



3340 Glenwood Street, Eureka, CA 95501 (707) 445-2081 (800) 282-0088 FAX (707) 445-0443

**MEMORANDUM:**

**DATE:** September 12, 2007

**TO:** Joint Powers Governing Board Members  
County Health Officers  
Lake County Administrative Officer  
Prehospital Care Medical Directors  
Prehospital Care Nurse Coordinators  
Fire Chiefs' Associations/EMS Liaisons  
EMCC Chairpersons

**FROM:** Linn Tyhurst, Administrative Assistant

**RE:** Informational Mailing

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**1. FOR YOUR INFORMATION AND REVIEW-**

- a. North Coast EMS Five Year Plan 2007 Update
- b. North Coast EMS Trauma Plan System Status Report
- c. North Coast EMS General Fund Final Progress Report
- d. North Coast EMS Quality Improvement Program Plan

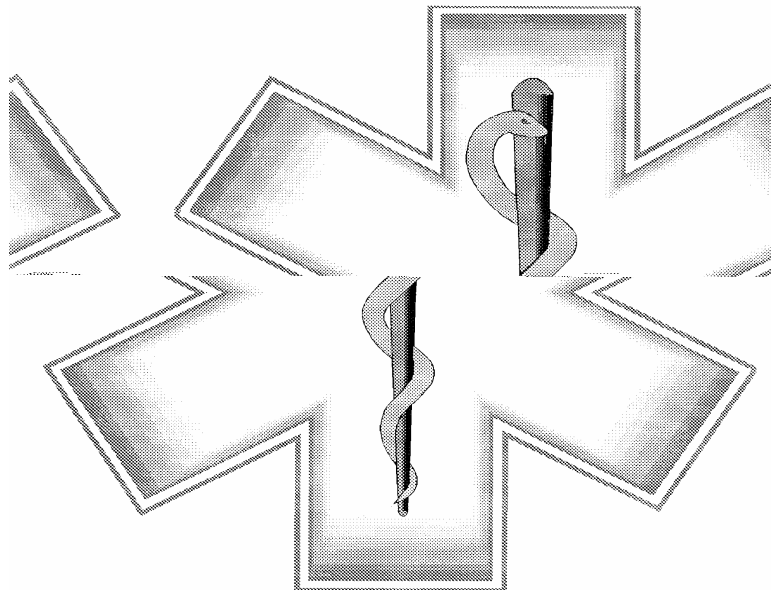
Please return any comments to Larry Karsteadt ([Larry@northcoastems.com](mailto:Larry@northcoastems.com)), fax number 445-0443, or by mail) by **October 12, 2007**.

Although the four plans have been submitted to the EMSA as required, please note that any substantial input will be incorporated in revised plans that will be presented to the JPA Governing Board for acceptance at the meeting of October 25, 2007. If substantial changes are needed at that time, we will resubmit to the EMSA.

The format of the EMS and Trauma plans has been streamlined by the State EMS Authority at the request of the Emergency Medical Directors Administrators Association of California (EMSAAC). Also, North Coast EMS was selected as the pilot Local EMS Agency for the new EMS Plan revision process and we appreciate the opportunity to participate in this process.

Hopefully you will find the review of these updates much easier as well. Our regional EMS objectives are listed on the right column of the EMS Plan, and we look forward to your suggestions on how we can enhance the EMS system as you review these documents.

**Emergency Medical Services System  
Five Year Plan  
June, 1999  
(2007 Update)**



**North Coast Emergency Medical Services Region  
Del Norte, Humboldt, Lake and  
Southern Trinity Counties**

Submitted by:  
North Coast Emergency Medical Services  
3340 Glenwood  
Eureka, CA 95501

July 26, 2007

Cesar A. Aristeiguieta, M.D., Director  
EMS Authority  
1930 9<sup>th</sup> Street  
Sacramento, CA 95811-7043

**Re: North Coast EMS Plan Revision**

Dear Dr. Aristeiguieta:

The North Coast EMS Regional EMS Plan 2007 Revision, less the completed inventory section which is being finalized at this time, is enclosed.

We greatly appreciate your willingness, and that of your staff, to develop the new EMS Plan Revision methodology and for selecting North Coast EMS as the pilot site for the State. We also extend our thanks to Nancy LaPolla and personnel at Santa Barbara EMS for suggesting a streamlined revision methodology.

Without question, the new revision process is vastly improved! Rather than taking several weeks to update a +200 page document, we were able to complete the five (5) page revision using the new Excel Spread Sheet in several hours. As you are aware, the spread sheet lists only the unmet or substantially changed standards, reports progress since 2005 and identifies short or long term objectives. The new update is not only much easier to complete but it is far easier to use as a tool to measure progress. The only relatively minor concern is the redundancy that is still required, which we resolved by noting the number of the similar standards addressed by targeting the same objective.

Importantly, we remain very hopeful that the new *EMS System Standards and Guideline* will minimize or reduce such unnecessary repetition, and with the consolidation of the EMS Plan Update and regional quarterly and final reports, will allow staff focus to more critical EMS system needs.

Please note that the revised EMS Plan has not yet been reviewed by region EMS constituents. It will soon be distributed for 45- day comment and submitted to our Joint Powers Governing Board for adoption at the meeting of **October 25, 2007**. If any changes are forthcoming at that time, we will submit a revised version to your office.

On behalf of the other LEMSAs scheduled to update the EMS Plan in the near future, we strongly recommend that the EMSA adopt and distribute the Excel template to all Local EMS Agencies as soon as possible. We will be happy to assist with this effort if that would be helpful.

Again, I cannot emphasize enough how beneficial and constructive the new update method is and thank you and your staff for your efforts to streamline the EMS Plan revision process.

We look forward to your positive review of this document and thank you and your staff again for your ongoing support.

Sincerely,

Larry Karsteadt, Executive Director  
North Coast EMS

Cc: Bonnie Sinz, EMSA  
Sandy Salabar, EMSA  
Carol McRae, EMSA  
Bruce Lee, EMSAAC President  
Nancy LaPolla, Santa Barbara EMS  
JPA Governing Board Members  
Public Health Officers  
Del Norte, Humboldt and Lake County Council  
EMCC Chairs, Informational Mail Recipients and North Coast EMS Web Site

<b>Standard</b>	<b>EMSA Requirement</b>	<b>Meets Minimum Req.</b>	<b>Short Range (one year or less)</b>	<b>Long Range (more than one year)</b>	<b>Progress</b>	<b>Objective</b>
1.01	LEMSA Structure	X		X	New Medical Director, Administrative Assistant, & JPA Board Members	State GF Augmentation
1.02	LEMSA Mission	X	X		Implemented QIP Plans & Reports, New EMT-I Regulations & Web-based EPCIS PCR Program	Send QIP Plan to EMSA More Funding to Conduct Site Visits
1.04	Medical Director	X		X	New Medical Director Selected	More Funding to Increase Hours
1.12	Review & Monitoring	X	X		See 1.02, Trauma Registry Installed at Trauma Center	Review Trauma Registry Data, More Funding to Monitor Providers, Review Ambulance Ordinance Changes
1.16	Funding Mechanism	X			Increased Local Revenue, Adopted New Pediatric Maddy Fund	State GF Augmentation, Evaluate Fire EMT-I Fee Reinstatement
1.17	Medical Direction	X	X		Redbud Standby Status Delayed; Implemented & Evaluated Modified Base Hospital Program	Modified Base Contract Execution with Sutter-Coast Hospital
1.18	QA/QI	X	X		See 1.02 & 1.12	See 1.02 & 1.12
1.20	DNR Policy	X	X			Update DNR Policy
1.23	Interfacility Transfer	X			Implemented Trauma Transfer	
1.25	On-line Medical Control	X			See 1.17	See 1.17

1.26	Trauma System Plan	X			See Revised Trauma Plan	See Revised Trauma System Plan
1.27	Pediatric System Plan	X	X		Only Two EDAPs Remain Designated	More Funding to Conduct Site Visits and Expand EDAP Designations
<b>Standard</b>	<b>EMSA Requirement</b>	<b>Meets Minimum Req.</b>	<b>Short Range (one year or less)</b>	<b>Long Range (more than one year)</b>	<b>Progress</b>	<b>Objective</b>
2.01	Assessment of Needs	X	X		Rural Outreach Program Dropped Due to No Special Project Revenue	Use Contractor Funds to Conduct First Responder Training
2.02	Approval of Training	X	X		Paramedic Program Accredited, Implemented EMT-Regulations	Submit Progress Report to National, More funding to Conduct Site Visits
2.04	Dispatch Training	X	X		Only One EMD Provider Remains Active	Review EMD Policies, Matrix & Card Set; Coordinate Training
2.05 & 2.06	First Responder Training & Response	X	X		See 2.01	See 2.01
2.10	Advanced Life Support	X	X		Implemented Modified Base Hospital Program, Dropped Field Training Officer Program Upgrade	See 1.17, More Funding to Upgrade FTO Program
2.13	Base Hospital Personnel	X			Updated ALS Cardex Protocols & Made Available on Webpage	
3.01	Communication Plan	X	X		Reviewed/commented on the draft Humboldt Co Communications Plan	Implement WIDE-AREA Med-Network that covers Hoopa area
3.04, 3.05 3.06, 3.10	Dispatch Center, Hospital Communications, MCI/Disaster	X	X		Assisted Lake & Humboldt with installation of expanded	Implement WIDE-AREA Med-Network that covers

	Communications, Integrated Dispatch				Med Net Systems	Hoopaa area & can be used by Del Norte
3.09	Dispatch Triage	X	X		See 2.04	See 2.04
4.05, 4.06	Response Time Standards, Ambulance Staffing	X	X			Review Humboldt Ambulance Ordinance Revisions
4.07	First Responder Agencies	X	X		See 2.01	See 2.01
4.15	MCI Plans	X	X		Regional MCI Plan under review	Revise Regional MCI Plan
4.16	ALS Staffing	X	X		Participated in Development of New State EMT-II Regulations	Evaluate Regional Role of New EMT-II

<b>Standard</b>	<b>EMSA Requirement</b>	<b>Meets Minimum Req.</b>	<b>Short Range (one year or less)</b>	<b>Long Range (more than one year)</b>	<b>Progress</b>	<b>Objective</b>
5.01	Assessment of Facilities Capabilities	X	X		Designated One Trauma Center (IV), adopted Modified Base Program, recommended Redbud as Standby ED, initiated Base Hospital Probation	Execute Modified Base Hospital contract and remove probation at Sutter-Coast Hospital
5.02	Triage & Transfer Protocols	X	X		ALS Protocols Revised & Trauma Center Transfer Agreement reviewed	Complete update of BLS Protocols
5.03	Transfer Guidelines	X			Reviewed Trauma Transfer Agreements	
5.04	Specialty Care Facilities	X	X		Designated One Trauma Center, Two Modified Base	More Funding to Conduct Site Visits & Expand EDAP

					Hospitals, Two EDAPs Remain Designated	Designations
5.05	Mass Casualty Management	X			See 3.04 above	See 3.04 above
5.07	Base Hospital Designation	X			See 1.17, 2.10 & 5.04 above	More Funding to Implement Recommendations of Modified Base Hospital Evaluation
5.08	Trauma System Design	X			See Revised Trauma System Plan	See Revised Trauma System Plan
5.10	Pediatric System Design	X	X		Two EDAPs Remain; Counties Adopted New Pediatric Maddy Fund	More Funding to Promote, Monitor, Designate and Provide Fiscal Incentive for EDAPs; Participate in State Development of EMSC Coordinator Duties
5.11	Emergency Departments Approved for Pediatrics	X	X		See 5.10	See 5.10

<b>Standard</b>	<b>EMSA Requirement</b>	<b>Meets Minimum Req.</b>	<b>Short Range (one year or less)</b>	<b>Long Range (more than one year)</b>	<b>Progress</b>	<b>Objective</b>
6.01	QA/QI Program	X	X		Approved QIP Plans & Implemented Quarterly Reports, Updated & Expanded EPCIS to Web-based Alternative	Review & Summarize Quarterly QIP Reports, Submit North Coast QIP Report to EMSA, See 1.02, 1.12, 4.05, 4.06
6.02	Prehospital Records	X	X		Expanded and Updated North Coast EMS Web-based EPCIS	Provide QI Management Training/Reports as Needed
6.03	Prehospital Care Audits	X	X		See 6.01 & 6.02 above.	See 6.01 & 6.02 above

6.05	Data Management System	X	X		See 1.12, 4.05, 4.06, 5.07, 6.01,6.02	See 1.12, 4.05, 4.06, 5.07, 6.01,6.02
6.06	System Design Evaluation	X	X		Initiated CE Provider Monitoring, Paramedic Program Nationally Accredited, & See 1.12, 4.05, 4.06, 5.07, 6.01,6.02	More Funding to Monitor CE Providers, Submit Accreditation Progress Report & See 1.12, 4.05, 4.06, 5.07, 6.01,6.02
6.07	Provider Participation	X	X		All QIP Plans Approved, Modified Base Program Evaluated, See 6.06, Trauma Registry Implemented	Submit NCEMS QIP Plan to EMSA, More Funding to Implement Modified Base Recommendation, See 1.12, 6.06
6.09	ALS Audit	X	X		See 6.01, 6.02 & 6.03 above	See 6.01, 6.02 & 6.03 above
6.10, 6.11	Trauma System Evaluation	X			See Revised Trauma Plan	See Revised Trauma Plan
7.01 7.02 7.03 7.04	Public Information Materials Injury Control Disaster Preparedness First Aid & CPR	X	X		Minimal Ongoing Participation in PIE Activities, mostly Pediatric; Counties Adopted New Pediatric Maddy Fund	More Funding to Maintain PIE, Pediatric, Disaster & First Aid/CPR Activities
8.01 8.03 8.05 8.13	Disaster Medical Planning HazMat Training, Casualty Distribution	X	X		Rural Outreach Project Dropped due to Lack of Special Project Funding	More Funding for Expansion of Disaster Related Activities

<b>Standard</b>	<b>EMSA Requirement</b>	<b>Meets Minimum Req.</b>	<b>Short Range (one year or less)</b>	<b>Long Range (more than one year)</b>	<b>Progress</b>	<b>Objective</b>
8.07	Disaster Communications	X	X		Implemented ReddiNet in Lake County, See 3.01, 3.04	See 3.01, 3.04 etc

					etc	
8.08	Inventory of Resources	X	X		See 8.01, 8.03, 8.05 above	See 8.01, 8.03, 8.05 above
8.09	DMAT Teams	X	X		City Ambulance Selected as DHAR Site	
8.16	Prehospital Agency Plans	X	X		Regional MCI Plan under review	Update Regional MCI Plan

<b>Standard</b>	<b>EMSA Requirement</b>	<b>Meets Minimum Req.</b>	<b>Short Range (one year or less)</b>	<b>Long Range (more than one year)</b>	<b>Progress</b>	<b>Objective</b>



June 29, 2007

Bonnie Sinz, R.N., Chief  
EMS Systems Division  
Emergency Medical Services Authority  
1930 9<sup>th</sup> Street  
Sacramento, CA 95814-7043

**Re: EMS Plan: Trauma System Status Report**

Dear Bonnie:

The North Coast EMS *Trauma System Status Report* is attached as requested.

Please note the following major changes since our Trauma Plan was approved:

- 1) On April 4, 2006, North Coast EMS formally designated Sutter-Lakeside Hospital in Lakeport, Ca as a **Level IV Trauma Center**. EMSA was notified on April 7, 2006 and our last update was approved on June 30, 2006. Adventist Health-Redbud Hospital in Clearlake, Ca previously withdrew from the process to focus on other needs, but with the intention of seeking designation at a later date.
- 2) On April 21 and August 7, 2006, North Coast EMS submitted updates of our Trauma Policies as requested in your Trauma Plan approval letter of September 29, 2004. These included modifications to the Lake County Trauma Patient Destination Policies due to designation of the single trauma center rather than two. These were formally accepted by email at a later date.
- 3) Since designation, the Lake County Trauma Advisory Committee has been convened six times to address Trauma System updates, issues and confidentially review cases.
- 4) Trauma center designation efforts in Humboldt County were discontinued after St. Joseph Hospital withdrew from the process citing fiscal challenges. To our knowledge, opportunities for improvement of trauma patient care identified during pre-designation site visits remain un-addressed.

Humboldt County remains one of the few counties in California without any formally designated trauma centers or an organized trauma care system.

Please note that as reported in our initial Trauma Plan, Sutter-Coast Hospital in Crescent City, Ca was designated as a Level IV Trauma Center as part of the Oregon Trauma System in the early 1990s. We recently confirmed that Sutter-Coast continues this designation, with periodic site surveys and trauma registry data submission, and we suggest that California consider cross-boundary recognition of neighboring state trauma center designations. In this particular case, Sutter-Coast took this important step long before California recognized Level IV, Oregon standards are similar and hospitals in this situation should not be expected to duplicate the designation process, particularly since it directly benefits California trauma patients. This undoubtedly applies to other areas of the State as well.

We suggest that such inter-state recognition include provisions for mutual participation in one another's trauma evaluation and QI processes, and potentially involve mutual data exchange when California implements the statewide trauma registry. Perhaps this concept could be addressed at a future State Trauma Advisory Committee meeting.

Thank you again for your attendance at our April 18, 2007 Lake County Trauma Advisory Committee meeting, and for your efforts, and others at EMSA, to reduce the redundancy of these and other required reports.

We look forward to your positive review of our Trauma Plan update.

Sincerely,

Larry Karsteadt, Executive Director  
North Coast EMS

c: JPA Board Members and Alternates  
Lake County Trauma Advisory Committee Members  
County Health and Human Services Administrators and Health Officers  
Kelly Mather, CEO, Sutter-Lakeside Hospital  
Bruce Dees, M.D., Trauma Medical Director, Sutter-Lakeside Hospital  
Mary Cardinale-Stein, R.N., Trauma Coordinator, Sutter-Lakeside  
John Menaugh, CEO, Sutter-Coast Hospital  
Carol Peete, R.N., Sutter-Coast Hospital  
Beth Brown, R.N, Sutter-Coast Hospital  
Joe Mark, St. Joseph Hospital  
Jeanette Lackett, R.N., Mad River Community Hospital  
Joe Rogers, Redwood Community Hospital

# North Coast EMS Plan: **TRAUMA SYSTEM STATUS REPORT**

June 29, 2007 – Larry Karsteadt, Executive Director

This **EMS Plan: Trauma System Status Report** is based upon the Emergency Medical Services Authority, *Trauma System Plan Revision & Annual Trauma System Status Report Guidelines*, dated November 2006.

## **I. Trauma System Summary:**

North Coast EMS covers Del Norte, Humboldt, and Lake and southern Trinity Counties.

Since the early 1990's, Sutter Coast Hospital in Del Norte County has provided trauma care as part of the Oregon Trauma System as a designated Level IV trauma center.

More recently and with state fiscal assistance, North Coast EMS developed a Regional Trauma Plan that targeted designation of five trauma centers: two Level IVs in Lake County and in Humboldt County one Level-III, one Advanced Level IV with Surgery and one Level IV.

The Trauma Plan was subsequently approved by the EMSA, site visits were conducted to four of the original five facilities using an outside team of experts, needs were identified and all but one hospital, Sutter-Lakeside Hospital in Lakeport, withdrew from the process for various reasons.

Sutter-Lakeside Hospital was designated as a Level IV trauma center in April, 2006 and participates in ongoing monitoring and evaluation of the trauma system with North Coast EMS and the Lake County Trauma Advisory Committee. Most of the trauma patients meeting Trauma Triage Criteria are directly flown out of Lake County to Level I or II trauma centers in Sacramento or Santa Rosa. North Coast EMS has MOUs with Coastal Valley's EMS and Sacramento County EMS regarding quality review, and the new trauma care system in Lake County is working effectively.

## **II. Changes in Trauma System:**

Since the initial Trauma Plan was submitted, North Coast EMS formally designated Sutter-Lakeside Hospital in Lakeport, Ca as a **Level IV Trauma Center** on April 4, 2006. EMSA was notified on April 7, 2006 and our last update was approved on June 30, 2006. Adventist Health-Redbud Hospital in Clearlake, Ca previously withdrew from the process to focus on other organizational issues, but with the intention of seeking designation at a later date.

On April 21 and August 7, 2006, North Coast EMS submitted updates of our Trauma Policies as requested in your Trauma Plan approval letter of September 29, 2004. These included modifications to the Lake County Trauma Patient Destination Policies due to designation of the single trauma center in Lake County rather than two. These were formally accepted by email at a later date. Copies of the MOUs with Sacramento County and Coastal Valley's EMS were also submitted.

Since designation, the Lake County Trauma Advisory Committee has been convened six times to address Trauma System updates, issues and confidentially review cases. Also, Lake County has acquired HRSA funding to install an expanded Med Net-type radio system that allows units on the south side of Clear Lake to contact Sutter-Lakeside directly for trauma patient medical control.

Trauma center designation efforts in Humboldt County were discontinued after St. Joseph Hospital withdrew from the process citing fiscal challenges. To our knowledge, opportunities for improvement of trauma patient care identified during pre-designation site visits remain un-addressed. Humboldt County remains one of the few counties in California without any formally designated trauma centers or an organized trauma care system.

Finally, at the time of designation, Dr. John Kelsey was our Regional Medical Director, and Trauma Coordinators were Pam Haynes, RN (north) and Mary Donati, RN (south), and later Ed Nickerson, R.N. (region). At this time, our Regional Medical Director is Rob Headley, M.D., and we are no longer able to afford a Trauma Coordinator contract position. Also, our current Administrative Assistant is S. Linn Tyhurst.

### **III. Number and Designation Level of Trauma Centers:**

The North Coast EMS region has two designated **Level IV Trauma Centers**, one designated by us (Sutter-Lakeside Hospital, Lakeport, CA) and the other by the State of Oregon (Sutter-Coast Hospital, Crescent City, Ca).

### **IV. Trauma System Goals and Objectives:**

- 1) *Assure that a comprehensive system of emergency medical and trauma services are available to the residents and visitors of North Coast EMS. This will be monitored on a continuous basis through base hospital, trauma center and the quality assurance/ system improvement process.*

The Lake County Trauma System has been successfully implemented with designation of Sutter-Lakeside Hospital as a Level IV Trauma Center, with ongoing monitoring and evaluation conducted by North Coast EMS in conjunction with Lake County Trauma Advisory committee meetings.

Adventist Health-Redbud Hospital representatives recently restated at a Lake County TAC meeting its interest in seeking designation in the future.

- 2) *Provide impartial and objective administration of the EMS and Trauma System. This will be monitored by system review based upon compliance with established policies and system standards. This will be done routinely as issues arise and at regular intervals through the quality assurance/ system improvement process review.*

North Coast EMS continues to meet this Objective relative to the Trauma System only in Lake County. Relative to the EMS System, this Objective is met fully in the region.

- 3) *Promote system cost-effectiveness and economic viability. This will be accomplished at the facility level by continuous review for cost effective care delivery practices, then shared through the system multidisciplinary review committee. At a system level this is accomplished through collaborative EMS leadership, in combination with trauma committee leadership, to monitor program costs and pursue appropriate funding sources.*

Relative to the Trauma System, this Objective continues to be met at the designated trauma center and regional levels in Lake County. North Coast EMS is not directly involved with these efforts in Del Norte County. Relative to the EMS System, this Objective is met fully in the region.

- 4) *Coordinate local trauma services with trauma services in adjacent regions and counties. This is accomplished through the agreements with out of county trauma centers and air ambulance providers. When care coordination issues arise, resolve is obtained through the out of county provider involvement in the QI process.*

This objective continues to be met in Lake County where Trauma MOUs with neighboring counties are in place that insure coordination of QI issues. North Coast EMS also authorized the Lake County located REACH Aero Medical Unit, which operates by MOU under the Coastal Valley's EMS medical control system. North Coast EMS is not involved with the Sutter-Coast Hospital and State of Oregon trauma system coordination or review process.

- 5) *Provide accountability and objective evaluation of the trauma care system through data analysis utilizing the trauma registry. This will be accomplished through the quarterly audit and review process at the trauma facility and the EMS system trauma audit committee.*

North Coast EMS purchased, with state fiscal assistance, trauma registry hardware and *Collector* software and a digital recording system for Sutter-Lakeside Hospital. The Lakeside Trauma Coordinator enters registry data according to State Inclusion Criteria, and utilizes the recorder and electronic PCR system (EPCIS) to review and audit trauma patient care. All written complaints specific to trauma cases are confidentially reviewed at Lake County TAC meetings and quarterly QIP Reports from Sutter-Lakeside include trauma system information. North Coast EMS is not involved with the Sutter-Coast trauma center review, auditing or evaluation process conducted by the State of Oregon.

- 6) *Promote public awareness and information regarding trauma services and injury prevention. This will be accomplished, as funding and staffing allow, through health fairs, public service announcements, and injury prevention outreach programs.*

North Coast EMS and Sutter-Lakeside organized a public press release session in Lakeport at the time of designation. Since then, North Coast EMS and hospital staff have participated as time allows in a few injury prevention outreach programs.

**V. Changes to Implementation Schedule:**

Locally approved trauma system plan	<b>May 27, 2004</b>
Submitted to EMS ( <b>revision</b> )	<b>May 27, 2004</b>
State Approved Trauma Plan	<b>September 29, 2004</b>
Continue to work with the hospitals in the region to reach the requirements for trauma center designation	<b>Completed*</b>

\*All future interest in trauma center designation by North Coast EMS will require formal notice, including a written pre-commitment by the CEO, Chief of Staff, Chief Nursing Officer, Trauma Medical Director, ED Director and Medical Staff by each interested facility. Unless other new funding is available, interested facilities will be expected to pay an initial trauma designation fee and ongoing annual designation fees to North Coast EMS to cover all North Coast EMS associated costs, including the site survey.

**VI. Progress on Addressing EMS Authority Trauma System Plan Comments:**

All recommendations identified by the EMSA in the letter of September 29,

2004 have been submitted and approved.

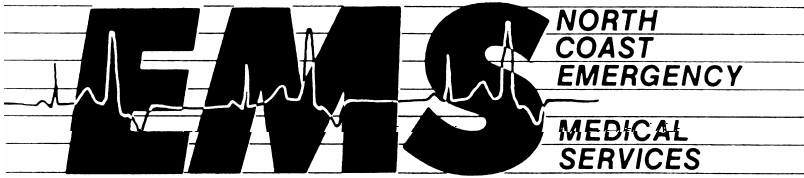
**VII. Other Issues:**

Sutter-Lakeside Hospital needs to resolve issues with the digital recorder and the new trauma radio link. This will include limited funding support by North Coast EMS.

Sutter-Lakeside Hospital and North Coast EMS needs to compare North Coast EMS and Coastal Valley's EMS Trauma Triage Policies to identify differences and minimize confusion.

The Sutter-Lakeside Hospital Trauma Coordinator needs to routinely submit to North Coast EMS Trauma Registry data for review. This should include Lake County TAC review of registry data and Trauma QI Policies to ensure all appropriate cases and outliers are reviewed at meetings.

The EMSA and State Trauma Advisory Committee should consider establishing cross-boundary, inter-state trauma center recognition standards that include provisions for mutual participation in one another's trauma evaluation and QI processes, and trauma registry data exchange.



3340 Glenwood Street, Eureka, CA 95501 (707) 445-2081 (800) 282-0088 FAX (707) 445-0443

August 21, 2007

Carol MacRae,  
Contract Manager  
EMS Authority  
1930 Ninth Street  
Sacramento, CA 95811

**RE: General Fund #6046 FY 2006-2007 Final Progress Report**

Dear Carol:

The General Fund Annual Report for Fiscal Year 2006-2007 is attached.

Please call if you have any questions.

Sincerely,

Larry Karsteadt, Executive Director  
North Coast Emergency Medical Services

cc: Joint Powers Governing Board  
County Health Officers  
EMCC Chairpersons  
Informational Mailing



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August 21, 2007

Carol MacRae,  
Contract Manager  
EMS Authority  
1930 Ninth Street  
Sacramento, CA 95811

**RE: General Fund #6046 FY 2006-2007 Final Progress Report**

Dear Carol:

The General Fund Annual Report for Fiscal Year 2006-2007 is attached.

Please call if you have any questions.

Sincerely,

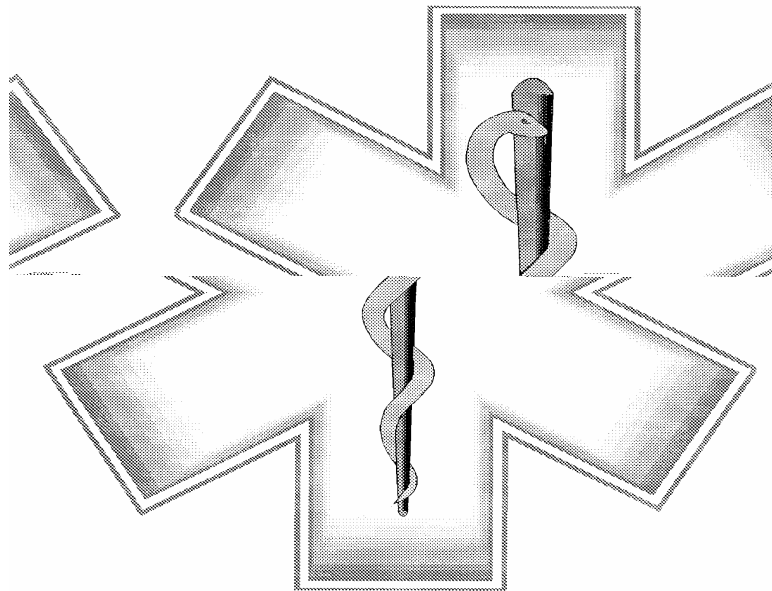
Larry Karsteadt, Executive Director  
North Coast Emergency Medical Services

cc: Joint Powers Governing Board  
County Health Officers  
EMCC Chairpersons  
Informational Mailing

# **NORTH COAST EMERGENCY MEDICAL SERVICES**

3340 Glenwood Street, Eureka, California 95501

Serving Del Norte, Humboldt, Lake and southern Trinity Counties



## **FINAL Progress Report**

**July 1, 2006 – June 30, 2007**

**General Fund Contract # EMS-6046**

**August 31, 2007**

## Overview:

In Fiscal Year 2006-2007, North Coast Emergency Medical Services (EMS) continued to serve as the local EMS agency for the functions delegated by Del Norte, Humboldt, Lake and southern Trinity Counties. The Agency continued to manage the regional EMS system in accordance with state law, regulation and guideline, under direction of the Joint Powers Governing Board and in coordination with a large network of organizations and individuals. North Coast EMS staff and contractors facilitated the planning, coordination and evaluation of the EMS system through a program of community consensus, patient and EMS participant advocacy and continuous quality improvement (CQI).

Highlights this year included: implementation of the new state Quality Improvement Program and the EPCIS Web-Plus computer program, monitoring of the Lake County Trauma System, receipt of national accreditation for the North Coast Paramedic Training Program, revision of the Regional Trauma Plan and completion of the Modified Base Hospital evaluation. We are also pleased that the Northern California Safety Consortium was approved by Pearson Vue as an EMT-I computer test site and that North Coast EMS was selected as the first LEMSA to test the new EMS Plan revision process.

The Joint Powers Governing Board directed the activities of North Coast EMS during FY 2006-2007. The Board consisted of the following members: Supervisor John Woolley, Humboldt County, Chairperson; Supervisor Rob Brown, Vice-Chairperson, Lake County; and Supervisor Martha McClure, Del Norte County. Alternates to the JPA Board were: Supervisors Mike Sullivan, Del Norte County; Ann Lindsay, M.D., Humboldt County; and Supervisor Denise Rushing, Lake County. The Agency was managed exclusively by the following general fund employees (totaling 4.8 FTE):

- Larry Karsteadt, Executive Director (1.0 FTE)
- Wendy Chapman, Training Coordinator (1.0 FTE)
- Maris Hawkins, Program Assistant II (0.8 FTE)
- Louis Bruhnke, EMT-P, EMS Coordinator (1.0 FTE)
- Linn Tyhurst, Administrative Assistant (1.0 FTE)

Several part-time independent consultants totaling less than 0.5 FTE were involved with general fund operations, including:

- Robert Headley, M.D., Regional Medical Director
- Cindy Henderson, EMT-P, AED and ETAD Review
- Jay Myhre, EPCIS Programmer
- Ezequiel Sandoval, Office Computer Maintenance
- Humboldt County Office of Education and College of the Redwoods – Paramedic Training
- Doug Boileau, North Coast Paramedic Program Coordinator
- Sal Gurreri, EMT-P, FTO Policy Revisions and Training
- Kayce Hurd, EMT-P, Protocol Revisions
- Moss, Levy and Hartzhiem, Agency Audit
- Northern California Safety Consortium, EMT-I Computerized Testing

# North Coast Emergency Medical Services General Fund #6046 Final Progress Report

Fiscal Year 2006-2007

The following report on progress at North Coast EMS during Fiscal Year 2006-07 meets the requirements of the California EMS Authority General Fund Contract #EMS-6046 and the document entitled: "EMSA Policy for Funding Regional EMS Agencies with State General Fund (July 2005; EMSA #104)." The report specifically addresses the goals, workload indicators, accomplishments and issues relative to contract objectives and as specified by the California EMS Authority (EMSA).

## **1.0 System Organization and Management**

**Objective:** To develop and maintain an effective management system to meet the emergency medical needs and expectations of the population served.

### **Workload Indicators:**

Total Static Population Served = **225,450** (estimate 3,000 residents in south Trinity County)

Total Annual Tourism Population = **+3 million**

Number of Counties = **3.3** (Del Norte, Humboldt, Lake, s. Trinity)

Geographic Size of Region = **6,840 square miles** (5,840 in the three JPA member counties and approximately 1,000 in southern Trinity County, which roughly equals one-third of the County)

**Accomplishments:** This year,

1. North Coast EMS personnel attended the following state EMS functions:
  - a. EMS for Children Coordinator Committee Meetings
  - b. Emergency Medical Services Administrators Association of California (EMSAAC) Meetings
  - c. EMSAAC Planning Conference and Annual Conferences
  - d. State Trauma Advisory Committee Meetings
  - e. Regional Funding Meetings
  - f. Regional Contract Revision Meeting
  - g. EMS for Children Conference Planning Meetings
  - h. EMS for Children State Conference
  - i. State EMS Commission Meetings
  - j. EMT-I State Licensure Meeting
  - k. EMSA & LEMSA Directors Meetings
  - l. State BRN Investigator Meeting
  - m. State Workers Compensation Orientation Meeting
  - n. EMSAAC/EMSA EMS Plan Revision Conference Call
  - o. EMSAAC Legislation Committee
  - p. CAL FIRE Del Norte Humboldt Training

2. North Coast EMS personnel attended the following regional/county functions :
  - a. Humboldt/Del Norte Medical Advisory Committee (MAC) Meetings
  - b. Lake and Humboldt County Emergency Medical Care Committees (EMCC) Meetings
  - c. Lake County Trauma Advisory Committee Meetings
  - d. Lake County Inter-facility Transfer Meetings
  - e. Humboldt County Fire Chiefs Association Meetings
  - f. Humboldt County Child Death Review Team Meetings
  - g. Humboldt County Injury Prevention Youth Driving Committee Meetings
  - h. Humboldt County Injury Prevention Committee Meetings
  - i. Child Passenger Safety Committee Meetings
  - j. Humboldt/Del Norte Disaster Committee Meetings
  - k. North Coast Paramedic Program Meetings
  - l. North Coast Paramedic Operating Council Meeting
  - m. EMT-I Training Program and Continuing Education Provider Site Visits
  - n. Joint Powers Governing Board Meetings
  - o. Earthquake Planning Meeting and Exercise, Humboldt State University
  - p. Disaster Researcher Meeting
  - q. City Disaster Exercise, Eureka
  - r. Humboldt County Communications Planning Meeting
  - s. Lake County Disaster Conference
  - t. Lake County Disaster Exercise
  - u. HRSA Meetings
  - v. Pediatric Trauma Training Conference, Eureka
  - w. Humboldt County End of Life Meetings
  - x. Sutter-Coast Base Hospital Meetings
  - y. Humboldt County Health Officer Meetings
  - z. Modified Base Hospital Meetings
  - aa. Humboldt County Ambulance Ordinance Meetings
  - bb. Hoopa Tribe/K'ima:u Ambulance/Willow Creek Fire Meetings
  - cc. Humboldt County Board of Supervisors Report of St. Joseph Hospital
  - dd. Auditor Meetings
  - ee. EPCIS Meetings
  - ff. EMS Week Board of Supervisors Presentations – Del Norte and Humboldt
  - gg. Humboldt County Fair Injury Prevention and CPS Booth
  
3. North Coast EMS selected Robert Headley as Regional Medical Director.
  
4. North Coast EMS initiated or maintained contracts with several contractors, including: Rob Headley, M.D., Regional Medical Coordinator, Cindy Henderson, EMT-P, AED Reports; Jay Myhre & Ezequiel Sandoval, EPCIS/Computer Maintenance; Moss, Levy and Hartzhiem, Audit; Sal Gurreri, Field Training Officers Program; Doug Boileau, Paramedic Training Program; Northern California Training Consortium, EMT-I Testing; College of the Redwoods and Humboldt County Office of Education, North Coast Paramedic Training Program; Kayce Hurd, EMT-P, Protocol Updates. All subcontracts were submitted to the EMSA.

5. The Agency distributed draft and final policies, protocols, quarterly reports, and information items for regional review and input in four Informational Mailings.
6. North Coast EMS maintained the Web site ([www.northcoastems.com](http://www.northcoastems.com)), which regularly posts upcoming training, the Policies and Procedures, Regional EMS Plan, the Regional Trauma Plan, the revised Kardex System for Base Hospitals, the MCI Plan, Informational Mailings, links to other EMS web sites and other information.
7. North Coast EMS executed and continued the State EMS General Fund contract and continued JPA member county contracts. This year's state allocation continued a 4% decrease for the sixth year in a row and county shares were increased by a total of \$28,000.
8. All counties submitted fiscal shares and the \$500 annual Med-Net Repeater Replacement Fund.
9. The Agency submitted all required quarterly reports for the General Fund for this year and the final report for last year. North Coast EMS also worked with the other regions and EMSA to streamline next years quarterly and final reporting process and integrate it better with the EMS Plan revision process.
10. The Agency audit for FY 2005-06 was submitted to the JPA Board and State as required.
11. A new North Coast Paramedic Training Program Consortium Agreement between North Coast EMS, the Humboldt County Office of Education and College of the Redwoods was executed and submitted to the national accreditation office. The training program was awarded initial accreditation, which expires in two years, and is in the process of addressing specific citations before the next class, which is scheduled for September, 2007. A progress report is due to national by August 31, 2007.
12. The Executive Director, previously appointed by EMSAAC to the State Cardiac Master Plan Task Force – Rural, the Legislative Committee, the EMS Plan Revision Committee and continued as a member of the State Trauma Advisory Committee. The Training Coordinator and EMS Coordinator continued as members of the EMS for Children Coordinators Group.
13. North Coast EMS continued to work with the Northern California Safety Consortium to become a PearsonVue EMT-I computerized testing site. This was approved for one year and will active early next fiscal year. The JPA Governing Board approved use of up to \$5,000 to ensure that the testing site has the necessary infrastructure to conduct testing.
14. North Coast EMS developed, implemented and maintained the new EPCIS Web-Plus computer program for the region that allow a the Prehospital Care Reporting System to function both as a modem-based and web-based program.
15. The Agency continued to help coordinate and participate in the ongoing process to secure a state General Fund augmentation for 2007-08 and 2008-09 with the EMSA and other regions. This included preparation of several documents, including a workload increase justification.
16. North Coast EMS entered into a lease of a new digital copy machine and reviewed upcoming Blue

Cross policy increases.

17. The Agency and JPA members submitted Statements of Economic Interest, as required, and most have completed the mandatory conflict of interest training.
18. The Agency completed and submitted to EMSA the Regional Trauma Plan and worked with EMSA and EMSAAC to streamline the EMS Plan Revision process. North Coast EMS was selected as the test site for the EMS Plan update and submitted the revision in July 2007 less the complete inventory section. The new revision template is excellent! Our last Regional EMS Plan, submitted in 2005-06 was approved by the EMSA.
19. North Coast EMS initiated and helped coordinate County Board of Supervisors adoption of SB 1773 (the Pediatric Maddy Fund) that adds funding to the existing Maddy Fund for hospitals, physicians and North Coast EMS, and increases coordination by North Coast EMS of Emergency Departments Approved for Pediatrics (EDAP). The latter includes fiscal incentives for EDAP designation and is designed to allow North Coast EMS to continue EMS for Children-type activities. All three JPA counties adopted the new fund which sunsets in January 2009.
20. The Agency received the Bertha Russ Lytel Fund for this year and submitted the grant for FY 07-08. Funds for next year were also received.
21. North Coast EMS submitted comments to the EMSA with regard to: revised *State EMS System Guidelines and Standards*.
22. The Agency unsuccessfully recommended legislative support for a regional state general fund augmentation and support for the Governors veto of SB 2554.

#### **Issues/Solutions:**

1. North Coast EMS and the other regional agencies, all of which are in need of a state General Fund augmentation, received annual 4% cuts beginning in FY 2002-03. Prevention 2010 Special Project grants were discontinued in FY 2004-05 and operational costs and cost of living expenses continued to increase since then. Additional county shares were received this year and have been approved for next year and the new Pediatric Maddy Fund has been adopted by all three Boards of Supervisors. Unless other new local or state funds are secured, however, North Coast EMS faces a fiscal deficit in FY 2008-09.
2. North Coast EMS and the six other regional agencies are currently working with the EMSA to secure a \$1.4 million augmentation to the General Fund next fiscal year. We recently helped prepare additional information for the EMSA and State Department of Finance. Between FY 1998-99 and 2005-06 the combined seven region workload increased 114.6%, regional FTEs increased by only 3.8%, local funding increased by 51% and state funding decreased by 4%!
3. North Coast EMS worked closely with the EMSA and EMSAAC to streamline the annual EMS Plan revision and, with EMSA and the six other regions, to streamline and integrate the state GF quarterly and final reports. We are very pleased that the EMS Plan update and next years GF

reporting process are being consolidated and substantially streamlined. We have consequently submitted the largest portion of the North Coast EMS Plan revision early this year.

4. Decreasing funds forced us to eliminate or reduce three contract positions this fiscal year – Nurse Contractor (eliminated), Regional Trauma Coordinator (eliminated) and Field Training Officer Program upgrade (reduced). Consequently, we ceased conducting site visits to base hospitals and EDAPs and our role in monitoring the new Trauma System in Lake County is minimal. Also, we discontinued efforts to update the FTO Program to help maintain fiscal reserve. New Maddy Funds, however, will allow us to prompt designation of, conduct site visits to and provide direct fiscal support for EDAPS, we are currently funding an FTO class in Lake County and plan to conduct a train-the-trainer class next fiscal year if funds are available.

**2.0 Staffing and Training**

**Objective:** To ensure personnel functioning within the EMS system are properly trained, licensed/certified/authorized and/or accredited to safely provide medical care to the public.

**Workload Indicators:**

- Total Number of Personnel Certified/Authorized/Accredited by Regional Agency = **888**
- Total Number of Personnel Completing Training Courses Approved by Regional Agency = **280**
- Total Number and Type\* of Approved Training Programs Approved by Region = **27**
- Total Number and Type of Training Programs Conducted by Regional Agency = **1**
- Total Number of Continuing Education Providers Authorized by Regional Agency = **41**

\* - for Type of Certificate or Program, see below (#1 and 2 respectively).

**Status:** This year,

1. The following EMS personnel possessed North Coast EMS issued documents:

- a. Certified EMT-Is = 691 (103 are ETAD certified)
- b. Certified EMT-IIIs = 2
- c. Accredited Paramedics = 130
- d. Authorized MICNs = 65
- e. Field Training Officers = 55
- f. Heparin/Nitro Infusion Medics = 64
- g. External Cardiac Pacing Medics= 40

2. Regional instructors conducted the following North Coast EMS approved training programs:

	Approved	Conducted
a. Esophageal Tracheal Airway Device =	10	4
b. EMT-I =	7	12
c. Paramedic =	1	1
d. Field Training Officers =	2	1

e. Mobile Intensive Care Nurse =	1	1
f. Emergency Medical Dispatch =	1	1
g. Heparin/Nitro Infusion =	2	3
h. Cardiac Pacing	3	2

3. Instructors reported that a total of **280** students completed the classes (EMT-I, Paramedic, MICN, FTO).
4. The North Coast Paramedic Training Program received initial national accreditation this year. The Consortium Operating Council conducted its first meeting and the progress report is due August 31, 2007. The next class is scheduled for September 2007. .
5. North Coast EMS requested that the North California Safety Consortium to become a Pearson Vue computerized EMT-I test site. The JPA Governing Board committed up to \$5,000 to assist with this effort and the NCSC was approved for a one year period. Testing is scheduled to begin in July 2007.
6. Approval for **41** continuing education (CE) programs was continued by North Coast EMS and numerous CE programs were offered within the region.
7. One certification review was conducted and the Agency issued a formal complaint to the BRN and participated in one investigation.
8. Staff attended Field Care Audits and all employees completed DOJ required back ground checks.
9. The Training Coordinator coordinated, with Kiwanis Club support, a Pediatric Trauma Training session with a physician from Loma Linda University. 50 people in attendance and North Coast EMS issued CE hours for registered participants and Loma Linda University will be issuing the BRN CE units.
10. The Training Coordinator updated the paramedic (re)accreditation applications to make the process simpler and sent a memo to all locally accredited paramedics advising them of these changes.
11. The North Coast EMS Disciplinary Policy was among the first to be approved by the EMSA in California.
12. The Training Coordinator organized the annual state EMS for Children Conference and assisted with scholarships for several north coast attendees.
13. The Agency initiated but discontinued the process to upgrade the Field Training Officers Program due to the projected budget shortfall.
14. North Coast EMS led the process, on behalf of five LEMSAs, to ensure that the EMSA reconsider the plan to discontinue use of the Combitube by EMT-Is one year after the new EMT-II regulations are adopted. We have 103 Combitube users and there are about 1,500 in the State. The Agency also continued to participate in review of the draft EMT-II regulations, which are on hold.

15. The Agency initiated the process to update BLS Protocols.
16. North Coast EMS a statewide review of the online method of receiving continuing education credits.
17. North Coast EMS participated in the state process to consider shifting EMT-I licensure to the EMSA and require background checks, uniform medical review of backgrounds and statewide registry. We favor the latter three but have concerns regarding EMSA assumption of responsibility for an estimated 100,000 EMT-Is in the State.
18. During EMS Week, the Agency gave Kris Kelly Star of Life Awards to Paramedic Rod Johnson (ALS) and Debbie McMahon, RN (PCNC) at the Humboldt County Board of Supervisors, and to EMT-Is David Soule, Clay Worden, Steve Wakefield, Joe Gregorio, William Morrison, Dana Reno, Noya Reno and Justin Gill at the Del Norte County Board of Supervisors. All three BOSs issued EMS Week Proclamations.

**Issues/Solutions:**

1. The potential shift to state EMT-I licensure within the next two years will increase costs to students and may create a decline in the number of EMT-Is, particularly in rural and remote areas. If this occurs, we suggest that a sliding fee scale be established by the EMSA for volunteers. We estimate that this shift, if it occurs, will cost North Coast EMS up to \$10,000 annually.
2. Due to projected budget shortfall the Agency postponed enhancements to the Field Training Officers program, although we plan to conduct FTO training in Lake County next year.
3. The total number of EMT-I certificates issued by the office appears to be declining, potentially due to a high first time EMT-I failure rate on the national exam. We are very pleased that the NCSC received approval to be a Pearson Vue test site in Humboldt County, and we are hopeful that this will occur in Mendocino County as well.
4. North Coast EMS has discontinued fiscal support of the local Critical Incident Stress Debriefing Program due to budget shortfall.
5. The Agency recognizes the need for fiscal support of First Responder Training Programs (refresher and basic) and will assess this possibility next year.

**3.0 Communications**

**Objective:** To develop and maintain an effective communications system that meets the needs of the EMS system.

**Workload Indicators:**

Total Number of Primary and Secondary PSAPs = **11**  
 Total Number of EMS Responses = **3802** Prehospital Care Reports were submitted  
 Total Number of Ambulances Dispatched = **3707** transports were reported

Total Number of Emergency Medical Dispatch (EMD) Programs Approved by Region = 3  
 Total Number and Type of EMD Programs Authorized by Agency = see #1 & 2 below.

**Status:** This year,

1. Priority Dispatch Corp, USA Emergency Medical Dispatch programs were continued at the Eureka Police Department and CALFIRE in Fortuna. The Del Norte County Sheriffs Department discontinued the program due to dispatcher turnover. .
2. Eleven (11) Public Safety Answering Points (PSAPs) were utilized by regional EMS providers as follows (several PSAPs directly dispatch ambulances):

PSAP	Location	EMD Utilized
a. Del Norte Co. Sheriffs Department	Del Norte County	No (dropped)
b. Humboldt Co. Sheriffs Department	Humboldt County	No
c. Humboldt State University	“	No
d. Arcata Police Department	“	No
e. Eureka Police Department	“	Yes
f. California Highway Patrol - Arcata	Del Norte & Humboldt	No
g. Fortuna Police Department	Humboldt County	No (dropped)
h. CAL FIRE - Fortuna	“	Yes (secondary PSAP)
i. Trinity Co. Sheriffs Department	Trinity County	No
j. Lake Co. Sheriffs Department	Lake County	No (dropped)
k. California Highway Patrol – Ukiah	Mendocino County	No

3. Six (6) non-PSAP ambulance dispatch centers were utilized within the region for dispatching ambulances:

a. K’ima:w Tribal Police	Humboldt County	No
b. City Ambulance of Eureka	“	No
c. Southern Trinity Rescue Dispatch	Trinity County	No
d. Redwood Empire Life Support	Sonoma County	No
e. CAL FIRE – Howard Forest	Mendocino County	No
f. CAL-FIRE – Napa	Napa County	No

4. North Coast EMS maintained contracts requiring field to hospital communications and recording equipment with six (6) base hospitals, one alternative base hospital and 15 ALS Providers (includes: Del Norte Ambulance, K’ima:w Ambulance, Arcata-Mad River Ambulance, Orleans Fire, Loleta Fire, Southern Trinity Area Rescue (STAR), Shelter Cover Fire, City Ambulance of Eureka, Inc. {Eureka, Fortuna, Garberville stations}; Northshore Fire {Upper Lake Fire; Nice Fire; Lucerne Fire; Clearlake Oaks Fire}; Lake County Fire; South Lake Fire; Kelseyville Fire; Lakeport Fire; REACH; CAL-Oro Life Flight. The Agency authorized Cal-Oro Life Flight as an ALS Provider this year for fixed wing inter-facility transfers only.

5. County continued permits (or contracts) with 11 ambulance providers include: Del Norte Ambulance, Arcata-Mad River Ambulance, City Ambulance of Eureka, Inc., K’ima:w Ambulance ,

STAR and the five transporting fire services listed above and REACH in Lake County.

6. The North Coast EMS region paramedics continued to utilize a Med-Net Communications System installed in 1977-78 that includes six (6) county owned and one (1) fire district owned Mt. Top Repeater, seven (7) hospital owned base station radios and numerous provider-owned mobile units (estimate 40).
7. North Coast EMS and all counties again have contributed their Regional Med-Net Repeater Replacement Trust Fund share this year for long-term Mt. Top repeater replacement.
8. As a participant in the HRSA program, North Coast EMS assisted the acquisition of disaster-related communications equipment to establish a single Med-Net MCI/Disaster channel for Humboldt County. MCI Channel tests were conducted this year following the North Coast EMS developed procedure and operational adjustments are being made. When the Rogers MCI Channel is available, we will invite Del Norte Ambulance to utilize the Humboldt County MCI system during mutual aid. In Lake County, on our recommendation, HRSA funds secured new radios to ensure that providers on the south side of the County can use the Med Net to communicate with the Trauma Center at Sutter-Lakeside Hospital.
9. The Training Coordinator coordinated an Emergency Medical Dispatch training class in Eureka for existing and new EMD providers.
10. The Agency participated in the process in Humboldt County to develop the County Communications Plan. We emphasized the need for inclusion of the Rodgers Mt-Top Repeater in the MCI Network and acquisition of new Med-Net Repeaters to help cover the Hoopa area. Med-Net mobile repeaters have been ordered with HRSA funds for the Hoopa Ambulances.

#### **Issues/Solutions:**

1. The Humboldt County Med Net MCI Channel (Wide Area Network) monthly tests continue to need operational adjustments are underway.
2. The Agency collaborated with Northshore Fire and Coastal Valley's EMS to investigate concerns regarding dispatch of Ukiah Ambulance to the Lake Pillsbury area.
3. The installation of the Rodgers MCI (WIDE AREA) Repeater and the two new Mt-Top Med-Net Repeater for the the Hoopa Area has been delayed to address local issues.

#### **4.0 Transportation**

**Objective:** To develop and maintain an effective EMS response and ambulance transportation system that meets the needs of the population served.

#### **Workload Indicators:**

Total Ambulance Response Vehicles = Estimate **47**

Total First Responder Agencies = around **40** approved by North Coast EMS

Total Patients Transported = **3707** transports were reported in the PCR program  
Total Patients Not Transported = **201** Against Medical Advise Patients (AMA) were reported  
Total Number of ALS Providers Authorized by Region = **15** (see 3.4 above)  
Total Number of Transport Providers in Region = **11** ( see 3.5 above)

**Status:** This year,

1. North Coast EMS continued Advanced Life Support Agreements with 15 providers (see above), First Responder Agreements with 40 fire districts, AED Agreements with 40 service providers and ETAD Agreements with 15 providers.
2. JPA member counties continued permits or contracts with 11 ambulance services (Del Norte Ambulance, Arcata-Mad River, K'ima:w, City Ambulance of Eureka, REACH, Northshore Fire, Lake County Fire, South Lake Fire, Kelseyville Fire and Lakeport Fire). Note that Clearlake Oaks, Lucerne, Nice and Upper Lake Fire previously consolidated into Northshore Fire.
3. We contracted with Kayce Hurd, EMT-P, to assist with ongoing review and revision of North Coast EMS BLS and ALS Treatment Guidelines. She completed revision of the BLS Protocols which are under staff review.
4. The Agency assisted the process for ambulance services to acquire Personnel Protective Equipment for Lake County Fire and K'ima:w Ambulance as part of an EMSA grant opportunity. This equipment has been distributed to both providers. The Agency finalized a PPE policy and executed MOUs with PPE recipients and the EMSA.
5. The Regional Medical Director and EMS Coordinator conducted retrospective review of all air-ambulance transports by REACH operating from within Lake County.
6. The Agency assisted with the process to investigate coverage of the Lake Pillsbury area by Ukiah Ambulance.
7. North Coast EMS continued to utilize the EPCIS program to assist with requests for data specific to transport, ALS and related activities.
8. The Agency completed, with assistance from all providers, the EMSA requested Transportation Inventory.
9. The Agency continued to work with the Public Health Branch of the Department of Health and Human Services on the AMbulacne Ordinance review process.
10. North Coast EMS coordinated the process to support continuation of Hoopa Ambulance paramedic staffing and coverage of the Willow Creek area.
11. The former Regional Medical Director conducted a retrospective review of Code 3 ambulance runs and determined that around 30% were not justified and efforts were made to encourage local providers to reduce Code 3 runs.

12. The EMS Coordinator reviewed proposed ambulance pediatric equipment as part of the EMS for Children Coordinators Group. These we later released as state guidelines.
13. The newly developed QIP Plans and quarterly reports pursuant to the State Quality Improvement Program Regulations include a transportation component.
14. City Ambulance of Eureka was selected as a host site for the state Disaster Ambulance Support Unit (DASU).
15. All transport and ALS providers submitted QIP Plans, which were approved by North Coast EMS, and all providers submitted the first two quarterly QIP reports.

**Issues/Solutions: None**

### **5.0 Assessment of Hospitals and Critical Care Centers**

**Objective:** To establish and/or identify appropriate facilities to provide for the standards and care required by a dynamic EMS patient care delivery system.

#### **Workload Indicators:**

Total Base Hospital Contacts = **2455**

Total Patients Received = **3000**

Total Number of Hospitals Designated by Region = 9

Total Number of Base and Alternative Base Hospitals = **4**

Total Number of Modified Base Hospitals = **3** (1 in process)

Total Number of Emergency Departments Approved by Pediatrics (EDAPs) = **2**

Total Number of Designated Trauma Centers – **1**

**Status:** This year,

1. North Coast EMS patients continued to be transported to seven (7) hospitals located within the region. Five are licensed as basic emergency departments (one in Del Norte County, three in Humboldt County and one in Lake County), and two are stand-by EDs (Jerold Phelps in southern Humboldt County and Adventist Health-Redbud in Lake County). Patients are transferred to at least 20 facilities located outside of the region; the EPCIS computer program reported **330** inter-facility transfers involving approved ALS Providers during the year.
2. North Coast EMS continued formal designation of three (3) full base hospitals and one (1) alternative base hospital. Only two facilities (Mad River and Redbud) are North Coast EMS designated Emergency Department Approved for Pediatrics (EDAP).
3. The Agency continued to work with base hospital Prehospital Care Medical Directors and Prehospital Care Nurse Coordinators, as needed, to address disclosure protected quality improvement issues.

5. North Coast EMS previously implemented the Regional Trauma System in Lake County with the designation of Sutter-Lakeside as a Level IV Trauma Center. We conducted Trauma Advisory Committee meetings in Lake County this year as part of the monitoring process. One of the meetings included the Trauma Coordinator, Cheryl Wraa, R.N., from UCD and another included Bonie Sinz, RN of the EMSA. Please see the North Coast EMS Regional Trauma Plan Revision for more details regarding the Trauma System
6. The Sutter-Coast Hospital probation as a base hospital continues although the new Modified Base Hospital contract, which will formally end the probation, will be executed early next year.
7. The Executive Director continued to participate as a member of the State Trauma Advisory Committee. As such, he participated in the process to evaluate the status of the trauma in California, consider potential development of large trauma regions and reviewed the new State Trauma Planning document.
8. St. Joseph and Redwood Hospitals were designated as Modified Base Hospitals. The Agency revised policies, contracts and completed an evaluation of the new program.
9. The Executive Director was appointed by EMSAAC to the State STEMI Task Force as the rural representative. Comments specific to the North Coast were sent to Task Force representatives for the meeting in LA.
10. All seven hospitals completed new QIP Plans, which were approved by North Coast EMS, and the first two quarterly QIP reports were submitted by all facilities.
11. The Agency worked with Adventist Health-Redbud Hospital in Lake County to implement a hospital directive regarding the direct transport of Acute Stroke patients from the field to Stroke Centers. This was later rescinded due to confusion over who was to notify the receiving facility.
12. The Agency worked with Del Norte Ambulance and Sutter-Coast Hospital to implement a rapid transport and treatment program at Sutter-Coast prior to transfer of Acute MI (STEMI) patients to Oregon.
13. North Coast EMS initiated and helped coordinate County Board of Supervisors adoption of SB 1773 (the Pediatric Maddy Fund) that adds funding to the existing Maddy Fund for hospitals, physicians and North Coast EMS, and increases coordination by North Coast EMS of Emergency Departments Approved for Pediatrics (EDAP). The latter includes fiscal incentives for EDPA designation and is designed to allow North Coast EMS to continue EMS for Children-type activities. All three JPA counties adopted the new fund which sunsets in January 2009.
14. The Agency assisted with the upgrade of the ReddiNet Hospital Communications System in Lake County.
15. North Coast EMS sent a letter of support to Redwood Communicate Hospital to maintain current Emergency Department coverage levels. We also attended presentations regarding the status of St. Joseph Hospital.

## Issues/Solutions:

1. The Final Evaluation Report of the new Modified Base Hospital Program was presented and accepted at a JPA meeting. North Coast EMS identified numerous concerns and made recommendations regarding the shift away from Mobile Intensive Care Nurses.
2. The Revised Regional Trauma Plan includes several recommendations.
3. The Adventist Health-Redbud Hospital led attempt in Lake County to direct rapid transport of Acute Stroke patients to Stroke Centers by air ambulance is an excellent idea. More coordination, however, is needed between Redbud, aero-medical providers, Stroke Centers, North Coast EMS and Coastal Valleys EMS for this to work effectively.
4. Specialty coverage levels in Humboldt County continue to decline, recently with the loss of two of three neurosurgeons. Orthopedic coverage is already minimal and occasionally not available.
5. Projected budget issues resulted in discontinuation of base hospital, EDAP and provider site visits, however, new Pediatric Maddy Funds will allow us to continue EDAP site visits next year.

## 6.0 Data Collection and Evaluation

**Objective:** To provide for appropriate system evaluation through the use of quality data collection and other methods to improve system performance and evaluation.

### Workload Indicators:

Total Patient Care Reports Generated = **3802**

Total Trauma Patients = **624**

Total Cardiac Patients = **355** (306 Chest Pain and 49 Cardiac Arrest Patients)

Total Medical Patients = **3083** (includes Total Transports less Trauma)

Total Pediatric Patients = **147**

Total Number of CQI Cases in Region = the Agency participated in numerous cases during the quarter.

**Status:** This year,

(Louis?? – update this whole section please.

1. The EPCIS computerized Prehospital Care Reporting (PCRs) program was maintained on over 30 computers and the upgrade to of the new version of the program was completed in all but one site. Some of the providers have continued to use the old program. Only Lakeside, as a designated Trauma Center, is utilizing the trauma registry.
2. Agency staff, several Prehospital Care Medical Directors (PCMDs), Prehospital Care Nurse Coordinators (PCNCs) and ALS Providers conducted confidential quality improvement investigations.
3. North Coast EMS implemented our new Online PCR Web-Plus EPCIS reporting system and

although some reconfiguration issues remain, it appears to be working well. The Agency plans to review current and future PCR reports together with EPCIS creator, Jay Myhre, this summer as part of a comprehensive update of the prehospital care reporting program.

4. The EMS Coordinator implemented the new regional Quality Improvement Program (QIP). All base hospitals (7) and all transport providers (11) submitted QIP Plans and all have been approved for one to five years. All hospitals and providers have submitted the first two quarterly reports and North Coast EMS has distributed summaries of those reports. We are very pleased with the responsiveness of our hospitals and providers to this important new program!
5. The Agency submit in July 2007 the North Coast EMS QIP Plan to the EMSA for review. This is the first QIP Plan submitted to the EMSA in the State!!
6. The Agency participated in an BRN investigation.
7. The Regional Medical Director and EMS Coordinator continued the process to review reports from regional FTOs on all new paramedic interns prior to accreditation.
8. *Collector* Trauma Registry software use continued at Sutter-Lakeside Hospital as part of the ongoing Trauma System evaluation process in Lake County. This will include modifications in the trauma specific reporting sections in EPCIS. (Louis – this still needs to be done!!)
9. The Agency conducted several meetings in Lake County of the Trauma Advisory Committee to review the new Trauma System and conduct confidential case reviews.
10. The Agency is in the process of distributing the remaining two digital radio/telephone recording Devices to Redwood and St. Joseph Hospitals. We also assisted with the upgrade at Sutter-Lakeside Hospital and plan to contribute \$500 tot that effort next year.
11. The Agency submitted upon request response time reports to the Humboldt County Public Health Branch of Health and Human Services.
12. The Regional Medical Director and EMS Coordinator continue to review all REACH cases involving Lake County patients.
13. The Agency is in the process of acquiring software to allow direct review of digital recordings of communications between hospital and field personnel from our office .
14. The Agency initiated a process to review and comment on the new state CEMISIS data standards.

#### **Issues/Solutions:**

1. North Coast EMS, in conjunction with all of our hospitals and providers, appears to be the first LEMSA in California to fully implement the new State QIP Regulations. Many thanks to EMS Coordinator Louis Bruhnke and all of our hospital and provider QIP Liaisons for an excellent job!!

#### **7.0 Public Information and Education (PI&E)**

**Objective:** To ensure that the population within the jurisdiction of the regional EMS agency has access to information and public information courses as it relates to emergency medical services.

**Workload Indicators:**

Total Public Information and Education Courses Conducted and/or Approved by Agency = See #1  
Total Number of Public Information and Education Events Involving Agency = See #1 below

**Status:** This year,

1. North Coast EMS continued to participate in PIE activities by attending local Injury Prevention, Child Death Review Team and Child Safety Seat Committee meetings.
2. One layperson AED program continued to provide services in Humboldt County and other inquiries regarding this have been received and processed.
3. The Agency initiated the process to review and comment on the new Layperson AED Regulations.
4. The Training Coordinator continued to actively participate on the State's EMS for Children Coordinator Committee, the EMSC Conference planning Committee and, with the EMS Coordinator, attended the EMSC annual conference.

Wendy – anything else??

**Issues/Solutions:**

1. Staff size, particularly with the state GF cut and increasing operating costs, is inadequate to provide more than limited involvement in PIE, although the new Pediatric Maddy Funds will help continue the above activities.

**8.0 Disaster Medical Response**

**Objective:** To ensure the preparedness and response of the regions EMS system in the event of a disaster or catastrophic event within the region or in a neighboring jurisdiction.

**Workload Indicators:**

Total Number of Disaster/MCI Responses (responses with 5 or more victims) = ??? **Reported**

Total Disaster Drills Involving Staff = at least ??

Total Disaster-related Meetings Attended by Staff = at least ??

**Status:** This year,

1. Agency staff attended Humboldt-Del Norte Disaster, Lake EMCC Committee, HRSA,

Earthquake and Tsunami Planning meetings.

2. The Agency continued to assist Humboldt County in the effort to enhance the Med Net System for MCI/Disaster purposes and in Lake County to enhance the Trauma System. The latter was completed and the former was activated.
3. The Agency helped secure speakers and attended the Lake County Disaster Training Conference.
4. The Agency attended and video taped the Chem Pack training session in Humboldt County.
5. The Executive Director attended HRSA meetings and submitted letters or emails in support for EMS related funding, including the new trauma radios in Lake County and the MCI WIDE AREA Network in Humboldt County.
6. The Agency observed drills and exercises at Humboldt State University, Lake County and in Eureka. Observation summaries were submitted each time.
7. North Coast EMS initiated a process to review the Regional MCI Plan.
8. The Executive Director facilitated integration of the State's new ESAR-VIP Disaster Program and Patti Berg's office relative to an Assembly Bill she co-authored.

**Issues/Solutions:**

1. The Agency will participate in disaster-related activities as staff funding and time allows.

**North Coast EMS Agency**

**Workload Indicators - Grouped by Provider**

Date: 7/1/2006 to 6/30/2007

	Number of Calls	Number to Hospital	Released at Scene	Dry Run	Trauma Cases	Pediatric Cases
	1	0	0	0	0	0
<b>Del Norte Ambulance</b>						
2022	1673	11	279	463	88	
<b>Arcata-Mad River Ambulance</b>						
2763	1966	44	298	627	127	
<b>City Ambulance</b>						
4405	4264	0	36	894	135	
<b>Hoopa</b>						
805	536	7	41	222	88	
<b>Nice Fire</b>						
359	202	0	34	68	16	
<b>Clearlake Oaks Fire</b>						
230	189	1	10	46	3	
<b>Kelseyville Fire</b>						
648	345	1	5	84	24	
<b>Lakeport Fire</b>						
1746	969	7	51	218	42	
<b>Lake County Fire</b>						
1630	1312	1	58	228	53	
<b>Lucerne Fire</b>						
437	352	24	47	87	14	
<b>South Lake County Fire</b>						
191	109	9	50	70	12	
<b>Upper Lake Fire</b>						
35	27	0	0	14	1	

**Workload Indicators - Grouped by Provider**

Date: 7/1/2006 to 6/30/2007

	Number of Calls	Number to Hospital	Released at Scene	Dry Run	Trauma Cases	Pediatric Cases
<b>Southern Trinity Area Rescue</b>						
	83	40	0	7	28	6
Total:	15355	11984	105	916	3049	609

## North Coast EMS Agency

### Prehospital Activity Overview (Part 1) by Provider

Date: 7/1/2006 to 6/30/2007

Provider	Responses	Transport	IFT	AMA	Gender		Pediatric (<14)	Seniors (>60)	Trauma	Triage-Criteria				
					Male	Female				Physio	Anatomic	Mech.	Hi-Energy	Other
Arcata-Mad River Ambulance	2763	2660	403	300	1326	1416	111	1157	202	7	1	24	9	139
Percent:		96.27%	14.59%	10.86%	47.99%	51.25%	4.02%	41.87%	7.31%	0.25%	0.04%	0.87%	0.33%	5.03%
City Ambulance	4405	4383	4	69	2076	2327	122	2070	294	10	18	41	17	206
Percent:		99.50%	0.09%	1.57%	47.13%	52.83%	2.77%	46.99%	6.67%	0.23%	0.41%	0.93%	0.39%	4.68%
Clearlake Oaks Fire	230	211	0	13	130	99	3	127	24	0	4	7	1	11
Percent:		91.74%	0.00%	5.65%	56.52%	43.04%	1.30%	55.22%	10.43%	0.00%	1.74%	3.04%	0.43%	4.78%
Del Norte Ambulance	2022	1984	0	259	931	1065	75	881	331	5	7	24	7	242
Percent:		98.12%	0.00%	12.81%	46.04%	52.67%	3.71%	43.57%	16.37%	0.25%	0.35%	1.19%	0.35%	11.97%
Hoopla	805	714	20	77	425	373	81	194	109	2	4	8	5	83
Percent:		88.70%	2.48%	9.57%	52.80%	46.34%	10.06%	24.10%	13.54%	0.25%	0.50%	0.99%	0.62%	10.31%
Kelseyville Fire	648	635	271	7	299	348	22	314	42	1	1	5	2	29
Percent:		97.99%	41.82%	1.08%	46.14%	53.70%	3.40%	48.46%	6.48%	0.15%	0.15%	0.77%	0.31%	4.48%
Lake County Fire	1630	1583	165	62	679	946	44	853	123	3	2	9	4	104
Percent:		97.12%	10.12%	3.80%	41.66%	58.04%	2.70%	52.33%	7.55%	0.18%	0.12%	0.55%	0.25%	6.38%
Lakeport Fire	1746	1711	665	61	784	957	38	1111	108	7	4	9	5	83
Percent:		98.00%	38.09%	3.49%	44.90%	54.81%	2.18%	63.63%	6.19%	0.40%	0.23%	0.52%	0.29%	4.75%
Lucerne Fire	437	401	0	39	204	231	12	195	43	2	1	3	0	37
Percent:		91.76%	0.00%	8.92%	46.68%	52.86%	2.75%	44.62%	9.84%	0.46%	0.23%	0.69%	0.00%	8.47%
Nice Fire	359	351	14	36	188	168	16	142	20	0	1	9	0	10
Percent:		97.77%	3.90%	10.03%	52.37%	46.80%	4.46%	39.55%	5.57%	0.00%	0.28%	2.51%	0.00%	2.79%
South Lake County Fire	191	180	1	47	104	80	11	51	62	3	1	5	6	47
Percent:		94.24%	0.52%	24.61%	54.45%	41.88%	5.76%	26.70%	32.46%	1.57%	0.52%	2.62%	3.14%	24.61%
Southern Trinity Area Rescue	83	79	0	15	51	32	4	18	25	2	0	5	5	4
Percent:		95.18%	0.00%	18.07%	61.45%	38.55%	4.82%	21.69%	30.12%	2.41%	0.00%	6.02%	6.02%	4.82%

### Prehospital Activity Overview (Part 1) by Provider

Date: 7/1/2006 to 6/30/2007

Provider	Respon- ses	Transport	IFT	AMA	Gender		Pediatric (<14)	Seniors (>60)	Trauma	Triage-Criteria				
					Male	Female				Physio	Anatomic	Mech.	Hi-Energy	Other
Upper Lake Fire	35	34	0	1	19	16	1	10	13	0	2	4	0	7
Percent:		97.14%	0.00%	2.86%	54.29%	45.71%	2.86%	28.57%	37.14%	0.00%	5.71%	11.43%	0.00%	20.00%
Total:	15354	14926	1543	986	7216	8058	540	7123	1396	42	46	153	61	1002

## North Coast EMS Agency

### Prehospital Activity Overview (Part 2) by Provider

Date: 7/1/2006 to 6/30/2007

Provider	ALS	BLS	Dispatch Code 2	Trans Code 3	Code 2 to 3	BH Contact	Chest Pain	Cardiac Arrest	ALOC	Resp. Distress
Arcata-Mad River Ambulance	1722	743	1306	9	31	1524	224	46	165	173
Percent:	62%	27%	47%	0%	1%	55%	8%	2%	6%	6%
City Ambulance	4096	273	2719	15	10	3343	342	54	437	350
Percent:	93%	6%	62%	0%	0%	76%	8%	1%	10%	8%
Clearlake Oaks Fire	183	37	219	3	0	202	35	11	22	28
Percent:	80%	16%	95%	1%	0%	88%	15%	5%	10%	12%
Del Norte Ambulance	1280	463	1095	15	10	1341	194	19	171	222
Percent:	63%	23%	54%	1%	0%	66%	10%	1%	8%	11%
Hoopa	575	189	411	20	9	601	59	11	51	71
Percent:	71%	23%	51%	2%	1%	75%	7%	1%	6%	9%
Kelseyville Fire	440	203	315	6	2	262	69	6	45	39
Percent:	68%	31%	49%	1%	0%	40%	11%	1%	7%	6%
Lake County Fire	1042	530	1233	7	0	926	128	38	183	194
Percent:	64%	33%	76%	0%	0%	57%	8%	2%	11%	12%
Lakeport Fire	998	697	910	7	1	935	139	31	138	164
Percent:	57%	40%	52%	0%	0%	54%	8%	2%	8%	9%
Lucerne Fire	303	87	359	7	0	243	31	4	32	49
Percent:	69%	20%	82%	2%	0%	56%	7%	1%	7%	11%
Nice Fire	231	94	324	0	0	196	30	5	26	26
Percent:	64%	26%	90%	0%	0%	55%	8%	1%	7%	7%
South Lake County Fire	117	24	171	4	0	129	17	4	16	8
Percent:	61%	13%	90%	2%	0%	68%	9%	2%	8%	4%
Southern Trinity Area Rescue	65	11	57	1	0	41	14	4	5	5
Percent:	78%	13%	69%	1%	0%	49%	17%	5%	6%	6%
Upper Lake Fire	29	6	31	1	0	26	2	0	4	3
Percent:	83%	17%	89%	3%	0%	74%	6%	0%	11%	9%

**Prehospital Activity Overview (Part 2) by Provider**

Date: 7/1/2006 to 6/30/2007

Provider	ALS	BLS	Dispatch Code 2	Trans Code 3	Code 2 to 3	BH Contact	Chest Pain	Cardiac Arrest	ALOC	Resp. Distress
Total:	11081	3357	9150	95	63	9769	1284	233	1295	1332



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## North Coast EMS Quarterly QIP Summary Regional reporting to July 10, 2007

The following is a compilation of many of the QIP entries received by North Coast EMS from providers and hospitals for the first quarter of 2007. Some of these entries have been abbreviated.

### Providers

#### PERSONNEL

- Provider continues to experience an ambulance driver shortage Monday – Friday during working hours.

#### EQUIPMENT and SUPPLIES

- Goal to replace second AED/Monitor this year.
- Two (2) New type 1 ambulances have been delivered and will in service as of 1/30/07
- Another major problem developed with a 2005 Ford ambulance with the 6.0 liter diesel engine. A bracket that holds an oil line into the high pressure oil pump failed allowing the line to back out sufficiently to reduce the oil pressure to a level where the unit would not start. The unit was down for almost a week. Ford had a maintenance bulletin on this problem.
- A new 2007 Medix Type III ambulance built on a GM chassis has been ordered with delivery expected the end of August.
- A Zoll E series monitor/defibrillator was tested for a one month period.

#### DOCUMENTATION

- Timeliness of submission has declined due to spring work commitments. This is a very difficult issue to resolve without endangering the availability of volunteers
- (4) PCR s Spelling, Capitalization, and Punctuation Errors were identified.
- (2) PCR s had no date or time when faxed to hospital.
- (2) PCR had no documented history, medications, or allergies.
- (1) PCR had no documented signed HIPPA form.
- (1) PCR's created after 24 hrs
- (5) Drug administration times delayed

## CLINICAL CARE and PATIENT OUTCOME

- Patient contact had no indications of reassessed vital signs performed for One patient with symptomatic chief complaints and mechanism of injuries.
- Two patients with seizures as c/c were not placed on a heart monitor
- (1) Patient was given ½ the NCEMS required dosage of D-50.
- (5) Patient's had delayed and/or missed treatments. This has been identified in several areas of the QIP/CQI program.

## SKILLS MAINTENANCE/COMPETENCY

- Four volunteer dispatchers attended the three day Emergency Medical Dispatch course held in Eureka. These dispatchers will provide valuable training to the other dispatchers unable to attend.
- Providers has been emphasizing the Incident Command System this year, and several multi-casualty and over the bank incidents have demonstrated its usefulness. Run reviews with EMT's, dispatchers and Southern Trinity Volunteer Fire Department have resulted in significant improvements.
- Six employees participated in Chem Pack training

## TRANSPORTATION/FACILITIES

- The switch to the Trinity County Fire Net was attempted in June with fair success. The new repeater equipment is scheduled to be installed this summer and may improve communications.
- The cell tower on Pickett Peak is on track for installation this summer.

## PUBLIC EDUCATION and PREVENTION

- First Aid and CPR courses given to 15 community members, and 24 USFS personnel.
- First aid training to the local 4-H group.
- Thirty-nine CPR and ten first aid classes were offered this quarter. AEDs were placed in service at physical fitness centers and training was conducted for the staff at each location.
- Ambulance crews participated in a high school "Every 15 Minutes" program.
- Hospital participated in "Relay for Life" for Cancer Awareness.

## Hospitals

## PERSONNEL

- Local EMT students rotated through the ED during April.
- During April during fighting a wild land fire multiple fire fighters/paramedics were transported to our facility with heat exhaustion. All were re-hydrated and released. Recognizing symptoms of heat exhaustion were reinforced.

- 3 new ED RNs orientated to NCEMS EMS and Trauma P&P – 5 RNs awaiting MICN Certification Class.
- PCNC/TPN currently applying to become MCIN Instructor for Lake County
- 3 Current MICNs successfully completed Recertification.
- NCEMS EMS Base Station and Trauma P&P included in New RN Orientation Packet for all traveler and registry RNs.
- ED currently attempting to schedule a 3<sup>rd</sup> RN from 1000-2200 daily on weekends, as patient weekend census consistently supports need for this additional 12-hour shift.
- Continuing challenges to meet State mandated nurse-patient staffing ratios have been met by utilizing Administrative Supervisors as the required Triage Nurse when a 5<sup>th</sup> patient is present. This 3<sup>rd</sup> nurse is required in the ED, for at least a few hours, nearly daily.
- 2 new RNs have been hired for night shift, and to cover the 3<sup>rd</sup> weekend nurse shift.
- Nurse Manager quit in May, interviews for a replacement Manager in the ED are currently underway.
- Interim ED Management is being provided by a trams approach.
- Hospital continues to have frequent holes in 24/7 Orthopedic on-call coverage. There is no increase in frequency in the last quarter

#### EQUIPMENT and SUPPLIES

- There has been some discussion regarding changing monophasic defibrillators to biphasic defibrillators in the ED.
- All Chest tubes are to be kept on the trauma cart in the trauma room – the current levels and sizes have been changed to include all Broselow tape size recommendations and all trauma surgeons requirements.
- Through grant monies obtained by the LCPHD, an antenna with coax wire has been purchased and is now installed at SLH. This second antenna and radio has been set-up specifically for the South Lake Fire Districts and placed on their frequency. The base station digital recording system still needs to be upgraded to support this added communication at the time of installation it was discovered that the old tape recorder would not interface with the radio. The cost to upgrade this old recorder was almost the same at the cost of upgrade the digital recorder. At this time a written request has been put into NCEMS and SLH Volunteers to help cover the cost of this upgrade (@ \$2600.00). NCEMS has unofficially offered \$500.00 towards this expense and I am awaiting the volunteer's monthly meeting to see what amount they can give towards the cost. If necessary I will then address the SLH medical staff to cover the difference.
- EZ IO (interosseous) drill obtained and 2 ED MD training sessions have been given by the Sales Rep. DVD/CD available in the department for reference. This is an MD only procedure.
- ED plans to install 2 additional cardiac monitors in rooms 6 & 8, bringing monitoring capability to 6/8 beds.

- ED bought an additional Dynamapp portable BP/O2 sat monitor, making 3 of these available in the department.
- Discussion is underway to explore purchasing a, ED Braslow cart (currently the Braslow bag is in use).
- Agreement to obtain the digital voice recorder for the Med Net radio has been signed with NCEMS.

Consideration is being given to moving the Med Net, or adding a speaker, to increase the audibility of the radio, as there are still some issues with ED Nurses not hearing transmissions

## DOCUMENTATION

- It was noted that PCR's were not sent on a timely basis over the holiday due to high call volume, problem discussed with providers.
- Several long scene times were noted and all but two were explained.
- Weekly reviews of Trauma Report Form by the PCNC has shown at 92% compliance – this is a slight increase in compliance, However the issue will again be addressed at the August ED staff meeting. Beginning in July a weekly email will be sent to all MICNs reminding them of the need to complete logs and paperwork in an attempt to improve compliance. (change and new measures)
- Monthly audit showing improvement to 10% of Run Reports do not have the MICN Radio Report included by the faxing agency – PCNC verbally reminding medics involved of the need for them to obtain and return fax a copy of the MICN Radio Report with their completed PCRs ( ED Unit Clerks also included in this process – they are labeling and handing a copy of the MICN form to all medics – they also monitor any noncompliance and report it to the PCNC).
- 30 Medical Aide and 10 Trauma random Hospital Charts from April through June were audited for inclusion of PCR in the MR – 100% compliance was identified.
- Medical aide record reviews during the 2<sup>nd</sup> quarter revealed only minor spelling and grammar errors on 15% of charts audited. Medics spoken to.
- Medical aide record reviews during the 2<sup>nd</sup> quarter revealed only minor spelling and grammar errors on 15% of charts audited. Medics spoken to.
- Trauma records reviewed during the 2<sup>nd</sup> quarter revealed a consistent understanding of the catchment area boundaries and guidelines for appropriate trauma patients care / transport. Scheduled FCA on in May at SLH, SLH's PCNC presented a review of general code 3 calls and trauma calls - PCRs and recorded radio calls. A discussion of the catchment area boundaries and guidelines for appropriate trauma patients care / transport developed. This FCA had a good attendance and was well received by all. The communication difficulties experience by south lake fire departments is being addressed by the LCPHD.
- There was one documentation fallout for a major trauma patient in which no PCR was submitted to the PCNC. The chart was obtained via medical records and EMT-P was given a reminder.

- PCNC continues to reinforce appropriate documentation on ambulance log, compliance is improving as new ED and Medical staff gain experience. Most frequent fallout is failure to sign the log.
- Scene times very rarely exceed 20 minutes without appropriate chart documentation. The occasional exception is resolved with a reminder, addendum to the record if warranted.
- As previously noted, digital recorder is expected to improve quality of radio tape recordings, solutions to the remaining radio documentation problem of nurses not hearing the Med-Net radio is under scrutiny, as noted.

#### CLINICAL CARE and PATIENT OUTCOME

- During a traffic MCI in June there were problems with communication and patient destination determination identified. One of the patients should have gone to trauma center. Copies of PCR's and audio were sent to trauma coordinator for review.
- Code Blue calls were reviewed from the field, no deficiencies were noted.
- No medical calls resulted in an incident report being generated.
- 2 New written concerns received from MICNs relating to 2 EMT-P's difficulty to start IVs on ALS runs. Both EMT-P spoken to. One on One education given to each EMT-P by PCNC. Both EMT-P's were required to attend the "Lesser Used Skills Course at Lakeport Fire in June where they both received more IV instruction from SLH PCNC.
- No written statements of concern were received on trauma calls this quarter.
- ALOC calls ID not to always have IV and/or FSBG done – this topic to be discussed at July FCA. Otherwise all random areas of the audits on above mentioned charts resulted in 100% compliance related to field and hospital personnel's performance. No other fallouts were identified.
- MICN Chart audits identified and brought to PCNC's attention: 1 medic charting "2 medics apparently having IV problems and Pedi BP/C-spine compliance. All these concerns addressed verbally with the appropriate medics and will be monitored during the 3<sup>rd</sup> quarter – if no reoccurrence is noted the concerns will be considered closed - unless brought back to the PCNC's attention by MICN written concerns or chart audits.
- Clinical chart fallouts:

April (1): One 6/10 shoulder pain d/t dislocation not given IV or pain med.  
Case reviewed with EMT-P.

May (2): One Chest Pain protocol chart fallout d/t no MS given, inconsequential to patient outcome, reviewed with PCMD, EMT-P. One chart referred to PCMD for patient with recurrent seizures, calling ambulance X2 within 24 hours.

June (3): One Chest Pain protocol chart had no oxygen documentation. Case reviewed with EMT-P. Documentation oversight, reminder given. Two charts by a single medic do not document C-Spine immobilization or

refusal of same in freeway speed MVA. Charts slated for review with EMT-P and PCMD.

- One chart fell out due to ED RN directing a stable patient needing SART exam to RMH. This is due to lack of experience/knowledge by the nurse, and lack of collaboration with the ED MD. Education to both nurse and MD will be provided, after this chart is reviewed by PCMD.
- One prolonged recent STAR call (> 1 hour scene time prior to lengthy transport) due to initial refusal of transport and interventions in a patient with abnormal EKG being transferred from STHS clinic to RMH is slated for review with STAR coordinator, PCMD and clinic MD.

#### SKILLS MAINTENANCE/COMPETENCY

- Hep/Nitro Pacing Class held.
- A C-Spine Immobilization Class and a Lesser Used Skills Class was given in June 07.
- Difficult Airway Review using current department equipment completed at ED Staff meeting.
- Field Care Audits:  
April-SIDS & ALTE  
May-SART & Mandated Suspected Abuse Reporting  
June-cancelled
- MCI channel testing successful in May & June.
- Obtained DVD/CD ROM for education of using the LMA (laryngeal mask airway).
- EZ IO training, previously mentioned.
- Improving the Triage process: planning/ meeting State mandate for ED Triage nurse: an ED committee is working on recommendations for the Department.
- Disaster Drill May 23<sup>rd</sup> completed to orient staff to new Hospital Incident Command System. The drill posited a water & sewage outage, no outside agencies were involved as the drill focused on processing demands for utilities.

#### TRANSPORTATION/FACILITIES

- Continuing to have problems with stroke patient destination determination in the field with both helicopter companies. Hospital Medical Director is reviewing these cases and has been in contact with North Coast EMS.
- Continued work on communications issues needed. There are still areas around lake where cell phone and radio communication are affected.
- STEM I determination in the field with 12 lead EKG brought forward by provider. Training and policies starting to be drafted with North Coast EMS supervision.
- Potential for confusion noted between Ground ambulance and air ambulance identified concerning trauma patient criteria – 1 case under review concerning this issue – to be followed up by TMD and TPM – Air ambulance trauma patient criteria to be re-evaluated and compared with

NCEMS trauma patient criteria – the findings to be presented to the 2<sup>nd</sup> LCTAC meeting in the 2<sup>nd</sup> quarter. Findings also to be forwarded to NCEMS and RCH. (This issue is still under investigation)

- May 07 FCA – Review of general Code 3 and trauma PCRs and recorded radio calls. A discussion of the catchment area boundaries and guidelines for appropriate trauma patients care / transport developed. This FCA had a good attendance and was well received by all.
- The ED ambulance bay door is now locked, for security purposes and to limit ambulatory persons coming directly into the department by this route. The door is accessed by staff and EMS personnel via a keypad entry system. All are unanimous in agreeing that limiting inappropriate access has had a positive effect on departmental organization by decreasing unnecessary foot traffic.

## PUBLIC EDUCATION and PREVENTION

### Noted Best Practices

- **STAR** personnel have been discussing that every ambulance response does not need to be code three, and that there can be unintended consequences to other traffic. Code two responses have increased the last two months.
- **Lake County Fire** personnel were briefed by the EMS Coordinator, Assistant Coordinator, and shift supervisor and requested to utilize the spell check built into the EPCIS program as well as to produce the narrative on a word document and cut and paste to the narrative section. This was an alternative because the word document has a spelling grammar section built in. It was also advised to have the patient involved personnel proof read for completeness and to remain within the HIPAA compliancy of local, state, federal, and departmental policies and procedures.
- **Lake County Fire** - 4/18/07, 4/25/07, 5/11/07, 5/18/07, 5/23/07, 6/30/07 the LCFPD hosted a fire/accident prevention presentation to local educational facilities and educated 220 local school children and adults from the age of 8 to the age of 55 on the daily operations of the profession and identified areas of Fire, EMS, and Rescue. The emphasis was on fire prevention and safety as well as accident prevention, 911-activation, and what to do until the fire department arrives. This included several hands-on demonstrations requiring the students to participate as patients, this included vital signs, heart monitors, SPO2, and full spinal immobilization as well as stay low and stop-drop-roll procedures and techniques.
- **Lake County Fire** - All LCFPD personnel have been briefed on heat related emergencies in all phases of their daily duties as well as calls for service that may present these conditions.

- **Arcata - Mad River Ambulance** - A new 100 watt VHF repeater was installed at the Arcata station and all mobile units and portable radios were programmed with the new frequencies. The system is expected to be activated in July resulting in better radio coverage for the Arcata and McKinleyville areas especially inside of structures.
- **Arcata - Mad River Ambulance** - Almost 700 PCR's for emergency calls and transfers were evaluated during the quarter utilizing the company's Continuous Quality Improvement Work Sheet.
- **Arcata - Mad River Ambulance's** general manager was appointed by the Arcata City Council to the city's Transportation Safety Committee.
- **Redbud Hospital** - In May "Heart at Risk" day provided heart screening for the community.
- **Redbud Hospital** - "Health Scene" tabloid was distributed to South Lake county residents at the end of June.
- **Redwood Memorial Hospital** - On May 14, RMH received a national excellence in health care service for Exemplary Service Overall Best Performer 2006 by Avatar International, SJHS health care research and quality evaluation consultant. This award noted RMH is a top performer in Avatar's Nation Database. This agency serves all levels of hospitals nationally and also has other large customer care clients, such as Disney & Ritz Carlton. The award was based on 2006 patient surveys for inpatient, outpatient, ambulatory surgery and emergency departments.
- **Redwood Memorial Hospital** - Participation in Ferndale Schools Science Night June 6. Education was presented on the heart, including how it works, cardiac monitoring, heart health, and a special display of cardiac cells on a TV monitor by Lab personnel.