



# INYO COUNTY EMERGENCY MEDICAL CARE COMMITTEE



**SOUTHERN INYO HOSPITAL**  
*Conference Room*  
**501 East Locust Street**  
**Lone Pine, CA**

**January 25, 2010**  
**QI Committee --5:00 p.m.**  
**EMCC -- 6:00 p.m.**

## A G E N D A

- I. CALL TO ORDER**
- II. APPROVAL OF NOVEMBER 30, 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. QI Committee Report
  - C. E Net Messenger Presentation – Kevin Davey, General Devices
- IV. OLD BUSINESS**
  - A. Annual EMCC Report
  - B. Lone Pine Airport
  - C. Mass Casualty Trailers
- V. OTHER/PUBLIC COMMENT**
- VI. COMMITTEE MEMBER REQUEST FOR TOPICS FOR NEXT MEETING**
- VII. NEXT MEETING DATE AND LOCATION**
- VIII. ADJOURNMENT**

*The Inyo 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*



**INYO COUNTY EMCC MEETING**  
Olancha-Cartago Fire Department

**MINUTES**  
**November 30, 2009**

**Voting Members Present:**

Paul Postle, Chairperson	So. Inyo Fire Prot. District, Chief	<a href="mailto:paul2701@wildblue.net">paul2701@wildblue.net</a>
Judd Symons, Vice Chair	Symons Emergency Specialties, Inc.	<a href="mailto:juddsymons@aol.com">juddsymons@aol.com</a>
Le Roy Kritz	Lone Pine Fire Department, Chief	<a href="mailto:LChief2401@lonepinetv.com">LChief2401@lonepinetv.com</a>
Lloyd Wilson	Big Pine Fire Department, Chief	<a href="mailto:dlwilson41@msn.com">dlwilson41@msn.com</a>
Steven Davis	Olancha Cartago Fire Dept., Chief	<a href="mailto:olanchafire@aol.com">olanchafire@aol.com</a>
Andrew Stevens	Northern Inyo Hospital	<a href="mailto:Andrew.stevens@nih.org">Andrew.stevens@nih.org</a>
Dr. Michael Dillon	ER Physician	<a href="mailto:MichaelDillon@qnet.com">MichaelDillon@qnet.com</a>
Lee Barron	Southern Inyo Hospital	<a href="mailto:leebee40@aol.com">leebee40@aol.com</a>
Joe Cappello	Independence Fire Department	<a href="mailto:jcappello@cebridge.net">jcappello@cebridge.net</a>

**Voting Members Absent:**

Jean Turner	Health & Human Services, Director	<a href="mailto:jturner@inyocounty.us">jturner@inyocounty.us</a>
Martha Reynolds	Northern Inyo Hospital	<a href="mailto:marthareynolds@nih.org">marthareynolds@nih.org</a>
Phil Ashworth	Independence Fire Department	<a href="mailto:philinyo@usamedia.tv">philinyo@usamedia.tv</a>
Mike Patterson	Sierra Life Flight, Program Director	<a href="mailto:mike@sierraaviation.com">mike@sierraaviation.com</a>

**Other Attendees:**

Diane Fisher	ICEMA	<a href="mailto:DFisher@cao.sbcounty.gov">DFisher@cao.sbcounty.gov</a>
Gina Ellis	ICHHS, Recording Secretary	<a href="mailto:gellis@inyocounty.us">gellis@inyocounty.us</a>
Marty Fortney	Inyo County Supervisor	<a href="mailto:marty@aberdeenresort.com">marty@aberdeenresort.com</a>
Denise Lauffer, RN	Southern Inyo Hospital	<a href="mailto:deniselauffer@aol.com">deniselauffer@aol.com</a>
Melissa Best-Baker	ICHHS, Public Health	<a href="mailto:mbestbaker@inyocounty.us">mbestbaker@inyocounty.us</a>
Tamara Cohn	ICHHS, Public Health	<a href="mailto:tcohn@inyocounty.us">tcohn@inyocounty.us</a>
Jennifer H. Gordon	Olancha-Cartago Fire Department	
Betty Biros	Olancha-Cartago Fire Department	
Katrina Haughton	Olancha-Cartago Fire Department	
Fred Hawkins	Liberty Ambulance	<a href="mailto:flhawkins8@aol.com">flhawkins8@aol.com</a>

**I. CALL TO ORDER**

Chairperson, Paul Postle, called the meeting to order at 6:12 p.m.

**II. APPROVAL OF SEPTEMBER 28, 2009 MINUTES**

Motion Steven Davis, seconded by Judd Symons to approve the September 28, 2009 minutes.  
Motion carried unanimously.

**III. NEW BUSINESS**

**A. Protocols**

1. Interfacility Transfer of STEMI Patients

The new protocols go into effect immediately. It is primarily for hospitals and does not have much of an impact on Inyo County providers, but it will affect STEMI patients in the future.

2. Adult Tachycardias

Diane Fisher asked the EMCC to make a recommendation for both protocols. Motion Steven Davis; seconded by Judd Symons to recommend approval of protocols Interfacility Transfer of Stemi Patients and Adult Tachycardias. Motion carried unanimously.

**B. Inyo County ALS/BLS Data**

Ms. Fisher reported on the ALS/BLS Data. The report is for Inyo County as a whole. Individual agency reports are handed out at the Quality Improvement (Q.I.) meeting that takes place prior to EMCC meetings. The trauma data is only from providers that are on the e-PCR. She gave a brief background on the Q.I. Committee and confidentiality and noted that items will be shredded after meeting. The Q.I. members are members on the EMCC. Joe Cappello will attend future Q.I. meetings to represent the Independence Fire Department.

**C. Federal HAvBED Assessment**

ICEMA is running an assessment poll every Tuesday. This request is from the federal government and will go on indefinitely. Ms. Fisher said that there has been good participation from Inyo County. She added that she received notice that there will not be a HAvBED assessment tomorrow, December 1, 2009.

**D. Northern Inyo Hospital Base Hospital Report**

Information has not been available from Northern Inyo Hospital (NIH). It will be attempted to get the information from the e-PCR. The quarterly base hospital reports are available on the website.

**E. Field Treatment Sites**

Tamara Cohn, Inyo County Public Health reported on field treatment sites which were a topic at a recent Fire Chief's meeting. There is an issue that sites may be needed for multiple reasons during times of a disaster. The list of designated sites is in the process of being updated. She handed out the current list of designated sites and an attached site checklist. Ms. Cohn led a discussion on how EMCC members could be of assistance with the site agreements for facilities in their service areas. Tom Stoudt of ICEMA needs this information by the end of December to meet his deadline. Ms. Cohn asked that members send a preliminary list of potential sites for their services area to Melissa Best-Baker by December 15, 2009 by e-mail to [mbestbaker@inyocounty.us](mailto:mbestbaker@inyocounty.us). It was anticipated that if sites and representatives from each community to assist with the process of getting agreements in place could be identified by the second week of January, that the site reviews and agreements could be in place by the end of January 2010.

**IV. OLD BUSINESS**

**A. H1N1/ILI Update**

Andrew Stevens, NIH, reported on the H1N1 Incident Command Center at the hospital that opened in October and just recently closed. He said Inyo County Public Health was able to provide NIH with masks, and he spoke about the reconfiguration of the waiting

rooms. Tamara Cohn, Inyo County Public Health, spoke about the strategy of response to H1N1. She reported on hospitalized individuals and the attributes. She said that cases that were hospitalized were hospitalized with pneumonia, which included twelve cases to date. Ms. Cohn extended her appreciation and respect to all the professional agencies. She talked about the three waves of H1N1 reporting that two of the waves are done and that the third is anticipated for March 2010. She spoke about the flu-mist clinics saying that as of yesterday the H1N1 vaccine is available for those ages 64 and younger.

Dr. Michael Dillon voiced concerns that the trial study had not been compared against another drug in a double blind study.

**B. Lone Pine Airport – Report from Sierra Lifeflight**

This agenda item was continued to next meeting. Gina Ellis received a phone call from Mike Patterson earlier in the day when he informed her that he was not able to attend the most recent Southern Inyo Airport Advisory Committee meeting as he was given an incorrect meeting date, but he plans on attending the next meeting to bring forth his concerns with the Lone Pine Airport runway conditions.

**C. 2008 Annual Report**

Paul Postle handed out a draft of the 2008 Annual Report. He reported that there are a few components including a service area map and a chart for the certified EMT's in Inyo County that are still needed to complete the report. There was discussion on the coverage of some of the service areas. Mr. Postle asked that he receive comments and/or recommendations by December 15, 2009, after which time the report will be submitted. Two items on report that need to be emphasized are: 1) recommendations of the 2008 EMCC and 2) a summary of future objectives. It was suggested that a review of past meeting minutes be examined to identify objectives. Additionally, the committee needs to look at establishing goals for 2010.

**V. OTHER/PUBLIC COMMENT**

**VI. COMMITTEE MEMBER REQUEST FOR TOPICS FOR NEXT MEETING**

- A. Lone Pine Airport update.
- B. EMCC Annual Report.
- C. Disaster Trailers

The Committee would like an update on the condition of the disaster trailers, and would like to know who monitors the trailers. The location of the trailers was discussed. It was said that part of the agreement is that the trailers are inventoried. Public Health anticipates adding more supplies with the HPP funds.

**VII. NEXT MEETING DATE AND LOCATION**

Monday, January 25, 2010, Southern Inyo Hospital Conference Room in Lone Pine, CA.  
Q.I. 5:00 p.m.  
EMCC 6:00 p.m.

**VIII. ADJOURNMENT**

Motion Steven Davis; seconded by Lloyd Wilson to adjourn the meeting at 7:46 p.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.
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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.
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6. Upon passing the ~~ICEMA certification exam~~ICEMA written examination with a minimum score of 80%, a provisional MICN card will be issued.
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  - 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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## MICN CERTIFICATION REQUIREMENTS

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### **PROCEDURE**

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documentation of eight (8) hours of remedial training given by their PLN/Medical Director relating to ICEMA protocols, policies/procedures and pass the ICEMA written examination with a minimum score of 85%.

- c. If the candidate fails to pass the ICEMA written examination on the third attempt, the applicant must repeat the course and reapply.
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- 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) 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. 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.
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- d. Must teach or attend an additional 6 hours of field care audits

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  - 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 (6) hours of field care audits obtained within the ICEMA region.
  - e. Documentation of one (1) ICEMA Annual Review class for each year of inactivation.

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4. The PLN will choose three (3) tapes for review (one trauma, one medical and one other) and submit them to their partnered Base Station PLN for review.
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**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 Station within the ICEMA Region.
  - c. Copy of front and back of a current, signed ACLS Card.
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5. Upon completion of 1-4 above, the applicant will be scheduled to take the ICEMA written examination.
6. Upon passing the 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 written examination on the first attempt will have to pay the ICEMA approved fee and re-take the written examination with a minimum score of 85%.
  - 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).
9. When three (3) tapes meet ICEMA criteria, a MICN card will be issued with the same expiration date as the candidates RN license.
10. 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.



## 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.



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## CARDIOVASCULAR “STEMI” RECEIVING CENTERS

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### 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.
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## 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.)
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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.
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  - 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

<b>Exchanged Airway/Suction Equipment</b>	<b>BLS Transport</b>	<b>ALS Non-Transport</b>	<b>ALS Transport</b>
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

<b>Non-Exchange Airway/Suction Equipment</b>	<b>BLS Transport</b>	<b>ALS Non-Transport</b>	<b>ALS Transport</b>
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**

<b>Exchanged IV/Needles/Syringes/Monitor Equipment</b>	<b>BLS Transport</b>	<b>ALS Non-Transport</b>	<b>ALS Transport</b>
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
<del>Esophageal Tracheal Airway Device (ETAD) LA</del>		<u>2</u>	<u>2</u>
<del>Esophageal Tracheal Airway Device (ETAD) SA</del>		<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

<b>Non-Exchange Dress Materials/Other Equip/Supplies</b>	<b>BLS Transport</b>	<b>ALS Non-Transport</b>	<b>ALS Transport</b>
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
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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

<b>Exchanged Airway/Suction Equipment</b>	<b>BLS Transport</b>	<b>ALS Non-Transport</b>	<b>ALS Transport</b>
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

<b>Non-Exchange Airway/Suction Equipment</b>	<b>BLS Transport</b>	<b>ALS Non-Transport</b>	<b>ALS Transport</b>
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**

<b>Exchanged IV/Needles/Syringes/Monitor Equipment</b>	<b>BLS Transport</b>	<b>ALS Non-Transport</b>	<b>ALS Transport</b>
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

<b>Exchanged IV/Needles/Syringes/Monitor Equipment</b>	<b>BLS Transport</b>	<b>ALS Non-Transport</b>	<b>ALS Transport</b>
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

<b>Non-Exchange IV/Needles/Syringes/Mon Equip</b>	<b>BLS Transport</b>	<b>ALS Non-Transport</b>	<b>ALS Transport</b>
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

<b>Non-Exchange Optional Equipment/Medications</b>	<b>BLS Transport</b>	<b>ALS Non-Transport</b>	<b>ALS Transport</b>
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

<b>Non-Exchange Optional Equipment/Medications</b>	<b>BLS Transport</b>	<b>ALS Non-Transport</b>	<b>ALS Transport</b>
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

<b>Exchanged Dressing Materials/Other Equip/Supplies</b>	<b>BLS Transport</b>	<b>ALS Non-Transport</b>	<b>ALS Transport</b>
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	2 each	2 each	2 each
Cervical Collars – Adjustable Adult & Pediatric	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

<b>Non-Exchange Dressing Materials/Other Equip/Supplies</b>	<b>BLS Transport</b>	<b>ALS Non-Transport</b>	<b>ALS Transport</b>
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

<b>Exchanged Medications/Solutions</b>	<b>Amount</b>
Verapamil (Isoptin)	15mg

### CONTROLLED SUBSTANCE MEDICATIONS

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

### AIRWAY/SUCTION EQUIPMENT

<b>Single Use Airway/Suction Equipment</b>	<b>Amount</b>
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 <sub>2</sub> 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 <sup>®</sup> )	1
Bone Drill (adult & Peds) or ICEMA approved IO device	2
Chemistry profile tubes	3
D5W in bag	1
<del>Esophageal Tracheal Airway Device (ETAD) LA</del>	<del>2</del>
<del>Esophageal Tracheal Airway Device (ETAD) SA</del>	<del>2</del>
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

<b>Single Use Dressing Materials/Other Equipment Supplies</b>	<b>Amount</b>
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

<b>Durable Use Dressing Materials/Other Equipment Supplies</b>	<b>Amount</b>
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
<del>Long board with restraint straps</del>	<del>1</del>
Pediatric immobilization board	1
Short extrication device	1
Traction splint	1



## EMS AIRCRAFT STANDARD DRUG & EQUIPMENT LIST

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### MEDICATIONS/SOLUTIONS

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Adenosine (Adenocard) 6mg	30mg
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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
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

<b>Exchanged Medications/Solutions</b>	<b>Amount</b>
Verapamil (Isoptin)	15mg

### CONTROLLED SUBSTANCE MEDICATIONS

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

### AIRWAY/SUCTION EQUIPMENT

<b>Single Use Airway/Suction Equipment</b>	<b>Amount</b>
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 <sub>2</sub> 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

<b>Durable Items Airway/Suction Equipment</b>	<b>Amount</b>
Aircraft Oxygen source –10L/min for 20 minutes	1
End-tittle CO2 device – pediatric and adult (may be integrated into bag)	1 each
Flashlight/penlight	1
Laryngoscope handle with batteries – or 2 disposable handles	1
Laryngeal blades - #0, #1, #2, #3, #4 curved and/or straight	1 each
Magill Forceps – Pediatric and Adult	1 each
Portable Oxygen with regulator – 10L/min for 20 minutes	1
Portable suction device (battery operated) <i>and/or</i> Wall mount suction device	1 each
Pulse Oximetry device	1
Stethoscope	1

**IV/NEEDLES/SYRINGES/MONITORING EQUIPMENT**

<b>Single Use IV/Needles/Syringes/Monitoring Equipment</b>	<b>Amount</b>
Conductive medium <i>or</i> Adult and Pediatric Pacer/Defibrillation pads	2 each
ECG – Pediatric and Adult	3 sets each
EZ IO Needles- Pts. 40kg or greater: 25mm, 15 gauge	2 each
Pts. 3-39 kg: 15mm, 15 gauge	2 each
LD needle	1
3-way stopcock with extension tubing	2
IO Needles - sizes 16, 18, 20 gauge	1 each
3-way stopcock	2
IV Catheters – sizes 14, 16, 18, 20, 22, 24	2 each
Macro drip Administration Set (10 drops/ml)	3
Micro drip Administration Set (60 drops/ml)	1
Safety Needles – 20ga or 21ga and 23ga or 25ga	2 each
Saline Lock	2
Syringes w/wo safety needles – 1ml, 3ml, 10ml, 20ml, 60ml catheter tip	2 each

<b>Durable Items IV/Needles/Syringes/Monitoring Equipment</b>	<b>Amount</b>
Blood pressure cuff – large adult or thigh cuff, adult, child and infant	1 set
C-PAP Unit (Approved) with	1
Small, Medium and Large sized masks	3 each
12 Lead ECG Monitor	1
Defibrillator (adult and pediatric capabilities) with TCP and printout	1
Glucose monitoring device	1

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

### OPTIONAL EQUIPMENT/MEDICATIONS

<b>Optional Equipment/Medications</b>	<b>Amount</b>
Ammonia Inhalants	2
Automatic ventilator (Approved)	1
Backboard padding	1
BLS AED/defib pads	1
BLS/ALS Handheld Resuscitator (CAREvent <sup>R</sup> )	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

<b>Single Use Dressing Materials/Other Equipment Supplies</b>	<b>Amount</b>
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

<b>Single Use Dressing Materials/Other Equipment Supplies</b>	<b>Amount</b>
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

<b>Durable Use Dressing Materials/Other Equipment Supplies</b>	<b>Amount</b>
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

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

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**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.





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## NAUSEA AND VOMITING

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### FIELD ASSESSMENT/TREATMENT INDICATORS:

1. Nausea
2. Vomiting

### CONTRAINDICATIONS:

Known sensitivity to ondansetron or other 5-HT<sub>3</sub> 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.~~



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## **12 LEAD ELECTROCARDIOGRAPHY**

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### **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.