transport):** A CCT transport that requires additional speciality personnel to provide care to the patient. Teams must have a minimum of a three (3) member crew consisting of:
 - 1. One speciality technician (MD, DO, pediatric nurse, neonatal nurse, perfusionist, respiratory therapist, etc).
 - 2. One Critical Care Transport Paramedic or Critical Care Transport Nurse.
 - 3. One Emergency Vehicle Operator (EVO), may be either a certified EMT, Paramedic or EMSA-First Responder.

Class 0 personnel are to operate within their speciality. Example: A NICU nurse is not qualified to function in the WVOEMS CCT arena with the exception of a neonatal transport.

Class 1.

Teams must have the minimum of a three member crew consisting of a Critical Care Transport Nurse, a Critical Care Transport Paramedic and an Emergency Vehicle Operator (EVO).

Class 2.

Teams must have a minimum of a three member crew (2) Critical Care Transport Paramedic's and an Emergency Vehicle Operator (EVO).

Class 3.

Teams must have a minimum of a two member crew (1) Basic Interfacility Transport Paramedic and an Emergency Vehicle Operator (EVO).

Classification of CCT Medications

| Medication | Administer Primarily (By Crew) (A) | Re-administer or titrate (B) | Monitor Drip (C) |
|-----------------------------|--|---------------------------------|---------------------|
| A. Medications | | | |
| 1. Sedatives | | | |
| a. Versed | 3 | 3 | 2 |
| b. Ativan | 3 | 3 | 2 |
| c. Diprivan * | 1 | 2 | 2 |
| d. Etomidate | 2 | 2 | N/A |
| 2. Analgesics | | | |
| a. Fentanyl | 2 | 2 | 2 |
| b. Morphine Sulfate | 4 | 4 | 3 |
| c. Demeral | 3 | 3 | 3 |
| 3. Paralytics | | | |
| a. Norcuron | 2 | 3 | N/A |
| b. Succinylcholine | 2 | N/A | N/A |
| c. Rocuronium | 2 | 2 | N/A |
| d. Atracurium | 2 | 2 | N/A |
| 4. Antihypertensives | | | |
| a. Hyperstat | 3 | 3 | N/A |
| b. Capoten | 2 | 2 | N/A |
| c. Catapres | 2 | 2 | N/A |
| d. Cardizem-IV | 1 | 2 | 3 |
| e. Normodyne IV | 1 | 1 | N/A |
| f. Nipride IV | 1 | 1 | 2 |
| 5. Volume Expanders | | | |
| a. Hespan | 2 | 3 | 3 |
| b. Plasmanate | 2 | 3 | 3 |
| c. Blood Products | 1 | 1 | 3 |
| 6. Vasopressors | | | |
| a. Dopamine * | 4 | 4 | 4 |
| b. Dobutrex * | 1 | 3 | 3 |
| c. Norepinephrine * | 1 | 1 | 1 |
| d. Epinephrine drip * | 1 | 1 | 1 |
| e. Neosynephrine * | 1 | 1 | 1 |
| 7. Bronchodilators | | | |
| a. Alupent | 3 | 3 | N/A |
| b. Theophylline | 1 | N/A | 3 |
| c. Racemic Epinephrine | 1 | 1 | N/A |
| 8. Antianginals | | | |
| a. Tenormin | 1 | 2 | N/A |
| b. Nitroglycerin-IV | 1 | 3 | 3 |
| c. Lopressor-IV | 1 | 2 | 3 |
| 9. Thrombolytics | | | |
| a. t-PA | 1 | N/A | 2 |
| b. Eminase | 1 | N/A | 2 |
| c. Streptokinase | 1 | N/A | 2 |
| d. Retavase | 1 | 2 | 2 |

| Medication | Administer Primarily (By Crew) | Re-administer or titrate | Monitor Drip |
|----------------------------------|-----------------------------------|--------------------------|------------------------------|
| | (A) | (B) | (C) |
| 10. Anticoag/Antiplatelet | A | B | C |
| a. Heparin | 1 | N/A | 3 |
| b. Low Mole. Heparin | 1 | N/A | 3 |
| c. Integrillin | 1 | N/A | 3 |
| d. Aggrastat | 1 | N/A | 3 |
| e. ReoPro | 1 | N/A | 3 |
| 11. Antiemetics | A | B | C |
| a. Zofran | 3 | 3 | N/A |
| b. Compazine | 2 | 2 | N/A |
| c. Tagamet | 2 | 2 | 2 |
| 12. Antibiotics | A | B | C |
| a. All types of antibiotics | 1 | 2 | 3 (Limit to 1 antibiotic) |
| 13. Miscellaneous | A | B | C |
| a. Mannitol | 2 | 3 | 3 |
| b. Magnesium Sulfate | 1 | 1 | 3 |
| c. Insulin | 1 | 2 | 2 |
| d. Steroids | 2 | 3 | 3 |
| e. Potassium Chloride | 1 | 1 | 3 |
| f. Romazicon | 3 | 3 | 3 |
| g. TPN | N/A | 1 | 3 |
| h. Vasopressin | 1 | 1 | 1 |
| i. Dilantin/Phenytoin | 1 | 1 | 2 |
| j. Phosphenytoin/ Cerebryx | 1 | 1 | 2 |
| k. Bumex/Bumetanide | 2 | 2 | 2 |
| l. Amiodarone/Cordarone | 2 | 2 | 3 |
| m. Milrinone (Primacor) | N/A | 1 | 1 |
| n. Inocor/Amrinone | N/A | 1 | 1 |
| o. Natreacor (Nesiritide) | 1 | 1 | 1 |
| p. Proton pump inhibitors | 2 | 3 | 3 |
| q. Antivenin | N/A | 2 | 3 |
| r. Calcium Chloride | 2 | 2 | 3 |
| s. Calcium Gluconate | 2 | 2 | 3 |
| t. Pronestyl | 2 | 2 | 3 |
| u. Labetalol | 1 | 2 | N/A |
| v. Lanoxin | 2 | N/A | N/A |

* **The medications with asterisks must be per medical direction only for initiation of drip by the CCT crew.**

In the event there is no contact with the medical command center, the CCT crew may elect to initiate a drug and will contact medical command as soon as possible.

In the event a CCT crew is asked to transport a patient with a drug not on the above list in the following categories (Sedatives, Paralytics, Vasodilators, Vasopressors and Thrombolytics), it must be considered a Class I and will be reviewed at the semiannual meetings for review of classification. Further inservicing may be required by the referring physician or pharmacist.

If at any time a paramedic or nurse administers a drug not classified on the medication list, it is a requirement to complete and submit the appropriate paperwork.

Classification of CCT Procedures

| B. Procedures | Perform (A) | Monitor (C) |
|---------------------------------|--------------------|--------------------|
| 1. Surgical Cricothyrotomy | 2 | 2 |
| 2. Chest Decompression | 4 | 4 |
| 3. Chest Escharotomies | 1 | 2 |
| 4. NG & OG tube insertion | 4 | 4 |
| 5. Urinary Catheters | 2 | 4 |
| 6. RSI | 2 | 2 |
| 7. Chest Tubes | 1 | 3 |
| 8. IV Pumps | 3 | 3 |
| 9. Transvenous Pacing | 0 | 2 |
| 10. Arterial Line | 1 | 2 |
| 11. CVP Line | 0 | 3 |
| 12. ICP Line | 0 | 1 |
| 13. Swan-Ganz | 0 | 1 |
| C. Specialized Equipment | A | C |
| 1. Transport Ventilators | 2 | 2 |
| 2. Specialized Ventilators | 1 | 1 |
| 3. IABP | 0 | 0 |
| 4. Transport Isolette | 0 | 0 |
| 5. Ventricular Assist Devices | 0 | 0 |
| 6. Simple Ventilators | 3 | 3 |

WVOEMS CCT Semiannual Medical Directors and Program Managers Meeting

All medical directors and program managers will be required to attend semiannual CCT meetings. The Assistant State EMS Medical Director for CCT may elect to organize meetings more frequently if he feels it is necessary. The following is a basic agenda for these meetings. Additional topics will be solicited by the State CCT Medical Director

I. CCT Guideline/Protocol Review.

- A. Any new requests will be sent to the Assistant State EMS Medical Director for CCT one month before the scheduled meeting so they can be distributed to all members involved for feedback prior to the scheduled meeting. This will include:
 - 1. Medications.
 - 2. Procedures.
 - 3. Changes in the way we conduct CCT.

II. Maintaining standards and ways to improve.

- A. CQI/QA process.
 - 1. How it is working.
 - 2. Any additions/deletions/corrections to the current process.
 - 3. Ways to improve.

III. Review of statistics from each program.

- A. Number of calls:
 - 1. Medical.
 - 2. Trauma.
 - 3. Pediatric.
 - 4. Neonatal.
 - 5. OB.

- B. Critical indicators:
 - 1. Appropriate.
 - 2. Inappropriate.
- C. Times:
 - 1. Average in hospital time.
 - 2. Average loaded transport time.
- D. Dispatch criteria.
 - 1. Appropriate.
 - 2. Inappropriate.
 - 3. Ways to improve.
- E. Number and types of interventions.
 - 1. Appropriate.
 - 2. Inappropriate.
- F. Disciplinary problems.
 - 1. Types.
 - 2. Resolutions.

Local EMS Agency CCT Medical Director Agreement

I, _____
(Please Print)

take full responsibility and agree to accept the requirements for oversight and operation of the CCT Program for the licensed EMS agency listed below:

(Name of Agency Represented)

as outlined in the State Critical Care Transport Program Requirements. I understand that failure to meet the minimum requirements will result in the agency's inability to function as a CCT program and that our license will be revoked and an investigation will be conducted. I also realize that my participation in this program will require extensive participation and leadership on my part.

Signature of Medical Director Date

Signature of Assistant State EMS Medical Director for CCT Date

CCT Criteria for Sending and Receiving Physicians

The medical appropriateness of a CCT transport shall be decided using pre-defined criteria as established by the WVOEMS. In the event of a situation where a delay in response could aggravate the illness or injury or cause further harm, but a CCT level of response is questionable, the communicator will send the CCT unit. In order for a transport to take place and maintain consistency, the following criteria has been established:

- A. The transferring physician will identify the need to transport a patient to a tertiary care facility.
- B. The transferring physician will contact the accepting physician to ensure bed availability and acceptance of care.
- C. It will be the responsibility of the sending/receiving physician to arrange CCT services through the nearest available licensed CCT Program or CCT Medical Command Center. If contact is made directly with a CCT Program then the CCT Program must make immediate contact with the Medical Command Center and advise them of all CCT calls.
- D. If there is a question regarding the appropriate level of transport, you may consult the medical command physician who will make the final determination. The medical command physician will determine the most appropriate mode of transportation based on the criteria.
- E. Neither the CCT Dispatch Center nor the CCT Medical Command Center should downgrade the class of transport below the classification level of the drugs or procedures required by the patient.
- F. The CCT Dispatch Center or the CCT Medical Command Center must clarify the transport based on the specific circumstances of the patient.
 1. The transporting EMS crew must also be comfortable with and agree to the class of transport.
 - a. Aeromedical transport is the preferred mode in order to reduce out of hospital time for unstable patients.
 - b. With short transport times, MCP should consider CCT-Ground (CCT-G).

Overall Evaluation

The entire transport must be evaluated for selection of optimum mode of transport required for every individual patient.

- A. Modes of transport to be considered:
 - 1. Critical care transport by air (CCT-A).
 - a. Rotor.
 - b. Fixed.
 - 2. Critical care transport by ground (CCT-G).
 - a. Class 0.
 - b. Class 1.
 - c. Class 2.
 - d. Class 3.

- B. Factors that need consideration for appropriate selection are:
 - 1. Terrain and road conditions.
 - 2. Level of care required.
 - 3. Response time and time between facilities.
 - 4. Distance between facilities.
 - 5. Weather conditions/daylight or darkness.
 - 6. Necessity to decrease out of hospital time.
 - 7. Life-saving interventions/surgical procedures.

Once the most appropriate level of transport has been established, it will be the responsibility of the CCT Dispatch Center to dispatch the appropriate level of service that can expedite the transport.

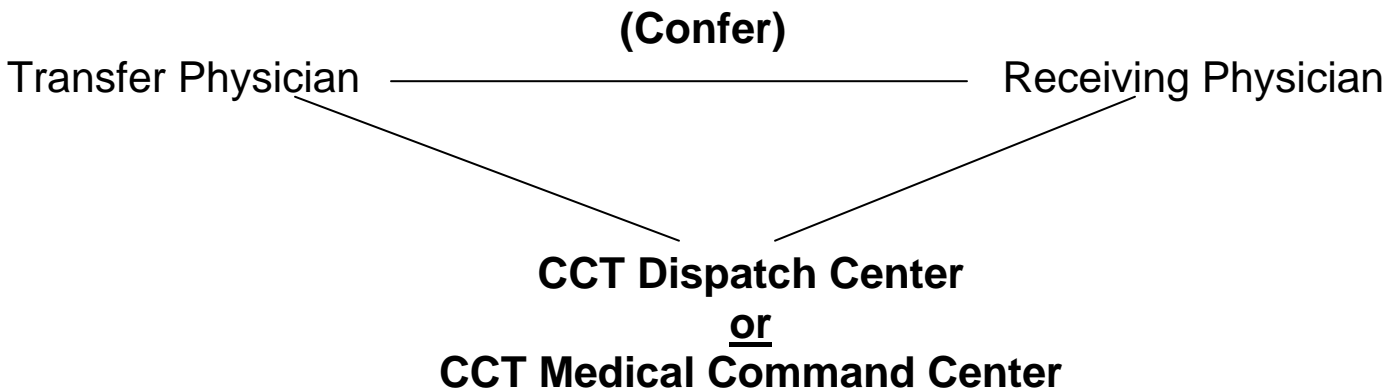
- A. If there are any instances in which transport will be delayed due to depletion of resources, the transferring facility will be contacted by CCT Dispatch Center and updated.

B. If there is an instance in which the patient may suffer deterioration due to a delay while waiting on CCT, the transferring physician may elect to choose the closest mode of transport available.

1. Examples:

- a. A trauma patient requiring surgical intervention to save life or limb.
- b. A patient with an aneurysm that is leaking, dissecting or pulsating and requires rapid surgical intervention.
- c. A patient who has received thrombolytics for an acute MI and has not reperfused with continued chest pain and needs an emergent cardiac catheterization and/or CABG.
- d. A patient who is admitted to an ICU with septic shock and is on a Dopamine and Dobutamine drip with frequent titration should be a Level 1 transport to maintain continuity of care from bedside to bedside. However, if that patient is on the above named drips and no titration is required and there is no instability, a level II response would be appropriate.

Critical Care Transport Dispatching Criteria

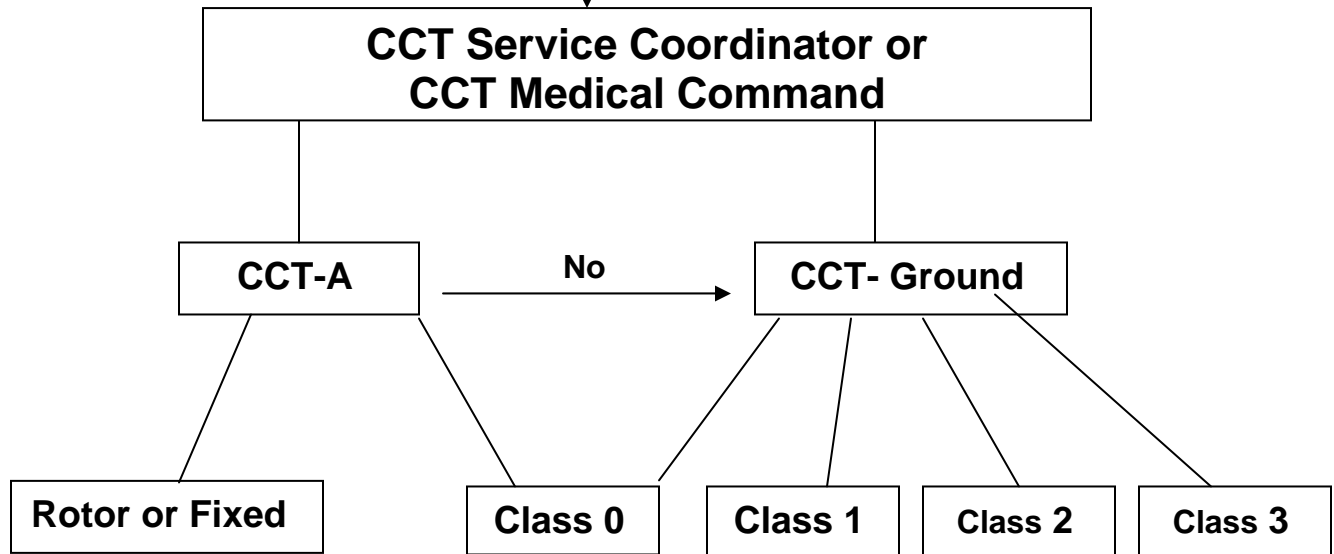


Contact with the nearest CCT Dispatch Center will begin the process. The sending/receiving physician may contact medical command if the medical command physician is needed for a consult or final determination of suitable crew configuration.

| | | |
|------------|------------|----------------|
| WVU | (Med Comm) | 1-800-255-2146 |
| CAMC | (Med Base) | 1-800-346-4206 |
| Huntington | (Med Comm) | 1-800-654-5767 |

Always consider Air over Ground for unstable patients

Critical Care Dispatch Sheet



Dispatch of CCT Resources

Please circle all those that apply:

- | | | | |
|----|--|-----|---------------|
| 1. | Is the patient unstable? | Yes | No |
| 2. | Are any of the current medications or procedures Class I or II? | Yes | No |
| | a. Do they require titration or rebolusing elevating the level required? | Yes | No |
| 3. | How many IV drips are they currently receiving? | 1 | 2 3 4 5 6 7 8 |
| | a. Is the patient receiving more than 3 drips? | Yes | No |
| | i. Please list all IV drips the patient is currently receiving: | | |

- | | | | |
|--|--|---------------------|------------------|
| If "Yes" to any of the above, the patient requires CCT | | Requires CCT | |
| 4. | Is the patient unstable? | Yes | No |
| | a. If yes, the patient requires Aeromedical transportation if available. | | |
| 5. | Is an Aeromedical service available? | Yes | No |
| | b. Is it imperative to minimize out of hospital time? | Yes | No |
| | c. If yes, dispatch Aeromedical service. If not or unavailable, refer to #6. | | |
| 6. | Is a ground CCT unit available? | Yes | No |
| 7. | Is this a class 0, I or II? | Class 0 | Class I Class II |
| | a. If they are not available, consider when one will be available. | | |
| | b. Communicate information to referring facility. | | |

Please refer to the questions below for consideration of CCT.

- | | | | |
|-----|---|-----|----|
| 8. | Is this patient intubated? | Yes | No |
| 9. | Does the patient have a high probability of multisystem organ failure? | Yes | No |
| 10. | Is there a high index of suspicion this patient will require intubation within the next 2 hours? | Yes | No |
| 11. | Will this patient go for a specialized procedure within the first 4 hours of admission at the receiving facility? | Yes | No |
| 12. | Please list the procedure: | | |
| | a. Dialysis | | |
| | b. Cardiac catheterization/Surgical intervention | | |
| | c. Insertion of balloon pump | | |
| | d. Pacemaker | | |
| | e. Surgery | | |
| | f. Other (please describe): _____ | | |
| 13. | If any procedures are listed in # 12, would you consider a local EMS to expedite transport of the patient so they will receive life saving interventions quicker? | Yes | No |
| | a. May consider rendezvousing with a CCT unit enroute to expedite transport. | | |
| 14. | Why is this patient being transferred to a tertiary care facility today? | | |

CCT CQI/QA Chart Audits

In Clinical Quality Improvement, data is monitored to evaluate the quality of care that is delivered to a patient. Protocols are compared to the actual care delivered and deviations are evaluated. The information is used to make improvements in patient care. The Medical Director must be intimately involved in the process and make recommendations that are aimed at continuously improving the quality of service delivered. Recommendations may include training, counseling, policy changes or protocol modifications.

Issues may be reported by the patient, medical facilities, communications specialists or critical care transport staff to the Agency QA Coordinator. The Agency QA Coordinator in conjunction with the Medical Director will review or investigate the issue and provide solutions to the Critical Care Transportation Team.

A. Objectives:

1. To assure optimal delivery of care for all patients in all age groups.
2. To assure accurate and appropriate documentation of the care provided.
3. To identify opportunities to improve the delivery of care to the patient.
4. To solve any identified issues in the delivery of care to the patient.
5. To provide a mechanism to monitor and evaluate the quality and appropriateness of patient care.
6. To monitor and evaluate the clinical performance of all individuals on the CCT team.

In order to assure optimal quality patient care, the CCT Nurse/Paramedic Coordinator will perform daily chart audits in order to review patient care and documentation. Criteria forms used to assess these charts for review are attached (refer to CCT documentation audit).

Patient care quality assurance will be monitored by chart audits. Charts that are “flagged” with any of the following criteria must be reviewed with the medical director:

- ### B. Any patient who has any of the following events during the course of the transport (course of transport shall be defined as extraordinary events that occur at the referring hospital after the CCT Crew has accepted the patient, during transport, or at the receiving hospital before care has been relinquished) must be referred for QA/QI review.
1. Changes in mental status.
 2. Changes in cardiac rhythm.

3. Rapid sequence intubation (RSI).
4. Cardiac or traumatic arrest.
5. Intra-aortic balloon pump transports.
6. Excess time delays (provide explanation).
7. Inappropriate request for transport.
8. Seizures.
9. Hypothermia.
10. Shock/volume expanders.
11. Failure of referring facility to adopt recommendations.
12. In-hospital stabilization time > 60 minutes.
13. Delay of any type.
14. Hypotension or /hypertension.
15. Respiratory failure.
16. Airway Interventions (including all intubation attempts, surgical cricothyrotomy).
17. Bleeding/hematoma secondary to thrombolytic therapy.
18. Use of paralytics.
19. Chest decompression.
20. Deviation from protocol.
21. Drug therapy interventions, titration of drips.
22. Hypoglycemia.
23. Hypoxemia.
24. Blood products.
25. Equipment failure.
26. Death.

27. Any event that is out of the ordinary.

28. Other (please explain).

CQI/QA

Once the transport is completed, it is the nurse's/paramedic's responsibility to complete the patient care QA monitor sheet and attach it to the front of every patient's chart.

The charts are to be delivered to the office of the CCT Program Coordinator on a daily basis for review.

- A. Weekly, all charts are to be forwarded to the agency CCT Medical Director for review and recommendations.
- B. The CCT Program Coordinator shall meet with the CCT Medical Director on a weekly basis to review charts unless urgent attention is required.
- C. The CCT Medical Director will then select the cases for review in the monthly staff meeting. These meetings are mandatory.
- D. Monthly, all CCT charts will be forwarded to the Assistant State EMS Medical Director after they have been reviewed by the Agency Medical Director. This must be done no later than the 10th of the following month.
 - 1. After the agency has been active in the CCT environment for one (1) year, they may request to send a monthly report to the Assistant State Medical Director for CCT and the QA would be sent to OEMS.
 - 2. In order to make the request after one (1) year, the Assistant State EMS Medical Director for CCT will make the determination by the volume and acuity of calls the agency has encountered. This request must be made in writing.

Peer Review

Any call may be reviewed at the request of anyone participating in the care of the patient. This can include but not be limited to the following: medical command personnel, transferring/receiving physician, nurse, paramedic, medical director, patient or family member. The following needs to be included in the report and submitted to the Assistant State EMS Medical Director using the following form once the agency medical director and program manager have reviewed the call:

WVOEMS Action Report

| Description | Attached | Not attached (provide explanation) |
|---|----------|------------------------------------|
| Documentation from actual call | | |
| Findings | | |
| Reason for consultation and the outcome | | |
| Any action taken | | |

Disciplinary Issue Review

In the event there are concerns or problems with regards to management of patient care, the Agent CCT Medical Director will be contacted immediately for consultation and final action. A report must be completed and forwarded to the Assistant State EMS Medical Director within three (3) days of the occurrence using the WVOEMS Action Report.

Patient Care Quality Assurance Monitor Sheet

Quality assurance requires systematic evaluation of patient care by the use of monitors toward the goal of identifying trends. These trends are then evaluated, with the goal of changing practice and improving quality care.

Please check appropriate box: **Type of Call**

| | |
|---------------------------|--------------------------------|
| CCT Medical | CCT Trauma |
| PICU | NICU |
| Labor and Delivery | Others (please explain) |

Total time at facility: _____

Total time on calls: _____

Comments:

Monitored patient care will include all patients experiencing an extraordinary event while the transport crew is involved in the patient's care (at referring hospital, during transport, or at the receiving hospital). These events will include, but are not limited to:

| | |
|---|---|
| <input type="checkbox"/> Changes in mental status <input type="checkbox"/> Changes in cardiac rhythm <input type="checkbox"/> Rapid sequence intubation (RSI) <input type="checkbox"/> Cardiac or traumatic arrest <input type="checkbox"/> Intra-aortic balloon pump transport <input type="checkbox"/> Excess time delays not related to patient care (provide explanation) <input type="checkbox"/> Inappropriate request for transport <input type="checkbox"/> Seizures <input type="checkbox"/> Hypothermia <input type="checkbox"/> Shock/volume expanders <input type="checkbox"/> Failure of referring facility to adopt recommendations <input type="checkbox"/> In-hospital stabilization time >60 min <input type="checkbox"/> Delay of any type <input type="checkbox"/> Hypotension or hypertension | <input type="checkbox"/> Respiratory failure <input type="checkbox"/> Airway Interventions (including all intubation attempts, surgical cricothyrotomy and retrograde intubations) <input type="checkbox"/> Bleeding/hematoma secondary to thrombolytic therapy <input type="checkbox"/> Use of paralytics <input type="checkbox"/> Chest decompression <input type="checkbox"/> Deviation from protocol <input type="checkbox"/> Drug therapy interventions, titration of drips <input type="checkbox"/> Hypoglycemia <input type="checkbox"/> Hypoxemia (O2 Saturation < 90%) <input type="checkbox"/> Blood products <input type="checkbox"/> Equipment failure <input type="checkbox"/> Death <input type="checkbox"/> Any event that is out of the ordinary <input type="checkbox"/> Other (please explain) |
|---|---|

The Medical Director will review all transports meeting the above criteria. The mechanism for identifying such patient transports for review will be the completion of this checklist form. Please attach the completed form to the CCT patient record for review by the CCT Coordinator.

Patient's Name

Transport Date and Number

CCT Transport Team

Medical Director's Signature

Program Manager's Signature

Office Use Only

| | |
|---|---|
| <input type="checkbox"/> None Warranted | <input type="checkbox"/> Policy/Procedure Review |
| <input type="checkbox"/> Conference | <input type="checkbox"/> Quarterly Staff Meeting Review |

Criteria for WV CCT Training Center

The WV Critical Care Transport system envisions a program in which advanced healthcare providers who are certified or eligible and possess a desire to specialize in Critical Care Transport will receive training under the supervision of qualified academic critical care practitioners in both the clinical and classroom setting for advanced science of critical care medicine. It is a goal of the system to prepare students to contribute to the process and successfully complete the examination for Critical Care Transport.

In order for an agency to become qualified and recognized as a WV CCT training center the following minimum criteria must be met:

- A. Required to contract with a large tertiary care facility capable of providing patients with high acuity and specialty units available for hands on clinical rotations.
- B. Must own and maintain specialty equipment to practice advanced skills required in the CCT environment.
 - 1. Surgical cricothyrotomy manikin.
 - 2. Chest decompression manikin.
 - 3. Invasive monitoring devices.
 - a. Swan-Ganz catheters.
 - b. Triple lumens.
 - c. Balloon pump catheter.
 - d. Pressure monitoring devices.
- C. Appropriate educational space for training, testing and storage of equipment.
 - 1. Didactic.
 - 2. Skills.
- D. Ample amount of qualified instructors.
 - 1. In order to meet the criteria to be a CCT instructor, the nurse/paramedic must meet the following:
 - a. Score Instructor Potential (IP) on 80% of the practical skills stations.
 - b. Obtain an overall grade of a "B" for the entire class.

E. Maintenance of training records.

1. Must be approved by the Assistant State EMS Medical Director for CCT to become qualified as a recognized CCT training center and OEMS State Medical Director.

Legal Recognition with Extension of Scope of Practice for Existing CCT Paramedic or RN or FN

EMS Personnel may qualify for an extended or advanced scope of practice by completing the following requirements:

1. Only (a) for Paramedic, either (a or b) for EMSA-RN (FN).
 - a. Applicant must have successfully completed a Critical Care Transport Program (UMBC or WVOEMS approved CCT Course).
 - b. Successfully pass the CEN or CCRN exam.
2. Submit a letter of recommendation from the Agency Medical Director and the Agency CCT Program.
3. Submit a completed West Virginia Emergency Medical Services Personnel Application and Signature Attachment Sheet.
4. Submit a copy of Registered Nurse license from the State of West Virginia Board of Nursing.
5. Submit a copy of CEN or CCRN certification.
6. Submit a copy of current WV certification as an EMT-P or EMSA.
7. Complete approved WVOEMS CCT Refresher Course and pass the written and practical examination with a score of 76% or greater.
8. Applicant has one year from August 1, 2005 to complete all requirements for certifications. Deadline to complete all requirements is September 15, 2006.

or

Existing CCT Paramedic, RN or FN participating in the Critical Care Transport arena and have met numbers 1, 2, 3 and 4 (if RN or FN) of the requirements may challenge the WVOEMS written and practical examination, and must successfully complete both the written with a minimum score of 76% and all practical skill stations.

If the participant fails either part of the examination, they must complete an approved WVOEMS CCT Refresher Course and successfully pass the written and practical examination with a score of 76% or greater.

The only exception to the above requirements will apply to those who took the pilot state approved CCT course offered by WVOEMS/WVSC/KCEAA from September 2003 through March 2004 and successfully passed the written/practical and oral board.

Initial Scope of Practice Extension - CCT - Paramedic

EMS Personnel may qualify for an extended or advanced scope of practice as a CCT-Paramedic by meeting the following requirements:

1. Successfully completed an approved Critical Care Transport Program training course following the WVOEMS curriculum and successfully complete both the written and practical examination with a score of 76% or higher.
2. Hold current WV certification as an EMT-P.
3. Submit a letter of recommendation from the Agency Medical Director and Agency CCT Program Coordinator.
4. Submit a completed West Virginia Emergency Medical Services Personnel Application, and Signature Attachment Sheet.
5. Obtain proper signatures of EMS Agency's Official Director (as appears on the agency license) and the Agency's CCT Medical Director.
6. Submit forms to WVOEMS.

Initial Scope of Practice Extension – CCT Nurse (RN or FN)

EMS Personnel may qualify for an extended or advanced scope of practice as a CCT-Nurse by meeting the following requirements:

1. Professionally licensed as a Registered Nurse by the State of WV with no violations.
2. Successfully completed an approved Critical Care Transport Program training course following the WVOEMS curriculum and successfully complete both the written and practical examination with a score of greater than 76% or successfully pass the CEN or CCRN exam.
 - a. If certified as CEN or CCRN, the nurse will be given the option to challenge the WVOEMS CCT Refresher Course examination and has to pass both the written and practical examination with a score of 76% or greater.
3. Submit a letter of recommendation from the Agency Medical Director and Agency CCT Program Coordinator.
4. Submit a completed West Virginia Emergency Medical Services Personnel Application and Signature Admission Attachment Sheet.
5. Certified as an EMSA RN or FN by WVOEMS and is affiliated with a West Virginia Licensed EMS Agency that provides a Critical Care Transport Service.

7. Obtain proper signatures of EMS Agency's Official Director (as appears on the agency license) and the Agency's CCT Medical Director.
6. Submit forms to WVOEMS.

Maintaining Extended Scope of Practice – CCT Every Two (2) Years Only

To maintain an advanced Scope of Practice as a CCT-Paramedic or CCT-RN in West Virginia, the individual must:

1. Be currently certified as an EMT-Paramedic, EMSA-RN or EMSA-FN (CCT Scope of Practice is concurrent with the individual's EMT-P, EMSA-RN or EMSA-FN 2-year certificate.)
2. Be affiliated with a licensed CCT agency.
3. Apply for CCT scope of practice continuation:
 - a. Submit a current complete application form.
 - b. Apply between January 1 and September 30 during the last year of certification.
4. Submit CCT continuing education record documenting completed refresher training consisting of:

| <u>Topics</u> | <u>Hours</u> |
|-------------------------------|--------------|
| Lab and X-Ray Interpretation | 2 |
| Pharmacology | 2 |
| Respiratory Management | 2 |
| Cardiac Management | 2 |
| Shock Management | 2 |
| Pediatric Management | 1 |
| OB/GYN Management | 1 |
| CNS/Neurological Management | 1 |
| Invasive Monitoring | 1 |
| CCT Trends and Special Topics | <u>2</u> |
| Total | 16 |

5. Submit completed CCT **biennial** skill evaluation form documenting the following:

- Advanced Chest Decompression
- Advanced Secondary Airway Devices
- Surgical Airway
- Intubation/RSI
- Ventilator Management/Capnography
- Medication Calculations
- 12 Lead ECG Interpretation
- Transvenous Pacemaker
- Oral Case Presentations
- Agency Specific (i.e.: IABP, Invasive Monitoring, Neonate Management)

6. Submit proof of current:
 - a. Advanced Cardiac Life Support – ACLS
 - b. International Trauma Life Support – ITLS or
Prehospital Trauma Life Support – PHTLS
 - c. Neonatal Resuscitation Program – NRP
 - d. Prehospital Emergency Pediatric Program – PEPP



West Virginia Department of Health and Human Resources
Bureau for Public Health
Office of Emergency Medical Services
350 Capitol Street, Room 515
Charleston, West Virginia 25301-3716

CCT Ambulance Equipment List

This is a list of the minimum equipment and supplies required for CCT EMS vehicles. This is in addition to the equipment and supplies already noted for Class C ambulance. All equipment must be clean and in proper working order. All supplies must be clean, and when applicable, sealed and within the manufacturers date of expiration. All classified vehicles must be equipped with all of the required equipment and supplies while en route to a scene or during patient transport.

CCT – Equipment and Supplies – Class 1 and 2 (it is assumed that equipment and supplies for a Class 0 or Class 3 transport would be obtained from the sending hospital).

- A. Paperwork.
 - 1. Notes.
 - a. CCT notes, page 1 and 2.
 - b. Supplemental report.
 - c. CCT protocol book.
 - d. Drug reference book.
- B. Urethral catheterization kit - 2.
 - 1. Foley kits to include:
 - a. Sterile gloves.
 - b. Povidine iodine swabsticks or cotton balls with betadine and tweezers.
 - c. Syringe (prefilled with sterile water).
 - d. Dry swabs.
 - e. Lubricating jelly.
 - f. Underpad.
 - g. Fenestrated drapes.

2. Foley drainage bag.
 - a. Catheter Foley/sizes.
 - i. 12 fr, 14 fr, 16 fr, 18 fr – 1 each.

C. IV fluids.

1. 0.9 sodium chloride.
 - a. 10 ml vial -6.
 - b. 100 ml - 6.
 - c. 250 ml - 4.
2. D5W.
 - a. 250 ml-4.
3. Lactated ringers 1000 ml -2.
4. Fluid warmer.

D. Syringes.

1. 1 cc – 5.
2. 3 cc – 10.
3. 10 cc – 10.
4. 30 cc – 2.
5. 60 cc Luer tip – 2.
6. Insulin syringe - 3.

E. Suction.

1. “Y” connectors – 2.
2. 5-in-1 connector – 2.

F. Miscellaneous.

1. IV clip cannula – 5.
2. Blunt plastic cannula – 10.

3. Conical filter – 2.
4. Stopcock – 4.
5. Calculator - 1.
6. ETCO2 cable – 1.
7. ETCO2 adapters - 5
8. Doppler stethoscope – 1.
 - a. Doppler gel -1.
9. Tympanic thermometer – 1.
10. Cover for tympanic thermometer – 1 box.

G. Airway (Cobra PLA or equivalent LMA).

1. Cobra PLA (peri-laryngeal airway) kit – 1 ½.
2. Cobra PLA (peri-laryngeal airway) kit – 2 - 1.
3. Cobra PLA (peri-laryngeal airway) kit – 3 - 1.
4. Cobra PLA (peri-laryngeal airway) kit – 4 - 1.
5. Surgical cricothyrotomy set with cuff, 5.5 mm – 1.
6. Wayne Pneumothorax kit, 10.2 fr – 2.

H. Medications.

1. Sedatives.
 - a. Ativan – 2 mg ampule - 5.
 - b. Etomidate – 20 mg vial – 4.
 - c. Versed 5 mg vial – 5.
2. Analgesics.
 - a. Fentanyl 100 mcg ampule – 5.
3. Paralytics.
 - a. Norcuron 10 mg vial – 6.
 - b. Succinylcholine 200 mg vial – 5.

4. Antihypertensives.
 - a. Cardizem 25 mg vial – 6 (class 1 drug).
 - b. Nipride 50 mg vial – 2.
5. Volume expanders.
 - a. Hespan 500 cc – 2.
6. Vasopressors.
 - a. Dobutamine 250 mg – 1.
 - b. Norepinephrine 4 mg – 2 (class 1 drug).
7. Antianginals.
 - a. Lopressor 5 mg vial – 3 (class 1 drug).
 - b. Nitroglycerin IV 50 mg/250 cc – 2 (class 1 drug).
8. Anticoagulants/antiplatelets.
 - a. Heparin 10,000u vial – 6 (class 1 drug).
9. Antibiotics.
 - a. Ancef (Kefzol) 1 g – 2 (class 1 drug).
10. Miscellaneous.
 - a. Amiodarone – 300 mg vial – 3.
 - b. Bumex – 1 mg vial – 2.
 - c. Dilantin 250 mg vial or preload – 5 (class 1 drug).
 - d. Labetalol 100 mg – 2 (class 1 drug).
 - e. Lanoxin 0.5 mg ampule – 2.
 - f. Magnesium sulfate 1 g vial – 2 (class 1 drug).
 - g. Mannitol 20% in 500 ml – 2.
 - h. Romazicon 0.5 mg vial – 2.
 - i. Solu-medrol 125 mg vial – 2.
 - j. Vasopressin – 20-units/ml vial – 4 (class 1 drug).

- k. Tagamet 300 mg vial -1.
- l. Calcium gluconate - 2.
- m. Betadine spray bottle -1.
- n. Insulin bottle (Humulin R) – 1 (class 1 drug).
- o. KCL (potassium chloride) 20 mEq vial – 2 (class 1 drug).
- p. Racemic epinephrine 2.25% .5 ml – 5 (class 1 drug).

I. Ventilation.

- 1. Ventilator – 1.
 - a. Volume control and pressure control capabilities.
 - b. Multiple modes.
 - i. SIMV, AC, CPAP.
 - ii. Pressure support, PEEP, adjustable peak flow.
 - c. Portable.
 - d. Battery.
 - e. Pediatric and adult capabilities.
 - f. Variable oxygen concentrations from 21% to 100%.
 - g. AC power capability.
- 2. Ventilator tubing (specific to brand vent above) – 4.
- 3. PEEP valve – 4.
- 4. Ventilator filters – 4.
- 5. Closed trach suction catheter – 4.

J. Various miscellaneous.

- 1. Disposable transducers for invasive monitoring – 2.
- 2. IV “Y” connector – 4.
- 3. 18/20 ga twin catheters – 4.
- 4. 20/22 ga twin catheters – 4.

5. Pressure infusion bags – 2.

6. Disposable skin probe (temperature monitoring) – 3.
 7. Disposable rectal probe (temperature monitoring) - 4.
 8. Blood administration set tubing - 4.
 9. Sterile gloves 7.5 - 6 sets.
- K. Major equipment items.
1. End tidal CO₂ monitoring device.
 2. Cellular phone installed.
 3. Invasive monitoring device.
 4. Temperature monitoring (rectal, skin and esophageal) device.
 5. On-board air and oxygen systems (minimum M tanks).
 6. On-board suctioning units – 2.
 7. Refrigerator.
 8. 5KW generator.
- L. IV pump.
1. Small and durable in size.
 2. Multiple chambers.
 3. Long battery life.
 4. Each truck must have the capability to infuse 6 drips.
 5. AC power capability.
 6. IV pump compatible tubing.
 - a. Nitroglycerine approved tubing.
- M. Transvenous (internal) pacemaker.
1. Adjustable rate.
 2. Adjustable milliamps.
 3. Battery powered.
 4. 9 volt batteries – 2.

N. Cardiac monitor.

1. 12-lead capability.
2. Fax transmission capability.
3. End tidal CO₂ monitoring.
4. Minimum of 2 invasive line monitoring capability with cables.
5. Temperature monitoring (skin, rectal, esophageal).
6. Pediatric and adult capabilities.
7. Non-invasive BP monitoring.
8. Transcutaneous (external) pacing.
9. Pulse oximetry capability.
10. Defibrillation capability.
11. AC power capability.