



MONO COUNTY

EMERGENCY MEDICAL CARE COMMITTEE



**Mammoth Hospital
85 Sierra Park Road
ED Lounge/Conference Room
Mammoth Lakes, CA**

**January 26, 2010
9:00 a.m.**

A G E N D A

- I. CALL TO ORDER**
- II. APPROVAL OF DECEMBER 1, 2009 MINUTES**
- III. NEW BUSINESS**
 - A. Protocols
 1. Reference # 1050 MICN Certification
 2. Reference # 6070 STEMI Receiving Center
 3. Reference # 7010 BLS/ALS Drug and Equipment List
 4. Reference # 7020 EMS Air Drug and Equipment List
 5. Reference # 9120 Nausea and Vomiting (Zofran)
 6. Reference #10100 12 lead ECG
 - B. E-PCR/Wireless printer at hospital
- IV. OTHER/PUBLIC COMMENT**
- V. COMMITTEE MEMBER REQUEST FOR TOPICS FOR NEXT MEETING**
- VI. NEXT MEETING DATE AND LOCATION**
- VII. ADJOURNMENT**

The Mono County Emergency Medical Care Committee (EMCC) meeting facility is accessible to persons with disabilities. If assistive listening devices or other auxiliary aids or services are needed in order to participate in the public meeting, requests should be made through the Inland Counties Emergency Medical Agency at least three (3) business days prior to the EMCC meeting. The telephone number is (909) 388-5823, and office is located at 515 North Arrowhead Avenue, San Bernardino, CA



MONO COUNTY EMCC MEETING

Mammoth Hospital
A/B Conference Room
Mammoth Lakes, CA

MINUTES December 1, 2009

Committee Members	Affiliation
<input checked="" type="checkbox"/> Mark Mikulicich	Mono County Paramedic Rescue Chief
<input checked="" type="checkbox"/> Dr. Rick Johnson, MD	Mono County Health Officer
<input checked="" type="checkbox"/> Bob Rooks	Mono County Fire Chief's Association
<input checked="" type="checkbox"/> Lori Baitx, RN	Mammoth Hospital
<input checked="" type="checkbox"/> Rosemary Sachs, RN	Mammoth Hospital

Other Attendees	Affiliation
Diane Fisher	ICEMA
Ray McGrale	Mono County Paramedic Rescue

I. CALL TO ORDER

The meeting was called to order at 9:10 a.m.

II. APPROVAL OF SEPTEMBER 29, 2009 MINUTES

Lori Baitx motioned to approve, second by Dr. Johnson. Motion unanimously approved.

III. NEW BUSINESS

A. New Protocols/Policies

1. The new STEMI patient transfer protocol does not directly affect Mono County; however ICEMA would eventually like to work something out with the Nevada receiving facilities to gather STEMI patient data into their system.
2. The Adult Tachycardia protocol is complete and should have been included in the last protocol packet; approval still needed from the EMCC. Without further discussion, Dr. Johnson motioned to approve the protocol. Bob Rooks seconded the motion and a vote was taken with all in favor, none opposed.

B. Mono County ALS Data

Diane brought up the latest statistics, and Mono County needs improvement in recording "receiving facility" data. There was also questionable data on the total number of runs recorded for October (15?). Mark commented that there were probably more runs that didn't yet get recorded. Ray was going to follow up. Diane also brought us incomplete scantron data per the individual paramedic number, which makes remedial corrections easier to apply to the right person(s).

It was also noted that there were several trauma calls with an extended run time. Mark commented that this was probably due to “back country calls” that take extra time for SAR to deliver the patient to the Medics, or calls that are serviced exclusively by the Medics but are still difficult to access due to remote locations. We will keep an eye on these types of calls. Inyo County QA is utilizing their e-PCR data to track and review trauma calls: response times, on scene times, etc.

C. Base Hospital Reports

Mammoth Hospital is very good about submitting the data. Base Hospital contact info and patient destination info was also presented; ICEMA is interested in how many patients are going north into Nevada, which may be obtainable at some point. ICEMA usually runs this data quarterly; it is produced monthly for Mono County as there is only one hospital.

D. HAvBED Reporting

Dr. Johnson submits this info regularly; ICEMA updates it every Tuesday and then submits it to the State, which in turn submits it to the Feds. This is the basis for National H1N1 data collection. ICEMA has been tracking hospital “surges” and flu specifics in the area; flu seems to have “peaked” (for now). Dr. J does daily data collection for flu and flu-like illness in the clinics, hospitals (Mammoth and NIH) and schools.

IV. OLD BUSINESS

A. H1N1 and ILI

Dr. Johnson said that we may be the only County that has enacted a declaration of local emergency and utilized our paramedics to help vaccinate the local first responders and law enforcement personnel. Over 5,000 vaccinations were given county-wide. Dr. Johnson stated that the most frustrating part was the slow availability of vaccine. This would have been much more difficult had the call volume and system demand been increased or if the disease had proven to be more fatal. There were a total of 12 hospitalized cases (ILI) in Inyo County, most of them confirmed H1N1. Mono County had a total of 5 hospitalized cases, with no confirmed H1N1 cases as of this date. There were no deaths in either county. Because there seems to be a decrease in new cases, the local emergency declaration will not be continued by the Board of Supervisors after December 15, 2009.

B. Blood Draws

A draft Blood Draw policy/protocol has been developed, and will be going out for comment (Mono County will review and comment!).

C. Zofran

The field trail has pretty much been completed, and because of the positive results, Zofran will be approved for pre-hospital use by the State EMSA, and ICEMA will include it in protocol.

V. OTHER/PUBLIC COMMENT

Diane talked about the lawsuit brought on ICEMA by Desert Ambulance, Barstow. The suit was over 5150 transfers Desert maintained that they are not equipped nor trained to take 5150s (and that they could not legally hold a patient against their will). Desert won the suit, and ICEMA is requesting reconsideration. Diane provided information about the case to Mark.

Bob said that Mammoth Fire will be using e-PCR and wanted SME to get set up; SME will get a wireless printer to facilitate. Bob said MLFD will be doing both e-PCR and scantrons initially.

Bob and Ray are taking inventory of the volunteer Fire District's AED batteries and patches. Ray asked Mark if the Medics could be used to check the AED equipment at the Fire Stations; this can be worked out.

There was also discussion about ambulance transfers; who would do them if the county could not? Under the EOA, MLFD would have second "right of refusal" however the hospital expressed concern that transfers are something they would like to be able to do (at certain times). Bob stated that MLFD would not mind if the hospital takes more transfers (refused by the county) and suggested that Mark work on a policy to facilitate this. Mark agreed to see what he could do.

VI. COMMITTEE MEMBER REQUEST FOR TOPICS FOR NEXT MEETING

Nothing specific; follow up on inquiries from this meeting.

VII. NEXT MEETING DATE AND LOCATION

January 26, 2010, 9:00 a.m. at Mammoth Hospital.

VIII. ADJOURNMENT

10:45 a.m.



MICN CERTIFICATION REQUIREMENTS

PURPOSE

To define the requirements for Mobile Intensive Care Nurse (MICN) certification within the ICEMA Region.

PROCEDURE

Initial MICN Certification

1. Possess a current California RN License
2. Successfully complete the ICEMA approved MICN course with a passing score of at least eighty percent (80%), and within six (6) months of course completion, submit the appropriate ICEMA application with:
 - a. Fee as set by ICEMA. The fee is not refundable or transferable.
 - b. Written verification of employment at a designated Base Hospital within the ICEMA Region.
 - c. Copy of front and back of a current, signed ACLS Card.
 - d. Copy of front and back of current California RN License.
3. Photo taken at ICEMA when application is submitted. Applicant may submit a driver's license size photo (no tinted glasses or hats) with their application.
4. Upon completion of 1-3 above, the applicant will be scheduled to take the ICEMA written examination.
5. Upon passing the ICEMA written examination with a minimum score of eighty percent (80%), a provisional MICN card will be issued.
 - a. A candidate who fails to pass the ~~ICEMA certification exam~~ICEMA written examination on the first attempt will have to pay the ICEMA approved fee and re-take the ~~exam~~examination with a score of at least 85%.
 - b. A candidate who fails to pass the ~~ICEMA certification exam~~ICEMA written examination on the second attempt will have to pay the ICEMA approved

- fee, and provide documentation of eight (8) hours of remedial training given by their PLN/Medical Director relating to ICEMA protocols, policies/procedures and pass the ~~ICEMA certification exam~~ICEMA written examination with a minimum score of 85%.
- c. If the candidate fails to pass the ~~ICEMA certification exam~~ICEMA written examination on the third attempt, the ~~ICEMA Medical Director will review the candidate's application to determine additional training requirements~~applicant must repeat the course and reapply.
6. A provisional MICN may function under the direct supervision of the Base Hospital MD, PLN or ICEMA approved designee for a maximum of six (6) months. The supervising individual must sign all MICN call forms. This timeframe may be extended upon receipt of a request in writing from either the candidate or PLN outlining any extenuating circumstances.
7. The PLN will choose three (3) tapes for review (one trauma, one medical and one other) and submit them to their partnered Base Hospital PLN for review.
8. When three (3) tapes meet ICEMA criteria, a MICN card will be issued with the same expiration date as the candidates RN license.
9. Failure to complete the entire process within one (1) year of application date constitutes failure of the entire process. The timeframe may be extended by the ICEMA Medical Director upon receipt of a request in writing from either the candidate or PLN outlining any extenuating circumstances.

Continuous MICN Certification

1. Possess a current California RN License and current ICEMA MICN certification.
2. Submit the appropriate completed ICEMA application with:
 - a. Written verification of employment at a designated Base Hospital within the ICEMA Region.

(This requirement may be waived for RN's that work in EMS for non base stations in administrative or supervisory positions that require MICN certification. Written request for waiver from the RN's supervisor or Fire Chief must be submitted to ICEMA. Evidence of field care audits and other CE classes taught will replace the radio time. Requests will be reviewed on an individual basis by ICEMA)
 - b. Copy of front and back of a current, signed ACLS Card.

- c. Copy of front and back of current California RN License.
 - d. Documentation of eight (8) hours of field time.
 - e. Documentation of one (1) ICEMA approved Skills Day.
 - f. Documentation of six (6) hours of field care audits obtained within the ICEMA region.
 - g. Documentation of two (2) ~~different~~ consecutive ICEMA Annual Review Class (ARC), ~~One~~ during each year of certification.
 - h. Continuous certification applicants not meeting this requirement must pay the ICEMA approved fee and successfully pass the ICEMA written examination with a minimum score of 80%.
 - i. ~~Certification exam~~ ICEMA written examination does not replace or fulfill the requirement for a Skills Day or Field Care Audits. These must be completed prior to recertification.
3. Current photo (within last 6 months) on file at ICEMA. Applicant may submit a driver's license size photo (no tinted glasses or hats) with their application.
 4. If the certification has lapsed for more than one (1) year, the applicant must comply with the above Initial Certification Procedure.

MICN Recertification for RN's Working in a Non-Base Station Facility

Applies to MICN's working in administrative/supervisory positions which have been approved by ICEMA:

- a. Must complete 2b through 2g above
- b. Must submit proof of employment with an approved non base station employer.
- c. Must teach or attend an additional skills day
- d. Must teach or attend an additional 6 hours of field care audits

If employment with approved entity is terminated the MICN must change status to inactive unless employed by a base hospital or another approved non base hospital employer.

Inactive MICN Certification

1. Maintain a current California RN License.
2. Submit the appropriate completed ICEMA application with all of the following documentation every two (2) years of inactivation.
 - a. Copy of front and back of a current, signed ACLS Card.
 - b. Copy of front and back of current California RN License.
 - c. Documentation of one (1) ICEMA approved Skills Day taken during the year of inactivation.
 - d. Documentation of ~~six~~four (64) hours of field care audits obtained within the ICEMA region.
 - e. Documentation of one (1) ICEMA Annual Review class for each year of inactivation.

Return to Active MICN Status

1. Submit the appropriate ICEMA application with documentation of all inactive MICN Certification requirements and written verification of employment at a designated Base Hospital within the ICEMA Region.
- ~~2. Upon receipt of above documentation, and photo, the candidate will be scheduled for the ICEMA exam.~~
- ~~3. Upon passing the ICEMA certification exam with a minimum score of 80%, a provisional MICN card will be issued.~~
 - ~~a. A candidate who fails to pass the ICEMA certification exam on the first attempt will have to pay the ICEMA approved fee and re-take the exam with a score of at least 85%.~~
 - ~~b. A candidate who fails to pass the ICEMA certification exam on the second attempt will have to pay the ICEMA approved fee, and provide documentation of eight (8) hours of remedial training given by their PLN or Medical Director relating to ICEMA protocols, policies/procedures and pass the ICEMA exam with a score of at least 85%.~~

- ~~e. If the candidate fails to pass the ICEMA certification exam on the third attempt, the applicant will have to take and pass the ICEMA approved MICN course.~~
2. A provisional MICN may function under the direct supervision of the Base Hospital MD, PLN or ICEMA approved designee for a maximum of six (6) months. The supervising individual must sign all MICN call forms.
 3. After obtaining a provisional MICN, the individual must complete eight (8) hours of field time.
 4. The PLN will choose three (3) tapes for review (one trauma, one medical and one other) and submit them to their partnered Base Hospital PLN for review.
 5. When three (3) tapes meet ICEMA criteria, a MICN card will be issued with the same expiration date as the candidates RN license.
 6. Failure to complete the entire process within one (1) year of application date constitutes failure of the entire process. The timeframe may be extended by the ICEMA Medical Director upon receipt of a request in writing from either the candidate or PLN outlining any extenuating circumstances.

Certification by Challenge Examination

1. Possess a current California RN License.
2. Meet one (1) of the following eligibility requirements:
 - a. MICN in another county within previous twelve (12) months
 - b. MICN in ICEMA Region, but has let certification expire within the previous forty-eight (48) months, and has not fulfilled requirements for inactive MICN status
3. Submit the appropriate ICEMA application with:
 - a. Fee as set by ICEMA.
 - b. Written verification of employment at a designated Base Hospital within the ICEMA Region.
 - c. Copy of front and back of a current, signed ACLS Card.
 - d. Copy of front and back of current California RN License.

4. Photo taken at ICEMA when application is submitted. Applicant may submit a driver's license size photo (no tinted glasses or hats) with their application.
5. Upon completion of 1-4 above, the applicant will be scheduled to take the ~~ICEMA certification exam~~ICEMA written examination.
6. Upon passing the ~~ICEMA certification exam~~ICEMA written examination with a minimum score of 80%, a provisional MICN card will be issued.
 - a. A candidate who fails to pass the ~~ICEMA certification exam~~ICEMA written examination on the first attempt will have to pay the ICEMA approved fee and re-take the ~~exam~~written examination with a minimum score of 85%.
 - b. ~~—A candidate who fails to pass the ICEMA certification exam~~ICEMA written examination -on the second attempt will be deemed ineligible for challenge certification. Applicant will need to take an ICEMA approved MICN course and comply with initial certification requirements. will have to pay the ICEMA approved fee, and provide documentation of eight (8) hours of remedial training in relation to ICEMA protocols, policies/procedures given by their PLN and pass the exam with a minimum score of 85%.
 - c. ~~—If the candidate fails to pass the ICEMA certification exam on the third attempt, the ICEMA Medical Director will review the candidate's application to determine additional training requirements.~~
7. The individual may then function as a provisional MICN under the direct supervision of the Base Hospital MD, PLN or ICEMA approved designee. The supervising individual must sign all MICN call forms.
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- b. Copy of front and back of a current, signed ACLS Card.
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 - b. A candidate who fails to pass the ICEMA written examination on the second attempt will be deemed ineligible for challenge certification. Applicant will need to take an ICEMA approved MICN course and comply with initial certification requirements.
7. The individual may then function as a provisional MICN under the direct supervision of the Base Station MD, PLN or ICEMA approved designee. The supervising individual must sign all MICN call forms.

8. The PLN will choose three (3) tapes for review (one trauma, one medical and one other).
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CARDIOVASCULAR “STEMI” RECEIVING CENTERS

PURPOSE

A Cardiovascular STEMI Receiving Center (SRC) will be the preferred destination for patients who access the 9-1-1 system meeting defined criteria and show evidence of a ST-elevation myocardial infarction on a 12 Lead electrocardiogram. These patients will benefit from rapid interventions via cardiac catheterization interventions.

DEFINITIONS

1. **STEMI** - ST Elevation Myocardial Infarction.
2. **PCI** - Percutaneous Coronary Intervention.
3. **STEMI Receiving Center (SRC)** - Facilities that have emergency interventional cardiac catheterization capabilities.
4. **STEMI Referring Centers** - Facilities that do not have emergency interventional cardiac catheterization capabilities.
5. STEMI Base Station- Facilities that have emergency interventional cardiac catheterization capabilities that also function as a Base Station.
- ~~65.~~ **CQI** - Continuous Quality Improvement.
- ~~76.~~ **EMS** - Emergency Medical Services.
- ~~87.~~ **CE** -Continuous Medical Education.

POLICY

The following requirements must be met for a hospital to be designated as a Cardiovascular STEMI Receiving Center by ICEMA:

1. An ICEMA approved paramedic receiving hospital which is a full service acute care facility.
2. Licensure as a Cardiac Catheterization Laboratory.
3. Intra-aortic balloon pump capability.

4. Cardiovascular surgical services permit:

This requirement may be waived by the EMS Agency Medical Director when appropriate for patient or system needs. The Medical Director will evaluate conformance with existing American College of Cardiology/American Heart Association or other existing professional guidelines for standards.

5. Communication system for notification of incoming STEMI patients, available twenty four (24) hours per day, seven (7) days per week. (i.e. in-house paging system)

6. Provide CE opportunities for EMS personnel in areas of 12 Lead ECG acquisition and interpretation, as well as assessment and management of STEMI patients.

7. **STAFFING REQUIREMENTS**

The hospital will have the following positions designated and filled prior to becoming a SRC:

a. Medical Directors

The hospital shall designate two physicians as co-directors of its SRC program. One physician shall be a board certified interventional cardiologist with active PCI privileges. The co-director shall be a board certified emergency medicine physician with active privileges to practice in the emergency department.

b. Nursing Director

The hospital shall designate a SRC Nursing Director who is trained or certified in Critical Care nursing.

c. On-Call Physician Consultants and Staff

A daily roster of the following on-call physician consultants and staff that must be promptly available within thirty (30) minutes of notification.

1. Cardiologist with percutaneous coronary intervention (PCI) privileges.
2. Cardiovascular Surgeon, if cardiovascular surgical services are offered.

If cardiovascular surgical services not available in house the facility must have a rapid transfer agreement in place with a facility that provides this service. The agreement must be on file with the local EMS agency. Additionally, the facility must have a rapid transport agreement in place with a local transport agency.

3. Cardiac Catheterization Laboratory team.
4. Intra-aortic balloon pump nurse or technologist.

8. INTERNAL HOSPITAL POLICIES

The hospital shall develop internal policies for the following situations:

- a. Fibrinolytic therapy protocol to be used only in unforeseen circumstances when PCI of an STEMI patient is not possible.
- b. Diversion of STEMI patients **only** during times of Internal Disaster in accordance to protocol # ~~140518070~~8060, Requests for Hospital Diversion, (applies to physical plant breakdown threatening significant patient services or immediate patient safety issues i.e. bomb threat, earthquake damage, hazardous material or safety and security of the facility.) A written notification describing the event must be submitted to ICEMA within twenty four (24) hours.
- c. Prompt acceptance of STEMI patients from other STEMI referral centers that do not have PCI capability.

e.d. ~~Cath lab team activation policy which requires immediate activation of the team upon EMS notification when there is documented STEMI patient en-route to the STEMI center, based on machine algorithm interpretation.~~

9. DATA COLLECTION

The following data shall be collected on an on-going basis and available for review by ICEMA:

- a. Total number of EMS STEMI patients transported to a designated SRC. (Source data: ICEMA approved patient care record.)
- b. Total number of EMS STEMI patients that bypass the most accessible receiving hospital (not approved as a SRC) and are transported to a SRC. (Source data: base hospital logs.)

- c. Total number EMS STEMI patients who received primary PCI. (Source data: STEMI center logs.)
- d. Door to dilation times for primary PCI of all STEMI patients. (Source data: STEMI center logs.)
- e. Total number of patients admitted with the diagnosis of myocardial infarction per year. (Source data: STEMI center logs.)
- f. Total number of PCI procedures performed per year per facility. (Source data: STEMI center logs.)

10. CONTINUOUS QUALITY IMPROVEMENT PROGRAM

SRC shall develop an on-going CQI program which monitors all aspect of treatment and management of STEMI cardiac patients and identify areas needing improvement. The program must, at a minimum, monitor the following parameters:

- a. Morbidity and mortality related to procedural complications.
- b. Detail review of cases requiring emergent rescue CABG.
- c. Tracking of door-to-dilation time and adherence to minimum performance standards set by this policy.
- d. Active participation in ICEMA STEMI CQI Committee activities.

11. PERFORMANCE STANDARD

In accordance with *D2B: An Alliance for Quality* guidelines, SRCs must achieve and maintain a door-to-balloon time of less than or equal to ninety (90) minutes in 75% of primary PCI patients with STEMI. If this standard is not achieved, SRC may be required to submit an improvement plan to ICEMA addressing the deficiency with steps being taken to remedy the problems.

DESIGNATION

1. The Cardiovascular STEMI Receiving Center applicant shall be designated after satisfactory review of written documentation and an initial site survey by ICEMA or its designees and completion of an agreement between the hospital and ICEMA.
2. Documentation of current accreditation from The Society of Chest Pain Centers as “Chest Pain Center with PCI” shall be accepted in lieu of a formal site visit by ICEMA.

3. Initial designation as a SRC shall be for a period of two (2) years. Thereafter, re-designation shall occur every four (4) years, contingent upon satisfactory review.
4. Failure to comply with the criteria and performance standards outlined in this policy may result in probation, suspension or rescission of SRC designation.

PATIENT DESTINATION

1. The designated SRC should be considered as the destination of choice if all of the following criteria are met:
 - a. Identified STEMI patients based on machine interpretation of field 12 Lead ECG, verified by paramedics and approved by a base hospital physician.
 - b. Total transport time to the SRC is thirty (30) minutes or less. Base hospital physician may override this requirement and authorize transport to the SRC with transport time of greater than thirty (30) minutes.
 - c. Base hospital contact is **mandatory** for all patients identified as possible STEMI patient. The base hospital confirms a SRC as the destination.
 - d. The base hospital is the only authority that can direct a patient to a STEMI receiving center.
 - e. The base hospital, if different from the SRC, will notify the SRC of patient’s pending arrival as soon as possible, to allow timely activation of Cardiac Cath lab team at the SRC.
2. The following factors should be considered with regards to choice of destination for STEMI patients. Base hospital contact and consultation is mandatory in these and similar situations:
 - a. Patients with unmanageable airway, unstable cardiopulmonary condition, or in cardiopulmonary arrest should be transported to the closest receiving hospital.
 - b. Patients with malignant ventricular fibrillation, ventricular tachycardia, second degree type II heart block and third degree heart blocks should be considered for transport to the closest receiving hospital.
 - c. Patients with obvious contraindication to thrombolytic therapy should be strongly considered for transport to the closest SRC.

- d. Patients with hemodynamic instability as exhibited by blood pressure less than 90 systolic and/or signs of inadequate tissue perfusion should be transported to the closest receiving hospital.



CARDIOVASCULAR “STEMI” RECEIVING CENTERS

PURPOSE

A Cardiovascular STEMI Receiving Center (SRC) will be the preferred destination for patients who access the 9-1-1 system meeting defined criteria and show evidence of a ST-elevation myocardial infarction on a 12 Lead electrocardiogram. These patients will benefit from rapid interventions via cardiac catheterization interventions.

DEFINITIONS

1. **STEMI** - ST Elevation Myocardial Infarction.
2. **PCI** - Percutaneous Coronary Intervention.
3. **STEMI Receiving Center (SRC)** - Facilities that have emergency interventional cardiac catheterization capabilities.
4. **STEMI Referring Centers** - Facilities that do not have emergency interventional cardiac catheterization capabilities.
5. **STEMI Base Station** - Facilities that have emergency interventional cardiac catheterization capabilities that also function as a Base Station.
6. **CQI** - Continuous Quality Improvement.
7. **EMS** - Emergency Medical Services.
8. **CE** -Continuous Medical Education.

POLICY

The following requirements must be met for a hospital to be designated as a Cardiovascular STEMI Receiving Center by ICEMA:

1. An ICEMA approved paramedic receiving hospital which is a full service acute care facility.
2. Licensure as a Cardiac Catheterization Laboratory.
3. Intra-aortic balloon pump capability.

4. Cardiovascular surgical services permit:

This requirement may be waived by the EMS Agency Medical Director when appropriate for patient or system needs. The Medical Director will evaluate conformance with existing American College of Cardiology/American Heart Association or other existing professional guidelines for standards.

5. Communication system for notification of incoming STEMI patients, available twenty four (24) hours per day, seven (7) days per week. (i.e. in-house paging system)

6. Provide CE opportunities for EMS personnel in areas of 12 Lead ECG acquisition and interpretation, as well as assessment and management of STEMI patients.

7. **STAFFING REQUIREMENTS**

The hospital will have the following positions designated and filled prior to becoming a SRC:

a. Medical Directors

The hospital shall designate two physicians as co-directors of its SRC program. One physician shall be a board certified interventional cardiologist with active PCI privileges. The co-director shall be a board certified emergency medicine physician with active privileges to practice in the emergency department.

b. Nursing Director

The hospital shall designate a SRC Nursing Director who is trained or certified in Critical Care nursing.

c. On-Call Physician Consultants and Staff

A daily roster of the following on-call physician consultants and staff that must be promptly available within thirty (30) minutes of notification.

1. Cardiologist with percutaneous coronary intervention (PCI) privileges.
2. Cardiovascular Surgeon, if cardiovascular surgical services are offered.

If cardiovascular surgical services not available in house the facility must have a rapid transfer agreement in place with a facility that provides this service. The agreement must be on file with the local EMS agency. Additionally, the facility must have a rapid transport agreement in place with a local transport agency.

3. Cardiac Catheterization Laboratory team.
4. Intra-aortic balloon pump nurse or technologist.

8. INTERNAL HOSPITAL POLICIES

The hospital shall develop internal policies for the following situations:

- a. Fibrinolytic therapy protocol to be used only in unforeseen circumstances when PCI of an STEMI patient is not possible.
- b. Diversion of STEMI patients **only** during times of Internal Disaster in accordance to protocol #8060, Requests for Hospital Diversion, (applies to physical plant breakdown threatening significant patient services or immediate patient safety issues i.e. bomb threat, earthquake damage, hazardous material or safety and security of the facility.) A written notification describing the event must be submitted to ICEMA within twenty four (24) hours.
- c. Prompt acceptance of STEMI patients from other STEMI referral centers that do not have PCI capability.
- d. Cath lab team activation policy which requires immediate activation of the team upon EMS notification when there is documented STEMI patient enroute to the STEMI center, based on machine algorithm interpretation.

9. DATA COLLECTION

The following data shall be collected on an on-going basis and available for review by ICEMA:

- a. Total number of EMS STEMI patients transported to a designated SRC. (Source data: ICEMA approved patient care record.)
- b. Total number of EMS STEMI patients that bypass the most accessible receiving hospital (not approved as a SRC) and are transported to a SRC. (Source data: base station logs.)

- c. Total number EMS STEMI patients who received primary PCI. (Source data: STEMI center logs.)
- d. Door to dilation times for primary PCI of all STEMI patients. (Source data: STEMI center logs.)
- e. Total number of patients admitted with the diagnosis of myocardial infarction per year. (Source data: STEMI center logs.)
- f. Total number of PCI procedures performed per year per facility. (Source data: STEMI center logs.)

10. CONTINUOUS QUALITY IMPROVEMENT PROGRAM

SRC shall develop an on-going CQI program which monitors all aspect of treatment and management of STEMI cardiac patients and identify areas needing improvement. The program must, at a minimum, monitor the following parameters:

- a. Morbidity and mortality related to procedural complications.
- b. Detail review of cases requiring emergent rescue CABG.
- c. Tracking of door-to-dilation time and adherence to minimum performance standards set by this policy.
- d. Active participation in ICEMA STEMI CQI Committee activities.

11. PERFORMANCE STANDARD

In accordance with *D2B: An Alliance for Quality* guidelines, SRCs must achieve and maintain a door-to-balloon time of less than or equal to ninety (90) minutes in 75% of primary PCI patients with STEMI. If this standard is not achieved, SRC may be required to submit an improvement plan to ICEMA addressing the deficiency with steps being taken to remedy the problems.

DESIGNATION

- 1. The Cardiovascular STEMI Receiving Center applicant shall be designated after satisfactory review of written documentation and an initial site survey by ICEMA or its designees and completion of an agreement between the hospital and ICEMA.
- 2. Documentation of current accreditation from The Society of Chest Pain Centers as “Chest Pain Center with PCI” shall be accepted in lieu of a formal site visit by ICEMA.

3. Initial designation as a SRC shall be for a period of two (2) years. Thereafter, re-designation shall occur every four (4) years, contingent upon satisfactory review.
4. Failure to comply with the criteria and performance standards outlined in this policy may result in probation, suspension or rescission of SRC designation.

PATIENT DESTINATION

1. The designated SRC should be considered as the destination of choice if all of the following criteria are met:
 - a. Identified STEMI patients based on machine interpretation of field 12 Lead ECG, verified by paramedics and approved by a base station physician.
 - b. Total transport time to the SRC is thirty (30) minutes or less. Base Station physician may override this requirement and authorize transport to the SRC with transport time of greater than thirty (30) minutes.
 - c. Base Station contact is **mandatory** for all patients identified as possible STEMI patient. The base station confirms a SRC as the destination.
 - d. The base station is the only authority that can direct a patient to a STEMI receiving center.
 - e. The base station, if different from the SRC, will notify the SRC of patient’s pending arrival as soon as possible, to allow timely activation of Cardiac Cath lab team at the SRC.
2. The following factors should be considered with regards to choice of destination for STEMI patients. Base station contact and consultation is mandatory in these and similar situations:
 - a. Patients with unmanageable airway, unstable cardiopulmonary condition, or in cardiopulmonary arrest should be transported to the closest receiving hospital.
 - b. Patients with malignant ventricular fibrillation, ventricular tachycardia, second degree type II heart block and third degree heart blocks should be considered for transport to the closest receiving hospital.
 - c. Patients with obvious contraindication to thrombolytic therapy should be strongly considered for transport to the closest SRC.

- d. Patients with hemodynamic instability as exhibited by blood pressure less than 90 systolic and/or signs of inadequate tissue perfusion should be transported to the closest receiving hospital.



BLS/ALS STANDARD DRUG & EQUIPMENT LIST

Each ambulance and first responder unit will be equipped with the following functional equipment and supplies. **This list represents mandatory items with minimum quantities** excluding narcotics which must be kept within the range indicated. All expiration dates must be current. All packaging of drugs or equipment must be intact. No open products or torn packaging may be used.

MEDICATIONS/SOLUTIONS

Exchanged Medications/Solutions	BLS Transport	ALS Non-Transport	ALS Transport
Activated Charcoal 25 gm		2	2
Adenosine (Adenocard) 6 mg		1	1
Adenosine (Adenocard) 12 mg		2	2
Adrenaline (Epinephrine) 1:1000 1 mg		2	2
Adrenaline (Epinephrine) 1:10,000 1 mg preload		3	3
Albuterol Aerosolized Solution (Proventil) - unit dose 2.5mg		4 doses	4 doses
Aspirin, chewable – 81mg tablet		1 bottle	1 bottle
Atropine 1 mg preload		4	4
Calcium Chloride 1 gm preload		1	1
Dextrose 25% 2.5 gm preload		2	2
Dextrose 50% 25 gm preload		2	2
Diphenhydramine (Benadryl) 50 mg		1	1
Dopamine 400 mg		1	1
Furosemide (Lasix) 40 mg		2	2
Glucagon 1 mg		1	1
Glucose paste	1 tube	1 tube	1 tube
Ipratropium Bromide Inhalation Solution (Atrovent) unit dose 0.5mg		4	4
Irrigating Saline and/or Sterile Water (1000cc)	2	1	2
Lidocaine 100 mg		3	3
Lidocaine 1gm or 1 bag pre-mixed 1gm/250cc D5W		1	1
Lidocaine 2% (Viscous) bottle		1	1
Magnesium Sulfate 10 gm		1	1
Naloxone (Narcan) 2 mg preload (needle less)		2	2
Nitroglycerine – Spray 0.4mg metered dose		1	2
Normal Saline for Injection (10cc)		2	2
Normal Saline 100cc		1	2
Normal Saline 250cc		1	1

Exchanged Medications/Solutions	BLS Transport	ALS Non-Transport	ALS Transport
Normal Saline 1000cc		3	6
<u>Ondansetron (Zofran) 4mg Oral Disintegrating Tablets (ODT)</u>		<u>4</u>	<u>4</u>
<u>Ondansetron (Zofran) 4 mg IM/ IV</u>		<u>4</u>	<u>4</u>
Phenylephrine HCL - 0.5mg per metered dose		1 bottle	1 bottle
Procainamide 1 gm		1	2
Sodium Bicarbonate 50 mEq preload		2	2
Verapamil 5 mg		3	3

CONTROLLED SUBSTANCE MEDICATIONS

Non-Exchange–MUST BE DOUBLE LOCKED	BLS Transport	ALS Non-Transport	ALS Transport
Midazolam – vials of 10mg/2cc, 2mg/2cc, or 5mg/5cc		20-40mg	20-40mg
Morphine Sulfate – ampules of 10mg or 15mg		20-60mg	30-60mg

AIRWAY/SUCTION EQUIPMENT

Exchanged Airway/Suction Equipment	BLS Transport	ALS Non-Transport	ALS Transport
Adult non-rebreather mask	2	2	2
BAAM Device		1	2
End Title CO2 device – Pediatric and Adult (may be integrated into bag)		1	1
CPAP circuits- all manufacture's available sizes		2 each	2 each
Endotracheal Tubes cuffed – 6.0 and/or 6.5, 7.0 and/or 7.5 and 8.0 and/or 8.5 with stylet		2 each	2 each
Endotracheal Tubes, uncuffed – 2.5, 3.0, 3.5		2 each	2 each
Endotracheal Tubes, uncuffed – 4.0 or 4.5, 5.0 or 5.5		2 each	2 each
ET Tube holders – pediatric and adult		1 each	2 each
Infant Simple Mask	1	2	2
King LTS-D Adult: 4-5 feet: Size 3 (yellow) 5-6 feet: Size 4 (red) Over 6 feet: Size 5 (purple)	SPECIALTY PROGRAMS ONLY 2 each	<u>1</u> 2 each	2 each
King Ped: 35-45 inches or 12-25 kg: Size 2 (green) 41-51 inches or 25-35 kg: Size 2.5 (orange)	SPECIALTY PROGRAMS ONLY 2 each	<u>1</u> 2 each	2 each
Nasal cannulas – pediatric and adult	2 each	2 each	2 each
Naso/Orogastric feeding tubes - 5fr or 6fr, and 8fr		1 each	1 each
Naso/Orogastric tubes - 10fr or 12fr, 14fr, 16fr or 18fr		1 each	1 each
Nasopharyngeal Airways – (infant, child, and adult)	1 each	1 each	1 each

Exchanged Airway/Suction Equipment	BLS Transport	ALS Non-Transport	ALS Transport
Needle Cricothyrotomy Device – Pediatric and adult or Needles for procedure 10ga, 12ga, 14ga, 15ga		1 each 2 each	1 each 2 each
One way flutter valve with adapter or equivalent		1	1
Oropharyngeal Airways – (infant, child, and adult)	1 each	1 each	1 each
Pediatric non-rebreather O2 mask	2	2	2
Small volume nebulizer with universal cuff adaptor		2	2
Suction Canister 1200 cc	1	1	1
Suction catheters - 6fr, 8fr or 10fr, 12fr or 14fr	1 each	1 each	1 each
Ventilation Bags – Infant 250ml, Pediatric 500ml (or equivalent) Adult	1 each 1 each	1 each 1 each	1 each 1 each
Water soluble lubricating jelly		1	1
Yaunkers tonsil tip	1	1	1

Non-Exchange Airway/Suction Equipment	BLS Transport	ALS Non-Transport	ALS Transport
Ambulance Oxygen source –10L/min for 20 minutes	1		1
Flashlight/penlight	1	1	1
Laryngeal blades - #0, #1, #2, #3, #4 curved and/or straight		1 each	1 each
Laryngoscope handle with batteries – or 2 disposable handles		1	1
Magill Forceps – Pediatric and Adult		1 each	1 each
Portable Oxygen with regulator – 10L/min for 20 minutes	1	1	1
Portable suction device (battery operated)	1	1	1
Pulse Oximetry device		1	1
Stethoscope	1	1	1
Wall mount suction device	1		1

IV/NEEDLES/SYRINGES/MONITORING EQUIPMENT

Exchanged IV/Needles/Syringes/Monitor Equipment	BLS Transport	ALS Non-Transport	ALS Transport
Blood Tubing (Y type)			2
Conductive medium or Pacer/Defibrillation pads		2 each	2 each
Disposable Tourniquets		2	2
ECG electrodes – Pediatric and Adult		3 sets each	3 sets each
Glucose monitoring device with compatible strips and OSHA approved single use lancets		1	1

Exchanged IV/Needles/Syringes/Monitor Equipment	BLS Transport	ALS Non-Transport	ALS Transport
EZ-IO Needles – Pts. 40kg or greater: 25mm, 15 gauge Pts. 3-39 kg: 15mm, 15 gauge LD needle <u>3-way stopcock with extension tubing</u>		2 each 1 each 1 <u>2</u>	2 each 1 each 1 <u>2</u>
IO Needles - sizes 16, 18, 20 gauge		1each	1 each
IV Catheters – sizes 14, 16, 18, 20, 22, 24		2 each	2 each
Microdrip Administration Set (60 drops/cc)		1	2
Macro drip Administration Set (10 drops/cc)		3	3
Pressure Infusion Bag (disposable)		1	1
Razors		2	2
Safety Needles – 20 or 21gauge and 23 or 25 gauge		2 each	2 each
Saline Lock Large Bore Tubing Needleless		2	2
Sterile IV dressing		2	2
Syringes w/wo safety needles – 1cc, 3cc, 10cc, 20cc, 60cc catheter tip		2 each	2 each

Non-Exchange IV/Needles/Syringes/Mon Equip	BLS Transport	ALS Non-Transport	ALS Transport
12 Lead ECG Monitor		1	1
Blood pressure cuff – large adult or thigh cuff, adult, child and infant	1	1	1
Defibrillator (adult and pediatric capabilities) with TCP and printout		1	1
Needle disposal system (OSHA Approved)		1	1
Thermometer Mercury Free with covers	1	1	1

OPTIONAL EQUIPMENT/MEDICATIONS

Optional Non-Exchange Equipment/Medications	BLS Transport	ALS Non-Transport	ALS Transport
AED/defib pads	2		
Ammonia Inhalants		2	2
Approved Automatic ventilator		1	1
Backboard padding	1	1	1
Bone Injection Drill (adult and pediatric)_or ICEMA approved IO device		2	2
Buretrol		1	1
Chemistry profile tubes		3	3

Optional Non-Exchange Equipment/Medications	BLS Transport	ALS Non-Transport	ALS Transport
Esophageal Tracheal Airway Device (ETAD) LA		<u>2</u>	<u>2</u>
Esophageal Tracheal Airway Device (ETAD) SA		<u>2</u>	<u>2</u>
Gum Elastic intubation stylet		2	2
IV infusion pump		1	1
IV warming device		1	1
Manual IV Flow Rate Control Device			
Manual powered suction device	1	1	1
Multi-lumen peripheral catheter		2	2
Needle Thoracostomy Kit (prepackaged)		2	2
Pitocin		20 units	20 units
Translaryngeal Jet Ventilation Device		1	1
Vacutainer		1	1

DRESSING MATERIALS/OTHER EQUIPMENT/SUPPLIES

Exchanged Dressing Materials/Other Equip/Supplies	BLS Transport	ALS Non-Transport	ALS Transport
Adhesive tape – 1 inch	2	2	2
Air occlusive dressing (Vaseline gauze)	1	1	1
Ankle & wrist restraints, soft ties acceptable	1	0	1
Antiseptic swabs/wipes		10	10
Bedpan or fracture pan	1		1
Urinal	1		1
Cervical Collars – Rigid Pediatric & Adult or Cervical Collars – Adjustable Adult & Pediatric	2 each 2 each	2 each 2 each	2 each 2 each
Cold Packs	2	2	2
Emesis basin or disposable bags & covered waste container	1	1	1
Head immobilization device	2	2	2
OB Kit	1	1	1
Pneumatic or rigid splints capable of splinting all extremities	4	2	4
Providence/Iodine swabs/wipes		10	10
Roller bandages – 4 inch	6	3	6
Sterile bandage compress or equivalent	6	2	6
Sterile gauze pads – 4x4 inch	4	4	4
Sterile Sheet for Burns	2	2	2
Universal Dressing 10x30 inches	2	2	2

Non-Exchange Dress Materials/Other Equip/Supplies	BLS Transport	ALS Non-Transport	ALS Transport
Ambulance gurney	1		1
Bandage Shears	1	1	1
Blood Borne Pathogen Protective Equipment - (nonporous gloves, goggles face masks & gowns meeting OSHA Standards)	2	2	2
Drinkable water in secured plastic container or equivalent	1 gallon		1 gallon
Long board with restraint straps	1	1	1
Pediatric immobilization board	1	1	1
Pillow, pillow case, sheets & blanket	1 set		1 set
Short extrication device	1	1	1
Straps to secure patient to gurney	1 set		1 set
Traction splint	1	1	1
Triage Tags- CAL Chiefs or ICEMA approved	30	30	30



BLS/ALS STANDARD DRUG & EQUIPMENT LIST

Each ambulance and first responder unit will be equipped with the following functional equipment and supplies. **This list represents mandatory items with minimum quantities** excluding narcotics which must be kept within the range indicated. All expiration dates must be current. All packaging of drugs or equipment must be intact. No open products or torn packaging may be used.

MEDICATIONS/SOLUTIONS

Exchanged Medications/Solutions	BLS Transport	ALS Non-Transport	ALS Transport
Activated Charcoal 25 gm		2	2
Adenosine (Adenocard) 6 mg		1	1
Adenosine (Adenocard) 12 mg		2	2
Adrenaline (Epinephrine) 1:1000 1 mg		2	2
Adrenaline (Epinephrine) 1:10,000 1 mg preload		3	3
Albuterol Aerosolized Solution (Proventil) - unit dose 2.5mg		4 doses	4 doses
Aspirin, chewable – 81mg tablet		1 bottle	1 bottle
Atropine 1 mg preload		4	4
Calcium Chloride 1 gm preload		1	1
Dextrose 25% 2.5 gm preload		2	2
Dextrose 50% 25 gm preload		2	2
Diphenhydramine (Benadryl) 50 mg		1	1
Dopamine 400 mg		1	1
Furosemide (Lasix) 40 mg		2	2
Glucagon 1 mg		1	1
Glucose paste	1 tube	1 tube	1 tube
Ipratropium Bromide Inhalation Solution (Atrovent) unit dose 0.5mg		4	4
Irrigating Saline and/or Sterile Water (1000cc)	2	1	2
Lidocaine 100 mg		3	3
Lidocaine 1gm or 1 bag pre-mixed 1gm/250cc D5W		1	1
Lidocaine 2% (Viscous) bottle		1	1
Magnesium Sulfate 10 gm		1	1
Naloxone (Narcan) 2 mg preload (needle less)		2	2
Nitroglycerine – Spray 0.4mg metered dose		1	2
Normal Saline for Injection (10cc)		2	2
Normal Saline 100cc		1	2
Normal Saline 250cc		1	1

Exchanged Medications/Solutions	BLS Transport	ALS Non-Transport	ALS Transport
Normal Saline 1000cc		3	6
Ondansetron (Zofran) 4mg Oral Disintegrating Tablets (ODT)		4	4
Ondansetron (Zofran) 4 mg IM/ IV		4	4
Phenylephrine HCL - 0.5mg per metered dose		1 bottle	1 bottle
Procainamide 1 gm		1	2
Sodium Bicarbonate 50 mEq preload		2	2
Verapamil 5 mg		3	3

CONTROLLED SUBSTANCE MEDICATIONS

Non-Exchange - MUST BE DOUBLE LOCKED	BLS Transport	ALS Non-Transport	ALS Transport
Midazolam – vials of 10mg/2cc, 2mg/2cc, or 5mg/5cc		20-40mg	20-40mg
Morphine Sulfate – ampules of 10mg or 15mg		20-60mg	30-60mg

AIRWAY/SUCTION EQUIPMENT

Exchanged Airway/Suction Equipment	BLS Transport	ALS Non-Transport	ALS Transport
Adult non-rebreather mask	2	2	2
BAAM Device		1	2
End Title CO2 device – Pediatric and Adult (may be integrated into bag)		1	1
CPAP circuits- all manufacture's available sizes		2 each	2 each
Endotracheal Tubes cuffed – 6.0 and/or 6.5, 7.0 and/or 7.5 and 8.0 and/or 8.5 with stylet		2 each	2 each
Endotracheal Tubes, uncuffed – 2.5, 3.0, 3.5		2 each	2 each
Endotracheal Tubes, uncuffed – 4.0 or 4.5, 5.0 or 5.5		2 each	2 each
ET Tube holders – pediatric and adult		1 each	2 each
Infant Simple Mask	1	2	2
King LTS-D Adult: 4-5 feet: Size 3 (yellow) 5-6 feet: Size 4 (red) Over 6 feet: Size 5 (purple)	SPECIALTY PROGRAMS ONLY 2 each	1 each	2 each
King Ped: 35-45 inches or 12-25 kg: Size 2 (green) 41-51 inches or 25-35 kg: Size 2.5 (orange)	SPECIALTY PROGRAMS ONLY 2 each	1 each	2 each
Nasal cannulas – pediatric and adult	2 each	2 each	2 each
Naso/Orogastric feeding tubes - 5fr or 6fr, and 8fr		1 each	1 each
Naso/Orogastric tubes - 10fr or 12fr, 14fr, 16fr or 18fr		1 each	1 each
Nasopharyngeal Airways – (infant, child, and adult)	1 each	1 each	1 each

Exchanged Airway/Suction Equipment	BLS Transport	ALS Non-Transport	ALS Transport
Needle Cricothyrotomy Device – Pediatric and adult or Needles for procedure 10ga, 12ga, 14ga, 15ga		1 each 2 each	1 each 2 each
One way flutter valve with adapter or equivalent		1	1
Oropharyngeal Airways – (infant, child, and adult)	1 each	1 each	1 each
Pediatric non-rebreather O2 mask	2	2	2
Small volume nebulizer with universal cuff adaptor		2	2
Suction Canister 1200 cc	1	1	1
Suction catheters - 6fr, 8fr or 10fr, 12fr or 14fr	1 each	1 each	1 each
Ventilation Bags – Infant 250ml, Pediatric 500ml (or equivalent) Adult	1 each 1 each	1 each 1 each	1 each 1 each
Water soluble lubricating jelly		1	1
Yaunkers tonsil tip	1	1	1

Non-Exchange Airway/Suction Equipment	BLS Transport	ALS Non-Transport	ALS Transport
Ambulance Oxygen source –10L/min for 20 minutes	1		1
Flashlight/penlight	1	1	1
Laryngeal blades - #0, #1, #2, #3, #4 curved and/or straight		1 each	1 each
Laryngoscope handle with batteries – or 2 disposable handles		1	1
Magill Forceps – Pediatric and Adult		1 each	1 each
Portable Oxygen with regulator – 10L/min for 20 minutes	1	1	1
Portable suction device (battery operated)	1	1	1
Pulse Oximetry device		1	1
Stethoscope	1	1	1
Wall mount suction device	1		1

IV/NEEDLES/SYRINGES/MONITORING EQUIPMENT

Exchanged IV/Needles/Syringes/Monitor Equipment	BLS Transport	ALS Non-Transport	ALS Transport
Blood Tubing (Y type)			2
Conductive medium or Pacer/Defibrillation pads		2 each	2 each
Disposable Tourniquets		2	2
ECG electrodes – Pediatric and Adult		3 sets each	3 sets each
Glucose monitoring device with compatible strips and OSHA approved single use lancets		1	1

Exchanged IV/Needles/Syringes/Monitor Equipment	BLS Transport	ALS Non-Transport	ALS Transport
EZ-IO Needles – Pts. 40kg or greater: 25mm, 15 gauge Pts. 3-39 kg: 15mm, 15 gauge LD needle		2 each 1 each 1	2 each 1 each 1
3-way stopcock with extension tubing		2	2
IO Needles - sizes 16, 18, 20 gauge		1 each	1 each
IV Catheters – sizes 14, 16, 18, 20, 22, 24		2 each	2 each
Microdrip Administration Set (60 drops/cc)		1	2
Macro drip Administration Set (10 drops/cc)		3	3
Pressure Infusion Bag (disposable)		1	1
Razors		2	2
Safety Needles – 20 or 21gauge and 23 or 25 gauge		2 each	2 each
Saline Lock Large Bore Tubing Needleless		2	2
Sterile IV dressing		2	2
Syringes w/wo safety needles – 1cc, 3cc, 10cc, 20cc, 60cc catheter tip		2 each	2 each

Non-Exchange IV/Needles/Syringes/Mon Equip	BLS Transport	ALS Non-Transport	ALS Transport
12 Lead ECG Monitor		1	1
Blood pressure cuff – large adult or thigh cuff, adult, child and infant	1	1	1
Defibrillator (adult and pediatric capabilities) with TCP and printout		1	1
Needle disposal system (OSHA Approved)		1	1
Thermometer Mercury Free with covers	1	1	1

OPTIONAL EQUIPMENT/MEDICATIONS

Non-Exchange Optional Equipment/Medications	BLS Transport	ALS Non-Transport	ALS Transport
AED/defib pads	2		
Ammonia Inhalants		2	2
Approved Automatic ventilator		1	1
Backboard padding	1	1	1
Bone Injection Drill (adult and pediatric)_or ICEMA approved IO device		2	2
Buretrol		1	1
Chemistry profile tubes		3	3
Gum Elastic intubation stylet		2	2

Non-Exchange Dressing Materials/Other Equip/Supplies	BLS Transport	ALS Non-Transport	ALS Transport
Ambulance gurney	1		1
Bandage Shears	1	1	1
Blood Borne Pathogen Protective Equipment - (nonporous gloves, goggles face masks & gowns meeting OSHA Standards)	2	2	2
Drinkable water in secured plastic container or equivalent	1 gallon		1 gallon
Long board with restraint straps	1	1	1
Pediatric immobilization board	1	1	1
Pillow, pillow case, sheets & blanket	1 set		1 set
Short extrication device	1	1	1
Straps to secure patient to gurney	1 set		1 set
Traction splint	1	1	1
Triage Tags- CAL Chiefs or ICEMA approved	30	30	30



EMS AIRCRAFT STANDARD DRUG & EQUIPMENT LIST

Each Aircraft will be equipped with the following functional equipment and supplies. This list represents mandatory items with minimum quantities, to exclude narcotics, which must be kept within the range indicated. All expiration dates must be current. All packaging of drugs or equipment must be intact. No open products or torn packaging may be used.

MEDICATIONS/SOLUTIONS

Exchanged Medications/Solutions	Amount
Adenosine (Adenocard) 6mg	30mg
Adrenaline (Epinephrine) 1:1,000	2mg
Adrenaline (Epinephrine) 1:10,000	3mg
Albuterol Aerosolized Solution (Proventil)-unit dose 2.5mg	2 doses
Aspirin, chewable - 81mg tablet	1bottle
Atropine 1mg preload	3mg
Calcium Chloride	1gm
Dextrose 25%	50gm
Dextrose 50%	50gm
Diphenhydramine (Benadryl) 50mg	50mg
Furosemide (Lasix)	40mg
Glucagon	1mg
Intropin (Dopamine)	200mg
Ipratropium Bromide Inhalation Solution (Atrovent) unit dose 0.5mg	4
Lidocaine	300mg
Lidocaine 1 gm or 1 bag pre-mixed 1 gm/250cc D5W	2gm
Lidocaine 2% (Viscous)	2oz
Magnesium Sulfate 10mg	10gms
Naloxone (Narcan)	10mg
Nitroglycerin – Spray/Tablets	1bottle
Normal Saline for Injection (10cc)	2
Normal Saline 250ml	1
Normal Saline 1000ml	4
<u>Ondansetron (Zofran) 4mg Oral Disintegrating Tablets (ODT)</u>	<u>4</u>
<u>Ondansetron (Zofran) 4 mg IM/ IV</u>	<u>4</u>
Phenylephrine HCL - 0.5mg per metered dose	1bottle
Procainamide	1gm
Sodium Bicarbonate	100mEq

Exchanged Medications/Solutions	Amount
Verapamil (Isoptin)	15mg

CONTROLLED SUBSTANCE MEDICATIONS

Non-Exchange Controlled Substance Meds – MUST BE DOUBLE LOCKED	Amount
Midazolam – vials of 10mg / 2ml	20-40mg
Morphine Sulfate – ampules of 10mg	20-60mg

AIRWAY/SUCTION EQUIPMENT

Single Use Airway/Suction Equipment	Amount
BAAM Device	1
Endotracheal tubes, uncuffed – 2.5, 3.0, 3.5	2 each
Endotracheal Tubes, uncuffed – 4.0 or 4.5, 5.0 or 5.5	2 each
Endotracheal Tubes cuffed – 6.0, 7.0, 7.5 and 8.0	2 each
ET Tube holders – pediatric and adult	1 each
King LTS-D Adult: 4-5 feet: Size 3 (yellow) 5-6 feet: Size 4 (red) Over 6 feet: Size 5 (purple)	2 each
King Ped: 35-45 inches or 12-25 kg: Size 2 (green) 41-51 inches or 25-35 kg: Size 2.5 (orange)	2 each
Malleable Stylet – pediatric and adult	1 each
Nasal Cannulas – infant, pediatric and adult	2 each
Naso/Orogastric tubes - 10fr or 12fr, 14fr, 16fr or 18fr	1 each
Naso/Orogastric feeding tubes - 5fr or 6fr, and 8fr	1 each
Nasopharyngeal Airways – infant, child, and adult	1 each
Needle Cricothyrotomy Device (Approved) – Pediatric and adult <i>or</i>	1 each
Needles for procedure 10ga or 12ga, and 14ga, or 16ga	2 each
Non Re-Breather O ₂ Mask – Pediatric and Adult	2 each
One way flutter valve with adapter or equivalent	1
Oropharyngeal Airways – infant, child, and adult	1 each
Small volume nebulizer with universal cuff adaptor	2
Suction catheters - 6fr, 8fr or 10fr, 12fr or 14fr	1 each
Ventilation Bags – Infant 250ml, Pediatric 500ml and Adult 1L	1 each
Water soluble lubricating jelly	1
Yaunkers tonsil tip	1

Durable Items IV/Needles/Syringes/Monitoring Equipment	Amount
Needle disposal system (OSHA approved)	1
Pressure infusion bag	1
Thermometer	1

OPTIONAL EQUIPMENT/MEDICATIONS

Optional Equipment/Medications	Amount
Ammonia Inhalants	2
Automatic ventilator (Approved)	1
Backboard padding	1
BLS AED/defib pads	1
BLS/ALS Handheld Resuscitator (CAREvent ^R)	1
Bone Drill (adult & Peds) or ICEMA approved IO device	2
Chemistry profile tubes	3
D5W in bag	1
Esophageal Tracheal Airway Device (ETAD) LA	2
Esophageal Tracheal Airway Device (ETAD) SA	2
IV infusion pump	1
IV warming device	1
Manual powered suction device	1
Multi-lumen peripheral catheter	2
Needle Thoracostomy Kit (prepackaged)	2
Pitocin	20 units
Translaryngeal Jet Ventilation Device	1
Vacutainer	1

DRESSING MATERIALS/OTHER EQUIPMENT/SUPPLIES

Single Use Dressing Materials/Other Equipment Supplies	Amount
Adhesive tape – 1 inch	2
Air occlusive dressing (Vaseline gauze)	1
Ankle & wrist restraints, soft ties acceptable	1
Antiseptic swabs/wipes	
Cervical Collars – Rigid Pediatric & Adult <i>or</i>	2 each
Cervical Collars – Adjustable Adult & Pediatric	2 each
Emesis basin or disposable bags & covered waste container	1
Head immobilization device	2
OB Kit	1
Pneumatic or rigid splints capable of splinting all extremities	4

Single Use Dressing Materials/Other Equipment Supplies	Amount
Providence/Iodine swabs/wipes	
Roller bandages – 4 inch	3
Sterile bandage compress or equivalent	6
Sterile gauze pads – 4x4 inch	4
Sterile Sheet for Burns	2
Universal Dressing 10x30 inches	2

Durable Use Dressing Materials/Other Equipment Supplies	Amount
Aircraft stretcher or litter system with approved FAA straps	1
Bandage Shears	1
Blanket or sheet	2
Blood Borne Pathogen Protective Equipment - (nonporous gloves, goggles face masks & gowns meeting OSHA Standards)	2
Long board with restraint straps	1
Pediatric immobilization board	1
Short extrication device	1
Traction splint	1



EMS AIRCRAFT STANDARD DRUG & EQUIPMENT LIST

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Dextrose 25%	50gm
Dextrose 50%	50gm
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Lidocaine	300mg
Lidocaine 1 gm or 1 bag pre-mixed 1 gm/250cc D5W	2gm
Lidocaine 2% (Viscous)	2oz
Magnesium Sulfate 10mg	10gms
Naloxone (Narcan)	10mg
Nitroglycerin – Spray/Tablets	1bottle
Normal Saline for Injection (10cc)	2
Normal Saline 250ml	1
Normal Saline 1000ml	4
Ondansetron (Zofran) 4mg Oral Disintegrating Tablets (ODT)	4
Ondansetron (Zofran) 4 mg IM/ IV	4
Phenylephrine HCL - 0.5mg per metered dose	1bottle
Procainamide	1gm
Sodium Bicarbonate	100mEq

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King LTS-D Adult: 4-5 feet: Size 3 (yellow) 5-6 feet: Size 4 (red) Over 6 feet: Size 5 (purple)	2 each
King Ped: 35-45 inches or 12-25 kg: Size 2 (green) 41-51 inches or 25-35 kg: Size 2.5 (orange)	2 each
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Nasopharyngeal Airways – infant, child, and adult	1 each
Needle Cricothyrotomy Device (Approved) – Pediatric and adult <i>or</i>	1 each
Needles for procedure 10ga or 12ga, and 14ga, or 16ga	2 each
Non Re-Breather O ₂ Mask – Pediatric and Adult	2 each
One way flutter valve with adapter or equivalent	1
Oropharyngeal Airways – infant, child, and adult	1 each
Small volume nebulizer with universal cuff adaptor	2
Suction catheters - 6fr, 8fr or 10fr, 12fr or 14fr	1 each
Ventilation Bags – Infant 250ml, Pediatric 500ml and Adult 1L	1 each
Water soluble lubricating jelly	1
Yaunkers tonsil tip	1

Durable Items IV/Needles/Syringes/Monitoring Equipment	Amount
Needle disposal system (OSHA approved)	1
Pressure infusion bag	1
Thermometer	1

OPTIONAL EQUIPMENT/MEDICATIONS

Optional Equipment/Medications	Amount
Ammonia Inhalants	2
Automatic ventilator (Approved)	1
Backboard padding	1
BLS AED/defib pads	1
BLS/ALS Handheld Resuscitator (CAREvent [®])	1
Bone Drill (adult & Peds) or ICEMA approved IO device	2
Chemistry profile tubes	3
D5W in bag	1
IV infusion pump	1
IV warming device	1
Manual powered suction device	1
Multi-lumen peripheral catheter	2
Needle Thoracostomy Kit (prepackaged)	2
Pitocin	20 units
Translaryngeal Jet Ventilation Device	1
Vacutainer	1

DRESSING MATERIALS/OTHER EQUIPMENT/SUPPLIES

Single Use Dressing Materials/Other Equipment Supplies	Amount
Adhesive tape – 1 inch	2
Air occlusive dressing (Vaseline gauze)	1
Ankle & wrist restraints, soft ties acceptable	1
Antiseptic swabs/wipes	
Cervical Collars – Rigid Pediatric & Adult <i>or</i>	2 each
Cervical Collars – Adjustable Adult & Pediatric	2 each
Emesis basin or disposable bags & covered waste container	1
Head immobilization device	2
OB Kit	1
Pneumatic or rigid splints capable of splinting all extremities	4

Single Use Dressing Materials/Other Equipment Supplies	Amount
Providence/Iodine swabs/wipes	
Roller bandages – 4 inch	3
Sterile bandage compress or equivalent	6
Sterile gauze pads – 4x4 inch	4
Sterile Sheet for Burns	2
Universal Dressing 10x30 inches	2

Durable Use Dressing Materials/Other Equipment Supplies	Amount
Aircraft stretcher or litter system with approved FAA straps	1
Bandage Shears	1
Blanket or sheet	2
Blood Borne Pathogen Protective Equipment - (nonporous gloves, goggles face masks & gowns meeting OSHA Standards)	2
Pediatric immobilization board	1
Short extrication device	1
Traction splint	1

NAUSEA AND VOMITING
~~ZOFRAN (Ondansetron)~~
~~PARAMEDIC TRIAL STUDY~~

FIELD ASSESSMENT/TREATMENT INDICATORS:

1. Nausea
2. Vomiting

CONTRAINDICATIONS:

Known sensitivity to ondansetron or other 5-HT3 antagonists:

1. Granisetron (Kytril)
2. Dolasetron (Anzemet)
3. Palonosetron (Aloxi)

PROCEDURE:

1. Assess patient for need for anti-emetic therapy
2. Maintain airway
3. Position of comfort
4. Oxygen

DOSAGE: PATENTS FOUR (4) YEARS OLD TO ADULT

1. Ondansetron 4mg IM or slow IV push (greater than 30 seconds)
2. Ondansetron 4mg Oral Disintegrating Tablet (ODT)
3. For all children 4 years to 8 years old may give a total of 4mgs of ondansetron prior to Base Station contact.
4. For all children 9 and older: give ondansetron 4mgs and may repeat times two (2) for a total of 12 mgs prior to Base Station contact.
5. Base Hospital M may order a repeat dose of ondansetron 4 mg for continuing nausea or vomiting up to a total of 12 mgs.
6. May give Ondansetron 4mg with morphine to prevent vomiting.

DOCUMENTATION:

Documentation will be done on the electronic patient care record (ePCR). ~~Patient's response to the medication will be measured using the attached Visual Analog Scale for Nausea at fifteen (15) minute intervals after the administration and upon arrival at the receiving hospital.~~ The patient's response to the medication and vital signs will be documented on the ePCR.



NAUSEA AND VOMITING

FIELD ASSESSMENT/TREATMENT INDICATORS:

1. Nausea
2. Vomiting

CONTRAINDICATIONS:

Known sensitivity to ondansetron or other 5-HT₃ antagonists:

1. Granisetron (Kytril)
2. Dolasetron (Anzemet)
3. Palonosetron (Aloxi)

PROCEDURE:

1. Assess patient for need for anti-emetic therapy.
2. Maintain airway.
3. Position of comfort.
4. Oxygen.

DOSAGE: PATENTS FOUR (4) YEARS OLD TO ADULT

1. Ondansetron 4mg IM or slow IV push (greater than 30 seconds).
2. Ondansetron 4mg Oral Disintegrating Tablet (ODT).
3. For all children four (4) years to eight (8) years old may give a total of 4mgs of ondansetron prior to Base Station contact.
4. For all children nine (9) and older: give ondansetron 4mgs and may repeat times two (2) for a total of 12mgs prior to Base Station contact.
5. May repeat dose of ondansetron 4mg for continuing nausea or vomiting up to a total of 12mgs.
6. May give Ondansetron 4mg with morphine to prevent vomiting.

DOCUMENTATION:

Documentation will be done on the electronic patient care record (ePCR). The patient's response to the medication and vital signs will be documented on the ePCR.



12 LEAD ELECTROCARDIOGRAPHY

~~FIELD ASSESSMENT/TREATMENT INDICATORS~~

- ~~1. Patient suspected of having myocardial infarction (MI).~~
- ~~2. All chest pain patients or any patient at risk for a MI.~~
- ~~3. Consider atypical presentations:~~
 - ~~a) Elderly~~
 - ~~b) Female~~
 - ~~e) Diabetic~~
 - ~~d) Unexplained syncope~~
 - ~~e) Difficulty breathing~~
 - ~~f) General weakness in patients over fifty (50) years old~~
 - ~~g) Profound weakness~~
- ~~4. May be considered in patients with stable tachycardia for diagnostic purposes.~~

~~CONTRAINDICATIONS (RELATIVE)~~

- ~~1. Uncooperative patient.~~
- ~~2. Presence of unstable ventricular tachycardia, ventricular fibrillation, or 3rd degree AV block.~~
- ~~3. Life-threatening conditions.~~
- ~~4. Situations in which a delay to obtain ECG (greater than one (1) minute) would compromise care of the patient.~~

~~PROCEDURE~~

- ~~1. Complete initial assessment and stabilizing treatment (DO NOT DELAY TREATMENT FOR 12 LEAD).~~
- ~~2. May acquire 12 Lead at incident location or in vehicle just prior to beginning transport.~~
- ~~3. Place precordial lead electrodes and acquire tracing as per manufacturer's directions.~~
- ~~4. Relay ECG interpretation to base hospital. Assure that receiving hospital is advised if machine interpretation is "acute myocardial infarction suspected".~~
- ~~5. If defibrillation or synchronized cardioversion are necessary, place paddles or defibrillation electrodes, removing precordial leads, if necessary.~~

~~DOCUMENTATION~~

- ~~1. Document the performance of 12 Lead ECG, the machine interpretation and the paramedic interpretation on prehospital care report (PCR).~~
- ~~2. Provide original tracing to receiving hospital. Attach copy of 12 Lead to Base Hospital copy, provider copy and ICEMA copy of PCR.~~

~~SPECIAL CONSIDERATIONS~~

- ~~1. Approximate time to acquire 12 Lead should be no longer than three (3) minutes.~~
- ~~2. Do ECG prior to or when Nitroglycerin is administered as changes in ECG may occur with treatment.~~
- ~~3. Do not need to repeat 12 Lead performed at clinics or other similar settings unless patient's condition changes.~~
- ~~4. Machine interpretation of suspected STEMI may not be accurate in presence of paced rhythms, bundle branch blocks and certain tachydysrhythmias (e.g., SVT, atrial flutter). When communicating machine interpretation to base hospital, paramedics should advise base hospital of paced / BBB / tachydysrhythmia rhythms.~~



12 LEAD ELECTROCARDIOGRAPHY

PURPOSE

To identify guidelines for the acquisition, interpretation and transmission of a 12 lead ECG in the prehospital setting to facilitate early identification STEMI patients and prompt transportation to a STEMI Receiving Center (SRC).

POLICY

Paramedics will obtain a 12 lead ECG in patients suspected of having acute coronary syndrome and provide treatment in accordance with this policy. Only paramedics who have received 12 lead ECG training are authorized to obtain a 12 lead ECG on patients.

INDICATIONS

Any and all patients whose medical history and/or presenting complaints are consistent with an acute coronary syndrome. Patients will have one or more of the following:

1. Chest or upper abdominal discomfort suggestive of acute coronary syndrome.
2. New onset cardiac dysrhythmias (including adult cardiac arrest if return of spontaneous circulation).
3. Unexplained syncope or near syncope.
4. Unexplained acute generalized weakness with or without diaphoresis.
5. Acute onset of dyspnea suggestive of congestive heart failure.
6. Other signs or symptoms suggestive of acute coronary syndrome.
7. May be considered in patients with stable tachycardia for diagnostic purposes.
8. Any atypical presentation of symptoms that may be a suspected anginal equivalent.

CONTRAINDICATIONS (RELATIVE)

1. Trauma.

2. Uncooperative patient.
3. Presence of unstable ventricular tachycardia, ventricular fibrillation, or 3rd degree AV block.

PROCEDURE

1. Complete initial assessment and stabilizing treatment.
2. Recommend obtaining the ECG as soon as possible and prior to departing the scene.
3. Place precordial lead electrodes and acquire tracing as per manufacturer's directions.
4. Relay ECG interpretation to STEMI Receiving Base Station. Assure that the receiving hospital is advised if machine interpretation is "acute myocardial infarction" or "suspected acute myocardial infarction." (Exact machine interpretation is required for immediate cath-lab activation at the STEMI receiving hospital).
5. STEMI Base Station contact must be made in situations where the medic suspects a positive STEMI which is not supported by the ECG interpretation.
6. If defibrillation or synchronized cardioversion are necessary, place paddles or defibrillation electrodes, removing precordial leads if necessary.
7. The paramedic should transmit ECG to the receiving STEMI Center when available.

DOCUMENTATION

1. Document the performance of 12 lead ECG, the machine interpretation and the paramedic interpretation on prehospital care report (PCR).
2. Provide original tracing to receiving hospital. Attach copy of 12 lead to hospital copy, provider copy and EMS copy of PCR.

DATA COLLECTION

In order to continue STEMI quality improvement, the following data elements must be collected on each and every 12 lead ECG performed and provided to the receiving hospital with the patient:

1. A copy of the ePCR or O1A.
 - a. Patient identifiers.
 - b. Procedure performed (12 lead ECG).
 - c. Machine, paramedic and physician interpretations.
 - d. Additional ECG findings.
 - e. Rhythm.
2. A copy of the 12 lead ECG.
 - a. Patient identifiers.
 - b. Date 12 lead ECG performed.
 - c. Time 12 lead ECG performed.

SPECIAL CONSIDERATIONS

1. Approximate time to acquire 12 lead should be no longer than three (3) minutes.
2. Perform 12 lead ECG prior to or just as Nitroglycerin is administered as changes in the 12 lead ECG may occur with treatment.
3. 12 lead ECG does not need to be repeated, if originally performed at clinics or other similar settings unless patient's condition changes.
4. Machine interpretation of suspected STEMI may not be accurate in presence of paced rhythms, bundle branch blocks and certain tachydysrhythmias (e.g., SVT, atrial flutter). When communicating machine interpretation to base station, paramedics should advise station of paced / BBB / tachydysrhythmia rhythms.