



**Calhoun County Medical Control Authority
Medical Treatment Policies – General Considerations**

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Index

Introduction	4
Limits of Practice	5
Individual Providers	5
Licensed Agencies.....	5
Definition of Roles	6
Medical First Responder.....	6
Basic Emergency Medical Technician (EMT-A).....	6
Specialist (EMT-Intermediate)	7
Paramedic (EMT-P).....	7
ALS Intercept Policy.....	8
Automatic Defibrillator Policy.....	9
Approval and Certification.....	9
Maintaining Certification	9
Suspension and Reinstatement of ADT Level	9
Equipment Checklist.....	10
Standards for Use.....	11
Medical Records and Quality Assurance	11
CCMCA Approved Run Report Policy	12
Medical First Response	12
Ambulance (all levels).....	12
Communication Difficulty Policy	13
Emergency Medical Dispatch Policy	14
General Considerations	14
Standards for use	14
Initial Certification requirements.....	14
Helicopter Policy.....	16
Mass Casualty Disaster Plan	17
Maximum Patient Load Policy	17
Patient Destination Policy.....	18
In an Emergency or Potential Emergency Situation.....	18
If the patient is unwilling to be transported to the closest medical facility.....	18
If a non-emergency situation exists	18
Special Destination Circumstances	19

Appendix A: Approved Automatic/Semiautomatic Defibrillators	20
Pad Recommendations	20
Automatic/Semiautomatic Devices approved by CCMCA for use.....	20
Appendix B: Incident Management System.....	21
1. EMS Incident Management	21
The IMS system is based on the following principles:	21
Working within this structure allows the EMS Command to:	21
2. Incident Operations – The Sector Concept.....	21
3. Multiple Site/Sector Operations	22
4. EMS Command Roles and Responsibilities	22
The EMS Command Initial Responsibilities:	22
Detailed Responsibilities of EMS Command include:.....	23
5. Staging Sector Officer.....	25
6. Triage Sector Officer.....	25
7. Treatment Sector Officer	26
8. Transportation Sector Officer.....	27
9. Safety Sector Officer.....	27
10. Logistics Sector Officer.....	28
11. Communications Sector Officer	28
12. Transfer of Command.....	29
13. De-Escalation and Securing of the Operations at the Incident Scene	29
14. Post-Incident Critique	29
Incident Command Terminology.....	30

Introduction

The following general considerations accompany the West Michigan Regional Protocols for patient care. Any EMS personnel functioning within the jurisdiction of the CCMCA are required to abide by these General Considerations and the West Michigan Regional Protocols. These have been formally adopted by the CCMCA on December 11, 1998.

The medical procedure outlined in these protocols are to be performed as outlined in the specific procedure. It is recognized by the Medical Director and the CCMCA that it is impossible to outline a procedure that is appropriate for every possible circumstance. For this reason, the Medical Director and CCMCA must rely on the experience and the expertise of the pre-hospital care provider to adapt the procedures outlined in this section to the particular exceptional circumstance.

The pre-hospital care provider must understand in the event that a variation from the prescribed procedure must occur, that it is his/her responsibility to insure that any variation in no way compromises the quality of patient care. Appropriate use of on-line medical control, in order to obtain an order for the variation from the standard medical procedure, by HERN or phone by all levels of pre-hospital care providers, will help insure this end. In addition, the pre-hospital care provider must understand that procedures not endorsed by the CCMCA are not to be performed in the field without a direct order by the on-line medical control physician. Endorsed procedures include those which are listed in the West Michigan Regional Protocols.

It is further understood by the Medical Director and CCMCA that periodic changes or additions to the protocols may be necessary. The pre-hospital care provider should understand that on-line communication, in order to obtain orders regarding the protocol or a requested variance, are an essential element necessary for the recognition of a need for such changes.

Limits of Practice

All pre-hospital care providers and individuals operating within the Calhoun County Medical Control Authority EMS System are limited in their practice. The limits of practice are equivalent to the level of current state license held by the agency and response vehicle and those defined within this manual and Michigan Department of Consumer and Industrial Services EMS Division.

Individual Providers

Individuals practicing at the Paramedic level require system certification to practice within the jurisdiction of the CCMCA. System Certification may require passing a written and/or practical skills test and a meeting with the Medical Director for CCMCA.

Licensed Agencies

In addition, the pre-hospital care provider must obtain approval from CCMCA for operation within the system. It is the responsibility of the agency to provide an annual list of licensed personnel (where appropriate), licensed response vehicles and agency license. The list of licensed personnel must include; Full Name, Social Security (license) number, expiration date and level of license and ACLS (if applicable) expiration date. These lists should be submitted during the month of May so that this is available for review prior to approval for yearly agency license renewal.

Definition of Roles

The following defines the roles which are expected for licensed personal under the CCMCA.

Medical First Responder

Medical First Responders are valuable members of the EMS team who are responsible for intervening in patient care when “threat to life or limb” exists during the period before an ambulance arrives. First Responders are expected to perform as based on the Michigan Department of Consumer and Industrial Services Emergency Medical Services division (MDCIS-EMS) goals and objectives for the Medical First Responder and Michigan Public Act 179 of 1990. The specific role of the First Responder is highly variable dependant upon the specific situation. However, duties of the First Responder prior to ambulance arrival may include:

1. Initial control of the scene.
2. Alerting the EMS system to the situation at the scene.
3. Gaining access to patients.
4. Providing patient care in the event of life threatening or emergency situations.
5. Moving patients when necessary.
6. Reporting information to responding ambulance personnel.
7. Assisting ambulance personnel after their arrival.

In addition to maintaining their license, Medical First Responders must maintain a current American Heart Association Healthcare Providers CPR certification or American Red Cross Professional Rescuer certification to practice within the CCMCA. The Medical First Responder level of care is represented by the letter “M” in the West Michigan Protocols. It is expected that all MFR’s will perform to this standard.

Basic Emergency Medical Technician (EMT-A)

Basic EMT’s are trained to the foundation level of EMS operations in the field. Basic EMT’s are expected to perform as based on the MDCIS-EMS goals and objectives for the Basic Emergency Medical Technician and Michigan Public Act 179 of 1990. In the absence of Medical First Response, they must act in that capacity as well. In addition to the roles mentioned within the Medical First Responder Level, they are the entry level for individuals who operate on a Basic Life Support or Advanced Life Support vehicle. While practicing on a licensed ALS or limited ALS vehicle, Basic EMT’s may only practice to the Basic Life Support Level. In addition to maintaining their license, Basic EMT’s must maintain a current American Heart Association Healthcare Providers CPR certification or American Red Cross Professional Rescuer certification to practice within the CCMCA. The Basic EMT level of care is represented by the letter “B” in the West Michigan Protocols. It is expected that all Basic EMT’s will perform to this standard.

Specialist (EMT-Intermediate)

Specialist EMT's are trained to provide the introductory phases of Advanced Cardiac Life Support to the patient in the field. Specialist's are expected to perform as based on the MDCIS-EMS goals and objectives for the Specialist Emergency Medical Technician and Michigan Public Act 179 of 1990. Specialist may initiate IV administration and insertion of advanced airways including endotracheal intubation. While practicing on a licensed ALS unit, Specialist's may only practice to the Limited Advanced Life Support Level.

In addition to maintaining their license, Specialist's must maintain a current American Heart Association Healthcare Providers CPR certification or American Red Cross Professional Rescuer certification to practice within the CCMCA. The Specialist level of care is represented by the letter "S" in the West Michigan Protocols. It is expected that all Specialist's will perform to this standard.

Paramedic (EMT-P)

The Paramedic processes the highest level of training and responsibility within the field levels of the EMS System. Paramedic's are trained to provide the phases of Advanced Cardiac Life Support which correct for life-threatening conditions. In addition, they are expected to perform as based on the MDCIS-EMS goals and objectives for the Paramedic and Public Act 179 of 1990.

In addition to the skills, knowledge and responsibilities of the previous three levels (MFR, BEMT, Specialist) Paramedics are expected to provide defibrillation, ECG interpretation and monitoring, drug administration and other procedures as dictated by the West Michigan Protocols.

Paramedics are expected to maintain a BLS Healthcare Provider and ACLS certification from the American Heart Association. The Paramedic level of care is represented by the letter "P" in the West Michigan Protocols. It is expected that all Paramedic's will perform to this standard. All Paramedics must achieve CCMCA System Certification prior to practicing within Calhoun County.

ALS Intercept Policy

Utilization of ALS level services should be considered for patients who are in critical condition or have potential life-threatening conditions. This will provide the patient with the highest level of care that is available until arrival at the Emergency Department. The following conditions are examples of when ALS intercepts would be considered appropriate:

1. Extended vehicular extrication
2. Cardiac or respiratory arrest
3. Chest pain
4. Anaphylactic reaction shock
5. Unconscious, unresponsive or semi-conscious state
6. Shock of any type

An ALS intercept for an acute, potentially life-threatening illness (including but not limited to the above) is subject to the condition that the vehicle intercept will not take place if the patient can arrive at the appropriate hospital in less time than it would take for the intercept to occur. The intercepting agency will provide the dispatching service with the distance, site and estimated time of arrival of the intercepting ALS unit. The intercept will not be arranged if, in the dispatcher's judgement, the above criteria cannot be met. Further, there should be no delays in transporting the patient either from the scene or in route if a problem develops with the intercept.

It is the responsibility of the primary responding unit to make an immediate determination regarding the need for ALS services and to initiate the intercept once determined to be necessary. The responsibility for this decision rests solely with the primary responding unit and its personnel to recognize potentially life-threatening emergencies and to act accordingly in the best interests of the patient.

Regarding the actual intercept, the transferring of a patient from one vehicle to another should be avoided. The ALS crew should board the primary responding unit bringing all appropriate equipment. Once set up, and care is being administered, the driver of the ALS vehicle will return to the intercepting vehicle and follow the primary care unit. All attempts should be made to minimize delays at the scene of an intercept to expedite the patient's arrival in the Emergency Department.

If an acute, life-threatening condition is suspected at the time of dispatching through the use of Emergency Medical Dispatch criteria (either 9-1-1 or private dispatch), an ALS unit must be dispatched to respond regardless of whether a lower level of service is also dispatched. The dispatching of the ALS unit in this situation is to occur without any delay from the time of the initial call (see the dispatch, interruption and transportation policy.)

Providers involved in ALS intercepts should have agreements in place regarding the exact mechanisms of handling ALS intercepts.

Automatic Defibrillator Policy

Approval and Certification

1. Each candidate for the ADT level must present the following information to the Medical Director:
 - a. Current MFR license or currently enrolled in class.
 - b. Photocopy of current CPR certification.
2. Completion of CCMCA approved ADT training program including, but not limited to use of equipment, knowledge of anatomy, physiology, and local protocols.
3. Agreement to strictly abide by applicable protocols and attend quarterly refresher training programs.

Maintaining Certification

In order to maintain certification to function at the ADT level, the provider must:

1. Maintain current Michigan MFR license or higher, and CPR certification and submit copies to the Medical Director as re-certified.
2. Attend quarterly and yearly refresher training and skills assessment as approved by the Medical Director.
3. Strictly adhere to policies and protocols in effect.
4. A list will be sent to the Medical Control Authority containing the names and certification type with expiration dates for each of their automatic defibrillator operators on an annual basis. This list should be submitted during the month of May for review with other agency licenses.

Suspension and Reinstatement of ADT Level

At the discretion of the Medical Director, an Automated Defibrillator Technician or ADT service can be immediately suspended from functioning at the ADT level.

This notification can be given verbally, which will then be followed up in writing within 72 hours to both the individual and/or service, with copies in the case of an individual, to the applicable ambulance service and for the Medical Control Authority ADT file. Criteria for removal from the project will include, but is not necessarily limited to:

1. Inadequate CPR.
2. Improper completion of quality assurance forms.
3. Inability to maintain continuing license as an MFR or higher, and current B.C.L.S. certification, or failure of the applicable ambulance service to provide said information to the Medical Director.
4. Failure to comply with continuing education/refresher requirements of the project or failure of the applicable ambulance service to provide said information to the Medical Director.
5. Inadequate/poor performance in the field, in general, and specifically with regard to ADT performance, or failure of the applicable pre-hospital service or individual ADT's who have knowledge of inadequate/poor performance to provide this information to the Medical Director.
6. Unprofessional conduct, or failure of the pre-hospital service or individual ADT's who have knowledge of such conduct, to report it to the Medical Director.

The individual cited may have discussions with the Medical Director, with administration of the pre-hospital service present, to explain the situation. However, the decision of the Medical Director is final. There will be no appeal.

The Medical Director may at that time require additional refresher, re-testing or retraining in order for the individual or service to be reinstated. Once the individual/service cited has met the refresher, re-testing or retraining requirements, the Medical Director may reinstate the individual/service back into the project. Such reinstatement will be in writing and at the sole discretion of the Medical Director.

Equipment Checklist

In order to maintain all equipment in functioning condition, it is mandatory that regular checks be done on all equipment and adjuncts necessary for service at the ADT level.

1. The following must be performed and documented on a weekly basis by each agency using the AED.
 - a. The battery must be checked monthly and results recorded according to the operations manual. This should be available for review by the CCMCA or Medical Director.
 - b. All machine cables, connections, and external casings must be checked for any cracks and/or damage. Any repairs/replacements to the machine should follow manufacturer recommendations.
2. After each run where the AED has been used the following must be performed and documented:
 - a. *If using the Heartstart 1000-3000*
 - i. Replace cassette tape, secure door lock, and run 5 seconds of lead tape.
 - ii. The original cassette tape then must be forwarded to the CCMCA for quality assurance purposes within 7 days. All cassette tapes are expected to be used only once. For this reason, the cassette tape will remain in possession of the CCMCA after submission.
 - iii. When submitting the tape to the CCMCA, a copy of the run sheet must be included for appropriate review.
 - iv. Document any problems or equipment failures on an incident report separate from the run sheet generated above.
 - b. *If using the Physio LifePak 500 or Laerdal/Heartstream Forerunner*
 - i. Attach the download cable to the unit and computer that is designated by the agency for use with this device.
 - ii. Follow the Manufacturers Upload program for uploading and Printing a Report
 - iii. Submit a copy of the Report to the CCMCA along with a copy of the run sheet.
 - iv. Document any problems or equipment failures on an incident report separate from the run sheet generated above.

Standards for Use

Use of the AED shall only be performed by those persons who:

1. Have successfully completed the prescribed course of study and have been certified by CCMCA as operators of the AED program.
2. Maintained a current level of certification by use of the prescribed continuing education as required by the Medical Director.

Medical Records and Quality Assurance

1. Copies of the run sheet and cassette tape from the AED must be submitted to the KCC EMS Director.
2. The cassette will be transcribed and subsequently a copy of the subscription will be made available to the agency upon request.
3. Statistics will be compiled based upon the run sheets and all runs will be reviewed by the Medical Director.
4. During the first two weeks of July (for the calendar year of January through June) and January (for the calendar year July through December), a copy of the log containing all routine maintenance and battery checks of the unit must be sent to the KCC EMS Director..

CCMCA Approved Run Report Policy

The CCMCA Approved Run Report should be completed for patients being brought to the hospital from the field, and for all inter-hospital transfers. A form should also be filled out on every call that is canceled or where treatment or transportation is refused.

Medical First Response

All Medical First Responders are required to complete the approved CCMCA run report for each medical response they respond to unless the call is canceled prior to their arrival, no patient is found or an AMA form is completed by the responding ambulance service. It is not intended that completion of this form should delay transport or treatment measures on the scene. While on-scene, the MFR agency shall complete the sections of the form which are possible. The yellow and pink copies are to be given to the responding ambulance agency for information gathering and Quality Assurance operations. The white copy (original) is to be taken back to the first response agency for completion to the best degree possible given the limited contact. This form is to be kept on file at the first response agency for potential audit during the QA process or if a question exists regarding the call.

Ambulance (all levels)

The CCMCA Approved Run Report should ideally be completed for patients being brought to the hospital from the field and for all inter-hospital transfers. A form should also be filled out on every call that is canceled or where treatment or transportation is refused.

The CCMCA Approved Run Report should ideally be completed at the time the patient is delivered to the hospital. The white copy is to be retained by the provider organization, the yellow copy is to be presented to the emergency room staff or staff receiving the patient and the pink copy is to be saved for QA purposes by each ambulance provider.

Communication Difficulty Policy

In the event that radio or telephone communication is impossible to establish, the West Michigan Regional Protocols and this document shall serve as standing orders in life-threatening situations until contact with the hospital can be made. **Every effort should be made to contact the hospital over the VHF radio's, cellular technology or a land-line phone.**

Emergency Medical Dispatch Policy

General Considerations

1. Upon receiving information that an apparent medical problem exists, the dispatching center will quickly ascertain the severity of the medical problem through the use of CCMCA approved emergency medical dispatch (EMD) protocols. (*See standards for use*).
2. Dispatch will notify the closest available ambulance at the appropriate service level for the particular call. It is expected that ALS units will be dispatched on all potential life threatening conditions as determined by EMD protocols.
3. If it becomes evident that an ALS service is needed, arrangements should be made immediately to dispatch an ALS unit or arrange for an ALS intercept.
4. All units in Calhoun County Medical Control region shall cooperate and provide all necessary information to coordinate their services as necessary to provide optimal patient care.

Standards for use

1. It is the policy of the CCMCA that all life-support agencies utilize the approved "Dispatch Priority Card System" as developed by the Medical Priority Consultants and modified for use by the CCMCA within Calhoun County.
2. A set of Emergency Medical Dispatch cards must be available to each and every Emergency Medical Dispatcher for use during medical calls.
3. A dispatcher will be certified in the use of the EMD system (*see below*) prior to dispatching any medical calls.
4. A list will be sent to the Medical Control Authority containing the names and certification type with expiration dates for each of their dispatchers on an annual basis. This list should be submitted during the month of May for review with other agency licenses.

Initial Certification requirements

1. Dispatchers must be certified by achieving certification in the National Academy of Emergency Medical Dispatch Emergency Medical Dispatcher Course (Medical Priority Consultants, Inc.).
2. All dispatchers must maintain a current AHA Healthcare Providers CPR certification or American Red Cross Professional Rescuer certification.

Maintaining Certification

1. Dispatchers are required to participate in retraining by maintaining their "National Academy of Emergency Medical Dispatch Certification" through the National Academy for Emergency Medical Dispatch.
2. All Dispatchers must maintain their CPR certification while dispatching Medical Calls.

Quality Review

1. All medical dispatch centers will have an appointed representative for their dispatch center who monitors the quality and compliance with the EMD standards. This individual will be identified to the CCMCA Medical Director and may be required to attend QA or similar Medical Control Meetings. This individual will also act as a liaison between the CCMCA and their dispatch regarding investigation into calls or complaints which involve dispatch issues. It is the responsibility of the dispatching agency to identify this representative to the Medical Director.
2. All medical dispatch centers will have a CCMCA approved process in place which reviews dispatch calls for compliance with the EMD system.
3. Quality Reviews of calls will include;
 - a. Review of the baseline call screening.
 - b. Achievement of an accurate chief complaint.
 - c. Dispatch of appropriate units.
 - d. Issuance of Pre-arrival instructions

Helicopter Policy

It is important that an orderly and concise mechanism is present for determining the need for helicopter transport and utilization. Helicopter usage is a finite resource which requires serious evaluation prior to use. There are a wide variety of circumstances which will impact it's use.

The responding ground ambulance unit will evaluate the accident site, injuries and justification for helicopter assistance. Situations justifying use of the helicopter may include;

1. Accident with multiple casualties.
2. Accident in an area inaccessible by ground transport.
3. Accident with critical victims in remote areas.
4. Delays in ground transport - delay of responding unit, entrapment at scene (extrication, drowning, etc.)

If the initial care at the scene is by Medical First Responders and they question the need for a helicopter response (considering the criteria above) - immediate contact should be made with the responding ground ambulance unit. Sufficient information should be obtained prior to contact.

In the interest of saving time, Medical First Responders may place a helicopter on standby while contacting the responding ground ambulance unit. Medical Control is to be notified a helicopter is being requested ASAP. This request will be forwarded from the responding ambulance service to the online medical control physician.

The responding ground ambulance unit should continue to respond to the scene regardless of whether a helicopter is dispatched. This is mandatory for the purposes of:

1. Assistance of victims at the accident site prior to arrival of the helicopter.
2. Institute emergency medical care/stabilization.
3. Assist in marking the scene for the helicopter.
4. Transport of less critical victims to the hospital by ground.
5. Transportation of the victim in the event of a helicopter delay or cancellation.

Mass Casualty Disaster Plan

In accordance with the needs of the community during a mass disaster or similar event, CCMCA has developed a Mass Disaster Plan. It is expected that all agencies which are members of or under the supervision of the CCMCA shall participate in this plan. In addition, mock drills will be conducted to test the plans effectiveness within Calhoun County. CCMCA encourages all agencies to participate, to the greatest extent possible, in preparing for emergencies. Please refer to the Mass Casualty Disaster Plan in Appendix B for more details.

Maximum Patient Load Policy

In order to promote safety and maintain a consistently high level of patient care, it is necessary to limit the number of patients to be transported in a single ambulance. These limitations reflect a minimum acceptable patient to care giver (EMT) ratio. The limitations are as follows:

1. When a critical patient is present, the critical patient should be the only patient transported in the ambulance. This patient should be accompanied by at least one emergency medical technician in the patient compartment. A critical patient is defined as a patient with a medical or traumatic condition of a life-threatening nature or potential to progress to that stage.
2. A maximum of two patients may be transported in an ambulance at any time. If two patients are to be transported in the ambulance, neither of the patients is to be a critical or potentially critical patient.

The only exception to this policy is in a mass casualty setting in which no other units are available to service the needs of the injured patients. In the event of a breach of this policy (mass casualty or non-mass casualty), the incident needs to be documented on an incident report and forwarded to the CCMCA for review.

Patient Destination Policy

Patient destination is complicated by factors including the competency of the patient, condition of the patient, potential effects of time on deterioration of the patient and preferences of the patient and/or family. It is impossible to list all contingencies or circumstances here. The following are to be considered guidelines in managing patient destination decisions.

Patient destination should be determined in the following manner:

In an Emergency or Potential Emergency Situation

If in the opinion of the pre-hospital care provider, the patient's condition warrants immediate attention at the closest medical facility and the patient or patient's family desires transport to other than the closest medical facility, then the pre-hospital care provider should;

1. Encourage the patient to go to the closest medical facility.
If the patient is unwilling to be transported to the closest medical facility
 - a. Contact the on-line Medical Control at the closest facility to verify the situation and gain their assistance in convincing the patient to go to the closest medical facility.
 - b. Complete documentation of the situation including the conversation with the hospital on-line physician, discussions with the patient, detailed account of the patient's condition and other pertinent information. This documentation should be written on the ambulance report.
 - c. The patient should sign a release of responsibility. This can either be for treatment and transport to the facility of the patient's choice against medical advice or no transport or treatment against medical advice. This release should be witnessed. When possible, if the patient refuses to sign the form, this needs to be witnessed by a third party other than the responding service or patient's family (i.e. police, fire, etc.)
2. The patient should be transported expeditiously and contact made enroute to the receiving facility. Every attempt must be made to prevent delays in patient care while determining patient disposition.

If a non-emergency situation exists

1. The patient destination should be determined by the patient and/or his/her family.
2. If the patient has no preference or is incompetent and no family is present, transport to the nearest hospital with a staffed Emergency Department is warranted.

Special Destination Circumstances

Under special circumstances, based on evaluation of the patient's condition, on-line Medical Control may determine that transportation to a hospital other than the nearest is indicated, due to the patient's immediate need for specialized critical care services or equipment not available at the nearest hospital. If the patient or patient's family refuses transportation to the designated facility, follow the procedures listed above under "If the patient is unwilling to be transported to the closest medical facility."

Appendix A: Approved Automatic/Semiautomatic Defibrillators

The use of automatic or semiautomatic defibrillation has proven to be a significant factor in decreasing morbidity and mortality for patients who have sustained a cardiac arrest.

Devices used to provide automatic or semiautomatic defibrillation must;

1. Efficiently interface with the EMS System in Calhoun County. (Example, Pads, consumable replacement, reporting, etc.)
2. Provide for easy access and use by Emergency Personal using the devices.
3. Demonstrate efficacy and accuracy in conforming to the standards as established by the American Heart Association and Michigan Department of Consumer and Industrial Services.

Pad Recommendations

When possible, it is recommended that the pad system used during the application of the automatic defibrillator match the pads used by the common responding ambulance agency. For example; In the Battle Creek area, Physio Fast-patch pads are commonly used by responding ALS units. This would be the recommended pad for initial use by the automatic defibrillator, if available. By using a similar pad, the responding Paramedics will be able to easily attach their monitor/defibrillator without having to change the pads.

Automatic/Semiautomatic Devices approved by CCMCA for use

CCMCA has approved for use the following devices by agencies interested in providing Early Defibrillation within the First Response Agency. If an agency is interested in using a device not listed, a written request with details on the device should be sent to the Medical Control Authority by the interested agency. Requests for use of additional devices will be taken on a case by case basis. As additional units are released from manufacturers, this list will be updated. Devices on this approved list do not need further approval from the CCMCA for purchase. All devices must be used in conformance with the CCMCA Automatic Defibrillation Protocol.

<u>Manufacturer</u>	<u>Model</u>
Laerdal Medical Corp. (Also Heartstream)	Heartstart 1000 Heartstart 2000-4000 Heartstart 911 Heartstart Forerunner & Forerunner 2
Physio Control	LifePak 500

Appendix B: Incident Management System

1. EMS Incident Management

The Incident Management System provides an on-scene organizational structure that supports effective management of resources under crisis conditions. The Incident Management System facilitates the EMS Command's decision making process and the discharge of responsibilities.

The IMS system is based on the following principles:

- Overall Incident Command is established by the Fire Department.
- EMS is a sector of the Incident Command Structure.
- Overall responsibility for medical command is assumed by first arriving EMS supervisor.
- Strong, direct and visible command structure addresses functional needs of the incident.
- Accountability and continuity of management is insured.

Working within this structure allows the EMS Command to:

- Identify the resource management requirements of an incident and delineate goals, objectives and tasks necessary to bring it under control.
- Determine and implement an overall strategy.
- Delegate responsibility with the necessary level of authority.
- Insure all patients receive expeditious emergency medical care and transport in accordance with their needs.
- Maintain accountability in managing resources.

The first EMS supervisor, upon arrival at any incident, shall immediately assume command of all pre-hospital emergency care resources and operations relating to the incident and is designated as the EMS Command. The EMS Command evaluates the situation, reviews actions taken by the first arriving unit and develops and implements an effective plan of action to continue managing the situation. As needed, the EMS Command may request and deploy additional resources and divide the operation into sectors, assigning units and other supervisory personnel as the circumstances dictate.

2. Incident Operations – The Sector Concept

Once command is established, EMS Command initiates a structure to manage the incident. This is accomplished by assessing the requirements of the situation, delegating authority to later arriving personnel based on the functional needs of the incident (i.e. triage, treatment and transportation of patients, staging of vehicles and equipment and the number of patients present.) These needs are met by dividing the incident into discrete, functional, management units within the incident management system, each with specific objectives and managers, which are known as sectors.

A sector is defined as an operational management unit, as opposed to a physical or geographic area. A sector consists of all resources necessary to meet its assigned objective, including personnel, vehicles, equipment and physical space. Sectors may be divided into areas to manage functional needs which are location specific. For example, the Triage Sector is comprised of at least one, but maybe more, Triage Areas (Northside Triage, Third Floor Triage, etc.).

In establishing a sector, EMS Command delegates authority to a Sector Officer. The general responsibilities of Sector officers include:

- Management of sector activities.
- Determination of required resources and their allocation within the sector.
- Tactical deployment within the sector.
- Monitoring the welfare and safety of sector personnel.
- Coordination of related activities and operations with other sectors and commands.

Roles and responsibilities of specific Sector Officers within the incident management structure and the radio designation consistent with their function are detailed in Roles and Responsibilities.

3. Multiple Site/Sector Operations

EMS Command shall determine when effective incident management requires that an incident be divided into multiple Command Posts or Sectors and shall direct that sufficient personnel be allocated to the operation. Area leaders shall be designated by the Sector Officer and be responsible for insuring that their particular area expeditiously completes assigned tasks. Area leaders must insure that their appropriate Sector officers are kept informed with periodic and accurate reports regarding the activities of the area personnel, the demands placed on the area and the adequacy of the resource level in the area.

4. EMS Command Roles and Responsibilities

EMS Command is the individual in charge of and accountable for all pre-hospital care operations at a Multiple Casualty Incident.

The EMS Command Initial Responsibilities:

- Initiates a plan and implements a strategy for the handling of all current and potential patients.
- Provides for the safety of all pre-hospital care providers at the incident scene.
- Insures that adequate and appropriate pre-hospital emergency medical care resources respond to the incident.
- Maintains the efficient provision of emergency pre-hospital medical care to all individuals at the incident scene.
- Insures that accurate patient information is obtained for all patients who receive pre-hospital care treatment.

- Identifies the hospitals and Specialty Care Referral Centers to which patients will be transported based on resources and patient care capabilities as advised by the Communications Sector. Hospitals are to be used sequentially, whenever possible to avoid inundating individual facilities. Patient tracking/ hospital disposition information is to be maintained at both the Command Post and the Communications Center.
- EMS Command must constantly assess the needs of the incident and anticipate demands which will be placed on the manpower and equipment resources. EMS Command must rely on the Sector Officers to provide a complete, accurate overview of the incident and the operation in progress, and employs this information in decision making to insure optimal use of available resources to mitigate the effects of the incident.
- EMS Command must maintain open lines of communication and seek information from peers in the other agencies as well as from his/her own Sector Officers. Based on experience, the Officer should weigh the information received from known, reliable sources versus that received from unknown or unreliable sources. In requesting information from other agencies or other reliable sources, EMS Command must be specific and know what information can be obtained from which source.
- After organizing the required information, the EMS Command determines a particular approach to the EMS operation at the incident. As the incident progresses, EMS Command will be deciding which, out of a group of alternatives, best resolves a problem or addresses an issue. The decision of which alternative to choose must be based on the EMS Command's rapid evaluation of unfolding events at the scene. This evaluation is to include the future impact to this incident of choosing one alternative over another.
- EMS Command, in developing a standard approach to reported and observed conditions, shifts from role of an EMS provider to that of head of an organization spending the majority of the time in synthesis of information, decision making and delegation of authority to local specific tasks.
- EMS Command constantly evaluates and re-assesses the EMS operation at the scene, specifically noting methods which would increase efficiency and effectiveness and details these methods in an overall incident evaluation.

Detailed Responsibilities of EMS Command include:

1. Rapid evaluation of the situation paying particular attention to the following factors:
 - The nature and scope of the incident.
 - Type(s) of structure(s), vehicle(s), etc. involved.
 - The number of casualties present.
 - The number of casualties that can reasonably be anticipated, and/or the potential of the incident to produce additional casualties.
 - Types and extent of injuries.
 - The hazards which may be present.
 - Additional resources which may be required at the scene.

2. Verification or adjustment of Command Post location, as established by the Fire Department.
3. Review of actions taken by first arriving units.
4. Transmission of a preliminary report to Fire Department Commander/Communications Center.
5. Identification of problems and determination of priorities for immediate and potential problems.
6. Development and implementation of an effective plan of action (strategy) to manage the incident.
7. Implementation of the Incident Management System and assignment of units as required.
8. Determination if additional response, including specialty units, is required at the incident.
9. Assignment of sectors consistent with incident strategy. Particular attention should be paid to the rapid establishment of Staging, Triage and Treatment Sectors until sufficient resources arrive. Sector command roles may be combined based on availability as conditions warrant.
10. Provision for continuing Medical Command of the incident.
11. Transmission of periodic progress reports.
12. Determination and monitoring of availability of resources: hospital and Specialty Care Referral Center status and area compliant status.
13. Establishment and maintenance of liaisons, as needed, with other operating agencies at the scene.
14. Review and evaluation of the effectiveness of incident operations, revising strategies and tactics as needed.
15. Requisition of additional resources and provision for assignments as necessary, escalating incident as needs dictate.
16. Monitoring of the welfare and safety of all members operating at the incident, providing relief as necessary.
17. Providing for continuing effective command.
18. De-escalation of the incident and returning units to service, as necessary.
19. Securing the incident and terminating command.

SECTOR OFFICERS' ROLES AND RESPONSIBILITIES

5. Staging Sector Officer

1. Coordinate with the Police Department to block streets, intersections, etc as required to establish and maintain a secure Staging Area.
2. Maintain a visible position for incoming vehicles and equipment.
3. Assemble, coordinate and control all personnel, equipment and vehicles in an orderly fashion by:
 - Identifying and maintaining a Staging Area, insuring unimpeded access and egress from the Incident scene.
 - Establishing and maintaining an accurate check- in/ check out inventory for all responding units.
 - Providing routing instructions for incoming units' personnel
 - Insuring that all vehicles are parked in an appropriate manner.
 - Safeguarding all vehicles and equipment in the Staging area.
4. Retain the keys for all vehicles that are left by their crews.
5. Direct EMS vehicles, including ambulances and EMS patient transportation resources, to the Transportation Sector Officer, when requested to do so by the Transportation Sector Officer or EMS Command Officer;
6. Use face-to-face communications within the Staging Area, whenever possible.
7. Provide timely, accurate updates to EMS Command with regard to the EMS operation, specifically the required resource level and identification of vehicles within the sector via the designated point-to-point frequency.
8. Coordinate activities within the Staging sector with the Officers in charge of other sectors and expeditiously complete tasks as assigned by EMS Command.
9. If necessary, request maintenance for vehicles through the Logistics Officer.
10. Until one is assigned, fulfill the role and responsibilities of the Logistics Officer.
11. Constantly evaluate and re-assess the operation of the Staging Sector and note methods for increasing its efficiency and effectiveness, detailing these methods in an overall incident evaluation.
12. Immediately comply with the direct order of a Safety Officer regarding any modification of operations.

6. Triage Sector Officer

1. Determine whether triage and primary treatment is to be conducted on-site or at a combination triage/treatment area.
2. Evaluate resources needed for extrication and removal of casualties, and their transport to the Treatment Area.
3. Insure that all patients are assessed and sorted in accordance with established procedures for setting priorities for the treatment of injuries, utilizing the TRIAGE Tag system or an acceptable substitute.
4. Insure that the appropriate ALS/BLS protocols are followed by EMS personnel for those patients requiring immediate lifesaving intervention prior to removal of the patients to the treatment area (Section E) .
5. Evaluate resources needed for triage and primary treatment of casualties.
6. Communicate resource requirements to EMS Command Post.

7. Coordinate the activities of all medical personnel assigned to the Triage Sector by using face-to-face communication and insuring site safety of those assigned.
8. Allocate and deploy assigned resources and personnel.
9. Insure that all patients are removed from any hazardous environment to a safe area, as quickly as possible.
10. Transfer patient care responsibilities to the Treatment Sector Officer as the patients are moved from the Triage to the Treatment Sector.
11. Provide timely, accurate updates to EMS Command with regard to the EMS operation within his/her sector via the designated point-to-point frequency.
12. Coordinate activities within the Triage Sector with the Officers in charge of other sectors and expeditiously complete tasks as assigned by EMS Command.
13. Constantly evaluate and re-assess the operation of the Triage Sector and note methods for increasing its efficiency and effectiveness, detailing these methods in an overall incident evaluation.
14. Secure sector operations and return resources to Staging when objectives have been met.
15. Immediately comply with the direct order of a Safety Officer regarding any modification of operations.

7. Treatment Sector Officer

1. Establish and identify a suitable Treatment Area and communicate that location to the Triage Sector and Command:
 - a. Identify a position which is upwind and uphill
 - b. Insure sufficient space for anticipated number of patients
 - c. Consider access and egress routes
2. Accept the transfer of patient care responsibilities from Triage Sector Officer as the patients are relocated from Triage Sector (Section E).
3. Separate casualties by triage priority.
4. Insure that all patients that are received by Treatment Sector personnel are re-assessed and re-triaged upon their arrival.
5. Insure that all patients receive prompt and efficient treatment in accordance with established ALS/BLS protocols.
6. Design and control expeditious movement and patient flow in Treatment Area by positioning casualties to allow working room.
7. Coordinate the activities of all medical personnel assigned to the Treatment Sector (doctors, nurses etc.).
8. Coordinate activities within the Treatment Sector with the Officers in charge of other sectors and expeditiously complete tasks as assigned by the EMS Command Officer.
9. Provide timely, accurate updates to EMS Command with regard to the EMS operation and resources required within the sector via the designated point-to-point frequency.
10. Constantly evaluate and re-assess the operation of the Treatment Sector and note methods for increasing its efficiency and effectiveness, detailing these methods in an overall incident evaluation.

11. Immediately comply with the direct order of a Safety Officer regarding any modification of operations.

8. Transportation Sector Officer

1. Establish an adequately sized, easily identifiable loading area, in coordination with the Treatment Sector Officer.
2. Maintain an accurate log of vehicles and provide frequent updates to Communications Sector Officer or EMS Command.
3. Accept the transfer of patient care responsibilities from Treatment Sector Officer as the patients are received and insure patient care continues to be provided.
4. Insure that all patient transportation priorities are reassessed and, if necessary, appropriately modified upon their arrival in the Transportation Sector.
5. Based on the list of medical facilities established by EMS Command, determine and coordinate the transport of patients to the receiving hospitals and Specialty Care Referral Centers which will be receiving patients.
6. Design and control traffic patterns (casualty and vehicular).
7. Coordinate the activities of all personnel assigned to the Transportation Sector.
8. Coordinate activities within the Transportation Sector with the Officers in charge of other sectors and expeditiously complete tasks as assigned by EMS Command.
9. Determine what additional patient transportation resources are necessary based on the reports of patients being treated or anticipated to being treated within the Triage and Treatment Sectors and coordinate these needs with the Staging Sector officer and/or EMS Command.
10. When necessary, establish and operate a helicopter landing zone.
11. Provide timely, accurate updates to EMS Command with regard to the EMS operation and resources required within the sector via the designated point-to-point frequency.
12. Report to EMS Command the departure of the last casualty from the scene.
13. Constantly evaluate and re-assess the operation of the Treatment Sector and note methods for increasing its efficiency and effectiveness, detailing these methods in an overall incident evaluation.
14. Immediately comply with the direct order of a Safety Officer regarding any modification of operations, regardless of the rank involved.

9. Safety Sector Officer

1. Insure that accepted safety practices are followed by all participants of the incident by:
 - Advising EMS Command of all potential or actual hazards, unsafe environments, or procedures at the scene of the incident which may threaten the health, welfare and safety of members of the Service operating at the incident scene; advising EMS Command of the measures which must be taken to insure the safety, health and welfare of members of the service operating at the incident scene.
 - Monitoring and observing operations in all other sectors to insure that these measures are being employed;

- Exercising emergency authority to stop actions or prevent unsafe actions
2. Note those circumstances/situations which may have implications for future incidents.
 3. Coordinate the activities of all personnel assigned to the Safety Sector.
 4. Provide timely, accurate updates regarding safety practices to the EMS Command Officer via the designated point-to-point frequency .
 5. Expeditiously complete tasks as assigned by the EMS Command Officer.
 6. Investigate accidents or injuries to personnel occurring within the incident area.
 7. Constantly evaluate and re-assess the operation of the Safety Sector and note methods for increasing its efficiency and effectiveness, detailing these methods in an overall incident evaluation.

10. Logistics Sector Officer

1. Establish an on-site equipment and supply resource area.
2. Maintain an accurate inventory of incoming equipment and supplies.
3. Request personnel, equipment and vehicles as directed by EMS Command.
4. Inform EMS Command upon receipt of additional equipment and/or supplies.
5. Advise EMS Command of equipment or supplies that are near depletion.
6. Where applicable, make servicing, repair and re-fueling provisions for all vehicles, equipment and supplies
7. Coordinate activities of all personnel assigned to the Logistics Sector.
8. Coordinate activities within the Logistics Sector with the Officers in charge of other sectors and expeditiously complete tasks as assigned by EMS Command.
9. Constantly evaluate and re-assess the operation of Logistics Sector and note methods for increasing efficiency and effectiveness, detailing these methods in overall incident evaluation.
10. Immediately comply with the direct order of a Safety Officer regarding any modification of operations.

11. Communications Sector Officer

1. Coordinate all voice, digital, radio and telephonic communication from the incident scene.
2. Coordinate and insure the accuracy of all patient tracking activities by interfacing with the Transportation Sector Officer and maintaining a log of patients, the units transporting and their destinations.
3. Manage all personnel activities within the Communications Sector.
4. Provide timely, accurate status reports to EMS Command.
5. Coordinate activities within the communications Sector with the Officers in charge of other sectors and expeditiously complete tasks as assigned by EMS Command.
6. Constantly evaluate and re-assess the Communications Sector and note methods for increasing its efficiency and effectiveness, detailing overall incident evaluation.
7. Immediately comply with the direct order of a Safety Officer regarding any modification of operations.

12. Transfer of Command

The decision to assume command of the incident is at the discretion of the jurisdictional ambulance service. If in the most senior manager's judgment, the present EMS Command is appropriately managing and controlling the EMS operation at the incident, the higher ranking Officer may defer assuming the command. If command is transferred, the person assuming command must communicate to the EMS Command being relieved that command is being transferred. The Officer being relieved must acknowledge that command is being transferred. This transfer of command should, if at all possible, be done face to face and include:

- General situation status.
- Incident management strategy.
- Deployment and assignment of operating units.
- Appraisal of need for additional resources.
- Identification of other agencies operating at the scene.
- Any other pertinent information.

13. De-Escalation and Securing of the Operations at the Incident Scene

When the EMS Command determines that EMS operations at a particular incident may be secured, but ongoing overhaul and/or salvage operations by other public safety agencies dictate a need for an ambulance to stand by at the scene, EMS Command shall secure EMS operations at the incident and may assign as many ambulances as needed to remain at the scene.

The unit(s) assigned to remain at the scene shall maintain contact with the ranking fire and/or police supervisor and transmit periodic situation reports to the Communications Center. The unit's personnel shall advise Communications Center when informed by competent authority that an EMS presence is no longer needed at the scene and may return to service.

14. Post-Incident Critique

Following the conclusion of a multiple casualty incident or major hazardous materials exposure incident, a determination shall be made by the EMS Command with regard to the need for a post-incident critique. A post-incident critique shall be considered mandatory after any incident meeting the following criteria:

Any incident requiring EMS operations for more than (2) hours.

- Any incident where an interagency conflict involving EMS or EMS related services occurred.
- Any incident where significant operational difficulties were encountered.

The objective of a post-incident critique shall be to review and analyze the incident thoroughly and objectively in a positive and candid atmosphere. The intent is to identify problems and recommend solutions, rather than find fault with individuals.

Incident Command Terminology

COMMAND - the act of directing, ordering and/or controlling resources by virtue of explicit legal, agency or delgated authority.

COMPETENT AUTHORITY - A representative of an agency or organization who, by position within the Incident Management System, Incident Command Structure, Chain of Command or special training; is empowered to provide guidance and direction and make decisions within a specific, well defined scope.

COORDINATION - the process of systematically analyzing a situation, developing relevant information, and informing the appropriate authority of viable alternatives for the most effective combination of available resources to meet specific objectives. The coordination process (which can be either intra or inter-agency) does not involve command actions. Personnel responsible for coordination, however, may perform command functions within limits as established by specific agency delegations, procedures and/or legal authorities.

EMS COMMAND - is the person in charge of all pre-hospital emergency medical care resources and operations at an MCI. This person has full authority to manage the situation and is responsible for all aspects of the EMS operation at the incident scene; including, but not limited to, coordination with other public safety officials present at the incident scene.

INCIDENT - an occurrence or event, either natural or technologically caused, that requires action by emergency service personnel to prevent or minimize injuries, loss of life, or damage to property or to natural resources.

INCIDENT MANAGEMENT SYSTEM (IMS) - the combination of facilities, equipment, personnel, procedures and communications operating within a common organizational structure with responsibility for the assessment, allocation, deployment and coordination of assigned resources to effectively accomplish objectives pertaining to the incident.

MULTIPLE CASUALTY INCIDENT (MCI) - is a situation which has...

- produced six (6) or more patients who require or may require pre-hospital emergency medical treatment;
- not produced six (6) or more patients but history of similar events indicates a potential of producing six or more patients.
- unusual circumstances regarding a situation which require unique resources or a significant EMS response and operation.
- the ability to exceed the capabilities of a two (2) ambulance response.

POTENTIAL HAZARD - exists when there is a valid probability or likelihood for injury.

PRIMARY ASSESSMENT SURVEY - is an assessment or triage procedure performed when there are six (6) or more patients produced by the incident. The principal

objective is to rapidly assess each patient's condition, initiate life-saving intervention (airway maintenance, control of severe bleeding, etc.), categorize and prioritize the patient's condition utilizing the Triage Tag.

REASONABLE AND PRUDENT - The quality of actions taken or decisions made that respond to the demands of an incident or move towards the resolution of a problem, without placing personnel or equipment at unacceptable risk.

RELIABLE SOURCE - An individual, agency or organization which is accountable and responsible for providing accurate, verifiable information, including but not limited to EMS administrative staff, an EMS unit.

RESOURCES - All the immediate and supportive assistance (vehicles, equipment, personnel, etc.) that are available to help mitigate the incident.

UNIFIED COMMAND - The organizational structure that determines the overall objectives for the incident and selects a strategy to achieve them. Unified Command involves all agencies with jurisdictional responsibility, and, in some cases, those that have some degree of functional responsibility that they may contribute to the resolution of the incident.