CONTRA COSTA
HEALTH SERVICES

Contra Costa
Emergency Medical Services Agency

EMS System Plan Annual Update

2011

1340 ARNOLD DRIVE, SUITE 126
MARTINEZ, CA 94553
(925) 646-4690 FAX (925) 646-4379
WWW.CCCEMS.ORG

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SECTION I: SUMMARY OF CHANGES TO EMS PLAN

The following is a summary of significant changes in the Contra Costa EMS Plan since the last reporting period:

(1) Transition of MHOAC and MHOAS role to Alameda County

(2) EMS Director transition. Art Lathrop retired and appointment of Pat Frost as new EMS Director.

(3) October 2011 Contra Costa Board approval of Stroke System Program launched in January 2012.

(4) John Muir Concord, John Muir Walnut Creek, Kaiser Walnut Creek, Kaiser Antioch, Kaiser Richmond, Doctors Medical Center - San Pablo, and San Ramon Regional successfully designated as Joint Commission Primary Stroke Centers and Stroke System Receiving Centers.

(5) Joined California Stroke Registry to support implementation of the Contra Costa Stroke System.

(6) Initiated School CPR Anytime program as part of *HeartSaf*e Communities' Initiative.

(7) Published study to evaluate impacts of possible closure of Doctors Medical Center - San Pablo.

(8) Developed county-wide Safely Surrendered Site Personnel training curriculum in collaboration with Contra Costa Health Service Maternal and Child Health Programs, and County Children and Family Services.

(9) Initiated enhancements to core quality improvement, patient safety and system performance indicators.

(10) Implemented testing of county-wide pediatric and neonatal emergency preparedness and medical surge toolkit.

(11) Initiated performance improvement process to evaluate and enhance effectiveness of countywide Multi Casualty Incident (MCI) Plan

(12) Acquisition of Disaster Mobile Support Unit (DMSU) for county and regional response in coordination with American Medical Response (AMR).

(13) Expanded *HeartSafe* Community, Hands-Only CPR and Public Safety Defibrillation Programs through public/private partnerships to increase by-stander CPR and appropriate use of 9-1-1.

(14) Co-sponsored regional Neonatal/Pediatric Disaster Coalition Conference in collaboration with Alameda County EMS and California EMS Authority.

(15) Successfully implemented 12-lead transmission program with five out of six STEMI Centers

SECTION II: UPDATES OF SPECIFIC INFORMATION

EMSA TABLE 2 - SYSTEM ORGANIZATION AND MANAGEMENT

1. Percentage of population served by each level of care by county:

a. Basic Life Support (BLS)	____ %
b. Limited Advanced Life Support (LALS)	____ %
c. Advanced Life Support (ALS)	100 %

2. Type of agency: b

a. Public Health Department
b. County Health Services Agency
c. Other (non-health) County Department
d. Joint Powers Agency
e. Private Non-profit Entity
f. Other:____

3. Person responsible for day-to-day EMS Agency activities reports to: b

a. Public Health Officer
b. Health Services Agency Director/Administrator
c. Board of Directors
d. Other:____

4. Indicate the non-required functions that are performed by the Agency:

Implementation of exclusive operating areas (ambulance franchising)	x
Designation of trauma centers/trauma care system planning	x
Designation/approval of pediatric facilities	x
Designation of other critical care centers	x
Development of transfer agreements	x
Enforcement of local ambulance ordinance	x
Enforcement of ambulance service contracts	x
Operation of ambulance service	n/a
Continuing education	x
Personnel training	x
Operation or oversight of EMS dispatch center	x
Non-medical disaster planning	x
Administration of critical incidents stress debriefing (CISD) team	n/a
Administration of disaster medical assistance team (DMAT)	n/a
Administration of EMS Fund [Senate Bill (SB) 12/612]	x
Other: Tracking and monitoring hospital emergency and critical care capacity	x
Other: Procuring and monitoring emergency ambulance services countywide	x
Other: Implementing EMS program enhancements funded under County Service Area EM-1	x
Other: Planning for/coordinating disaster medical response at local/regional levels	x

5. EMS Agency budget FY 10/11

a. EXPENSES	
Salaries and benefits	$ 1,947,562
Contract services	110,600
Operations (e.g. copying, postage, facilities)	226,408
Travel	8,674
Fixed assets	0
Indirect expenses (overhead)	0
Ambulance subsidy	0
EMS Fund payments to physicians/hospital	1,888,137
Dispatch center operations (non-staff)	263,000
Training program operations	0
Other: 1st Responder Enhancements	3,341,871
Other: HazMat	150,000
Other: Contingencies (incl. Future Richmond paramedic engine startup)	180,000
TOTAL EXPENSES	$8,116,252

b. SOURCES OF REVENUE FY 10/11	
Special project grant(s) [from EMSA]	$ 177,500
Preventive Health and Health Services (PHHS) Block Grant	0
Office of Traffic Safety (OTS)	0
State general fund (RDMHS)	0
County general fund	0
Other local tax funds (e.g., EMS district)	0
County contracts (e.g., multi-county agencies)	0
Certification fees	13,167
Training program approval fees	0
Training program tuition/Average daily attendance funds (ADA)	0
Job Training Partnership ACT (JTPA) funds/other payments	0
Base hospital application fees	0
Base hospital designation fees	0
Trauma center application fees	0
Trauma center designation fees	250,000
Pediatric facility approval fees	0
Pediatric facility designation fees	0
Other critical care center designation fees (STEMI)	25,000
Ambulance service/vehicle fees/CCTP revenue	39,217
Contributions	0
EMS Fund (SB 12/612)	2,437,922
Other grants: Hospital Preparedness Program	518,504
Other: County Service Area EM-1 charges	4,535,000
TOTAL REVENUE	$7,996,310
Surplus (deficit)	$119,942

6. Fee structure for 1

First responder certification	$	n/a
EMS dispatcher certification		n/a
EMT-I certification (includes $75 state registry fee)		135
EMT-I recertification (includes $75 state registry fee)		97
EMT-defibrillation certification		0
EMT-defibrillation recertification		0
EMT-II certification		n/a
EMT-II recertification		n/a
EMT-P accreditation		60
Mobile Intensive Care Nurse/ Authorized Registered Nurse (MICN/ARN) certification		25
MICN/ARN recertification		25
EMT-I training program approval (4 year term)		3,000
EMT-II training program approval		n/a
EMT-P training program approval (4 year term)		3,500
MICN/ARN training program approval		0
Base hospital application		0
Base hospital designation		0
Trauma center application		10,000
Trauma center designation		250,000
STEMI center designation		5,000
Stroke center designation		5,000
Pediatric facility approval		n/a
Pediatric facility designation		n/a
Other critical care center designation		
Ambulance service license		n/a
Ambulance vehicle permits		
Non-emergency ambulance (three-year permit)		1,500
Emergency ambulance (three-year permit per ERA)		1,500
Other: Air/Helicopter classification		250
Other: Air/Helicopter authorization (2-year term)		1,800
Other: CE Provider (authorization and reauthorization)		2,000
Other: Replacement EMT certification card		10
Other: CCT P Program		n/a
Other: Non-Emergency Paramedic Transfer Program (plus $50/transfer after 1st 50)		3,000

7. The following tables are for the fiscal year 11/12

CATEGORY	ACTUAL TITLE	FTE POSITIONS (EMS ONLY)	TOP SALARY BY HOURLY EQUIVALENT	BENEFITS (% of salary) [1]	COMMENTS
EMS Admin/Coord/Dir	EMS Director	1	$50.45 (base)	37%	
Asst Admin/Admin Asst/Admin Mgr	Assistant EMS Director	1	$45.60 (base)	37%	vacant
ALS Coord/Field Coord/Trng Coord	1st Responder Prog/Training Coord	1	$48.91(base)	37%	
Prog Coord/Field Liaison (Non-clinical)	Prehosp Care Coord/Personnel/MIS	1	$43.06 (base)	37%	
Trauma Coordinator	Prehospital Care Coordinator	1	$43.06 (base)	37%	
STEMI/Stroke/Hospital Coordinator	Prehospital Care Coordinator	1	$50.85 (base)	37%	
Medical Director	EMS Medical Director	1	$80.83 (base)	37%	
Other MD/Med Consult		N/A			
Disaster Med Planner	Emergency Preparedness Manager	1	$48.90 (base)	37%	
Disaster Med Trainer	Emergency Preparedness Trainer	1	$ 35.76	37%	
Dispatch Supervisor		NA			
Medical Planner		N/A			
Dispatch Supervisor		N/A			
Data Evaluator/Analyst		N/A			
QA/QI Coordinator	Prehospital Care Coordinator	1	$43.06 (base)	37%	
Public Info & Ed Coord		N/A			
Exec Secretary		N/A			
Other Clerical	Clerk - Senior	1	$21.84 (base)	37%	
Data Entry Clerk	Admin Analyst	1	$25.80 (base)	37%	
Other: Administrative Assistant	Administrative Services Assistant III	1	$34.66 (base)	37%	

[1] 37% is the standard percentage used to calculate benefits. Actual benefits may be considerably more depending on the position and benefits selected by the employee, etc. The County retirement contribution is not reflected.

EMSA TABLE 3 - PERSONNEL/TRAINING[1]

2011	EMT-Is	EMT - IIs	EMT- Ps	MICNs	EMS Dispatchers
Total certified/accredited/authorized	1,501	-	459	65	NA
Number of newly certified this year	N/A	-	N/A	N/A	NA
Number of certified this year (2011)	533	-	232	24	NA
Number of certificate reviews resulting in:	0		0	0	NA
a) formal investigations	10		0	0	
b) probation	3		0	0	
c) suspensions	0		0	0	
d) revocations	1		0	0	
e) denials	1		0	0	
-	-		-		
g) no action taken	0		0	0	
h) referred to EMSA	0		0	0	

1. Number of EMS dispatchers trained to EMSA standards: 52

2. Early defibrillation:

   a. Number of EMT-I (defib) certified 1,501
   b. Number of public safety (defib) certified (non-EMT-I) 38

3. Do you have a first responder training program? yes _____ no x

[1] As of 12/31/11 number of providers completing certification during 2011

EMSA TABLE 4 - COMMUNICATIONS

1.	Number of primary Public Service Answering Points (PSAP)		10
2.	Number of secondary PSAPs		2
3.	Number of dispatch centers directly dispatching ambulances with EMD		3
4.	Number of designated dispatch centers for EMS aircraft		3
5.	Do you have an operational area disaster communication system?	Yes x No	
	a. Radio primary frequency		
	MEDARS (T-Band) 4 channel		
	b. Other methods		
	Alternate telephone system; Local government radio frequencies; ReddiNet microwave communications among hospitals, ambulance dispatch centers and EMS Agency		
	c. Can all medical response units communicate on the same disaster communications system?	Yes x No	
	d. Do you participate in OASIS?	Yes x No	
	e. Do you have a plan to utilize RACES as a back up communication system?	Yes x No	
	1) Within the operational area?	Yes x No	
	2) Between the operational area and region and/or state?	Yes x No	
6.	Who is your primary dispatch agency for day-to-day emergencies?		
	Three designated fire/medical dispatch centers		
7.	Who is your primary dispatch agency for a disaster?		
	Sheriff's Communications		

EMSA TABLE 5 - RESPONSE/TRANSPORTATION

Transporting Agencies

1.	Number of exclusive operating areas			5
2.	Percentage/population covered by Exclusive Operating Areas			100%
3.	Total number responses in 2011			---
	a. Number of emergency responses	(Code 2: expedient, Code 3: lights/siren)		78,580
	b. Number of non-emergency responses	(Code 1: normal)		n/a
4.	Total number of transports in 2011			---
	a. Number or emergency transports	(Code 2: expedient, Code 3: lights/siren)		59,538
	b. Number of non-emergency transports	(Code 1: normal)		n/a

Early Defibrillation Programs

5.	Number of public safety defibrillation programs	16
	a. Automated	16
	b. Manual	0
6.	Number of EMT-Defibrillation programs	2
	a. Automated	2
	b. Manual	0

Air Ambulance Services

7.	Total number or responses	unknown
	a. Number of emergency responses	unknown
	b. Number of non-emergency responses	unknown
8.	Total number of transports in 2010	258
	a. Number of emergency (scene) responses	258
	b. Number of non-emergency responses	unknown

System Standard Response Times (90th Percentile) for 2011

	METRO/URBAN	SUBURBAN/RURAL	WILDERNESS	SYSTEM WIDE
1. BLS and CPR capable first responder	Varies by local jurisdiction	N/A	N/A	Varies by local jurisdiction
2. Early defibrillation capable responder	Varies by local jurisdiction	N/A	N/A	Varies by local jurisdiction
3. Advanced life capable responder	NA	N/A	N/A	N/A
4. EMS transport unit	7:56[1]	N/A	N/A	7:56

[1] 2011 average response times for Code 3 calls. Does not include calls cancelled enroute or QRV (Quick Response Vehicle) calls.

EMSA TABLE 6 - FACILITIES/CRITICAL CARE

Trauma care system

Trauma patients for 2011:

1.	Number of patients meeting trauma triage criteria	2,466
2.	Number of major trauma victims transported directly to a trauma center by ambulance	1,215
3.	Number of major trauma patients transferred to a trauma center	1,251
4.	Number of patients meeting triage criteria who weren't treated at a trauma center [1]	52

Emergency departments

1.	Total number of emergency departments	9
	a. Number of referral emergency services	0
	b. Number of standby emergency services	0
	c. Number of basic emergency services	9
	d. Number of comprehensive emergency services	0

* An additional ED was added in 11/07 making a total of 9 EDs

Receiving Hospitals

1.	Number of receiving hospitals with agreements	9
2.	Number of base hospitals with agreements	1

EMSA TABLE 7 - DISASTER MEDICAL

System Resources

1.	Casualty Collections Points (CCP)	
	a. Where are your CCPs located?	On file at the EMS Agency
	b. How are they staffed?	Situational[2]
	c. Do you have a supply system for supporting them for 72 hours?	Yes x No
2.	CISD	
	Do you have a CISD provider with 24-hour capability?	Yes x No
3.	Medical Response Team (IP=in progress)	
	a. Do you have any team medical response capability?	Yes x No
	b. For each team, are they incorporated into your local response plan?	Yes x No
	c. Are they available for statewide response?[3]	Yes x No
	d. Are they part of a formal out-of state response system?[4]	Yes x No
4.	Hazardous materials	
	a. Do you have any HAZMAT-trained medical response teams?	Yes x No
	b. At what HAZMAT level are they trained?	First Responder

[1] Defined as total undertriages for that year
[2] Determined by incident commander. Medical Reserve Corps available
[3] If individual wishes to participate
[4] Through Office of Civilian Volunteers

c. Do you have the ability to do decontamination in an emergency room? Yes x No _____

d. Do you have the ability to do decontamination in the field? Yes x No _____

Operations

1. Are you using a standardized Emergency Management System (SEMS) that incorporates a form of Incident Command System (ICS) structure? Yes x No _____

2. What is the maximum number of local jurisdiction EOCs you will need to interact with in a disaster? 20

3. Have you tested your MCI Plan this year in a:

   a. Real event? Sept 2011 East County Train Derailment Yes x No _____

   b. Exercise? Nov 2011 Med/Health Exercise Yes x No _____

4. List all counties with which you have written medical aid agreement. All [1]

5. Do you have formal agreements with hospitals in your operational area to participate in disaster planning and response? Yes x No _____

6. Do you have a formal agreement with community clinics in your operational areas to participate in disaster planning and response? Yes x No _____

7. Are you part of a multi-county EMS system for disaster response? Yes x No _____

8. Are you a separate department or agency? Yes _____ No x

9. If not, to whom do you report? Contra Costa Health Services

10. If not in the Health Department, do you have a plan to coordinate public health and environmental health issues with the Health Department? Yes x No _____

[1] Through California Disaster Mutual Aid Agreement

EMSA TABLE 8 – PROVIDERS

American Medical Response			5151 Port Chicago Hwy, Suite A Concord, CA		Leslie Mueller, General Manger, CCC 925-602-1300 or 888-267-6591		
Written Contract: x Yes ____ No	Service: x Ground ____ Air ____ Water	x Transport x Non-Transport	Air Classification: ____ Auxiliary rescue ____ Air ambulance ____ ALS rescue ____ BLS rescue	If Air: ____ Rotary ____ Fixed Wing	# of personnel providing services:	____ PS ____ PS-Defib ____ BLS 141 EMT-D ____ LALS 183 ALS	
Ownership: ____ Public x Private	Medical Director: x Yes ____ No	If Public: ____ Fire ____ Law ____ Other	If Public: ____ City ____ County ____ State ____ Fire district ____ Federal	System available 24 hours? x Yes ____ No		Number of Ambulances: 62[1]	

San Ramon Valley Fire Protection District			1500 Bollinger Canyon Road San Ramon, CA 94583		Rich Price, Fire Chief 925-838-6603		
Written Contract: x Yes ____ No	Service: x Ground ____ Air ____ Water	10 Engines x Transport x Non-Transport	Air Classification: ____ Auxiliary rescue ____ Air ambulance ____ ALS rescue ____ BLS rescue	If Air: ____ Rotary ____ Fixed Wing	# of personnel providing services:	____ PS 162 PS-Defib 15 BLS 47 EMT-D ____ LALS 76 ALS	
Ownership: x Public ____ Private	Medical Director: x Yes ____ No	If Public: x Fire ____ Law ____ Other	If Public: ____ City ____ County ____ State x Fire district ____ Federal	System available 24 hours? x Yes ____ No		Number of Ambulances: 8[2]	

[1] Includes 43 ALS units, 19 BLS units, 8 QRV(Quick Response Vehicles) or Supervisor Vehicles, 2 Bariatric Units

[2] Includes 7 ambulances and an MCI unit that can be augmented as an ambulance as needed

EMSA TABLE 8 - Providers (cont.)

Moraga-Orinda Fire Protection District	1280 Moraga Way Moraga, CA 94556	Randy Bradley, Fire Chief / Daryl Lee, EMS Chief 925-258-4599

Written Contract: x Yes ____ No	Service: x Ground ____ Air ____ Water	5 Engines x Transport x Non-Transport	Air Classification: ____ Auxiliary rescue ____ Air ambulance ____ ALS rescue ____ BLS rescue	If Air: ____ Rotary ____ Fixed Wing	# of personnel providing services: ____ PS ____ PS-Defib ____ BLS 22 EMT-D ____ LALS 41 ALS	
Ownership: x Public ____ Private	Medical Director: x Yes ____ No	If Public: x Fire ____ Law ____ Other	If Public: ____ City ____ County ____ State x Fire district ____ Federal	System available 24 hours? x Yes ____ No		Number of Ambulances: 2 (plus 1 cross-staffed and 2 ALS backup)

Contra Costa County Fire Protection District	2010 Geary Road Pleasant Hill, CA 94523	Daryl Louder, Fire Chief / Ben Smith, EMS Battalion Chief 925-941-3300

Written Contract: x Yes ____ No	Service: x Ground ____ Air ____ Water	29 Engines ____ Transport x Non-Transport	Air Classification: ____ Auxiliary rescue ____ Air ambulance ____ ALS rescue ____ BLS rescue	If Air: ____ Rotary ____ Fixed Wing	# of personnel providing services: ____ PS ____ PS-Defib ____ BLS 138 EMT-D ____ LALS 102 ALS	
Ownership: x Public ____ Private	Medical Director: x Yes ____ No	If Public: x Fire ____ Law ____ Other	If Public: ____ City x County ____ State x Fire district ____ Federal	System available 24 hours? x Yes ____ No		Number of Ambulances: 0

EMSA TABLE 8 - Providers (cont.)

Crockett-Carquinez Fire Protection District			746 Loring Avenue Crockett, CA 94525		G. Littleton, Jr., Fire Chief 510-787-2717		
Written Contract: ____ Yes _x_ No	Service: _x_ Ground ____ Air ____ Water	_3_ Engines ____ Transport _x_ Non-Transport	Air Classification: ____ Auxiliary rescue ____ Air ambulance ____ ALS rescue ____ BLS rescue	If Air: ____ Rotary ____ Fixed Wing	# of personnel providing services: _12_ PS _38_ PS-Defib ____ BLS _19_ EMT-D ____ LALS ____ ALS		
Ownership: _x_ Public ____ Private	Medical Director: _x_ Yes ____ No	If Public: _x_ Fire ____ Law ____ Other	If Public: ____ City ____ County ____ State _x_ Fire district ____ Federal	System available 24 hours? _x_ Yes ____ No		Number of Ambulances: _0_	

East Contra Costa Fire Protection District			134 Oak Street Brentwood, CA 94513		Hugh Hendersen, Fire Chief / Jeff Burris, EMS Chief 925-240-2132		
Written Contract: ____ Yes _x_ No	Service: _x_ Ground ____ Air ____ Water	_6_ Engines ____ Transport _x_ Non-Transport	Air Classification: ____ Auxiliary rescue ____ Air ambulance ____ ALS rescue ____ BLS rescue	If Air: ____ Rotary ____ Fixed Wing	# of personnel providing services: ____ PS ____ PS-Defib _6_ BLS _63_ EMT-D ____ LALS ____ ALS		
Ownership: _x_ Public ____ Private	Medical Director: _x_ Yes ____ No	If Public: _x_ Fire ____ Law ____ Other	If Public: ____ City ____ County ____ State _x_ Fire district ____ Federal	System available 24 hours? _x_ Yes ____ No		Number of Ambulances: _0_	

El Cerrito Fire Department			10900 San Pablo Avenue El Cerrito, CA 94530		Lance Maples, Fire Chief / Dave Gibson, EMS Chief 510-215-4450	
Written Contract: x Yes ____ No	Service: x Ground ____ Air ____ Water	3 Engines ____ Transport x Non-Transport	Air Classification: ____ Auxiliary rescue ____ Air ambulance ____ ALS rescue ____ BLS rescue	If Air: ____ Rotary ____ Fixed Wing	# of personnel providing services: ____ PS ____ PS-Defib ____ BLS 15 EMT-D ____ LALS 18 ALS	
Ownership: x Public ____ Private	Medical Director: x Yes ____ No	If Public: x Fire ____ Law ____ Other	If Public: x City ____ County ____ State ____ Fire district ____ Federal	System available 24 hours? x Yes ____ No	Number of Ambulances: 0	

Pinole Fire Department			880 Tennent Avenue Pinole, CA 94564		Jim Parrott, Fire Chief 510-724-8970	
Written Contract: x Yes ____ No	Service: x Ground ____ Air ____ Water	2 Engines ____ Transport x Non-Transport	Air Classification: ____ Auxiliary rescue ____ Air ambulance ____ ALS rescue ____ BLS rescue	If Air: ____ Rotary ____ Fixed Wing	# of personnel providing services: ____ PS ____ PS-Defib ____ BLS 9 EMT-D ____ LALS 7 ALS	
Ownership: x Public ____ Private	Medical Director: x Yes ____ No	If Public: x Fire ____ Law ____ Other	If Public: x City ____ County ____ State ____ Fire district ____ Federal	System available 24 hours? x Yes ____ No	Number of Ambulances: 0	

Richmond Fire Department			440 Civic Center Plaza Richmond, CA 94804		Michael Banks, Fire Chief / Marcus Rayon, Battalion Chief EMS 510-307-8031	
Written Contract: ____ Yes x No	Service: x Ground ____ Air ____ Water	7 Engines ____ Transport x Non-Transport	Air Classification: ____ Auxiliary rescue ____ Air ambulance ____ ALS rescue ____ BLS rescue	If Air: ____ Rotary ____ Fixed Wing	# of personnel providing services: ____ PS ____ PS-Defib ____ BLS 73 EMT-D ____ LALS ____ ALS	
Ownership: x Public ____ Private	Medical Director: x Yes ____ No	If Public: x Fire ____ Law ____ Other	If Public: x City ____ County ____ State ____ Fire district ____ Federal	System available 24 hours? x Yes ____ No	Number of Ambulances: 0	

EMSA TABLE 8 - Providers (cont.)

Rodeo-Hercules Fire Protection District			1680 Refugio Valley Road Hercules, CA 94547		Charles Hanley, Fire Chief 510-799-4561		
Written Contract: x Yes ____ No	Service: x Ground ____ Air ____ Water	2 Engines ____ Transport x Non-Transport	Air Classification: ____ Auxiliary rescue ____ Air ambulance ____ ALS rescue ____ BLS rescue	If Air: ____ Rotary ____ Fixed Wing	# of personnel providing services: ____ PS ____ PS-Defib ____ BLS 20 EMT-D ____ LALS 8 ALS	
Ownership: x Public ____ Private	Medical Director: x Yes ____ No	If Public: x Fire ____ Law ____ Other	If Public: ____ City ____ County ____ State x Fire district ____ Federal	System available 24 hours? x Yes ____ No		Number of Ambulances: 0

REACH			451 Aviation Blvd. Suite 101 Santa Rosa, CA 95403		Darin Huard, General Manager 707- 529-1530		
Written Contract: ____ Yes x No	Service: ____ Ground x Air ____ Water	x Transport ____ Non-Transport	Air Classification: ____ Auxiliary rescue x Air ambulance ____ ALS rescue ____ BLS rescue	If Air: x Rotary x Fixed Wing	# of personnel providing services: 6 ____ PS ____ PS-Defib ____ BLS ____ EMT-D ____ LALS 6[1] ALS	
Ownership: ____ Public x Private	Medical Director: x Yes ____ No	If Public: ____ Fire ____ Law ____ Other	If Public: ____ City ____ County ____ State ____ Fire district ____ Federal	System available 24 hours? x Yes ____ No		Number of Ambulances: 2[1]

EMSA TABLE 8 - Providers (cont.)

[1] An additional 2 helicopters and 6 ALS staff available as needed

CALSTAR			177 John Glenn Dr Concord, CA 94545		Ross Fay, Program Director 925-798-7670	
Written Contract: ____ Yes _x_ No	Service: ____ Ground _x_ Air ____ Water	_x_ Transport ____ Non-Transport	Air Classification: ____ Auxiliary rescue _x_ Air ambulance ____ ALS rescue ____ BLS rescue	If Air: _x_ Rotary _x_ Fixed Wing	# of personnel providing services: 9	____ PS ____ PS-Defib ____ BLS ____ EMT-D ____ LALS 9 ALS
Ownership: ____ Public _x_ Private	Medical Director: _x_ Yes ____ No	If Public: ____ Fire ____ Law ____ Other	If Public: ____ City ____ County ____ State ____ Fire district ____ Federal	System available 24 hours? _x_ Yes ____ No		Number of Ambulances: 3[1]

[1] Includes 1 helicopter and 2 fixed-wing aircraft with additional assets available as needed

EMSA TABLE 9 – APPROVED TRAINING PROGRAMS

Los Medanos College
2700 East Leland Road
Pittsburg, CA 94565

Sam Bradley
925-439-2181 ext 3352

Student Eligibility:	Cost of Program	Program Level: EMT Training
Open to the general public	$ 46.00 per unit + $50 lab fee Basic: $206 Refresher: $ 26/unit	Number of students completing training per year: Initial training: 108 Refresher: 40 Cont. Education: 0 Expiration Date: 5/13/16 Number of courses: Initial training: 1 Refresher: 1 Cont. Education: 0

Contra Costa College
2600 Mission Bell Drive
San Pablo, CA 94806

Michael J. Frith
510-235-7800 ext 4229

Student Eligibility:	Cost of Program	Program Level: EMT Training
Open to the general public	Basic: $ 276 Refresher: $ 26/unit	Number of students completing training per year: Initial training: 40 Refresher: 0 Cont. Education: 8 Expiration Date: 8/31/15 Number of courses: Initial training: 2 Refresher: 0 Cont. Education: 1 and as needed

Mt. Diablo Adult Education
1266 San Carlos Avenue
Concord, CA 94518

Barbara Leal
925-685-7340, ext 2768

Student Eligibility:	Cost of Program	Program Level: EMT Training
Open to the general public	Basic: $876 Refresher: $299	Number of students completing training per year: Initial training: 40 Refresher: 15 Cont. Education: 6 Expiration Date: 2/28/2014 Number of courses: Initial training: 2 Refresher: 2 Cont. Education: 2

EMSA TABLE 9 - Approved Training Programs (cont.)

Contra Costa County Fire – EMS Division 2945 Treat Blvd. Concord, CA 94518		Ben Smith, EMS Battalion Chief 925-641-3300
Student Eligibility: District Personnel Only	Cost of Program No charge to fire district employees In-house training only	Program Level: EMT Training Number of students completing training per year: Initial training: 38 Refresher: 295 Cont. Education: 282 Expiration Date: 8/31/15 Number of courses: Initial training: 2 Refresher: 28 Cont. Education: 4

Richmond Professional Black Firefighters 3510 Cutting Blvd Richmond, CA 94804		Captain Angel Bobo, Program Oversight Linsy Mayo, Program Manager 510-307-8031
Student Eligibility: Open to the general public	Cost of Program Basic: none Refresher: none	Program Level: EMT Training Number of students completing training per year: Initial training: 0[1] Refresher: n/a Cont. Education: n/a Expiration Date: 10/31/2012 Number of courses: Initial training: 0 Refresher: n/a Cont. Education: n/a

John Muir Health, Walnut Creek		Lori Altabet, Base Coordinator 925-947-4438
Student Eligibility: Minimum 2 years ED experience, TNCC, ALS, PALS. I- house training only	Cost of Program Initial: No charge In-house training only	Program Level: MICN Number of students completing training per year: Initial training: 10 Cont. Education: 44 Expiration Date: 8/31/2011 Number of courses: Initial training: 1 Refresher: 1 Cont. Education: as needed

[1] During 2010 the program was not active due to space and funding constraints but will re-open in 2011

EMSA TABLE 10 – FACILITIES

Contra Costa Regional Medical Center			2500 Alhambra Avenue Martinez, CA 94553	Primary Contact: Administration 925-370-5000	
Written Contract: __x__ Yes _____ No	___ Referral emergency service ___ Standby emergency service __x__ Basic emergency service ___ Comprehensive emergency service		Base Hospital: _____ Yes __x__ No	Pediatric Critical Care Center: [1] _____ Yes __x__ No	Designated Stroke Center: [5] _____ Yes __x__ No
EDAP: [2] _____ Yes __x__ No	PICU: [3] _____ Yes __x__ No	Burn Center: _____ Yes __x__ No	Trauma Center: _____ Yes __x__ No	If Trauma Center what Level: [4] _____	Designated STEMI Center: _____ Yes __x__ No

Doctors Medical Center, San Pablo			2000 Vale Road San Pablo, CA 94806	Primary Contact: Administration 510-235-7000	
Written Contract: __x__ Yes _____ No	___ Referral emergency service ___ Standby emergency service __x__ Basic emergency service ___ Comprehensive emergency service		Base Hospital: _____ Yes __x__ No	Pediatric Critical Care Center: [1] _____ Yes __x__ No	Designated Stroke Center: [5] __x__ Yes _____ No
EDAP: [2] _____ Yes __x__ No	PICU: [3] _____ Yes __x__ No	Burn Center: _____ Yes __x__ No	Trauma Center: _____ Yes __x__ No	If Trauma Center what Level: [4] _____	Designated STEMI Center: __x__ Yes _____ No

[1] Meets EMSA *Pediatric Critical Care Center (PCCC) Standards*
[2] Meets EMSA Emergency Departments Approved for Pediatrics (EDAP) Standards
[3] Meets California Children Services (CCS) Pediatric Intensive Care Unit (PICU) Standards
[4] Levels I, II, III and Pediatric
[5] Contra Costa EMS Stroke System is planned to be launched in January 2012

John Muir Health, Walnut Creek Campus	1601 Ygnacio Valley Road Walnut Creek, CA 94598	Primary Contact: Administration 925-939-3000		
Written Contract: __x__ Yes _____ No	___ Referral emergency service ___ Standby emergency service __x__ Basic emergency service ___ Comprehensive emergency service	Base Hospital: __x__ Yes _____ No	Pediatric Critical Care Center: [1] _____ Yes __x__ No	Designated Stroke Center: [5] __x__ Yes _____ No
EDAP: [2] _____ Yes __x__ No	PICU: [3] _____ Yes __x__ No	Burn Center: _____ Yes __x__ No	Trauma Center: __x__ Yes _____ No	If Trauma Center what Level: [4] Level II	Designated STEMI Center: __x__ Yes _____ No

Kaiser Medical Center-Antioch	4501 Sandcreek Road Antioch, CA 94531	Primary Contact: Administration 925-813-6500		
Written Contract: __x__ Yes _____ No	___ Referral emergency service ___ Standby emergency service __x__ Basic emergency service ___ Comprehensive emergency service	Base Hospital: _____ Yes __x__ No	Pediatric Critical Care Center: [1] _____ Yes __x__ No	Designated Stroke Center: [5] __x__ Yes _____ No
EDAP: [2] _____ Yes __x__ No	PICU: [3] _____ Yes __x__ No	Burn Center: _____ Yes __x__ No	Trauma Center: _____ Yes __x__ No	If Trauma Center what Level: [4] _____	Designated STEMI Center: _____ Yes __x__ No

[1] Meets EMSA *Pediatric Critical Care Center (PCCC) Standards*
[2] Meets EMSA Emergency Departments Approved for Pediatrics (EDAP) Standards
[3] Meets California Children Services (CCS) Pediatric Intensive Care Unit (PICU) Standards
[4] Levels I, II, III and Pediatric
[5] Contra Costa EMS Stroke System is planned to be launched in January 2012

Kaiser Medical Center-Richmond	1330 So. Cutting Blvd. Richmond, CA 94801	Primary Contact: Administration 510-307-1500		
Written Contract: __x__ Yes _____ No	___ Referral emergency service ___ Standby emergency service __x__ Basic emergency service ___ Comprehensive emergency service	Base Hospital: _____ Yes __x__ No	Pediatric Critical Care Center: [1] _____ Yes __x__ No	Designated Stroke Center: [5] __x__ Yes _____ No
EDAP: [2] _____ Yes __x__ No	PICU: [3] _____ Yes __x__ No	Burn Center: _____ Yes __x__ No	Trauma Center: _____ Yes __x__ No	If Trauma Center what Level: [4] _____	Designated STEMI Center: _____ Yes __x__ No

Kaiser Medical Center-Walnut Creek	1425 South Main Street Walnut Creek, CA 94596	Primary Contact: Administration 925-295-4000		
Written Contract: __x__ Yes _____ No	___ Referral emergency service ___ Standby emergency service __x__ Basic emergency service ___ Comprehensive emergency service	Base Hospital: _____ Yes __x__ No	Pediatric Critical Care Center: [1] _____ Yes __x__ No	Designated Stroke Center: [5] __x__ Yes _____ No
EDAP: [2] _____ Yes __x__ No	PICU: [3] _____ Yes __x__ No	Burn Center: _____ Yes __x__ No	Trauma Center: _____ Yes __x__ No	If Trauma Center what Level: [4] _____	Designated STEMI Center: __x__ Yes _____ No

[1] Meets EMSA *Pediatric Critical Care Center (PCCC) Standards*
[2] Meets EMSA Emergency Departments Approved for Pediatrics (EDAP) Standards
[3] Meets California Children Services (CCS) Pediatric Intensive Care Unit (PICU) Standards
[4] Levels I, II, III and Pediatric
[5]Contra Costa EMS Stroke System is planned to be launched in January 2012

John Muir Health – Concord Campus	2540 East Street Concord, CA 94524		Primary Contact: Administration 925-682-8200		
Written Contract: __x__ Yes ____ No	___ Referral emergency service ___ Standby emergency service __x__ Basic emergency service ___ Comprehensive emergency service		Base Hospital: _____ Yes __x__ No	Pediatric Critical Care Center: [1] _____ Yes __x__ No	Designated Stroke Center: [5] __x__ Yes _____ No
EDAP: [2] _____ Yes __x__ No	PICU: [3] _____ Yes __x__ No	Burn Center: _____ Yes __x__ No	Trauma Center: _____ Yes __x__ No	If Trauma Center what Level: [4] _____	Designated STEMI Center: __x__ Yes _____No

San Ramon Regional Medical Center	6001 Norris Canyon Road San Ramon, CA 94583		Primary Contact: Administration 925-275-9200		
Written Contract: __x__ Yes _____ No	___ Referral emergency service ___ Standby emergency service __x__ Basic emergency service ___ Comprehensive emergency service		Base Hospital: _____ Yes __x__ No	Pediatric Critical Care Center: [1] _____ Yes __x__ No	Designated Stroke Center: [5] __x__ Yes _____ No
EDAP: [2] _____ Yes __x__ No	PICU: [3] _____ Yes __x__ No	Burn Center: _____ Yes __x__ No	Trauma Center: _____ Yes __x__ No	If Trauma Center what Level: [4] _____	Designated STEMI Center: __x__ Yes _____No

[1] Meets EMSA *Pediatric Critical Care Center (PCCC) Standards*
[2] Meets EMSA Emergency Departments Approved for Pediatrics (EDAP) Standards
[3] Meets California Children Services (CCS) Pediatric Intensive Care Unit (PICU) Standards
[4] Levels I, II, III and Pediatric
[5]Contra Costa EMS Stroke System is planned to be launched in January 2012

Sutter Delta Medical Center	3901 Lone Tree Way Antioch, CA 94509	Primary Contact: Administration 925-779-7200		
Written Contract: __x__ Yes _____ No	___ Referral emergency service ___ Standby emergency service __x__ Basic emergency service ___ Comprehensive emergency service	Base Hospital: _____ Yes __x__ No	Pediatric Critical Care Center: [1] _____ Yes __x__ No	Designated Stroke Center: [5] ____ Yes __x__ No
EDAP: [2] _____ Yes __x__ No	PICU: [3] _____ Yes __x__ No	Burn Center: _____ Yes __x__ No	Trauma Center: _____ Yes __x__ No	If Trauma Center what Level: [4] _____	Designated STEMI Center: __x__ Yes _____No

[1] Meets EMSA *Pediatric Critical Care Center (PCCC) Standards*
[2] Meets EMSA Emergency Departments Approved for Pediatrics (EDAP) Standards
[3] Meets California Children Services (CCS) Pediatric Intensive Care Unit (PICU) Standards
[4] Levels I, II, III and Pediatric
[5] Contra Costa EMS Stroke System is planned to be launched in January 2012

EMSA TABLE 11 - DISPATCH AGENCIES

Contra Costa Fire Dispatch	2010 Geary Road Pleasant Hill, CA 94523		Kody Kerwin 925-941-3550	
Written Contract: ____ Yes _x_ No	Service: _x_ Ground _x_ Air ____ Water	_x_ Day-to-Day _x_ Disaster	Number of Personnel providing services:	_15_ EMD Trained ____ EMT-D ____ BLS ____ LALS ____ ALS
Ownership: _x_ Public ____ Private	Medical Director: _x_ Yes ____ No	If public: Explain:	_x_ Fire ____ Law ____ Other	____ City ____ County ____ State _x_ Fire District ____ Federal

Richmond Police/Fire Dispatch	401 27th Street Richmond, CA 94804		Byron Baptiste 510-620-6660	
Written Contract: ____ Yes _x_ No	Service: _x_ Ground _x_ Air ____ Water	_x_ Day-to-Day ____ Disaster	Number of Personnel providing services:	_27_ EMD Trained ____ EMT-D ____ BLS ____ LALS ____ ALS
Ownership: _x_ Public ____ Private	Medical Director: _x_ Yes ____ No	If public: Explain:	_x_ Fire _x_ Law ____ Other	_x_ City ____ County ____ State ____ Fire District ____ Federal

San Ramon Valley Fire Dispatch	1500 Bollinger Canyon Road San Ramon, CA 94583		Sean Grayson 925-838-6600	
Written Contract: ____ Yes _x_ No	Service: _x_ Ground _x_ Air ____ Water	_x_ Day-to-Day ____ Disaster	Number of Personnel providing services:	_12_ EMD Trained ____ EMT-D ____ BLS ____ LALS ____ ALS
Ownership: _x_ Public ____ Private	Medical Director: _x_ Yes ____ No	If public: Explain:	_x_ Fire ____ Law ____ Other	____ City ____ County ____ State _x_ Fire District ____ Federal

SECTION III: PROGRESS FROM PREVIOUS YEAR

EMSA TABLE 1: SUMMARY OF SYSTEM STATUS

A. System Organization And Management

	Doesn't meet standard	Meets minimum standard	Meets guidelines recommended	Short-range Plan	Long-range Plan
Agency Administration					
1.01 LEMSA Structure		x	n/a		
1.02 LEMSA Mission		x	n/a		
1.03 Public Input		x	n/a		
1.04 Medical Director		x	x		
Planning Activities					
1.05 System Plan		x	n/a		
1.06 Annual Plan Update		x	n/a		
1.07 Trauma Planning		x	x		
1.08 ALS Planning		x	n/a		
1.09 Inventory of Resources		x	n/a		
1.10 Special Populations		x	x		
1.11 System Participants		x	x		
Regulatory Activities					
1.12 Review & Monitoring		x	n/a		
1.13 Coordination		x	n/a		
1.14 Policy/Procedures Manual		x	n/a		
1.15 Compliance w/Policies		x	n/a		
System Finances					
1.16 Funding Mechanism		x	n/a		
Medical Direction					
1.17 Medical Direction		x	n/a		
1.18 QA/QI		x	x		
1.19 Policies, Procedures, Protocols		x	x		
1.20 DNR		x	n/a		
1.21 Determination of Death		x	n/a		
1.22 Reporting of Abuse		x	n/a		
1.23 Interfacility Transfer		x	n/a		
Enhanced Level: Advanced Life Support					
1.24 ALS System		x	x		
1.25 On-Line Medical Direction		x	x		
Enhanced Level: Trauma Care System					
1.26 Trauma System Plan		x	n/a		
Enhanced Level: Pediatric Emergency Medical and Critical Care System					
1.27 Pediatric System Plan		x	n/a		
Enhanced Level: Exclusive Operating Areas					
1.28 EOA Plan		x	n/a		

B. Staffing/Training

	Doesn't meet standard	Meets minimum standard	Meets guidelines recommended	Short-range Plan	Long-range Plan
Local EMS Agency					
2.01 Assessment of Needs		x	n/a		
2.02 Approval of Training		x	n/a		
2.03 Personnel		x	n/a		
Dispatchers					
2.04 Dispatch Training		x	x		
First Responder (non-transporting)					
2.05 First Responder Training		x	x		
2.06 Response		x	n/a		
2.07 Medical Control		x	n/a		
Transporting Personnel					
2.08 EMT-1 Training		x	x		
Hospital					
2.09 CPR Training		x	n/a		
2.10 Advanced Life Support		x	x		
Enhanced Level: Advanced Life Support					
2.11 Accreditation Process		x	n/a		
2.12 Early Defibrillation		x	n/a		
2.13 Base Hospital Personnel		x	n/a		

C. Communications

	Doesn't meet standard	Meets minimum standard	Meets guidelines recommended	Short-range Plan	Long-range Plan
Communications Equipment					
3.01 Communications Plan		x	x		
3.02 Radios		x	x		
3.03 Interfacility Transfer		x	n/a		
3.04 Dispatch Center		x	n/a		
3.05 Hospitals		x	x		
3.06 MCI/Disasters		x	n/a		
Public Access					
3.07 9-1-1 Planning/Coordination		x	x		
3.08 9-1-1 Public Education		x	n/a		
Resource Management					
3.09 Dispatch Triage		x	x		
3.10 Integrated Dispatch		x	x		

D. Response/Transportation

	Doesn't meet standard	Meets minimum standard	Meets guidelines recommended	Short-range Plan	Long-range Plan
Universal Level					
4.01 Service Area Boundaries		x	x		
4.02 Monitoring		x	x		
4.03 Classifying Medical Requests		x	n/a		
4.04 Pre-scheduled Responses		x	n/a		
4.05 Response Time Standards		x	x		
4.06 Staffing		x	n/a		
4.07 First Responder Agencies		x	n/a		
4.08 Medical & Rescue Aircraft		x	n/a		
4.09 Air Dispatch Center		x	n/a		
4.10 Aircraft Availability		x	n/a		
4.11 Specialty Vehicles		x	x		
4.12 Disaster Response		x	n/a		
4.13 Intercounty Response		x	x		
4.14 Incident Command System		x	n/a		
4.15 MCI Plans		x	n/a		
Enhanced Level: Advanced Life Support					
4.16 ALS Staffing		x	x		
4.17 ALS Equipment		x	n/a		
Enhanced Level: Ambulance Regulation					
4.18 Compliance		x	n/a		
Enhanced Level: Exclusive Operating Permits					
4.19 Transport Plan		x	n/a		
4.20 "Grand fathering"		x	n/a		
4.21 Compliance		x	n/a		
4.22 Evaluation		x	n/a		

E. Facilities/Critical Care

	Doesn't meet standard	Meets minimum standard	Meets guidelines recommended	Short-range Plan	Long-range Plan
Universal Level					
5.01 Assessment of Capabilities		x	x		
5.02 Triage & Transfer Protocols		x	n/a		
5.03 Transfer Guidelines		x	n/a		
5.04 Specialty Care Facilities		x	n/a		
5.05 Mass Casualty Management		x	x		
5.06 Hospital Evacuation		x	n/a		
Enhanced Level: Advanced Life Support					
5.07 Base Hospital Designation		x	n/a		
Enhanced Level: Trauma Care System					
5.08 Trauma System Design		x	n/a		
5.09 Public Input		x	n/a		
Enhanced Level: Pediatric Emergency Medical and Critical Care System					
5.10 Pediatric System Design		x	n/a		
5.11 Emergency Departments		x	x		
5.12 Public Inputs		x	n/a		
Enhanced Level: Other Specialty Care Systems					
5.13 Specialty System Design		x	n/a		
5.14 Public Input		x	n/a		

F. Data Collection/System Evaluation

	Doesn't meet standard	Meets minimum standard	Meets guidelines recommended	Short-range Plan	Long-range Plan
Universal Level					
6.01 QA/QI Program		x	x		
6.02 Prehospital Records		x	n/a		
6.03 Prehospital Care Audits		x	x		
6.04 Medical Dispatch		x	n/a		
6.05 Data Management System		x	x		
6.06 System Design Evaluation		x	n/a		
6.07 Provider Participation		x	n/a		
6.08 Reporting		x	n/a		
Enhanced Level: Advanced Life Support					
6.09 ALS Audit		x	x		
Enhanced Level: Trauma Care System					
6.10 Trauma System Evaluation		x	n/a		
6.11 Trauma Center Data		x	x		

G. Public Information And Education

	Doesn't meet standard	Meets minimum standard	Meets guidelines recommended	Short-range Plan	Long-range Plan
Universal Level					
7.01 Public Information Materials		x	x		
7.02 Injury Control		x	x		
7.03 Disaster Preparedness		x	x		
7.04 First Aid & CPR Training		x	x		

H. Disaster Medical Response

	Doesn't meet standard	Meets minimum standard	Meets guidelines recommended	Short-range Plan	Long-range Plan
Universal Level					
8.01 Disaster Medical Planning		x	n/a		
8.02 Response Plans		x	x		
8.03 HAZMAT Training		x	n/a		
8.04 Incident Command System		x	x		
8.05 Distribution of Casualties		x	x		
8.06 Needs Assessment		x	x		
8.07 Disaster Communication		x	n/a		
8.08 Inventory of Resources		x	x		
8.09 DMAT Teams		x	x		
8.10 Mutual Aid Agreements		x	n/a		
8.11 CCP Designation		x	n/a		
8.12 Establishment of CCPs		x	n/a		
8.13 Disaster Medical Training		x	x		
8.14 Hospital Plans		x	x		
8.15 Inter-hospital Communications		x	x		
8.16 Prehospital Agency Plans		x	n/a		
Enhanced Level: Advanced Life Support					
8.17 ALS Policies		x	n/a		
Enhanced Level: Specialty Care Systems					
8.18 Specialty Center Roles		x	n/a		
8.19 Waiving exclusivity		x	n/a		

COMPLETED ASSESSMENT FORMS

Assessment forms have been updated for all standards to simplify and standardize the annual assessment process.

A. System Organization and Management

Agency Administration

1.01 LEMSA Structure.

Each local EMS agency shall have a formal organizational structure which includes both agency staff and non-agency resources and which includes appropriate technical and clinical expertise.

CURRENT STATUS: STANDARD MET.

The Contra Costa County Board of Supervisors has designated Contra Costa Health Services as the local EMS Agency. Currently, the EMS Agency has 12 staff positions including an EMS Director, EMS Medical Director, EMS Assistant Director (vacant), Emergency Preparedness Manager and Trainer, 4 Prehospital Coordinators (Trauma Nurse Coordinator, IS/Data, Quality Improvement), Training Coordinator, and three clerical staff. In 2011 the RDMHS role transitioned to Alameda County.

1.02 LEMSA Mission.

Each local EMS agency shall plan, implement, and evaluate the EMS system. The agency shall use its quality/evaluation process to identify needed system changes.

CURRENT STATUS: STANDARD MET.

The EMS Agency's stated mission is to plan, implement, and evaluate the EMS System. Local data is used to identify necessary system changes, and/or to evaluate the need/effect of recommended changes.

1.03 Public Input.

Each local EMS agency shall actively seek and shall have a mechanism (including the Emergency Medical Care Committee and other sources) to receive appropriate consumer and health care provider input regarding the development of plans, policies, and procedures, as described throughout this document.

CURRENT STATUS: STANDARD MET.

A system of advisory and other EMS-related committees including the Emergency Medical Care Committee (EMCC), EMS Facilities and Critical Care, Medical Advisory, STEMI Oversight, Stroke Oversight and Quality Improvement Committees has developed over the years to provide for EMS system-related input and recommendations to the Board of Supervisors, the Health Services Department and/or the EMS Agency.

1.04 Medical Director.

Each local EMS agency shall appoint a medical director who is a licensed physician who has substantial experience in the practice of emergency medicine.

RECOMMENDED GUIDELINES:

Administrative Experience. The local EMS agency medical director should have administrative experience in emergency medical services systems. Advisory Groups. Each local EMS agency medical director should establish clinical specialty advisory groups composed of physicians with appropriate specialties and non-physician providers, including nurses and prehospital providers.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

The EMS Agency has a full-time, well-prepared EMS Medical Director who is actively involved in local and statewide EMS-related activities. The EMS Medical Director reports directly to the County Health Officer on medical matters, and to the EMS Director on operational issues. Specialty resources, including advisory groups or specialty medical consultants, are in place or are developed to provide input into specialized system issues.

1.05 System Plan.

Each local EMS agency shall develop an EMS system plan based on community need and utilization of proper resources, and shall submit it to the EMS Authority. The plan shall:

a) Assess how the current system meets guidelines,

b) Identify system needs for patients within each of the clinical target groups, and

c) Provide a methodology and time line for meeting these needs.

CURRENT STATUS: STANDARD MET.

The EMS Plan is the foundation for a process of ongoing planning and implementation for Contra Costa County EMS. Many of the activities directed by this plan focus on target issues and evaluation of the system's performance outcomes.

1.06 Annual Plan Update.

Each local EMS agency shall develop an annual update to its EMS System Plan and shall submit it to the EMS Authority. The update shall identify progress made in plan implementation and changes to planned system design.

CURRENT STATUS: STANDARD MET.

An approved EMS system plan in the required format has been in place since November 1995. Materials have been updated and have been submitted to EMSA as required. Revised 4.12

1.07 Trauma Planning.

The local EMS agency shall plan for trauma care and shall determine optimal system design for trauma care in its jurisdiction.

RECOMMENDED GUIDELINE:

Trauma Center Agreements. The local EMS agency should designate appropriate facilities or execute agreements with trauma facilities in other jurisdictions.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

There is a trauma system and a designated/contract Level II trauma center in Contra Costa County. An updated Trauma System was approved by EMSA effective January 2010. Trauma triage policies are approved and periodically reviewed. Integration of all the existing EMS system components into a functional trauma system has been fully completed. The Trauma Center agreement was renewed through May 2021 by the Contra Costa Board of Supervisors on May 2010. Revised 4/12

COORDINATION WITH OTHER EMS AGENCIES:

Contra Costa County works closely with neighboring Alameda County with respect to care provided critical trauma patients. Each county recognizes the other's trauma centers, and regional critical care and pediatric trauma center is Children's Hospital Trauma Center in Oakland. There is also an extensive bi-county (Alameda and Contra Costa County) medical review process of trauma patient care. An updated letter from Alameda EMS acknowledging this relationship was submitted at EMSA's request in August 2010 with the Contra Costa Trauma System Plan Status Report. Revised 4/12

1.08 ALS Planning.

Each local EMS agency shall plan for advanced life support services throughout its jurisdiction.

CURRENT STATUS: STANDARD MET.

Advanced life support services are provided countywide. All emergency ambulance services are required to respond with ALS resources to emergency medical requests. As a result of a successful RFP process, the County has entered into a no-subsidy emergency ambulance contract with a private provider, American Medical Response. Subsidy savings are being passed on to fire districts that have elected to provide ALS programs. A comprehensive competitive bid process for emergency ambulance service in ERA IV was held in 2008. San Ramon Valley Fire Protection District's comprehensive proposal was the single bid received.

The EMS Agency has developed and implemented a plan to support fire first response agencies in developing and expanding paramedic first-responder programs throughout the county. This EMS system reconfiguration assures a more rapid paramedic response to emergency medical requests. Four fire districts and two city fire departments (Moraga-Orinda Fire Protection District, San Ramon Valley Fire Protection District, Contra Costa County Fire Protection District, El Cerrito Fire Department, Rodeo-Hercules Fire District, and Pinole Fire Department) have established ALS first response units. Innovative rural ALS first response units respond to the identified needs in four rural areas (Byron/Discovery Bay, Oakley, Bethel Island and Crockett).

COORDINATION WITH OTHER EMS AGENCIES:

Paramedic reciprocity agreements are in place with surrounding counties where paramedics may be dispatched across county lines.

1.09 Inventory of Resources.

Each local EMS agency shall develop a detailed inventory of EMS resources (e.g., personnel, vehicles, and facilities) within its area and, at least annually, shall update this inventory.

CURRENT STATUS: STANDARD MET.

Inventories exist for personnel, vehicles (air and ground), facilities, and agencies within the County's jurisdiction.

1.10 Special Populations.

Each local EMS agency shall identify population groups served by the EMS system that require specialized service (e.g., elderly, handicapped, children, non-English speakers).

RECOMMENDED GUIDELINES:

Special Services. Each local EMS agency should develop services, as appropriate, for special population groups requiring specialized EMS services as appropriate (e.g., elderly, handicapped, children, non-English speakers).

CURRENT STATUS: STANDARD MET/RECOMMENDED GUIDELINE BEING ADDRESSED.

Groups served by the EMS system that may require specialized services have been identified. Targeted specialty population planning has occurred for trauma, pediatrics, bariatric and mental health patient population. EMS system participates in Contra Costa County Fall Prevention Network and-Child Injury Prevention Network-East Bay. Website and other EMS community resources are available at www.cccems.org in both English and Spanish. EMS Agency partners with Contra Costa Health Services supporting reducing Health Disparities Initiatives. EMS protocols are written to address special needs of special populations including seniors, bariatric, behavioral health, pediatric and non-English speaking populations. In December 2010 Contra Costa was the first California County to develop a county-wide Pediatric/Neonatal Disaster and Medical Surge Plan Toolkit adopted in February 2011 after public comment. Contra Costa actively partners with EMSC and Alameda County to support pediatric/neonatal disaster preparedness throughout California. Revised 4/12

1.11 System Participants.

Each local EMS agency shall identify the optimal roles and responsibilities of system participants.

RECOMMENDED GUIDELINES:

Formalized EMS System Participation. The local EMS agency should ensure that system participants conform to their assigned EMS system roles and responsibilities, through mechanisms such as written agreements, facility designations, and exclusive operating areas.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

EMS Agency has contracts or memorandums of understanding (MOUs) with EMS providers that reflect identified roles, responsibilities and performance standards. EMS agreements include emergency ambulance providers, trauma center, medical dispatch centers, fire paramedic first responder agencies, and emergency helicopter providers. The EMS Medical Director may serve as Medical Director of the fire paramedic program, and EMS staff is involved in program implementation and quality improvement activities.

1.12 Review and Monitoring.

Each local EMS agency shall provide for review and monitoring of EMS system operations.

CURRENT STATUS: STANDARD MET.

The Board of Supervisors appoints the local Emergency Medical Care Committee. The EMCC provides advice and recommendations on ambulance services and emergency medical care to County Board of Supervisors, Health Services Department and EMS Agency. EMS system operations are monitored and evaluated using data. Written agreements are in place that identify minimum EMS performance standards for system participants. Contra Costa County EMS system's operational performance is evaluated, documented, and reported on a regular basis.

1.13 Coordination.

Each local EMS agency shall coordinate EMS system operations.

CURRENT STATUS: STANDARD MET.

Substantial coordination exists between the EMS Agency and the system providers. System coordination is provided through the Emergency Medical Care Committee and local and multi-county advisory committees. These committees operate with varying missions and meeting schedules based on needs.

1.14 Policy and Procedures Manual.

Each local EMS agency shall develop a policy and procedures manual that includes all EMS agency policies and procedures. The agency shall ensure that the manual is available to all EMS system providers (including public safety agencies, transport services, and hospitals) within the system.

CURRENT STATUS: STANDARD MET.

Comprehensive EMS Agency policies/procedures and prehospital care manuals are available to all EMS system providers on the Contra Costa County EMS website or at the EMS Agency Office. Each EMS Policy is reviewed annually to assure that EMS policies and prehospital care manual are current. The EMS agency also assures appropriate educational materials to support changes in policy for the hospitals and emergency department personnel. Revised 6/12

1.15 Compliance with Policies.

Each local EMS agency shall have a mechanism to review, monitor, and enforce compliance with system policies.

CURRENT STATUS: STANDARD MET.

The EMS Agency has contracts, written agreements or MOUs with EMS providers, which include emergency ambulance providers, trauma center, medical dispatch centers, fire paramedic first responder agencies, and emergency helicopter provider agencies. These agreements provide mechanisms to monitor, evaluate and enforce compliance with system policies and regulations with respect to emergency medical services. Selected performance indicators are published in the Annual Report, EMS System Plan which includes system status reports for trauma, STEMI and stroke. Revised 6/12

1.16 System Finances: Funding Mechanism.

Each local EMS agency shall have a funding mechanism that is sufficient to ensure its continued operation and shall maximize use of the Emergency Medical Services Fund.

CURRENT STATUS: STANDARD MET.

EMS Agency and support program funding is derived from several sources: the County Service Area EM-1 (Measure H) assessments, grant funds, certification and designation fees, funds derived from Senate Bill 12/612, and other fees from EMS system participants. The existing funding sources are adequate to meet existing needs however it is anticipated that fees will be realigned to cover actual EMS agency operations in the future. Revised 4/12

1.17 Medical Direction.

Each local EMS agency shall plan for medical direction within the EMS system. The plan shall identify the optimal number and role of base hospitals and alternative base hospitals and the roles, responsibilities, and relationships of prehospital and hospital providers.

CURRENT STATUS: STANDARD MET.

County has designated one base hospital to provide medical direction to prehospital personnel. Base hospital and base hospital personnel roles and responsibilities are identified in the County's policies, procedures and protocols manual. ALS Providers, as well as fire first responder agencies participating in Fire Paramedic First Responder Programs and/or First Responder Defibrillation Programs are under medical direction of the EMS Medical Director.

1.18 QA/QI.

Each local EMS agency shall establish a quality assurance (QA)/quality improvement (QI) program to ensure adherence to medical direction policies and procedures, including mechanism for compliance review. Provider-based programs approved by the EMS agency and coordinated with other system participants may be included.

RECOMMENDED GUIDELINE:

Provider QA/QI In-house. Prehospital care providers should be encouraged to establish in-house procedures that identify methods of improving the quality of care provided.

CURRENT STATUS: STANDARD MET/RECOMMENDED MET.

A formal system-wide QI plan which integrates/interfaces with prehospital care provider CQI programs is in place and was approved by EMSA in 2008. All ALS providers and ALS support providers, have active CQI programs that include data evaluation to the extent possible, case review, and identification of training needs and problem solving. A common data collection set has been established and patient care data from the field is collected electronically, allowing for enhanced CQI processes. An EMS QI Leadership committee provides system data review, problem-solving discussion, identification of countywide training needs, and educational case review. A comprehensive, bi-county trauma care review process is also in place. Integration and interface of electronic data to provide expanded capability for EMS system evaluation is in place and being utilized. Revised 4/12

1.19 Policies, Procedures, Protocols.

Each local EMS agency shall develop written policies, procedure, and/or protocols including:

a. *Triage*
b. *Treatment*
c. *Medical dispatch protocols*
d. *Transport*
e. *On-scene treatment times*
f. *Transfer of emergency patients*
g. *Standing orders*
h. *Base hospital contact*
i. *On-scene physicians and other medical personnel*
j. *Local scope of practice for prehospital personnel.*

RECOMMENDED GUIDELINES:

Each local EMS agency should develop (or encourage the development of) pre-arrival/post dispatch instructions.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

Detailed policies, procedures and protocol exist for clinical and operational prehospital situations. County transfer guidelines and a procedure for on-scene physicians and other medical personnel are in place. A countywide system of emergency medical dispatching that includes pre-arrival instructions is fully implemented.

1.20 DNR.

Each local EMS agency shall have a policy regarding "Do Not Resuscitate" (DNR) situations, in accordance with the EMS Authority's DNR guidelines.

CURRENT STATUS: STANDARD MET.

An EMS "Do-Not-Resuscitate" policy, developed in accordance with EMSA's DNR guidelines is in place for prehospital personnel. DNA forms are available in English and Spanish. Integration of the Physician Orders for Life-Sustaining Treatment (POLST) program into local field policies and procedures was implemented January 1, 2009 as required by law. Training of EMS responders is complete and EMS is working with SNFs to support appropriate use in the community on an ongoing basis. The EMS agency continues to be involved in educating providers and the community about POLST. Revised 4/12

1.21 Determination of Death.

Each local EMS agency, in conjunction with the County coroner(s) shall develop a policy regarding determination of death, including deaths at the scene of apparent crimes.

CURRENT STATUS: STANDARD MET.

An EMS policy is in place regarding determination of death.

1.22 Reporting of Abuse.

Each local EMS agency, shall ensure that providers have a mechanism for reporting child abuse, elder abuse, and suspected SIDS deaths.

CURRENT STATUS: STANDARD MET.

An EMS Policy is in place for reporting child and elder abuse, and suspected SIDS deaths and is reviewed and updated annually. EMS participates in Contra Costa County Child Death Review Process. In 2011 EMS partnered with Contra Costa Health Services Maternal Child Services and Contra Costa Child Protective Services to develop a county-wide curriculum for Safely Surrendered Baby Site Personnel. Revised 4/12

1.23 Interfacility Transfer.

The local EMS medical director shall establish policies and protocols for scopes of practice of all prehospital medical personnel during interfacility transfers.

CURRENT STATUS: STANDARD MET.

Policies/procedures are in place identifying scope of practice for prehospital medical personnel during interfacility transfers. A paramedic interfacility transfer program including detailed policies, procedures and QI activities has been developed. System performance metrics for intrafacility transfer in trauma, STEMI and stroke have been implemented in collaboration with system stakeholders. Revised 6/12

Enhanced Level: Advanced Life Support

1.24 ALS System.

Advanced life support services shall be provided only as an approved part of a local EMS system and all ALS providers shall have written agreements with the local EMS agency.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

Written agreements exist between the EMS Agency and all ALS providers, both transport and first response.

1.25 On-line Medical Direction.

Each EMS system shall have on-line medical direction, provided by a base hospital (or alternative base station) physician or authorized registered nurse.

RECOMMENDED GUIDELINE:

Medical Control Plan. An EMS system should develop a medical control plan that determines:

a) Base hospital configuration for the system;

b) Base hospital selection/designation processes that allow eligible facilities to apply;

c) Process for determining when prehospital providers should appoint an in-house medical director.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

One base hospital has been designated by/for the County, providing on-line medical control by physicians or authorized registered nurses. There is a base station application and selection process for designation should more than one hospital be interested in being designated as a base hospital. Prehospital providers that furnish paramedic services are required to have an EMS Medical Director. The EMS Agency Medical Director serves in this capacity for fire agency providers.

Enhanced Level: Trauma Care System

1.26 Trauma System Plan.

The local EMS agency shall develop a trauma care system plan, which determines:

a) The optimal system design for trauma care in the EMS area, and

b) The process for assigning roles to system participants, including a process that allows all eligible facilities to apply.

CURRENT STATUS: STANDARD MET.

A trauma care system plan was developed and successfully implemented in 1985. One trauma center is optimal for the County, and, following a competitive process, John Muir Medical Center was designated as the local level II trauma center. The trauma system plan was updated in 2009, endorsed by the EMCC in March 2009 and approved by EMSA in January 2010. The Trauma System Status report was approved by the Trauma Commission in June 2012. Revised 6/12

Pediatric Emergency Medical and Critical Care System

1.27 Pediatric System Plan.

The local EMS agency shall develop a pediatric emergency medical and critical care system plan that determines:

a) Optimal system design for pediatric emergency medical and critical care in EMS area, and

b) Process for assigning roles to system participants, including a process that allows all eligible facilities to apply.

CURRENT STATUS: STANDARD MET.

A comprehensive pediatric emergency medical and critical care system plan is in place that includes triage protocols, criteria for designation of pediatric facilities, and the drafting and execution of agreements between the EMS Agency and the designated receiving and specialty care facilities. Most seriously injured children are transported or interfacility transferred to Children's Hospital Oakland. Pediatric treatment, and other prehospital procedures for children have been implemented in the County.

NEED(S):

A comprehensive update to the Pediatric System Plan developed in 2000 was evaluated and updated in December 2008. The EMSC Program Evaluation and Update of these Pediatric System Plans are not required by EMSA. Contra Costa was the first county to submit a Pediatric System Plan in four years per EMSA as of June 3, 2009. Contra Costa County continues to actively collaborate with Alameda County and State EMSC to support Pediatric Disaster Planning and Medical Surge Preparedness throughout California. Revised 4/12

Exclusive Operating Area

1.28 EOA Plan.

The local EMS agency shall develop, and submit for state approval, a plan based on community needs and utilization of available resources for granting of exclusive operating areas which determines:

a) The optimal system design for ambulance service and advanced life support services in the EMS area, and

b) The process for assigning roles to system participants, including a competitive process for implementation of exclusive operating areas.

CURRENT STATUS: STANDARD MET.

All residents and visitors to Contra Costa County have access to ALS services. The Moraga Fire District is "grandfathered" as an exclusive operating area (EOA) under 1797.201 and 1797.224 of the H&S code. Competitive processes for emergency ambulance services are held at least every ten years in the remaining four EOAs within Contra Costa County.

B. Staffing and Training

Local EMS Agency

2.01 Assessment of Needs.

The local EMS Agency shall routinely assess personnel and training needs.

CURRENT STATUS: STANDARD MET.

The EMS Agency sets standards for training and requires EMS providers to assure that their personnel meet these standards. The local Quality Improvement process is designed to identify areas where training is indicated. EMS routinely assesses training needs when new skills or programs are added to the EMS system. The Fire EMS Training Consortium offers a forum for addressing training needs identified in the EMS system QI process.

2.02 Approval of Training.

The EMS Authority and/or local EMS agencies shall have a mechanism to approve an emergency medical services education programs that require approval (according to regulations) and shall monitor them to ensure that they comply with State regulations.

CURRENT STATUS: STANDARD MET.

Procedures and mechanisms are in place to approve EMS education programs.

2.03 Personnel.

The local EMS Agency shall have mechanisms to accredit, authorize, and certify prehospital medical personnel and conduct certification reviews in accordance with State regulations. This shall include a process for prehospital providers to identify and notify the local EMS Agency of unusual occurrences that could impact EMS personnel certification.

CURRENT STATUS: STANDARD MET.

Procedures, policies and requirements are in place to credential first responder defibrillator personnel, EMT-Is, EMT-Ps, and MICNs. Provisions are included for the Agency to be notified in the event of unusual occurrences that could impact local EMS Agency credentialing. A fingerprint background check process through the California Department of Justice is required of applicants for EMT-I certification. During 2010 Contra Costa effectively implemented EMT 2010 regulations. Revised 1/11

Dispatchers

2.04 Dispatch Training.

Public safety answering point (PSAP) operators with medical responsibility shall have emergency medical orientation and all medical dispatch personnel (public and private) shall receive emergency medical dispatch training in accordance with the EMS Authority's Emergency Medical Dispatch Guidelines.

RECOMMENDED GUIDELINE:

Training/Certification According to State Standards. Public safety answering point (PSAP) operators with medical dispatch responsibilities and all medical dispatch personnel (both public and private) should be trained and tested in accordance with the EMS Authority's Emergency Medical Dispatch Guidelines.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

Dispatch training standard adopted countywide. Dispatch agency personnel are trained and tested in accordance with EMSA Emergency Medical Dispatch Guidelines.

First Responders (non-transporting)

2.05 First Responder Training.

At least one person on each non-transporting EMS first response unit shall have been trained to administer first aid and CPR within the previous three years.

RECOMMENDED GUIDELINE:

Defibrillation. At least one person on each non-transporting EMS first response unit should be currently certified to provide defibrillation and have available equipment commensurate with such scope of practice, when such a program is justified by response times for other ALS providers.

EMT-I. At least one person on each non-transporting EMS first response unit should be currently certified at the EMT-I level and have appropriate training and equipment to administer first aid and CPR.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

A first responder master plan - coordinated by the EMS Agency - includes policies, procedures and treatment guidelines for the county. First response units are staffed with paramedics and/or EMTs with defibrillation training. Defibrillation programs for first responders receive ongoing support. Under American Medical Response's (AMR's) contract with the county additional training resources are made available to fire service employees. Fire services countywide have formed an EMS Training Consortium that includes representatives of each of the fire providers with the support of AMR and the EMS Agency, to coordinate and standardize available and new training to meet certification and county requirements and to enhance patient care provided in both the public and private sectors.

2.06 Response.

Public safety agencies and industrial first aid teams shall be encouraged to respond to medical emergencies and shall be utilized in accordance with local EMS Agency policies.

CURRENT STATUS: STANDARD MET.

All fire services provide first responder services. There are also law enforcement and industrial teams that may respond. A plan for providing increased numbers of fire paramedics on first-response units is underway. Staff worked with Concord Police Department to develop and implement a SWAT paramedic program in 2009-10. Revised 1/11

2.07 Medical Control.

Non-transporting EMS first responders shall operate under medical direction policies, as specified by the local EMS agency medical director.

CURRENT STATUS: STANDARD MET.

The EMS Agency policies and procedures manual provides medical protocols for EMS first responders. Monitoring and evaluation of first responder efforts have been incorporated within the County system. Processes are in place to allow fire first responders to complete patient care documentation. The EMS Medical Director provides medical oversight for all Fire first responder paramedic services.

Transport Personnel

2.08 EMT-I Training.

All emergency medical transport vehicle personnel shall be currently certified at least at the EMT-I level.

RECOMMENDED GUIDELINES:

Defibrillation. If advanced life support personnel are not available, at least one person on each emergency medical transport vehicle should be trained to provide defibrillation.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

All emergency medical transport vehicles are staffed at the EMT-P level. "One and one" staffing (one paramedic and one EMT-I) on ambulances in service areas that are covered by fire first-response paramedics is permitted. All fire first responder units are staffed and equipped to provide defibrillation, and the majority are staffed with paramedics. Revised 11/07

Hospital

2.09 CPR Training.

All allied health personnel who provide direct emergency patient care shall be trained in CPR.

CURRENT STATUS: STANDARD MET.

All first responders, ambulance personnel and hospital personnel who provide direct emergency patient care are trained in CPR.

2.10 Advanced Life Support.

All emergency department physicians and registered nurses that provide direct emergency patient care shall be trained in advanced life support.

RECOMMENDED GUIDELINE:

Board Certification. All emergency department physicians should be certified by the American Board of Emergency Medicine (ABEM).

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

All emergency department physicians and registered nurses that provide direct emergency patient care are trained in advanced life support. Receiving hospitals require that emergency physician staff be ABEM certified or to have appropriate ALS training as defined by medical staff protocols and ED service requirements. Majority of ED physicians in all facilities meet ABEM standard. Revised 6/10

Advanced Life Support

2.11 Accreditation Process.

The local EMS Agency shall establish a procedure for accreditation of advanced life support personnel, which includes orientation to system policies and procedures, orientation to the roles, and responsibilities of providers within the local EMS system, testing in any optional scope of practice, and enrollment into the local EMS Agency's quality improvement process.

CURRENT STATUS: STANDARD MET.

Procedures are in place for accrediting advanced life support personnel that include orientation to system policies and procedures, orientation to roles and responsibilities of providers within the local EMS system, and testing for optional scopes of practice. Provider CQI programs must interface with the county process.

2.12 Early Defibrillation.

The local EMS Agency shall establish policies for local accreditation of public safety and other basic life support personnel in early defibrillation.

CURRENT STATUS: STANDARD MET.

Policies and procedures for public safety/EMT defibrillation programs are in place.

2.13 Base Hospital Personnel.

All base hospital/alternative base station personnel who provide medical direction to prehospital personnel shall be knowledgeable about local EMS agency policies/procedures and have training in radio communications techniques.

CURRENT STATUS: STANDARD MET.

Base hospital personnel are prepared to provide consultation to prehospital personnel and are familiar with radio communications to perform that task.

C. Communications

Communications Equipment

3.01 Communications Plan.

The local EMS agency shall plan for EMS communications. The plan shall specify the medical communications capabilities of emergency medical transport vehicles, non-transporting advanced life support responders, and acute care facilities and shall coordinate the use of frequencies with other users.

RECOMMENDED GUIDELINE:

Use of Technology. The local EMS agency's communications plan should consider the availability and use of satellite and cellular telephones.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

The EMS communications plan includes common radio frequencies for use by ambulances and hospitals, the use of cell phones by paramedics, fire/ambulance radio communications, and CAD linkages among ambulance and fire-dispatch centers. All acute care hospitals, fire medical dispatch centers, ambulance dispatch center, Sheriff's Communications and EMS Agency have installed ReddiNet communications systems allowing for communications among those agencies.

Interoperable communications within the health care system has been enhanced by adding hospitals and community clinics to the County's new 440 mhz trunked radio system. During 2011, ReddiNet upgrade process to enhance satellite technology for all Contra Costa Hospitals and Dispatch Agencies was completed. Revised 4/12

3.02 Radios.

Emergency medical transport vehicles and non-transporting advanced life support responders shall have two-way radio communications equipment which complies with the local EMS communications plan and which provides for dispatch and ambulance-to-hospital communication.

RECOMMENDED GUIDELINE:

Enhanced Radio Capability. Emergency medical transport vehicles should have two-way radio communications equipment that complies with the local EMS communications plan and which provides for vehicle-to-vehicle (including both ambulances and non-transporting first responder units) communications.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

Medical transport vehicles are required to have radio capability to communicate with dispatch, with fire agencies, and for ambulance-to-hospital communication. The EMS Agency is monitoring the upgrade of the county-wide radio system as part of the EBRECS program. Revised 4/12

3.03 Interfacility Transfer.

Emergency medical transport vehicles used for interfacility transfers shall have the ability to access both sending and receiving facilities. This could be accomplished by cellular telephone.

CURRENT STATUS: STANDARD MET.

Permitted ambulances providing emergency interfacility transfer services have communications capability with sending and receiving facilities through the MEDARS system (T-Band) frequencies and/or by cellular telephone.

3.04 Dispatch Center.

All emergency medical transport vehicles where physically possible (based on geography and technology), shall have the capability of communicating with a single dispatch center or disaster communications command post.

CURRENT STATUS: STANDARD MET.

All ambulances are capable of communicating on the MEDARS radio system.

3.05 Hospitals.

All EMS system hospitals shall (where physically possible) be able to communicate with each other by two-way radio.

RECOMMENDED GUIDELINE:

Access to Services. All hospitals should have direct communications access to relevant services in other hospitals within the system (e.g., poison information, pediatric and trauma consultation).

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

All hospitals, Sheriff's Communications, ambulance dispatch agencies and the EMS Agency are part of the ReddiNet computerized communications system. ReddiNet is used to report HAVBED and to communicate diversion and disaster status. MEDARS system is a redundant system that allows parties to communicate via the County Sheriff's Communications Center. In addition hospitals and community clinics are also connected to the County's 440 mhz trunked radio system. Radio and ReddiNet training and testing activities are regularly conducted by the EMS Agency.

3.06 MCI/Disasters.

The local EMS agency shall review communication linkages among providers (prehospital and hospital) in its jurisdiction for their capability to provide service in the event of multi-casualty incidents and disasters.

CURRENT STATUS: STANDARD MET.

Emergency communications procedures are in place to provide system coordination during a multi-casualty or disaster event. The disaster plan, including the communication component, has been integrated with other agencies within the County. The ReddiNet computer system allows for hospital polling and patient tracking, as well as intra-agency communications. The system allows tracking of MCI activity and generates backend reports that are reviewed by EMS. In September 2010 the MCI Advisory Committee was re-assembled to provide ongoing MCI plan evaluation, event debriefing and training. Revised 4/12

Public Access

3.07 9-1-1 Planning/Coordination.

The local EMS agency shall participate in on-going planning and coordination of the 9-1-1 telephone service.

RECOMMENDED GUIDELINE:

9-1-1 Promotion. The local EMS agency should promote the development of enhanced 9-1-1- systems.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

Enhanced 9-1-1 has been implemented in Contra Costa County, and is functional throughout the County.

3.08 9-1-1 Public Education.

The local EMS agency shall be involved in public education regarding 9-1-1 telephone service, as it impacts system access.

CURRENT STATUS: STANDARD MET.

The EMS Agency, along with the EMCC, developed and distributes a 9-1-1-access brochure to assist with 9-1-1 education. Public Education is also enhanced through the EMS participation in coalition programs such as Child Injury Prevention Coalition-Bay Area, school and community Hands-Only CPR training and *HeartSafe* Communities. Revised 4/12

Resource Management

3.09 Dispatch Triage.

The local EMS agency shall establish guidelines for proper dispatch triage, identifying appropriate medical response.

RECOMMENDED GUIDELINE:

Priority Reference System. The local EMS agency should establish an emergency medical dispatch priority reference system, including systemized caller interrogation, dispatch triage policies, and pre-arrival instructions.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

A comprehensive Emergency Medical Dispatch program has been implemented Countywide, and is evaluated on an ongoing basis.

3.10 Integrated Dispatch.

The local EMS system shall have functionally integrated dispatch with system-wide emergency services coordination, using standardized communications frequencies.

RECOMMENDED GUIDELINE:

System Status Management. The local EMS agency should develop a mechanism to ensure appropriate system-wide ambulance coverage during periods of peak demand.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

Fire-EMS dispatch coordinates appropriate ambulance response using “system-status monitoring.” In addition, the County Sheriff Dispatch acts in a radio communication/resource coordinator role during MCIs.

D. Response and Transportation

Universal Level

4.01 Service Area Boundaries.

The local EMS agency shall determine the boundaries of emergency medical transportation service areas.

RECOMMENDED GUIDELINES:

Formalized EOAs. The local EMS agency should secure a county ordinance or similar mechanism for establishing emergency medical exclusive operating areas (e.g., ambulance response zones).

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

The Board of Supervisors has defined exclusive operating areas for EMS ground ambulance providers. These zones remain intact but have been informally restructured for purposes of data reporting. There is an ambulance ordinance in place. Revised 4/12

COORDINATION WITH OTHER EMS AGENCIES.

No impact on other EMS Agencies.

4.02 Monitoring.

The local EMS agency shall monitor emergency medical transportation services to ensure compliance with appropriate statutes, regulations, policies, and procedures.

RECOMMENDED GUIDELINE:

Licensing Mechanism. The EMS agency should secure a county ordinance or similar mechanism for licensure of emergency medical transport services. These should be intended to promote compliance with overall system management and, wherever possible, replace any other local ambulance regulatory programs within the EMS area.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

A County ambulance ordinance and County contracts with emergency ground ambulance providers provide mechanisms for local EMS Agency to permit and monitor medical transportation services. Contracts with emergency ambulance providers include requirements for rigorous evaluation of services provided.

4.03 Classifying Medical Requests.

The local EMS agency shall determine criteria for classifying medical requests (e.g., emergent, urgent, and non-emergent) and shall determine appropriate level of medical response to each.

CURRENT STATUS: STANDARD MET.

Criteria for determining the appropriate level of emergency medical response have been established. Fire/medical dispatchers are trained as emergency medical dispatchers in the Priority Dispatch system.

4.04 Pre-scheduled Responses.

Service by emergency medical transport vehicles, which can be pre-scheduled without negative medical impact, shall be provided only at levels that permit compliance with EMS agency policy.

CURRENT STATUS: STANDARD MET.

Existing ALS provider system status plans do not allow for use of emergency resources for pre-scheduled non-emergency use. Policies/procedures are in place for interested paramedic providers to establish paramedic interfacility transfer programs. Paramedics staffing these units are required to have additional medical training. In 2011 the intrafacility transfer policy was revised to allow for 9-1-1 services to be used to support critical patient transfer to a higher level of care for select patient populations, e.g. STEMI, Trauma, Critical Medical and Stroke. Revised 4/12

4.05 Response Time Standards.

Each local EMS agency shall develop response time standards for medical responses. These standards shall take into account the total time from receipt of the call at the primary public safety answering point (PSAP) to arrival of the responding unit at the scene, including all dispatch intervals and driving time.

RECOMMENDED GUIDELINE:

Minimum Response Time Standards. Emergency medical service areas designated so that, for 90% of emergent responses, the response time for each of the following does not exceed:

a) BLS/CPR provider	Metro/urban—5 minutes Suburban/rural—15 minutes Wilderness—as quickly as possible
b) First responder defibrillation provider	Metro/urban—5 minutes Suburban/rural—as quickly as possible Wilderness—as quickly as possible
c) ALS provider (not functioning as first responder)	Metro/urban—8 minutes Suburban/rural—20 minutes Wilderness—as quickly as possible
d) BLS/ALS transport (not functioning as first responder)	Metro/urban—8 minutes Suburban/rural—20 minutes Wilderness—as quickly as possible

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET

Emergency ambulance provider contracts and enhanced first responder agreements established by the EMS Agency specify response time standards. Response times are measured from receipt of call at secondary PSAP to arrival on scene. Standards are met for all transport and enhanced first responder providers as locally defined using criteria based for local service areas as approved by the Board of Supervisors. Revised 6/12

COORDINATION WITH OTHER EMS AGENCIES.

No impact on other EMS Agencies.

4.06 Staffing.

All emergency medical transport vehicles shall be staffed and equipped according to current State and local EMS Agency regulations.

CURRENT STATUS: STANDARD MET.

Adequate regulations, policies and procedures exist to assure that ambulances are staffed and equipped according to current State and local standards.

4.07 First Responder Agencies.

The local EMS agency shall integrate qualified EMS first responder agencies (including public safety agencies and industrial first aid teams) into the system.

CURRENT STATUS: STANDARD MET.

A first responder master plan is in place that includes standards for enhanced first responder programs. Most fire agencies have elected to provide paramedic first responder services and have entered into written agreements with the EMS Agency. Such agreements include standards for quality improvement processes and data collection. The EMS Agency provides limited funding to support paramedic fire first responder services. Revised 4/12

4.08 Medical & Rescue Aircraft.

The local EMS agency shall have a process for categorizing medical/rescue aircraft and shall develop policies/procedures for:

a) Authorizing aircraft to be utilized in prehospital care.
b) Requesting of EMS aircraft.
c) Dispatching of EMS aircraft.
d) Determining EMS aircraft patient destination.
e) Orientation of pilots/flight crews to local EMS system.
f) Addressing and resolving formal complaints regarding EMS aircraft.

CURRENT STATUS: STANDARD MET.

Helicopter guidelines provide a mechanism for emergency helicopter access. Policies and procedures are in place for helicopter classification, authorization, request for, transport criteria and field operations. In 2011 EMS initiated a review of Air Transport program including authorization and CQI monitoring and is presenting working with all air providers to facilitate appropriate written agreements for performance. Revised 4/12

COORDINATION WITH OTHER EMS AGENCIES.

No formal coordination with other local EMS agencies.

4.09 Air Dispatch Center.

The local EMS agency shall designate a dispatch center to coordinate the use of air ambulances or rescue aircraft.

CURRENT STATUS: STANDARD MET.

Air medical and air rescue requests are directed to the appropriate air dispatch center by the fire/medical dispatch agency. Revised 4/12

4.10 Aircraft Availability.

The local EMS agency shall identify the availability of medical and rescue aircraft for emergency patient transportation and shall maintain written agreements with aeromedical services operating within the EMS system.

CURRENT STATUS: STANDARD MET.

Two air ambulance helicopter services provide emergency helicopter coverage on a daily rotation. Medical helicopters are requested through fire/medical dispatch centers. Procedures to classify and to authorize air medical programs to respond within the County have been developed and implemented.

COORDINATION WITH OTHER EMS AGENCIES.

Informal agreements currently exist and have demonstrated Air providers ability to effectively coordinate with other EMS agencies. Formal agreements are in progress. Revised 4/12

4.11 Specialty Vehicles.

Where applicable, the local EMS agency shall identify the availability and staffing of all terrain vehicles, snow mobiles, and water rescue and other transportation vehicles.

RECOMMENDED GUIDELINES:

Planning for Response. EMS agency should plan for response by and use of all terrain vehicles, snowmobiles, and water rescue vehicles in areas where applicable, which considers existing EMS resources, population density, environmental factors, dispatch procedures and catchment area.

CURRENT STATUS: STANDARD MET.

Fire and police agencies within the County have rescue capabilities relevant to local areas utilizing appropriate specialty vehicles, e.g. water rescue with supplemental resources available from other agencies (e.g. Coast Guard) upon request. In 2011 the EMS agency provided matching funds to support development of a Fire-EMS USAR team. Revised 4/12

COORDINATION WITH OTHER EMS AGENCIES.

Services could be requested through Mutual or Automatic Aid through the Fire AutoAid and Mutual Aid system or through EMS.

4.12 Disaster Response.

The local EMS agency, in cooperation with the local office of emergency services (OES) shall plan for mobilizing response and transport vehicles for disaster.

CURRENT STATUS: STANDARD MET.

A comprehensive medical disaster plan following SEMS/NIMS is in place for the County. The EMS agency is actively involved in all disaster and MCI exercises to support Medical Health and Fire EMS operations.The EMS Agency contracted 9-1-1 provider has received a DMSU to support multicasualty events in 2011. Revised 4/12

4.13 Inter-County Response.

The local EMS agency shall develop agreements permitting inter-county response of emergency medical transport vehicles and EMS personnel.

RECOMMENDED GUIDELINE:

Formal Agreements. Mutual aid agreements and automatic aid agreements that identify the optimal configuration and responsibility for EMS responses are encouraged and coordinated by the county.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

Mutual aid responsibilities met through the California Master Mutual Aid Agreement. Contra Costa is involved in the MHOAC and regional discussions to develop additional MOUs to support emergency response. Revised 4/12

COORDINATION WITH OTHER EMS AGENCIES.

Coordinated through State and Region II medical disaster plans.

4.14 Incident Command System (ICS).

The local EMS agency shall develop multi-casualty response plans and procedures that include provisions for on-scene medical management, using the Incident Command System.

CURRENT STATUS: STANDARD MET.

A comprehensive multi-casualty response plan is in place for EMS incidents within the County. ICS is utilized for multi-casualty incidents. Hospitals have adopted and trained in the Hospital Emergency Incident Command System. All EMS staff are trained to the ICS 300-400 level and actively participate in disaster exercises throughout the year. Revised 4/12

4.15 MCI Plans.

Multi-casualty response plans and procedures shall utilize State standards and guidelines.

CURRENT STATUS: STANDARD MET.

Existing State and federal guidelines are used as a basis for the County's multi-casualty plans. As standards and guidelines change processes are in place to review and modify the MCI plan/procedures as needed. Revised 4/12

Advanced Life Support

4.16 ALS Staffing.

All ALS ambulances shall be staffed with at least one person certified at the advanced life support level and one person staffed at the EMT-I level.

RECOMMENDED GUIDELINES:

Crew Composition. The local EMS agency should determine whether advanced life support units should be staffed with two ALS crewmembers or with one ALS and one BLS crewmember.

Defibrillation Capability. On any emergency ALS unit that is not staffed with two ALS crewmembers, the second crewmember should be trained to provide defibrillation, using available defibrillators.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

Ambulances and first responder units are optimally staffed to provide a minimum of two paramedics on scene to provide care for critically ill and injured patients. First responder units are staffed with a paramedic or at least one crewmember trained and equipped to provide defibrillation.

4.17 ALS Equipment.

All emergency ALS ambulances shall be appropriately equipped for the scope of practice of level of staffing.

CURRENT STATUS: STANDARD MET.

Adequate regulations, policies and procedures exist to assure that ALS ambulances are appropriately equipped for the scope of practice of its level of staffing. Equipment lists are reviewed as needed and EMS system utilization data is used to evaluate the use and efficacy of equipment to assure patient safety and costs efficiencies. Revised 4/12

Ambulance Regulation

4.18 Compliance.

The local EMS agency shall have a mechanism (e.g., an ordinance and/or written provider agreements) to ensure that EMS transportation agencies comply with applicable policies and procedures regarding system operations and clinical care.

CURRENT STATUS: STANDARD MET.

The county has an ambulance permit process in place which pertains to ground ambulances. The county has written agreements with EMS ground providers that define and require compliance with EMS policies and procedures. The EMS agency has policies and procedures in place for classification and authorization of EMS Aircraft. Written agreements are in progress. Revised 4/12

Exclusive Operating Permits

4.19 Transportation Plan.

Any local EMS agency, which desires to implement exclusive operating areas, pursuant to Section 1797.224, H&SC, shall develop an EMS transportation plan which addresses:

a) Minimum standards for transportation services,
b) Optimal transportation system efficiency and effectiveness, and
c) Use of a competitive process to ensure system optimization.

CURRENT STATUS: STANDARD MET.

Contra Costa County Board of Supervisors has approved an EMS ground transportation plan.

4.20 "Grand fathering."

Any local EMS agency which desires to grant an exclusive operating permit without use of a competitive process shall document in its EMS transportation plan that its existing provider meets all of the requirements for "grand fathering" under Section 1797.224, H&SC.

CURRENT STATUS: STANDARD MET.

Exclusive operating areas that have been granted comply with the H&S Code.

4.21 Compliance.

The local EMS agency shall have a mechanism to ensure that EMS transportation and/or advanced life support agencies to whom exclusive operating permits have been granted, pursuant to Section 1797.224, H&SC, comply with applicable policies and procedures regarding system operations and patient care.

CURRENT STATUS: STANDARD MET.

County ordinance, contracts and EMS Agency policies and procedures require compliance of ambulance providers.

4.22 Evaluation.

The local EMS agency shall periodically evaluate the design of exclusive operating areas.

CURRENT STATUS: STANDARD MET.

Exclusive operating areas are periodically reviewed.

Ambulance Regulation

E. Facilities and Critical Care

5.01 Assessment of Capabilities.

Local EMS agency shall assess and periodically reassess EMS-related capabilities of acute care facilities in its service area.

RECOMMENDED GUIDELINE:

Written Agreements. Local EMS agency should have written agreements with acute care facilities in its services area.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

The EMS Agency, in conjunction with the Facilities & Critical Care standing committee, conducts an assessment of receiving hospital capabilities annually. All receiving hospitals are actively involved in the EMS System. Revised 4/12

5.02 Triage & Transfer Protocols.

Local EMS agency shall establish prehospital triage protocols and assist hospitals with establishment of transfer agreements.

CURRENT STATUS: STANDARD MET.

The local EMS Agency has prehospital triage and transfer protocols.

COORDINATION WITH OTHER EMS AGENCIES.

There is coordination with Alameda County on trauma triage.

5.03 Transfer Guidelines.

The local EMS agency, with the participation of acute care hospital administrators, physicians and nurses, shall establish guidelines to identify patients who should be considered for transfer to facilities of right capability and shall work with acute care hospitals to establish transfer agreements with such facilities.

CURRENT STATUS: STANDARD MET.

The EMS Agency has developed criteria to help identify patients who should be considered for transport or transfer to facilities with specialized or limited capabilities and has assisted in developing transfer agreements among these facilities. In 2011 the EMS agency revised the intrafacility transfer policy to refine transfer criteria and indications. Revised 4/12

COORDINATION WITH OTHER EMS AGENCIES.

There is no formal coordination with other EMS Agencies.

5.04 Specialty Care Facilities.

The local EMS agency shall designate and monitor receiving hospitals and, when appropriate, specialty care facilities for specified groups of emergency patients.

CURRENT STATUS: STANDARD MET.

The EMS Agency designates and monitors ambulance-receiving facilities, including a specialty care facility for trauma patients. Children are transported to receiving hospitals staffed and equipped to care for pediatric patients. The EMS Agency has implemented a program in which patients who have been assessed of having ST-Elevation Myocardial Infarctions (STEMIs) are transported to designated receiving facilities staffed and equipped to provide rapid intervention. A Stroke System Implementation Plan was approved by the Contra Costa Board of Supervisors in October 2011 and was successfully launched in January 2012. Seven hospitals have become Primary Stroke Centers to support the program. Revised 4/12

COORDINATION WITH OTHER EMS AGENCIES.

Local trauma system/center evaluation process is performed in conjunction with neighboring Alameda County's process. Informal collaborations are occurring on the bi-county and regional level for STEMI and Stroke through EMDAAC. Revised 4/12

5.05 Mass Casualty Management.

The local EMS agency shall encourage hospitals to prepare for mass casualty management.

RECOMMENDED GUIDELINE:

Preparation. The local EMS agency should assist hospitals with preparation for mass casualty management, including procedures for coordination of hospital communication and patient flow.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

A comprehensive plan is in place for managing medical/health emergencies. EMS Agency administers federal/state grants that provide funding specific for hospital and trauma center preparations for caring for large numbers of patients. The EMS Agency participates in the Operational Area Disaster Committee providing an opportunity for Fire-EMS, Public Health and city disaster planners to address issues and share information. Individual hospitals have their own disaster plans consistent with the Hospital Incident Command System (HICS). Hospital surge plan developed and submitted to the State in conjunction with the Hospital Preparedness Program. Working with hospitals on enhanced surge planning for neonates and children is currently in progress. Revised 4/12

5.06 Hospital Evacuation.

The local EMS agency shall have a plan for hospital evacuation, including its impact on other EMS system providers.

CURRENT STATUS: STANDARD MET.

The Bay Area Medical Mutual Aid (BAMMA) Committee developed hospital evacuation guidelines and each hospital has an evacuation plan as required by law. Additionally, the County Multicasualty Incident Plan can be implemented to handle transport and distribution of patients from a hospital being evacuated.

COORDINATION WITH OTHER EMS AGENCIES.

Evacuation guidelines were developed in coordination with the other Bay Area counties.

5.07 Base Hospital Designation.

The local EMS agency shall, using a process which allows all eligible facilities to apply, designate base hospitals or alternative base stations as it determines necessary to provide medical direction of prehospital personnel.

CURRENT STATUS: STANDARD MET.

One hospital has been designated as a base hospital in Contra Costa County (John Muir Medical Center). John Muir Medical Center has also been designated to receive all of the trauma system and medical base contacts. All hospitals may apply to provide base hospital services.

COORDINATION WITH OTHER EMS AGENCIES.

Not applicable.

Trauma Care System

5.08 Trauma System Design.

Local EMS agencies that develop trauma care systems shall determine the optimal system, including:

a) Number and level of trauma centers,
b) Catchment area design (including areas in other counties, as appropriate), with consideration of workload and patient mix,
c) Identification of patients who should be triaged or transferred to a designated center, including consideration of patients who should be triaged to other critical care centers,
d) Role of non-trauma center hospitals, including those that are outside of the primary triage area of trauma center,
e) Plan for monitoring and evaluation of the system.

CURRENT STATUS: STANDARD MET.

A comprehensive trauma system plan, which addresses the points identified in the standard has been developed and adopted throughout the county. The County has designated one Level II trauma center. The trauma plan update was completed in 2009 and approved by EMSA in January 2010. Recommendations made by EMSA were successfully addressed in the Trauma System Plan Status Report submitted in August 2010 and subsequently approved by EMSA in September 2010. Revised 1/11

5.09 Public Input.

In planning its trauma care system the local EMS agency shall ensure input from both providers and consumers.

CURRENT STATUS: STANDARD MET.

The local trauma system planning process included broad multidisciplinary input including from consumers through several health services forums for the public and the EMCC. Although the 2009 update of the Trauma System Plan did not involve any substantive changes from earlier planning processes, input was obtained from stakeholders and the Plan was approved by the EMCC. The Plan objectives and progress are subsequently submitted to Contra Costa Board of Supervisors and to EMSA for approval.

Pediatric Emergency and Critical Care Systems

5.10 Pediatric System Design.

Local EMS agencies developing pediatric emergency medical/critical care systems shall determine optimal system, including:

a) Number/role of system participants, particularly EDs,
b) Catchment area design with regard to workload/patient mix,
c) Identification of patients to be primarily triaged or secondarily transferred to designated centers,
d) Role of providers qualified to transport such patients to designated facilities,
e) Identification of tertiary care centers for pediatric critical care and pediatric trauma,
f) Role of non-pediatric, critical care hospitals including those outside the primary triage area,
g) Plan for monitoring and evaluation of the system.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

A comprehensive pediatric system plan that addresses considerations listed in the standard for optimal system design is in place. County EMS leading regional planning efforts in coordination with the EMSC Advisory Committee and Alameda County in an ongoing basis. In December 2010 Contra Costa published a first draft of a countywide Pediatric and Neonatal Disaster Preparedness and Medical Surge Plan Toolkit for public comment. The plan was subsequently adopted and is now tied to the hospital preparedness program deliverables. Revised 4/12

COORDINATION WITH OTHER EMS AGENCIES.

Local hospitals transfer most seriously ill pediatric patients to Children's Hospital, Oakland, in neighboring Alameda County. Children's Hospital has been designated as a Pediatric Critical Care Center.

5.11 Emergency Departments.

Local EMS agencies shall identify minimum standards for pediatric capability of an emergency department, including:

a) Staffing,
b) Training,
c) Equipment,
d) Identification of patients for whom consultation with a pediatric critical care center is appropriate,
e) Quality assurance, and
f) Data reporting to the local EMS agency.

RECOMMENDED GUIDELINE:

Identification Procedure. A County EMS procedure for identifying emergency departments that meet standards for pediatric care, for pediatric critical care centers and pediatric trauma centers.

CURRENT STATUS: STANDARD MET.

The County's EMS for Children Plan, updated in 2008, demonstrated that standards for hospitals were being met. Contra Costa EMS is actively engaged with hospitals in improving capabilities for pediatric and neonatal inpatient surge. At the time of the review all hospitals were evaluated as "pediatric ready." Contra Costa EMS has encouraged all community hospitals to support the California EMSC Readiness Project. Revised 4/12

5.12 Public Input.

In planning its pediatric emergency medical and critical care system, the local EMS agency shall ensure input from the prehospital, hospital providers and consumers.

CURRENT STATUS: STANDARD MET.

Public input was obtained through the EMCC, Medical Advisory Committee, Facilities and Critical Care Committee, and others, in developing and implementing a countywide EMS for Children program. Contra Costa continues to have an active network of emergency department, prehospital and community stakeholders supporting pediatric and neonatal emergency care. Pediatric safety is a high priority EMS system metric. The EMS Agency is currently working with providers to strengthen their pediatric emergency capabilities. Revised 4/12

Enhanced Level: Other Specialty Care Systems

5.13 Specialty System Design.

Local EMS agencies developing specialty care plans for EMS-targeted clinical conditions shall determine the optimal system, for the specific condition involved including:

a) Number and role of system participants,
b) Design of catchment areas (including inter-county transport), with consideration of workload and patient mix,
c) Identification of patients who should be triaged or transferred to a designated center,
d) The role of non-designated hospitals, including those that are outside of the primary triage area,
e) A plan for monitoring and evaluating the system.

CURRENT STATUS: STANDARD MET.

Local EMS Agency has and will continue to consider the points listed in Standard 5.13 in developing specialty care plans. A plan for identification of certain cardiac conditions (S-T Elevation Myocardial Infarcts or STEMIs) by paramedic personnel using equipment that provides a 12-lead electrocardiogram (ECG) and transportation to designated hospitals staffed and equipped to provide immediate specialty care for these patients (STEMI Centers) was implemented in 2008. STEMI System performance reported at appropriate intervals and exceeds national standards. The EMS Agency has development and implemented of a Stroke System as of January 2012. Metrics consistent with national guidance are routinely evaluated as part of system performance. Revised 4/12

5.14 Public Input.

In planning other specialty care systems the local EMS agency shall ensure input from both providers and consumers.

CURRENT STATUS: STANDARD MET.

The EMS Agency has and will ensure input from providers and consumers when planning/ developing specialty care systems. Broad-based input was obtained from providers and consumers when planning and developing our STEMI and Stroke system. Specialty system reports are routinely provided at EMCC and Contra Costa Board of Supervisors. Materials are as posted on our website at www.cccems.org

F. Data Collection and System Evaluation

6.01 QI Program.

The local EMS agency shall establish an EMS quality improvement/assurance program to evaluate response to emergency medical incidents and care provided specific patients. Programs shall address the total EMS system, including all prehospital provider agencies, base and receiving hospitals. It shall address compliance with policies, procedures, and protocols and identification of preventable morbidity and mortality and shall utilize State standards/guidelines. Program shall use provider-based QI/QA programs and shall coordinate them with other providers.

RECOMMENDED GUIDELINE:

Resources to Evaluate. Local EMS agency should have resources to evaluate response to/care provided specific patients.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

The EMS system has a QI program in place to evaluate response to emergency medical incidents and care provided specific patients. Resources are available for the EMS Agency to evaluate response to and care provided individual patients. All Fire EMS ALS providers are required to complete an electronic patient care record for all patient contacts.

Fire-EMS Provider QI plans are subject to EMS Agency approval. Local core metrics for system performance developed and reviewed quarterly within the QI Leadership group. In 2010 State EMSA CEMSIS grant recipient; sharing data for refinement of CEMSIS Trauma, Medical and EMS for Children performance measures. Funds were utilized to support extensive training in CQI performance and data evaluation through a consultant Davis Balestracci. In addition, the EMS agency funded 50 scholarships Institute of Healthcare Improvement (IHI) Certificate for Patient Safety, Quality and Leadership for Fire-EMS providers. This certificate is now the minimum requirement for all CQI personnel in the EMS System. Revised 4/12

6.02 Prehospital Records.

Prehospital records for all patient responses shall be completed and forwarded to appropriate agencies as defined by the local EMS agency.

CURRENT STATUS: STANDARD MET.

The EMS Agency has established prehospital care report (PCR) data to be collected by all contract emergency ambulance providers and paramedic first responders. All Fire EMS ALS providers are now capable of completing an electronic patient care record for all patient contacts A standard PCR for BLS first responder is in place. Electronic PCR compliance monitoring and clinical indicators are available to Fire Agency CQI and EMS staff and are used in monitoring and quality improvement activities. Revised 4/12

6.03 Prehospital Care Audits.

Audits of prehospital care, including both clinical and service delivery aspects, shall be conducted.

RECOMMENDED GUIDELINES:

Linking Mechanism. The local EMS agency should have a mechanism that links prehospital records with dispatch, emergency department, inpatient and discharge records.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINES MET.

Provider agencies, base hospitals and the EMS Agency perform audits of prehospital care. Electronic Prehospital records systems fully implemented. Dispatch data available via First Watch supported with access to wave files for response drill down CQI functions. PCR, emergency department, inpatient, and discharge records are electronically and manually collected for review of critical trauma patients, cardiac arrest situations, and on a case-by-case basis. These processes are supported by a best practice patient/provider safety program (EMS Event Reporting). Linkages with National Registries for Trauma and CARES (Cardiac Arrest Registry to Enhance Survival) and the California Stroke Registry (CSR) are in place and being further refined. Contra Costa is actively exploring opportunities to link prehospital records with receiving hospitals medical record systems on an ongoing basis. Revised 4/12

6.04 Medical Dispatch Evaluation.

The local EMS agency shall have a mechanism to review medical dispatching to ensure that the appropriate level of medical response is sent to each emergency and to monitor the appropriateness of pre-arrival/post dispatch directions.

CURRENT STATUS: STANDARD MET.

The dispatch staffs of all three fire/medical dispatch centers in the county have implemented an Emergency Medical Dispatch program. This program provides for pre-arrival instructions, and for ongoing monitoring and evaluation that is performed in conjunction with the EMS Agency. EMS staff is involved in the Dispatch CQI program in collaboration with dispatch CQI leadership. Revised 4/12

6.05 Data Management System.

Local EMS agency shall establish based on State standards a data management system that supports system-wide planning and evaluation (including identification of high-risk patient groups) and QA audit of care provided specific patients.

RECOMMENDED GUIDELINES:

Integrated Data Management System. The local EMS agency should establish an integrated data management system that includes system response and clinical (both prehospital and hospital) data. The EMS agency should use patient registries, tracer studies, and other monitoring systems to evaluate patient care at all stages of the system.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

Comprehensive data management system. Work continues to implement a seamless data management system. Prehospital first responder and ambulance response and clinical data is available electronically for all responses.

Current emphasis is on linking information to various data management platforms and CEMSIS to support data management efficiencies. A data tracking system (First Watch) has been implemented in each of the fire medical dispatch centers. This system is able to integrate response times and key clinical data. Full integration of various electronic patient care data sources throughout the EMS system is planned to link with CEMSIS in the future, however, state funding will be required to achieve this deliverable. Revised 4/12

6.06 System Design/Operations Evaluation.

The local EMS agency shall establish an evaluation program to evaluate EMS system design and operations. This shall include structure, process, and outcome evaluations, utilizing State standards and guidelines when they exist.

CURRENT STATUS: STANDARD MET.

The EMS Agency has a program to evaluate system components.

6.07 Provider Participation.

The local EMS agency shall have the resources and authority to require provider participation in the system-wide evaluation program.

CURRENT STATUS: STANDARD MET.

The EMS Agency has a reliable process of evaluation. Local EMS providers are active participants in EMS system review processes. Such processes include participation on the EMCC, Medical Advisory Committee, QI/Data Committee, Facilities and Critical Care Committee and Hospital Disaster Forum. EMS providers are also active participants on specialized evaluation projects and programs. Contract emergency ambulance providers submit to intense program review. Contracts and written agreements with EMS providers contain provisions that require participation in EMS system evaluation activities. Revised 4/12

6.08 Reporting.

The local EMS agency shall periodically report on EMS system operations to the Board(s) of Supervisors, provider agencies, and Emergency Medical Care Committee(s).

CURRENT STATUS: STANDARD MET.

The EMS Agency reports to the Board of Supervisors, the EMCC and its advisory committees on a regular basis.

6.09 ALS Audit.

The process used to audit treatment provided by advanced life support providers shall evaluate both base hospital and prehospital activities.

RECOMMENDED GUIDELINES:

Integrated Data Management System. The local EMS agency's integrated data management system should include prehospital, base hospital, and receiving hospital data.

CURRENT STATUS: STANDARD MET AND RECOMMENDED GUIDELINE MET

An EMS system QI process is used to evaluate care provided by paramedics and by base hospital personnel. The EMS agency's integrated data management system includes dispatch, ambulance, first responder, base hospital and trauma system data (e.g. Trauma, STEMI, Cardiac Arrest and Child Death). Efforts to create seamless linkages of this data continue to be explored. In 2011, 12-lead transmission data system was added to support STEMI and Cardiac Arrest program performance. Revised 4/12

Trauma Care System

6.10 Trauma System Evaluation.

The local EMS agency shall develop a trauma system including:

a) A trauma registry,
b) A mechanism to identify patients whose care fell outside of established criteria, and
c) A process of identifying potential improvements to the system design and operation.

CURRENT STATUS: STANDARD MET.

The trauma system evaluation process includes a comprehensive trauma registry, a mechanism to identify "under-triaged" trauma patients, and methods to assure continued optimal operation. The Contra Costa Medical Director

chairs the Regional Trauma Committee and actively participates in State Trauma Commission efforts supporting optimal methodologies and indicators for identifying under triaged patients. Revised 4/12

6.11 Trauma Center Data.

The local EMS agency shall ensure that designated trauma centers provide required data to the EMS agency, including patient specific information that is required for quality assurance and system evaluation.

RECOMMENDED GUIDELINE:

Non-Trauma Center Data. The local EMS agency should seek data on trauma patients who are treated at non-trauma center hospitals and shall include this information in its quality assurance/quality improvement and system evaluation program.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

The EMS Agency collects required trauma registry and system data from the local designated level II trauma center, and seeks necessary trauma-related data from other hospitals that might, on occasion, receive critical trauma patients. Upgrades in data platforms to support data management and reduce cost are being evaluated. Revised 4/12

G. Public Information and Education

7.01 Public Information Materials.

The local EMS agency shall promote the development and dissemination of materials for the public that addresses:

a) Understanding of EMS system design and operation,
b) Proper access to the system,
c) Self help, e.g., CPR, first aid, etc.
d) Patient and consumer rights as they relate to the EMS system,
e) Health/safety habits as they relate to prevention/reduction of health risks in target areas,
f) Appropriate utilization of Emergency Departments.

RECOMMENDED GUIDELINE:

Local EMS agency should promote targeted community education programs on use of emergency medical services.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

The EMS Agency has developed information and materials for dissemination to the public including a 9-1-1 brochure, which is distributed countywide. EMS participants have been involved in prevention programs including violence prevention, child injury prevention, and in Child Death Review. The EMS Agency maintains CPR and public education information on our website at www.cccems.org. Local businesses and other organizations have developed Public Access Defibrillation (PAD) programs to assure rapid availability of defibrillation. The EMS Agency continues to work with public agencies throughout the county to make available CPR and PAD training, and to distribute defibrillators to public agencies with PAD programs. A PAD brochure and PAD implementation guide was developed to support these efforts. In 2009 the EMS Agency implemented the AHA "*HeartSafe* Community" Program to integrate and support system-wide community education on the use to emergency medical services. The EMS Agency is an active facilitator of community Hands-Only CPR and has taught over 3,000 students this skill over the last year in partnership with EMS system stakeholders. Revised 4/12

7.02 Injury Control.

Local EMS agency, in conjunction with local health education programs, shall work to promote injury control/preventive medicine.

RECOMMENDED GUIDELINE:

Programs for Targeted Groups. The local EMS agency should promote the development of special EMS educational programs for targeted groups at high risk of injury or illness.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

The EMS Agency supports/ provides resources to injury control efforts in conjunction with multiple partners within the EMS System (e.g. Trauma Center, Car Safety, Child Injury Prevention Network-Bay Area and *HeartSafe* Community). The local designated trauma center provides a trauma prevention education program directly and financially supports the county's programs to decrease violence and to prevent injury. The local private emergency

ambulance provider undertakes an annual community health research project. EMS staff along with other EMS responders participates on the Contra Costa County Coroner's Child Death Review Committee. The EMS Agency provides data on injury frequency and demographics for populations served at intervals to public health and appropriate stakeholder groups. Revised 4/12

7.03 Disaster Preparedness Promotion.

Local EMS agency, in conjunction with local office of emergency services, shall promote citizen disaster preparedness activities.

RECOMMENDED GUIDELINE:

Disaster Preparedness Activities. The local EMS agency, in conjunction with the local office of emergency services (OES), should produce and disseminate information on disaster medical preparedness.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

EMS Agency works with the OES and other local agencies to promote and disseminate information on disaster preparedness.

7.04 First Aid and CPR Training.

The local EMS agency shall promote the availability of first aid and CPR training for the general public.

RECOMMENDED GUIDELINE:

Training Goals: The local EMS agency should adopt a goal for training an appropriate percentage of the general public in first aid and CPR. A higher percentage should be achieved in high-risk groups.

CURRENT STATUS: STANDARD MET.

EMS has taken a lead in promoting CPR training for the public by information regarding locations of citizen CPR classes. Multiple local agencies promote and provide CPR training on our website. American Medical Response offers a program to provide CPR training and AED training/distribution. This program is supplemented by the *HeartSafe* Community Program launched by the EMS agency in 2009. Revised 4/12

H. Disaster Medical Response

8.01 Disaster Medical Planning.

In coordination with the local office of emergency services (OES), the local EMS agency shall participate in the development of medical response plans for catastrophic disasters, including those involving toxic substances.

CURRENT STATUS: STANDARD MET.

The EMS Agency is actively involved in medical response planning including bioterrorism response. EMS Agency staff has successfully completed the National Incident Management system (NIMS) Training courses IS-00100, IS-00200, and IS-00700.

8.02 Response Plans.

Medical response plans and procedures for catastrophic disasters shall be applicable to incidents caused by a variety of hazards, including toxic substances.

RECOMMENDED GUIDELINES:

Model Plan. The California Office of Emergency Services' multi-hazard functional plan should serve as the model for the development of medical response plans for catastrophic disasters.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

County Health Services has implemented a comprehensive medical/health emergency plan for the county based on SEMS that interfaces with the County Disaster Plan. Medical response plans under SEMS are in place for a variety of potential disastrous or hazardous incidents. A Multicasualty Incident Response (MCI) Plan provides for a multidisciplinary response to incidents with multiple victims including hazardous materials medical incidents. A revision of the local MCI plan helps to assure the broadest possible scope of response possibilities.

8.03 HAZMAT Training.

All EMS providers shall be properly trained and equipped for response to hazardous materials incidents, as determined by their system role and responsibilities.

CURRENT STATUS: STANDARD MET.

County's fire departments and the County Health Services Hazardous Materials Division have addressed hazardous materials response. All emergency ambulance providers are required to attend eight hours of HAZMAT training.

8.04 Incident Command System.

Medical response plans and procedures for catastrophic disasters shall use the Incident Command System as the basis for field management.

RECOMMENDED GUIDELINES:

ICS Training. The EMS agency should ensure that ICS training is provided for all medical providers.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

Medical response plans and procedures for catastrophic events use ICS as the basis for field management and coordination. Training for ICS activities by ambulance personnel is an emergency ambulance contract requirement.

8.05 Distribution of Casualties.

The local EMS agency, using State guidelines when available, shall establish written procedures for distributing disaster casualties to the most appropriate facilities in its service area.

RECOMMENDED GUIDELINES:

Special Facilities and Capabilities. Local EMS agency, using State guidelines and in consultation with Regional Poison Center, should identify hospitals with special facilities and capabilities for receipt and treatment of patient with radiation and chemical contamination and injuries.

CURRENT STATUS: STANDARD MET.

County multicasualty plan identifies patient distribution procedures. Hospital emergency personnel have received specialized HAZMAT training. All basic emergency departments are considered capable of receiving and treating contaminated patients.

8.06 Needs Assessment.

The local EMS agency shall establish written procedures for early assessment of needs and resources and an emergency means for communicating requests to the State and other jurisdictions.

RECOMMENDED GUIDELINE:

Annual Exercises. Local EMS agency's procedures for determining necessary outside assistance in a disaster should be exercised yearly.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

Specific county disaster plan components address out-of-county medical mutual aid requests. A comprehensive Regional Disaster Medical Health Coordination (RDMHC) system is in place in Region II with the CCC EMS Agency transitioned this program to Alameda County in 2011. Local hospitals, ambulance providers and the EMS Agency drill together during statewide disaster exercises. Revised 4/12

8.07 Disaster Communication.

A specific frequency/frequencies shall be identified for interagency communication and coordination during a disaster.

CURRENT STATUS: STANDARD MET.

CALCORD is the County frequency for interagency coordination at the command level. Fire and emergency ambulance units are capable of unit-to-unit communication, and a single frequency has been identified for this purpose. All paramedic ambulances are equipped with cellular telephones. 440 MHz radio base stations and have been installed in all receiving hospital command centers. Portable 440 MHz radios have been issued to the same.

8.08 Inventory of Resources.

The local EMS agency, in cooperation with the local OES, shall develop an inventory of appropriate disaster medical resources to respond to multi-casualty incidents and disasters likely to occur in the service area.

RECOMMENDED GUIDELINES:

Medical Resource Provider Agreements. The local EMS agency should ensure that emergency medical providers and health care facilities have written agreements with anticipated disaster medical resource providers.

CURRENT STATUS: STANDARD MET.

Resource directories have been developed by County OES and by the EMS Agency. A web-based asset-tracking database called "Asset Logistics and Resource Management System" or "ALARMS," was developed and implemented with HRSA funding to inventory and track local hospital and other emergency resources. The EMS Agency has entered into cooperative agreements with the Health Resources Services Administration (HRSA) to make available funding to hospitals and clinics to achieve preparedness in surge capacity; pharmaceutical caches; personal protection; decontamination; communications/information; and education, preparedness training and terrorism preparedness exercises. The Health Department and EMS Agency worked with fire, law, and OES to implement a Homeland Security grant that provided communications and radiological detection equipment, and person protective equipment. Revised 4/12

8.09 DMAT Teams.

Local EMS agency shall establish/maintain relationships with disaster medical assistance teams (DMAT) in its area.

RECOMMENDED GUIDELINE:

Local DMAT Team. The local EMS agency supports the development and maintenance of DMAT teams in its area.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

The county supports the OES Region II DMAT team, CA-6. The EMS agency has a Medical Reserve Corp Program in development. Revised 4/12

8.10 Mutual Aid Agreements.

The local EMS agency shall ensure medical mutual aid agreements with other counties in its OES Region and elsewhere, as needed, to ensure that sufficient emergency medical response and transport vehicles, and other relevant resources will be available during significant medical incidents and during periods of extraordinary system demand.

CURRENT STATUS: STANDARD MET.

Inter-county medical mutual aid planning continues to be been extensive even with the transition of the EMS Agency's role as the Regional Disaster Medical Health Coordinator (RDMHC) to Alameda County. The County is also a signatory to the California Mutual Aid Agreement and is participating in discussions to support other MOUs in this area. Revised 4/12

8.11. CCP Designation.

The local EMS agency, in coordination with local OES and County health officer(s), and using State guidelines when they are available, shall designate casualty collection points (CCPs).

CURRENT STATUS: STANDARD MET.

CCP sites have been designated for all areas of the County.

8.12 Establishment of CCPs.

The local EMS agency shall develop plans for establishing CCPs and a means for communicating with them.

CURRENT STATUS: STANDARD MET.

CCP sites have been designated. There is a plan to dispatch an ambulance to the CCP to communicate with County EOC.

8.13 Disaster Medical Training.

The local EMS agency shall review the disaster medical training of EMS responders in its service area, including the proper management of casualties exposed to and/or contaminated by toxic or radioactive substance.

RECOMMENDED GUIDELINE:

EMS Responders Appropriately Trained. The EMS agency should assure that EMS responders are appropriately trained in disaster response, including the proper management of casualties exposed to or contaminated by toxic or radioactive substances.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

Policies, procedures, and treatment guidelines for substance-specific hazardous material incidents have been developed.

EMS Agency requires eight hours of HAZMAT training for all ambulance personnel. EMS providers participate in training exercises. EMS Agency staff has completed the National Incident Management System (NIMS) Training courses IS-00100, IS-00200, IS-00700, IS300 and IS400. Contra Costa Medical Reserve Corp was officially recognized in May 2009 by DHS and continues to actively recruit health care personnel. Revised 6/12

8.14 Hospital Plans.

The local EMS agency shall encourage all hospitals to ensure that their plans for internal and external disaster are fully integrated with the County's medical response plan(s).

RECOMMENDED GUIDELINE:

Hospital Disaster Drills. At least one disaster drill per year conducted by each hospital should involve other hospitals, the local EMS agency, and prehospital medical care agencies.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

Hospitals have internal and external disaster plans in place. There is integration with the County's disaster plans. EMS Agency facilitates the Medical/Health Preparedness Forum for hospitals and our preparedness partners to share ideas and assist each other in disaster planning. Local hospitals, ambulance providers and the EMS Agency participate in the annual statewide medical/health disaster exercises at a minimum. EMS and Public Health coordinate preparedness activities including hospital fatality management plans for integration into the County's plan for handling mass fatalities with hospitals and appropriate local officials. Revised 6/12

8.15 Inter-hospital Communications.

The local EMS agency shall ensure that there is an emergency system for inter-hospital communications, including operational procedures.

CURRENT STATUS: STANDARD MET.

ReddiNet, an inter-hospital microwave communications system, links hospitals with each other, the EMS Agency, Sheriff's Communications Center, and all three ambulance dispatch centers. 440 MHz radio base stations have been installed in all receiving hospital command centers. Portable 440 radios have been issued to the same. Monthly testing is done on the fourth Wednesday of the month. EMS agency holds three time a day ReddiNet polls as routine part of State and Federal HAvBED. ReddiNet e-learning and training environment planned to maintain end-user competencies. ReddiNet performance metrics are submitted at appropriate intervals to the Hospital Executives and Contra Costa Facilities and Critical Care Committee as part of a formal performance improvement plan. Revised 6/12

8.16 Prehospital Agency Plans.

The local EMS agency shall ensure that all prehospital medical response agencies and acute care hospitals in its service area, in cooperation with other local disaster medical response agencies, have developed guidelines for the management of significant medical incidents and have trained their staffs in their use.

RECOMMENDED GUIDELINE:

Prehospital Training. The local EMS agency ensures the availability of training in management of significant medical incidents for all prehospital medical response agencies and acute-care hospital staffs in its service area.

CURRENT STATUS: STANDARD AND RECOMMENDED GUIDELINE MET.

All hospitals and medical response agencies have written policies and procedures for the management of significant medical incidents. Disaster managers from all facilities actively participate in a robust schedule of training and planning activities coordinator by EMS Disaster Manager. All hospitals participate in multi-agency exercises on an annual basis and are compliant with HICS training. Revised 4/12

Enhanced Level: Advanced Life Support

8.17 ALS Policies.

The local EMS agency shall ensure that policies and procedures allow advanced life support personnel and mutual aid responders from other EMS systems to respond and function during significant medical incidents.

CURRENT STATUS: STANDARD MET.

Current policies waive restrictions on responders during disasters. There are reciprocal agreements with surrounding county EMS agencies.

Enhanced Level: Specialty Care System

8.18 Specialty Center Roles.

Local EMS agencies developing trauma or other specialty care systems shall determine the role of identified specialty centers during significant medical incidents and the impact of such incidents on day-to-day triage procedures.

CURRENT STATUS: STANDARD MET.

In multiple patient situations, mechanisms are in place to assure patients are transported by ground or air to appropriate specialty centers consistent with local MCI plan. Specialty care systems are well developed for Trauma, STEMI and Stroke at the present time. Access to additional specialty care including neurosurgery, organ transplant, stroke, pediatric and neonatal critical care and burns are accessible with base consultation. In a significant medical incident, specialty center designation may not be taken into consideration in patient triage if specialty resources are overwhelmed. Revised 4/12

Enhanced Level: Exclusive Operating Areas/Ambulance Regulation

8.19 EOA/Disasters.

Local EMS agencies that grant exclusive operating permits shall ensure that a process exists to waive the exclusivity in the event of a significant medical incident.

CURRENT STATUS: STANDARD MET.

Current policies and County contracts with providers allow exclusivity waiver in the event of disaster and mutual aid requests.

MAJOR SYSTEM CHANGES

EMS SYSTEM MANAGEMENT AND ORGANIZATION

EMS Agency staff functions and assignments have been evaluated and consolidated in light of Plan priorities and goals. Additional staff has been recruited to support Agency activities specific to EMS system Quality Improvement activities.

Integration of paramedic first responder and ambulance services continues to be a major priority in implementing a comprehensive plan, approved by the Board of Supervisors in May 2004, for the integration of paramedic first responder and ambulance services in those areas of the county covered by private ambulance services. The standard set for EMS responses within Contra Costa County is a paramedic on scene within 10 minutes, either on the fire first responder unit, a paramedic-staffed "Quick Response Vehicle" (QRV), or the transport ambulance.

- All ambulances crews include at least 1 paramedic.
- The number of fire paramedic first responder units has increased from 38 to 41 of 48 planned fire first responder paramedic units in 2010 but are now threatened to be reduced due to widespread economic conditions and lack of funding.
- Four QRVs are located in areas throughout the county to provide or enhance a paramedic response.

The East Contra Costa Fire Agency became an Independent Fire District in 2010. The Contra Costa Stroke System was successfully launched in January 2012. Specialty Center advisory committee's for Stroke, STEMI and Trauma assist the EMS agency in system performance review and refinement. Revised 4/12

STAFFING AND TRAINING

At the request of the Fire Chiefs, a Fire-EMS Training Consortium that includes representatives from each of the fire first responder agencies, emergency ambulance providers and EMS has been developed and implemented. The goal of the Consortium is to standardize EMS training throughout the county by working together on developing training plans, providing training aids, and encouraging participation by both public and private personnel working together. Fire providers have taken responsibility for further program development, although EMS Agency continues to provide staff support. The consortium manages the prehospital mobile simulator program using adult, pediatric and infant simulators to support clinical competency training. The Consortium is the training arm of the EMS System Quality Improvement Program. Revised 6/12

COMMUNICATIONS

Initiated upgrade in ReddiNet platform enhancement transitioning from Packet Radio to Satellite Capability.

The EMCC Committee is continuing to monitor the development and implementation of new technology to enhance the 9-1-1 system for mobile devices.

In May 2010 Contra Costa Dispatch Agencies received notification of a new statewide 9-1-1 call reporting tool being implemented by the State Public Safety Communications Division. The single solution replaces the FRINS and CARSnet systems enhancing connectivity and reliable time stamping when 9-1-1 calls are transferred from one agency to another. In 2011 the East Bay Regional Communication System (EBRCS) intraoperable communication project initiated its planned roll out. The launch of the program began first with law and in 2012 to Fire and other affected agencies. The EMS Agency is working with all EMS System stakeholders to fully implement over the next three years along with narrow banding in compliance with new federal and state communication requirements. Revised 6/12

RESPONSE AND TRANSPORTATION

Significant time and effort has been spent reviewing and re-evaluating the model used for response to emergency medical requests. In cooperation with the EMS Agency, local fire first-responder agencies continue to expand first responder advanced life support programs. Changes in ambulance staffing configuration and response time standards have been implemented in areas with fire paramedic first responder services.

Local EMS aircraft policies and procedures for classification, authorization, request for, transport criteria and field operations have been implemented. Two currently classified and accredited air medical providers are based within County.

In 2010 the EMS Agency implemented an enhanced intrafacility paramedic transport protocol focused on providing hospitals with rapid 9-1-1 response for critical trauma, STEMI, Stroke and medical patients. Revised 6/12

TRAUMA SYSTEM PLAN

During 2009 the Contra Costa Trauma System Plan was updated and submitted to EMSA in 2009. The Trauma System Plan was approved by EMSA in January 2010. In August 2010 Contra Costa EMS submitted a Trauma System Plan update that addressed several identified issues. That update was subsequently approved by The EMS Commission in June 2012. A head injury trauma study by John Muir Base and the EMS Agency is in progress an effort to improve survival rates of head injury victims. Revised 6/12

FACILITIES AND CRITICAL CARE

Nine acute care hospitals currently provide Basic Emergency Medical Services. The ninth facility, Kaiser Medical Center, Antioch, opened in November 2007. Contra Costa eliminated Emergency Department diversion in 2007 and partners with each hospital to facilitate appropriate patient handoff. Revised 1/11

DATA COLLECTION AND SYSTEM EVALUATION

American Medical Response, the County's largest contract emergency ambulance provider, uses an electronic patient care reporting system that is linked to their dispatch data. The electronic patient care report (ePCR) is printed at the patient's receiving hospital and specified data points are entered into a database. This information is used for a variety of functions including quality improvement activities by designated EMS staff.

Fire agencies providing paramedic ambulance and first responder services have implemented to a similar electronic PCR system (Zoll ePCR) to replace previous electronic and paper systems. This software was purchased by the EMS Agency for all fire agencies, and work was completed to tailor the system to meet local needs. This system was implemented in early 2007 by most agencies. Clinical and system performance metrics are now accessible, however work continues to fully integrate this system to other nonclinical and clinical data platforms used by EMS to evaluate the system as a whole. Contra Costa has been an active participant in all statewide CEMSIS efforts. Revised 6/12

PUBLIC INFORMATION AND EDUCATION

EMS System continues its emphasis on response to sudden Cardiac Arrest and Public Access Defibrillation or "PAD" programs. These programs are supported in partnership with the American Heart Association. The number of publically accessible defibrillators has increased throughout the county by an additional 65 AEDs in 2010.

The EMS Agency has also implemented a system-wide program called *HeartSafe* Community where all elements of the Chain of Survival are in place. This program partners EMS, the American Heart Association and local communities to improve cardiovascular health of the citizens of that community and to increase the chances of survival from heart attack, stroke or sudden cardiac arrest. During 2011 the EMS agency played a role in facilitating a school-based Hands-Only CPR program training over 3,000 students a year. Revised 4/12

DISASTER MEDICAL RESPONSE

Disaster planning continues to be a high local priority. EMS Agency staff members participate on the Health Services Bioterrorism Response Planning Committee that provides education and training on biological threats for emergency responders, clinicians, and the public.

County and other organizations have been involved in the preparation of several grant applications related to bioterrorism and homeland security. EMS staff has successfully completed NIMS courses ICS-100, ICS-200, ICS-700 with selected staff completing ICS 300, ICS 400.and State-sponsored Earthquake Training.

In May 2009 the Contra Costa Medical Reserve Corp (MRC) was officially recognized by DHV. It was registered with the US Citizen Corp, interviewed and now listed on the federal website as an official MRC, as well as in Disaster Healthcare Volunteers of California. In 2012 the MRC program was officially approved by the Contra Costa Board of Supervisors.

During 2010 the EMS Agency monitored the H1N1 and influenza impacts and lessons learned. The EMS agency has been actively involved in the disaster and emergency preparedness and medical surge planning for pediatrics and neonates in collaboration with Alameda County EMS. Disaster preparedness activities involving all area hospitals and EMS provider agencies have been conducted. Contra Costa EMS has a countywide pediatric and neonatal emergency preparedness and medical surge plan and toolkit and is working with all hospitals to support their pediatric and neonatal response capabilities as part of the county Medical Health Preparedness Forum. Revised 4/12

2011 EMS System Plan

SPECIFIC OBJECTIVES

Progress From Last Reporting Period in 2010

	Standard	Meets State Standard	2011 Objectives	Progress to date
1.07	Trauma Planning	Yes	Timely submission of Annual Trauma System Status Report to EMSA.	Objective met: Trauma System Plan accepted by EMSA with recommendation to include as part of system plan going forward.
1.14	Policy and Procedure Manual	Yes	Annual review and update of prehospital care policies and procedures based on prehospital evidence-based care. Implementation of new American Heart Association Guidelines for BLS and ALS within 1-2 years.	Objective partially met: BLS guidelines implemented in 2011 and ALS guideline changes going to include effective January 2012.
1.20	DNR	Yes	Ongoing review policies and procedures to ensure language consistent with statewide POLST implementation including updates in public and prehospital personnel education campaigns within 1-2 years.	Objective partially met: policy language continues to be refined and educational efforts in place. Website resources to be developed.
1.21	Determination of Death	Yes	Ongoing review and update policies, resources and training for unexpected deaths in pediatrics and adults within 1- 2 years.	Objective met: These issues have been incorporated into our CQI program and processes on a continuous basis.
1.23	Interfacilty Transfer	Yes	Continued evaluation and process improvement supporting rapid interfaciltiy transfer in high-risk populations, e.g. Trauma, STEMI, Stroke within 1 year.	Objective met: Evaluation process identified need for broader ongoing quality effort with all hospitals to support timely transfer of patients when higher level of care needed.
2.06	Response	Yes	Continue to work with interested fire first responder agencies to increase numbers of paramedics on first-response units within 1-5 years.	Objective on hold: No requests from fire first responder agencies to increase numbers of paramedics. Economic conditions supporting funding have significantly deteriorated. Governing bodies for fire first responder agencies have reduced services when funding is not available. These are factors outside of the EMS agency authority and control.

	Standard	Meets State Standard	2011 Objectives	Progress to date
4.17	ALS Equipment	Yes	Ongoing evaluation of Chest Compression Devices and their efficacy for improving patient survival within 1-3 years.	Objective met: Contra Costa continues to participate in ongoing study to evaluate compression devices. Funding requires continued grant and stakeholder support.
			Implementation plan for county-wide 12 lead transmission-using LifeNet Technology System within 1-3 years.	Objective partially met: trial of transmission program successful and all STEMI centers involved in technology. Technology gaps exist for a portion of the county due to problems with intra-operability of devices. Solutions are being explored to successfully implement the program county-wide. Program requires support of ongoing funding to fully implement program thru grants and stakeholders.
5.06	Hospital Evacuation Plan	Yes	Integration of Hospital specific evacuation plans into EMS system hospital evacuation planning within 1-3 years.	Objective met: EMS agency facilitates the Hospital Preparedness Program and in that capacity works to support exercises to test and evaluated hospital specific evacuation plans. Funding on these efforts is tied to state funding.
5.07	Base Hospital	Yes	Review and analysis of joint Base Hospital/EMS head trauma triage study within 1-2 years.	Objective largely met: data collection is complete. Analysis is in progress with plan to publish data and refine current trauma protocols.
5.08	Trauma Planning	Yes	Continued successful participation with in CEMSIS Trauma data submission and indicator development in collaboration with local, regional and state trauma leadership within 1-5 years.	Objective partially met: CEMSIS system fails to have sufficient funding to support local data integration. Solutions continue to be explored on the local, regional and state level. Progress on this objective dependent on future grant funding to support state integration.
5.10	Pediatric Emergency and Critical Care System	Yes	Continued networking with pediatric emergency care advocates throughout the local, regional and state EMS systems supporting pediatric emergency care best practices.	Objective partially met: EMS has instituted a strong program focused on the high-risk low-volume pediatric emergency population. Significant improvements in pediatric resources, trauma and incident review are supporting development of tools, training and resources to support competency. This is part of an ongoing commitment to patient safety.

	Standard	Meets State Standard	2011 Objectives	Progress to date
5.13	Specialty System Design	Yes	Stroke System Implementation within 1-2 years.	Objective met: The Stroke system program was approved by the Contra Costa Board of Supervisors. Seven Primary Stroke Centers were designated in 2010 and the program went live in January 2012.
5.14	Public Input	Yes	Implement Stroke Advisory Oversight Group while continuing to build *HeartSafe* Communities within 1-2 years.	Objective largely met: Stroke Advisory oversight group and *HeartSafe* communities efforts are now linked and part of a larger community education program supporting recognition of stroke, heart attack, cardiac arrest and rapid access to 9-1-1.
6.01	QA/QI Program	Yes	Implement Cardiac Arrest Registry for Enhanced Survival (CARES) web-based hospital reporting within 1-2 years.	Objective not met: funding for CARES and transitions in EMS staff have limited progress on this objective. EMS continues to work with Facilities and Critical Care to support this implementation.
			Implement stroke system performance monitoring in collaboration with designated stroke centers and California Stroke Registry within 1-3 years.	Objective partially met: Continuing to work with Stroke Registry and stroke centers to implement data collection and reporting. This is the first time the CSR has worked with an entire stroke community as part of their stroke system metrics and refinement to build in prehospital metrics and design appropriate reports will require time.
6.03	Prehospital Care Audits	Yes	Exploration of linkages between prehospital and hospital data platforms to evaluate EMS patient care supporting evidence-based EMS system performance metrics supporting improved patient outcomes, e.g. CARES, STEMI, Stroke, Trauma within 2-5 years	Objective initiated: Funding and technology incompatibilities continue to constrain the EMS system from making significant progress in this area at this time. Opportunities are on the horizon that will likely require significant federal or state grant funding.
7.01	Public Education	Yes	Expansion of *HeartSafe* Communities to include support for CPR, PAD, heart attack, stroke and healthy lifestyle within 2-3 years.	Objective largely met: *HeartSafe* communities efforts are now integrated as part of a larger community education program supporting recognition of stroke, heart attack, cardiac arrest and rapid access to 9-1-1 involving numerous stakeholders and groups.

	Standard	Meets State Standard	2011 Objectives	Progress to date
7.03	Disaster Preparedness Promotion	Yes	Explore implementation of bi-county pediatric medical surge plan with Alameda County, while supporting development of regional and state efforts to address pediatric disaster management within 1-3 years.	Objective initiated: Contra Costa and Alameda Counties are currently the leads in this area and supporting a statewide effort to improve pediatric and neonatal disaster preparedness.
8.13	Disaster Medical Response	Yes	Sustain active network of ongoing recruitment and development of Contra Costa Medical Reserve Corps (MRC) within 5 years.	Objective partially met: MRC program development continues and improvements are being implemented to support a reliable MRC capability that could be mobilized in an event. This is a long-term project that requires ongoing volunteer commitment and funding.
8.15	Interhospital Communications	Yes	Address current gaps and improvement opportunities for ReddiNet platform to support reliable use by hospitals within 2-3 years.	Objective largely met: Robust CQI effort with regular compliance reporting to participating hospitals is helping hospitals design reliable processes for reporting and communication competency. This program is not part of the Hospital Preparedness Program performance improvement efforts.
8.17	Enhanced Level: Advanced Life Support	Yes	Re-evaluation of MCI Plan implemented in 2008 to support field and provider effectiveness during significant medical incidents within 2-3 years.	Objective met: MCI advisory group has developed ongoing program of MCI plan review and training as part of this effort.
8.18	Enhanced Level: Specialty Care Systems	Yes	Designate Stroke Center candidates and establish system oversight in preparation for launch of Contra Costa Stroke System in January 2012.	Objective completed as of January 1, 2012.

TIMELINE/ACTIONS TO BE ADDRESSED

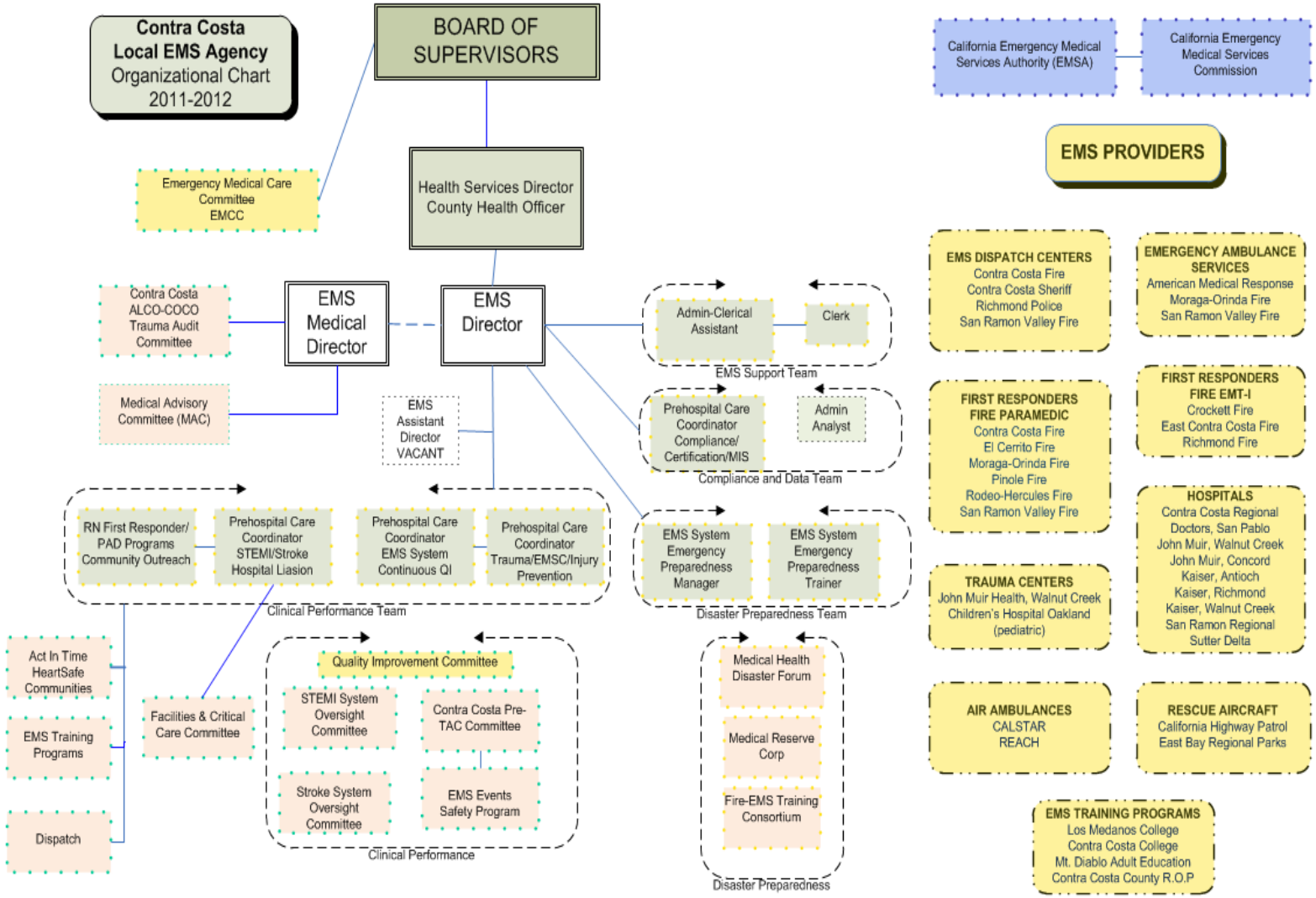
All State standards have been met. We plan to address or reassess the following objectives.

	Standard	Meets State Standard	2012 Objectives	Time Frame
1.07	Trauma Planning	Yes	Submission of Annual Trauma System Status Report.	Annually
1.14	Policy and Procedure Manual	Yes	Update of prehospital care policies and procedures based on prehospital evidence-based care. Implementation of new American Heart Association Guidelines for ALS.	1 year
			Evaluate all patient care protocols for activities that do not support a patient benefit, delay transfer to definite care and do not support patient safety. Revise protocols to reduce cost while prioritizing patient safety.	3-5 years
1.20	DNR	Yes	Ongoing review policies and procedures to ensure language consistent with statewide POLST implementation including updates in public and prehospital personnel education campaigns. Creating web resources for the community.	1-2 years
1.21	Determination of Death	Yes	Ongoing review and update policies, resources and training for unexpected deaths in pediatrics and adults.	Annually
1.23	Interfacilty Transfer	Yes	Continued evaluation and process improvement supporting rapid interfaciltiy transfer in high-risk populations, e.g. Trauma, STEMI, Stroke.	Annually
2.06	Response	Yes	Evaluate and mitigate as possible system impacts of fire station closures as a result of reductions in EMS first responder funding and health care reimbursement.	1-5 years
4.17	ALS Equipment	Yes	Participate in ongoing evaluation of Chest Compression Devices and their efficacy for improving patient survival.	1-3 years
			Evaluate current equipment lists for cost savings and patient need based on patient care data.	1-5 years
			Fully implement plan for county-wide 12 lead transmission-using LifeNet Technology System.	1-3 years
5.06	Hospital Evacuation Plan	Yes	Integrate neonatal and pediatric planning into community hospital disaster plans.	1-3 years
5.07	Base Hospital	Yes	Complete analysis of joint Base Hospital/EMS head trauma triage study.	1-2 years
5.08	Trauma Planning	Yes	Continued participation in CEMSIS Trauma and Medical data submission and indicator development in collaboration with local, regional and state trauma leadership.	1-5 years
5.10	Pediatric Emergency and Critical Care System	Yes	Continued networking with pediatric emergency care advocates throughout the local, regional and state EMS systems supporting pediatric emergency care best practices.	1-2 years
5.13	Specialty System Design	Yes	Stroke System Evaluation	Annually

	Standard	Meets State Standard	2012 Objectives	Time Frame
5.14	Public Input	Yes	Work with transport agencies to provide consumer guidance to the lay public on paying for their ambulance bills.	1-2 years
6.01	QA/QI Program	Yes	Implement Cardiac Arrest Registry for Enhanced Survival (CARES) web based hospital reporting.	1-2 years
			Implement stroke system performance monitoring in collaboration with designated stroke centers and California Stroke Registry.	1-3 years
6.03	Prehospital Care Audits	Yes	Exploration of linkages between prehospital and hospital data platforms to evaluate EMS patient care supporting evidence-based EMS system performance metrics supporting improved patient outcomes, e.g. CARES, STEMI, Stroke, Trauma.	5 years
7.01	Public Education	Yes	Expansion of *HeartSafe* Communities to include support for CPR, PAD, heart attack, stroke and healthy lifestyle.	Annually
7.03	Disaster Preparedness Promotion	Yes	Explore implementation of bi-county pediatric medical surge plan with Alameda County, while supporting development of regional and state efforts to address pediatric disaster management.	3 years
8.13	Disaster Medical Response	Yes	Sustain development and recruitment of Contra Costa Medical Reserve Corp volunteers.	5 years
8.15	Interhospital Communications	Yes	Address ongoing gaps and improvement opportunities for ReddiNet platform to support reliable use by hospitals.	Annually
8.17	Enhanced Level: Advanced Life Support	Yes	Support field and provider effectiveness during significant medical incidents through MCI plan evaluation and training.	Annually
8.18	Enhanced Level: Specialty Care Systems	Yes	Evaluate pending new regulations for specialty care systems, e.g. STEMI, Stroke, EMS for Children.	1-2 years

ORGANIZATIONAL CHART

Contra Costa Health Services, Emergency Medical Services



AMBULANCE ZONE SUMMARY FORM - ERA I

Local EMS Agency or County Name: Contra Costa County
Area or sub area (Zone) Name or Title: ERA I
Name of Current Provider(s): American Medical Response
Area or sub area (Zone) Geographic Description: ERA-I includes the cities of El Cerrito, Richmond, Pinole, Hercules, San Pablo, Kensington, Martinez, Pleasant Hill, Lafayette, and Walnut Creek west of Highway 680 and adjacent unincorporated areas excluding that portion of ERA 1 included in the Moraga-Orinda Fire Protection District.
Statement of Exclusivity, Exclusive or non-Exclusive (HS 1797.6): Exclusive
Type of Exclusivity, "Emergency Ambulance", "ALS", or "LALS" (HS 1797.85): Emergency Ambulance, ALS, 9-1-1 responses
Method to achieve Exclusivity, if applicable (HS 1797.224 Competitively-determined. Request for Proposal and review process held at least every 10 years. EMS Authority approved an RFP August 10, 2004. An exclusive 9-1-1 contract with American Medical Response went into affect of July 1, 2005.

AMBULANCE ZONE SUMMARY FORM – ERA II

Local EMS Agency or County Name: Contra Costa County
Area or sub area (Zone) Name or Title: ERA II
Name of Current Provider(s): American Medical Response
Area or sub area (Zone) Geographic Description: ERA-II includes the cities of Clayton, Concord, Walnut Creek east of Highway 680 and adjacent unincorporated areas.
Statement of Exclusivity, Exclusive or non-Exclusive (HS 1797.6): Exclusive
Type of Exclusivity, "Emergency Ambulance", "ALS", or "LALS" (HS 1797.85): Emergency Ambulance, ALS, 9-1-1 responses
Method to achieve Exclusivity, if applicable (HS 1797.224) Competitively-determined. Request for Proposal and review process held at least every 10 years. EMS Authority approved RFP August 10, 2004. An exclusive 9-1-1 contract with American Medical Response went into affect of July 1, 2005.

AMBULANCE ZONE SUMMARY FORM – ERA III

Local EMS Agency or County Name: Contra Costa County
Area or sub area (Zone) Name or Title: ERA III
Name of Current Provider(s): Moraga-Orinda Fire Protection District
Area or sub area (Zone) Geographic Description: ERA-III includes the territory of the Moraga -Orinda Fire Protection District
Statement of Exclusivity, Exclusive or non-Exclusive (HS 1797.6): Exclusive
Type of Exclusivity, "Emergency Ambulance", "ALS", or "LALS" (HS 1797.85): Emergency Ambulance-all calls requiring emergency ambulance response, ALS
Method to achieve Exclusivity, if applicable (HS 1797.224 Grandfathered with exclusivity pursuant to H.S. 1797.224. Moraga Fire Protection District began providing paramedic ambulance service throughout the territory of its jurisdiction in June 1977 and has continued on an uninterrupted basis. In December 1997, the territory of the Moraga Fire Protection District was combined with the territory of the Orinda Fire Protection District and a new Moraga-Orinda Fire Protection District formed and the County exclusive operating area agreement update to reflect the expanded territory. EMSA approved this boundary adjustment on January 30, 2003.

AMBULANCE ZONE SUMMARY FORM – ERA IV

Local EMS Agency or County Name: Contra Costa County
Area or sub area (Zone) Name or Title: ERA IV
Name of Current Provider(s): San Ramon Valley Fire Protection District
Area or sub area (Zone) Geographic Description: ERA IV includes the territory of San Ramon Valley Fire Protection District.
Statement of Exclusivity, Exclusive or non-Exclusive (HS 1797.6): Exclusive
Type of Exclusivity, "Emergency Ambulance", "ALS", or "LALS" (HS 1797.85): Emergency Ambulance-all calls requiring emergency ambulance response, ALS
Method to achieve Exclusivity, if applicable (HS 1797.224
Periodic Request for Proposal process. Request for proposal process held in 2008 resulted in a contract that expires October 21, 2018.

AMBULANCE ZONE SUMMARY FORM – ERA V

Local EMS Agency or County Name: Contra Costa County
Area or sub area (Zone) Name or Title: ERA V
Name of Current Provider(s): American Medical Response West
Area or sub area (Zone) Geographic Description: ERA-V includes all of East County including the cities of Pittsburg, Bay Point, Antioch, Brentwood and unincorporated areas along the 9-1-1 boundary line separating East from Central County.
Statement of Exclusivity, Exclusive or non-Exclusive (HS 1797.6): Exclusive
Type of Exclusivity, "Emergency Ambulance", "ALS", or "LALS" (HS 1797.85): Emergency Ambulance, ALS, 9-1-1 responses
Method to achieve Exclusivity, if applicable (HS 1797.224 Competitively-determined. Request for Proposal and review process held at least every 10 years. EMS Authority approved RFP August 10, 2004. An exclusive 9-1-1 contract with American Medical Response went into affect of July 1, 2005.

Contra Costa Emergency Medical Services
Specialty Systems of Care Reports
Trauma, Cardiac Arrest, STEMI, Stroke and Quality
2011

Contra Costa Emergency Medical Services
Trauma System Plan Goals and Objectives

Overview: A number of goals and objectives have been identified to assure 1) rapid identification of severely injured patients in the field, with 2) prompt transport to a trauma center, where 3) well-qualified physician and nursing staff are equipped and prepared to provide immediate intervention and ongoing care appropriate to the needs of the patient. The following describes the Contra Costa Trauma System goals and objectives:

Category	Goal	Objective	Process/Metric	Timeframe
Trauma system planning	Trauma plan incorporates applicable standards and guidelines from American College of Surgeons Committee (ACSCOT) on Trauma Resources for *Optimal Care of the Injured Patient 2006* and as may be revised from time to time.	Compare document standards to current EMS trauma policies and procedures to identify areas for improvement.	TAC case review and Trauma registry data used in the evaluation of trauma system policies, procedures and protocols for consistency with ACSC guidelines.	Policy and procedures reviewed annually and as needed per ACSC guideline updates.
		Implement identified areas for improvement using a process designed for input from the Medical Advisory Committee (MAC) and the trauma center.	Pre TAC case review and EMS patient/provider safety reporting (EMS Event Reporting) used to identify gaps in trauma system planning and performance.	Reported annually with monthly, quarterly and as needed review.

Progress to date:

In January 1, 2009 the definition of “Major Trauma Victim” (MTV) was modified in the system to include only patients with an ISS of greater than 15. EMS and the Trauma Center agreed this would be more consistent with ACSCOT guidelines. This new definition is the one utilized by most trauma systems across the nation. Policies and procedures were updated to reflect that change. Historical data was retrospectively evaluated based on the new definition so trending metrics would be meaningful. The most current copies of these updated policies, procedures and protocols are available on our website at www.cccems.org

Contra Costa Emergency Medical Services
Trauma System Plan Goals and Objectives

Category	Goal	Objective	Process/Metric	Timeframe
EMS Response	Rapid, well prepared response to injured patients in the field.	Monitor and evaluate fire first responder compliance with established response times monthly to assure a paramedic response to all 9-1-1 requests within each emergency response area.	Response times reflecting both fire first responders and ambulance providers for all 9-1-1 requests should be within 10 minutes at least 90% of the time.	Reported annually with monthly, quarterly and as-needed review.
		Monitor and evaluate emergency ambulance compliance with established response times monthly to assure a paramedic response to all 9-1-1 responses areas.	Reviewed as part of fire first responder and ambulance contract compliance.	
		Assure through annual contract compliance evaluations that fire first responder and ambulance personnel are well prepared to provide quality care for trauma victims by requiring ongoing training that meets or exceeds that established by the ACS as outlined in ITLS and PHTLS.	Documentation of appropriate training consistent with ITLS and/or PHTLS within the last year reviewed as part of contract compliance for both fire first responders and ambulance providers.	Annually.

Progress to date: In 2011 EMS system code 3 response time for metro/urban reflecting averaged 7:56 minutes 90% of the time. Response time standards are set for fire first response by their respective governing boards. Economic factors threaten to further reduce fire first response capabilities and level of participation in the EMS System however these factors have not affected ambulance response. Additional information on response time metrics can be found in the Contra Costa EMS Annual Report posted on our website at www.cccems.org.

First responder fire and transport agencies track compliance with ITLS and PHTS training on in-house e-learning systems and submit training compliance reports at intervals as part of EMS and provider agency contract compliance. In May 2010, Contra Costa EMS recognized the successful completion of the ATT (Assessment and Treatment of Trauma) Course as being equivalent to ITLS and PHTLS. All three courses are now recognized as meeting prehospital trauma training requirements in Contra Costa County.

Contra Costa Emergency Medical Services
Trauma System Plan Goals and Objectives

Category	Goal	Objective	Process/Metric	Timeframe
Triage	Critically injured patients that are the most in need of the specialized services available at the trauma center are quickly identified in the field. These patients have injuries that result in an ISS score of >15.	Monitor and evaluate undertriage rates by field and base hospital personnel to assure rate of less than 5% annually and over time.	Undertriage is defined as patients who are transported by EMS to a non-trauma center receiving hospital based on triage by a paramedic or base and who has an ISS>15	Reported annually with monthly, quarterly and as needed review.
		Monitor and evaluate overtriage rates by field and base hospital personnel to maintain an overtriage rate of no more than 80%[1].	Overtriage is defined as patients transported by EMS to a trauma center based on triage criteria or are triaged by base hospitals and have an ISS<15.[2]	Reported annually with monthly, quarterly and as needed review.

Progress to date:

Undertriage by Year

Type of Triage Error	2006	2007	2008	2009	2010	2011
TOTAL UNDERTRIAGES	**26**	**36**	**52**	**48**	**46**	**52**
Undertriage Rate[3]	2.3	3.0	4.7	4.2	3.7	4.3
Undertriage %[4]	1.9%	2.8%	4.4%	3.9%	3.9%	4.2%
Base Contact for Trauma Destination	14	17	15	18	24	16
Triaged by Field Personnel	12	19	37	30	22	36

Source: EMS Agency based on data from the John Muir Health, Walnut Creek Trauma Registry and Emergency Department Log. Note: Definition of Major Trauma Victim (MTV) modified in 2009 to include only patients with Injury Severity Score (ISS) of greater than 15. Prior years' data is compared based on new definition.

In **2011**, 2466 patients were identified as requiring **trauma triage**, 1,215 of which were transported directly to J**ohn Muir Trauma Center**. 117 patients were transported to Children's Hospital Oakland, and 68 to out-of-county adult trauma centers, primarily Eden Hospital, Castro Valley and Highland Hospital, Oakland, U.C. Davis, and Santa Clara Valley Medical Center. Patients in traumatic full arrest or whose airway cannot be managed are triaged to the closest basic emergency department for resuscitation. John Muir Trauma Center has seen **33,400** patients have been triaged through the County trauma system. In 2010, the definition of **"Major Trauma Victim" (MTV)** was modified in the system to include only patients with an Injury Severity Score (ISS) of greater than 15. Injury Severity Score is a standardized retrospective assessment of the level of severity of injury. Previously, patients with ISS score of 10-14 with length of stay of three days or more were also considered MTVs. This new definition is the one utilized by most trauma systems across the nation. Critically injured patients who arrive at non-trauma center hospitals may be transferred to trauma centers.

[1] No uniform methodology for calculating overtriage rates exist at the state or national level although ACS guidelines suggest that an overtriage rare of < 50% is preferred.
[2] Excludes out-of-county transports, transfers, patient walk-ins, and patients transported to the trauma center as a receiving facility rather than as part of the trauma system. Considerations from evaluation include discharges from the emergency department and trauma team non-activations on EMS transports based on triage.
[3] Undertriage Rate = number of under triages/number of patients triaged to trauma centers.
[4] Undertriage Percent = number of under triages/number of patients triaged to receiving facilities.

Contra Costa Emergency Medical Services
Trauma System Plan Goals and Objectives

Category	Goal	Objective	Process/Metric	Timeframe
On Scene Treatment	Field treatment protocols specifically designed to provide optimal care for the injured patient.	Review field treatment protocols annually to assure care provided is state of the art for injured patients.	Policy and protocol review supplemented with concurrent review of electronic ePCR audits of field performance.	Annually and as needed.

Progress to date:

All policies, procedures and field protocols were reviewed annually or updated as needed. EMS protocols are available on our website at www.cccems.org. Major revisions in trauma triage criteria, helicopter response and the development of a "field manual" utilizing a user friendly format was instituted in 2010. Field treatment is routinely reviewed and metrics for pain assessment, invasive interventions, helicopter utilization and other protocol related prehospital care data are evaluated.

As part of data entry into the trauma registry all trauma prehospital electronic patient care records are reviewed. Out of this review process selected cases are identified submitted to the Prehospital Trauma Advisory Committee and Alameda/Contra Costa County Trauma Advisory Committee. Recommendations for improvement in training, processes, equipment and communication are generated through this rigorous review process

Patients with more serious injuries increasingly have been noted to be in older age groups (65 and over). Triage of elderly patients is more difficult and remains a problem throughout the nation because their presentation is frequently much more subtle, with more minor mechanisms of injury (primarily falls). Many have overlying medical issues that cloud the ability to determine if their symptoms and findings are truly related to trauma. In 2009, a head trauma study was approved by EMS and the trauma center looking at refining the ability of field providers and base hospital MICNs in determining mechanisms to reliably identify patients at risk for serious occult head trauma.

A study was instituted in response to trauma system data that suggested there was a higher than expected undertriage rate for this population. The study was approved in 2009 and implemented in March of 2010. Results from this study may help further refine local field treatment protocols and trauma triage criteria. Data collection was completed in Spring of 2011 and study is in pre-submission for future publication.

Contra Costa Emergency Medical Services
Trauma System Plan Goals and Objectives

Category	Goal	Objective	Process/Metric	Timeframe
On Scene Time	Critically injured patients are rapidly transported to definitive care at the trauma center.	Monitor and evaluate helicopter, ambulance, first responder data and trauma registry data to ensure compliance.	90% compliance with on-scene times of 15 minutes or less by ambulance or helicopter.	Quarterly and annual review as needed.

Progress to date:

Trauma Scene Time [5] (Average in minutes)	2008 (n>1000) Average in minutes			2009 (n>1000) Average in minutes			2010 (n>1000) Median Time in minutes		
Transport Mode	**Blunt**	**Penetrating**	**Cumulative**	**Blunt**	**Penetrating**	**Cumulative**	**Blunt**	**Penetrating**	**Cumulative**
Helicopter	17	13	15	16	13	14.5	14.5	14	14
Ground	17	14	15.5	17	14	15.5	17	13	16
			15.25			15			15

90% compliance with on-scene times of 15 minutes or less met in 2010 when averaging response times for both blunt and penetrating data. Trend analysis reveals that the Contra Costa EMS system produces highly reliable levels of performance in this area. This reflects data that is not controlled for scene times requiring prolonged extraction, environmental or patient factors that could influence scene time.

[5] 2008 data included San Ramon/Moraga-Orinda while 2009 data reflects AMR only.

Contra Costa Emergency Medical Services
Trauma System Plan Goals and Objectives

Category	Goal	Objective	Process/Metric	Timeframe
Transport Mode	Critically injured trauma patients are transported from the field to a trauma center rapidly and in a safe manner.	Monitor and evaluate ground vs helicopter utilization data to ensure there is identified and measurable time-savings compliance.[6]	90% helicopter scene time meets or exceeds 25 minute local metric and outliers demonstrate other benefit to the patient.[7]	Quarterly and annual review as needed.

Progress to date:

Contra Costa EMS has been working with CALSTAR, REACH and the Helicopter Task Force to develop appropriate EMS System Performance Metrics for Air Medical Response. Efforts being made to link electronic patient care data to EMS for review and analysis. Current system relies on many non-electronic processes and needs to be improved to facilitate appropriate data management.

Trauma Scene Time [8] (Average in minutes)	2008 (n>1000) Average in minutes			2009 (n>1000) Average in minutes			2010 (n>1000) Median Time in minutes		
Transport Mode	**Blunt**	**Penetrating**	**Cumulative**	**Blunt**	**Penetrating**	**Cumulative**	**Blunt**	**Penetrating**	**Cumulative**
Helicopter	17	13	15	16	13	14.5	14.5	14	14
Ground	17	14	15.5	17	14	15.5	17	13	16
			15.25			15			15

90% compliance with on-scene times of 25 minutes or less met in 2010 when averaging response times for both blunt and penetrating data. Trend analysis reveals that the Contra Costa EMS system produces predictable and highly reliable levels of performance in this area. This reflects data that is not controlled for scene times requiring prolonged extraction, environmental or patient factors that could influence scene time.

[6] Ground ambulance transport times set the maximum standard and helicopter transport is used only if there is a measurable timesaving or if treatment needed is only available by helicopter staff. Helicopter field care and transport time (which includes on-scene, flight and transport from helipad to ED) is optimally 20-25 minutes in most cases.

[7] See footnote #2.

[8] 2008 data included San Ramon/Moraga-Orinda while 2009 data reflects AMR only.

Contra Costa Emergency Medical Services
Trauma System Plan Goals and Objectives

Category	Goal	Objective	Process/Metric	Timeframe
Trauma Center Designation	A Level II trauma center is designated within Contra Costa County and is committed to providing care to critically injured patients.	Maintain a written agreement with a local Level II trauma center that requires compliance with State and local trauma system plan.	Written contract on file and maintained.	Reviewed annually and renewed per contract terms.
Progress to date: A new trauma center contract was approved, by the Contra Costa Board of Supervisors (BOS), on May 22, 2010. The contract term is through May 21, 2021 with conditional automatic renewal to 2031. Contracts are on file at Contra Costa EMS offices.				

Contra Costa Emergency Medical Services
Trauma System Plan Goals and Objectives

Category	Goal	Objective	Process/Metric	Timeframe
Trauma Center Services	Trauma center services meet or exceed state trauma regulations and local trauma center requirements identified in the Trauma System Plan.	Maintains trauma center services in good standing as specified in written contract.[9]	Submission of annual report or equivalent documenting contract requirements and specifications.	Annually.
		Maintains American College of Surgeons Committee Trauma Level II Verification.	Submission of Verification upon renewal.	As needed.
		Monitor trauma bypass rate.	Trauma bypass hours do not exceed 5% (438 hours) annually as tracked by ReddiNet.[10]	Annually.

Progress to date:

The Trauma center is compliant with submission of annual reports and verification of ACS verification. Reports and ACS documentation are on file at the Contra Costa EMS Agency offices.

If trauma center resources are temporarily overwhelmed, the trauma center may consider "Trauma Center Bypass," directing any critical trauma patients to out-of-County trauma centers until resources are again available. In 2011 John Muir Trauma Center bypass rate was 0.3% down from 0.6% in 2010.

Trauma Center Time on Trauma By-Pass by Year

2006	2007	2008	2009	2010	2011
2.1%	2.1%	1.4%	0.9%	0.6%	0.3%

Source: EMS Agency based on data from the ReddiNet system.

[9] Annual report includes Trauma center organizational chart, self-assessment of state and local regulations/requirements, documentation of completion of local training and credentialing requirements for medical and nursing staffs, confirmation of Level II verification by the American College of Surgeons Committee on Trauma, description of injury prevention activities, and a description of any additional programs or activities that enhance care provided at the Level II Trauma Center.

[10] ReddiNet is the EMS Agency emergency medical communication system used by Contra Costa hospitals, base, dispatch and prehospital providers to facilitating real-time notifications and information required to support effective EMS system workflow.

Contra Costa Emergency Medical Services
Trauma System Plan Goals and Objectives

Category	Goal	Objective	Process/Metric	Timeframe
Trauma Center and Trauma System Evaluation	The trauma center maintains a comprehensive trauma registry and collects EMS related data that includes a minimum of those patients described in "Patient Inclusion Criteria" for the National Trauma Data Bank.	Assure data is available to evaluate care provided to all injured patients at the trauma center.	All required CEMSIS data readily available and accessible to evaluate both objectives. Local trauma data submitted is extracted from Trauma One using required CEMSIS specifications.	As needed and annually.
		Assure data is available to evaluate triage, transport and field treatment of all critically injured patients.		

Progress to date:

The Trauma Registry is maintained by the Trauma Center and data is accessible through National Trauma Data Bank (NTDB). The current NTDB is designed to support primarily hospital performance and not EMS system performance. Contra Costa EMS continues to work with the State and Trauma center to support development of an appropriate CEMSIS patient identifier to assure CEMSIS-Trauma data is transmitted accurately.

Contra Costa EMS actively participates in the CEMSIS Trauma Grant program and successfully submitted data during the 2009-2011 to State EMSA at designated intervals as part of the CEMSIS demonstration grant project. Support for data linkages to the State are being facilitated by Lancet.

A Contra Costa EMS Trauma Coordinator supports prehospital data entry and access to Trauma System data. Data is analyzed and reviewed routinely by EMS Staff and Dr. Joe Barger, Contra Costa EMS Medical Director. Dr. Barger serves on the State EMS Trauma Commission collaborating with trauma systems throughout the state to improve outcomes for patients. Contra Costa EMS continues to actively contribute to the development of Trauma System data evaluation on the local, regional and state level and is a strong advocate for data driven Trauma and EMS System evaluation.

Contra Costa Emergency Medical Services
Trauma System Plan Goals and Objectives

Category	Goal	Objective	Process/Metric	Timeframe
Trauma Center and Trauma System Evaluation	Mechanisms are in place to assure that quality trauma care is provided all critically injured patients in Contra Costa County.	Compliance with Trauma Policy 16 and the associated Trauma System Quality Improvement Program.	Full compliance is equivalent to at least four Trauma Audit Committee meetings annually and six to eight prehospital trauma care review meetings.	Annually.
		Annual review of trauma system plan.	Submission of Trauma System Plan status report of equivalent to the state EMS authority.	Annually.

Progress to date:

Contra Costa was in full compliance with its Trauma System Plan. In 2011 Contra Costa engaged its Trauma Center in a trauma system CQI redesign process to enhance the Trauma CQI program. The new program in development will support a strong systems based approach to CQI defining meaningful metrics focused on improving patient outcomes and patient flow to definitive care. Consensus trauma system performance indicators are in discussion.

Contra Costa Trauma System status reports are submitted to State EMSA as required annually.

Contra Costa Trauma System Report - 2011

On-Scene Triage of Patients within Contra Costa Meeting Field Trauma Criteria

	2007	2008	2009	2010	2011
TOTAL PATIENTS TRIAGED	**2488**	**2269**	**1381**	**2420**	**2466**
Transported to a trauma center	**1184**	**1097**	**1155**	**1253**	**1215**
John Muir Health, Walnut Creek	1026	953	1018	1134	1030
Children's Hospital, Oakland	107	93	108	94	117
Other Trauma Centers	51	51	29	25	68
Transported to a non-trauma center Hospitals	**1304**	**1172**	**1226**	**1167**	**1251**
Contra Costa Regional Medical Center	79	66	61	89	76
Doctors San Pablo	190	135	136	159	153
John Muir Health - Concord	169	153	138	142	154
John Muir Health - Walnut Creek[11]	235	220	253	232	234
Kaiser Antioch	18	83	99	135	111
Kaiser Richmond	75	75	71	82	73
Kaiser Walnut Creek	136	110	115	170	135
San Ramon Regional	26	33	41	36	29
Sutter Delta	238	176	201	196	228
Out-of-County	28	30	25	34	34
Unknown	110	91	86	112	24

Source: EMS Agency based on data from the John Muir Health, Walnut Creek Trauma Registry and Emergency Department Log.

Undertriage by Year

Type of Triage Error	2007	2008	2009	2010	2011
TOTAL UNDERTRIAGES	**36**	**52**	**48**	**46**	**52**
Undertriage Rate[12]	3	4.7	4.2	3.7	4.3
Undertriage %[13]	2.8	4.4	3.9	3.9	4.2
Base Contact for Trauma Destination	17	15	18	24	16
Triaged by Field Personnel	19	37	30	22	36

Source: EMS Agency based on data from the John Muir Health, Walnut Creek Trauma Registry and Emergency Department Log. Definition of Major Trauma Victim (MTV) modified in 2009 to include only patients with Injury Severity Score (ISS) of greater than 15. Prior years' data is compared based on new definition.

Trauma Center Time on Trauma By-Pass by Year

	2007	2008	2009	2010	2011
Percentage	2.1	1.4	0.9	0.6	0.3

Source: EMS Agency based on data form the Reddinet System.

[11]These patients were triaged as not having major trauma but were transported to John Muir, Walnut Creek as the closest facility.

[12]Undertriage Rate = number of under triages/number of patients triaged on trauma centers.

[13]Undertriaged Percent = number of under triages/number of patients triaged to receiving facilities.

Helicopter Utilization Report - 2011

Contra Costa Patoents Transported by Helicopter[8]

Origin	2007		2008		2009		2010		2011	
	Pts	%	Pts	%	Pts	%	Pts	%	Pts	%
Total	**348**	**100**	**256**	**100**	**258**	**100**	**234**	**100**	**262**	**100**
East County	167	48	126	49.2	124	48.1	116	49.6	142	54
West County	148	42.5	90	35.2	106	41.1	82	35	87	33
South County	10	2.9	18	7	15	5.8	23	9.8	18	7
Central County	23	6.6	22	8.6	13	5	13	5.6	15	6

Source: EMS Agengy based on data supplied by helicopter provider agencies.

Helicopter Transports Originating within Contra Costa County by Provider Agency[8]

Origin	2007		2008		2009		2010		2011	
	Pts	%	Pts	%	Pts	%	Pts	%	Pts	%
Total	**348**	**100**	**256**	**100**	**258**	**100**	**234**	**100**	**262**	**100**
CALSTAR	198	56.9	141	55.1	165	64	131	56	134	51
REACH	145	41.7	105	41	86	33.3	101	43.2	123	47.4
CHP	4	1.1	9	3.5	6	2.3	2	0.9	4	0.2
Other	1	0.3	1	0.4	1	0.4	0	0	1	0.4

Source: EMS Agengy based on data supplied by helicopter provider agencies.

Helicopter Transports by Destination[8]

Origin	2007		2008		2009		2010		2011	
	Pts	%	Pts	%	Pts	%	Pts	%	Pts	%
Total	**348**	**100**	**256**	**100**	**258**	**100**	**234**	**100**	**257**	**100**
John Muir Health	265	76.1	199	77.7	211	81.8	181	77.4	196	75
Children's	52	14.9	33	12.9	30	11.6	24	10.3	39	15
Other/Unknown	31	8.9	24	9.4	17	6.6	29	12.4	27	10

Source: EMS Agengy based on data supplied by helicopter provider agencies.

[8] All of these flights originated from Contra Costa County.

Trauma Center Activity Report

All Trauma Patients Seen at the John Muir Trauma Center, Walnut Creek by Year[14]

	2006	2007	2008	2009	2010	2011
All Patients	1,607	1,601	1,538	1,564	1,602	1,483
Adult	1,597	1,581	1,525	1,550	1,583	1,471
Pediatric	10	20	13	14	19	12
Injury Type						
Blunt	1,292	1,210	1,187	1,228	1,276	1,221
Penetrating	299	358	318	301	326	262
Both***	13	30	31	34	0	0
Unknown	3	3	2	1	0	0
Mode of Arrival						
Air Ambulance	562	508	426	424	334	316
Ground Ambulance	711	989	1,069	1,118	1,246	1,144
Private Vehicle	0	15	41	21	21	23
Other	4	10	0	1	0	0
Unknown	330	79	2	0	1	0
County of Injury						
Contra Costa	1,188	1,207	1,189	1,228	1,231	1,178
Solano	349	320	274	275	288	224
Alameda	16	22	19	18	33	29
Marin	15	7	12	10	5	7
Napa	9	15	16	8	13	6
Sonoma	2	5	2	1	3	4
Other	7	13	19	17	17	15
Unknown	21	12	7	7	12	20
Injury Severity						
ISS>15	414	485	497	487	439	404
ISS<15	1,186	1,114	1,038	1,077	1,147	1,079
Unknown	7	2	3	0	16	0
Major Trauma[15]	25.9%	30.3%	32.4%	31.1%	27.7%	27.2%
Not Major Trauma	74.1%	69.7%	67.6%	68.9%	72.3%	72.8%
ED Disposition						
Admitted	1,357	1,308	1,250	1,241	1,178	1,133
Expired	11	10	14	16	23	24
Home	204	249	233	278	354	280
Transfer	13	17	7	8	8	11
Other	22	17	13	15	16	18
Unknown	0	0	21	6	23	17

Source: EMS Agency based on data from John Muir Trauma Registry.

[14] Includes patients transported from field in Contra Costa and other counties, and from hospitals within/outside of Contra Costa

[15] Based on retrospective review, a major trauma victim is defined as having an Injury Severity Score (ISS) >15. This criteria was modified in 2009 and prior years' data is compared utilizing new criteria.

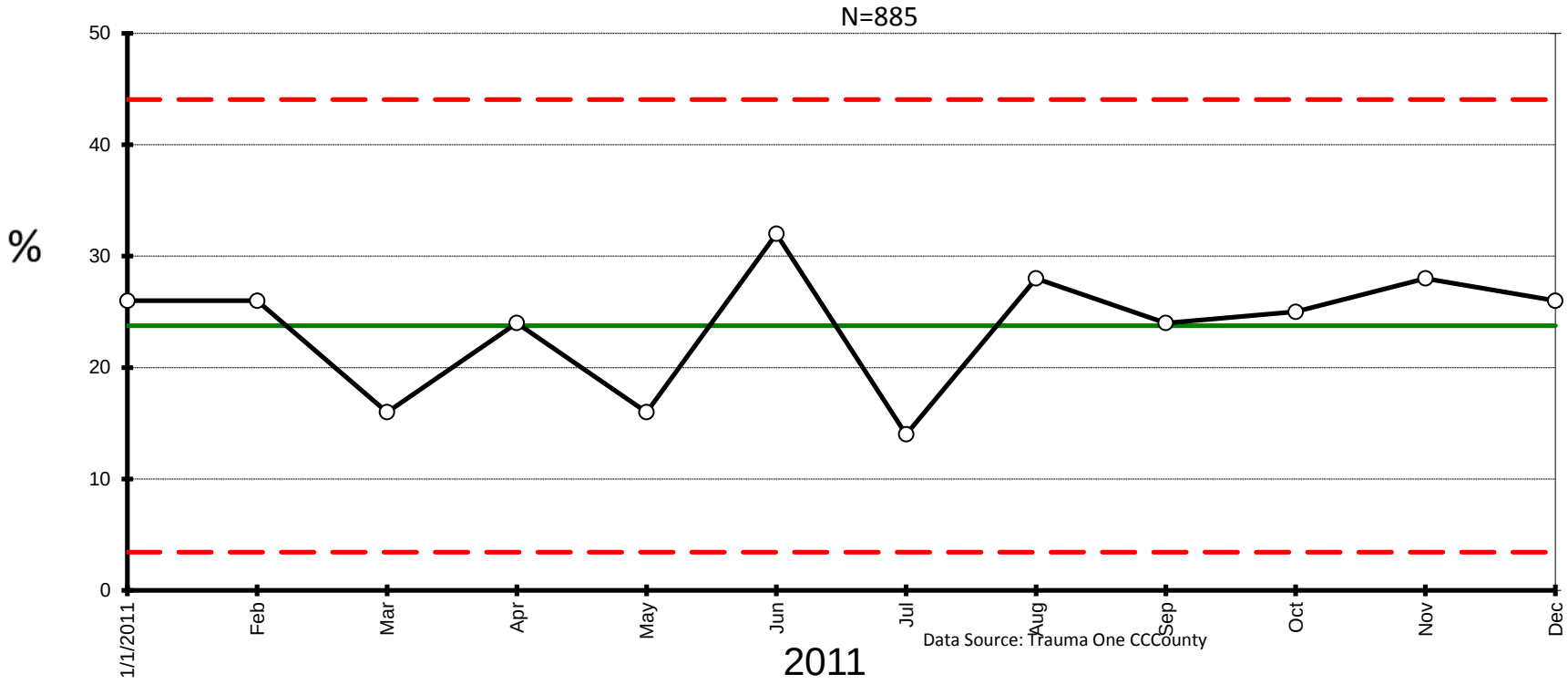
Contra Costa EMS Agency
Core Indicators: Trauma System
Q4 2011 Report

Data Source: Trauma One Registry; July 2010 through November 2011.

Contra Costa EMS Agency
Core Indicator # TC#C0001

Data Source: Trauma One Registry; July 2010 through November 2011
N= 1269 total trauma alerts. N=301 total MTV's

% Major Trauma Victims by Month



No Special Cause Detected

Avg of Data Shown	23.75
Median Data Shown	25.5
Sigma for Limits	6.770
Base for Limits	Average MR

Chart Type: **Chart for Individuals**

Centerline: 23.75 Process Limits: Lower: 3.441 Upper: 44.06

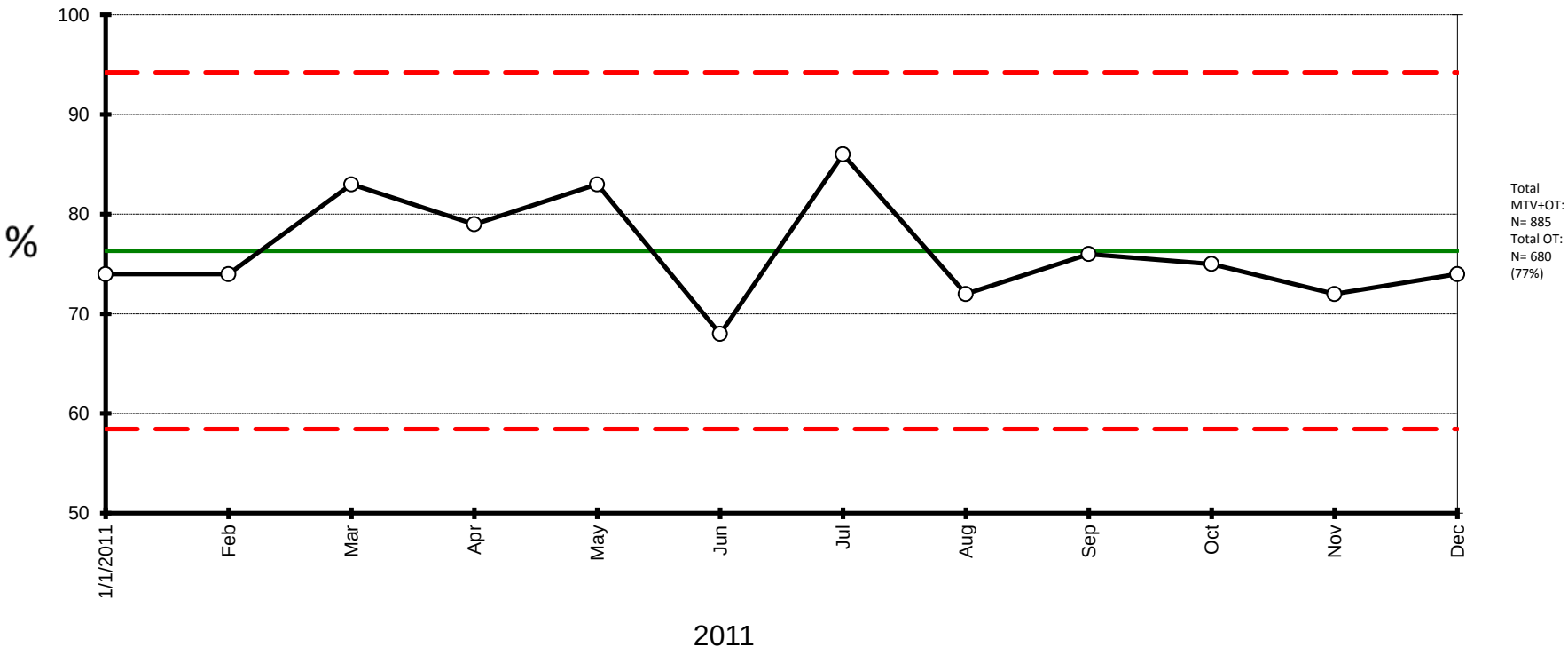
Database Column 1

A. 1 Beyond Control Limit
B. 9 On One Side of Average
C. 6 Trending Up or Down
D. 14 Alternating Up & Down
E. 2 of 3 Beyond 2 Sigma
F. 4 of 5 Beyond 1 Sigma
G. 15 Within 1 Sigma
H. 8 Outside 1 Sigma
X. Excluded or Missing Data

Contra Costa EMS Agency
Core Indicator # TC#C0002

Data Source: Trauma One Registry; July 2010 through November 2011
N= 1269 total trauma alerts. N=968 total over-triage

% Over Triage
Major Trauma Victims By Month



No Special Cause Detected

Avg of Data Shown	76.33333
Median Data Shown	74.5
Sigma for Limits	5.964
Base for Limits	Average MR

Chart Type: Chart for Individuals
Centerline: 76.33 Process Limits: Lower: 58.44 Upper: 94.23

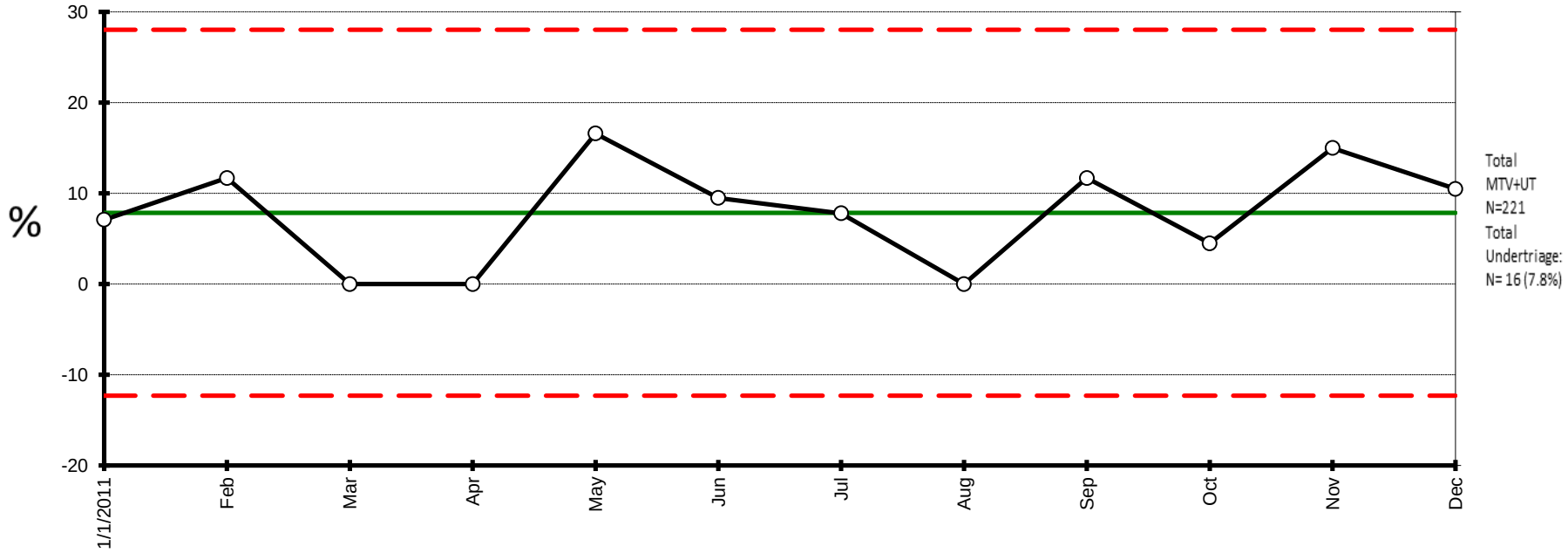
A: 1 Beyond Control Limit
B: 9 On One Side of Average
C: 6 Trending Up or Down
D: 14 Alternating Up & Down
E: 2 of 3 Beyond 2 Sigma
F: 4 of 5 Beyond 1 Sigma
G: 15 Within 1 Sigma
H: 8 Outside 1 Sigma
X: Excluded or Missing Data

Database Column 1

Contra Costa EMS Agency
Core Indicator # TC#C0003

Data Source: Trauma One Registry; July 2010 through November 2011
N=66 total under-triage; N= 1269 total trauma alerts

% Under Triage
Major Trauma Victims By Month



2011

No Special Cause Detected

Avg of Data Shown	7.866667
Median Data Shown	8.65
Sigma for Limits	6.721
Base for Limits	Average MR

Chart Type: **Chart for Individuals**
Centerline: 7.867 Process Limits: Lower: -12.30 Upper: 28.03

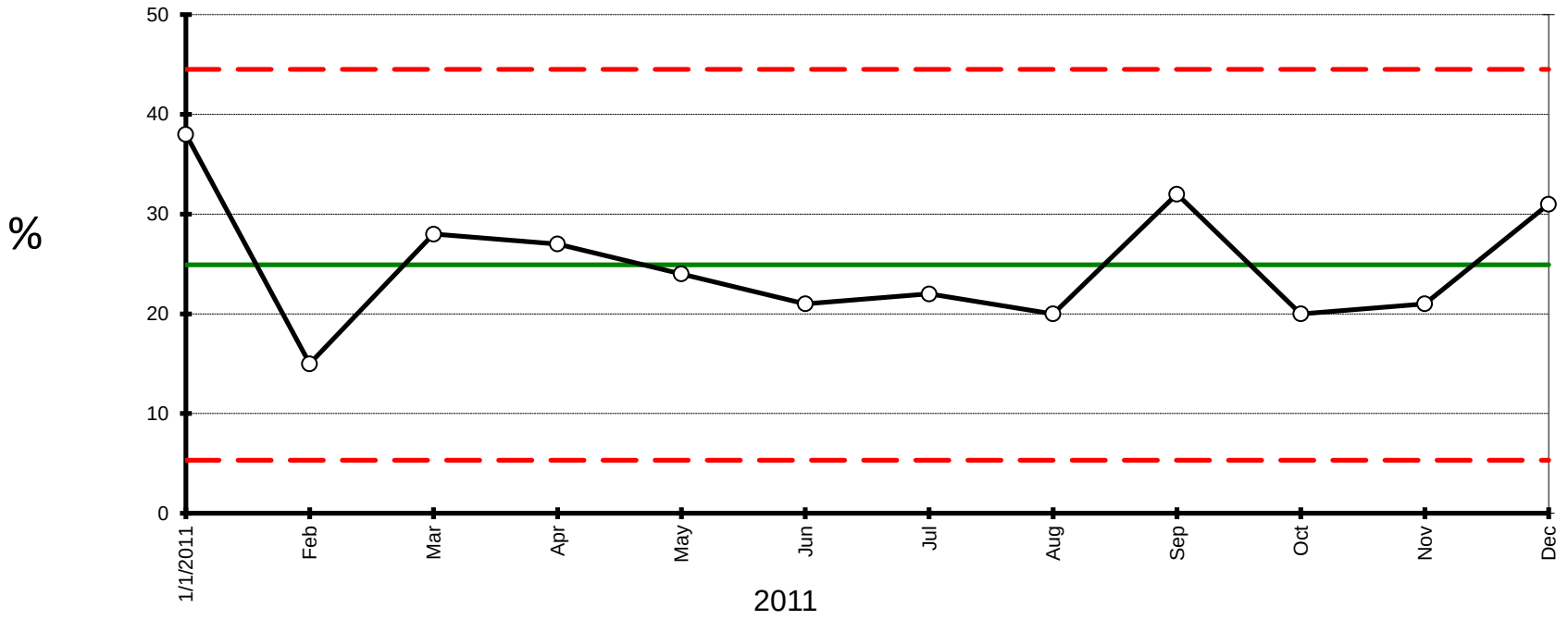
Database Column 1

A. 1 Beyond Control Limit
B. 9 On One Side of Average
C. 6 Trending Up or Down
D. 14 Alternating Up & Down
E. 2 of 3 Beyond 2 Sigma
F. 4 of 5 Beyond 1 Sigma
G. 15 Within 1 Sigma
H. 8 Outside 1 Sigma
X. Excluded or Missing Data

Contra Costa EMS Agency
Core Indicator # TC#C0004

Data Source: Trauma One Registry; July 2010 through November 2011
N= 1269 total trauma alerts. N=314 Total discharged home

% MTV's Discharged Home from ED by Month



No Special Cause Detected

Avg of Data Shown	24.91667
Median Data Shown	23
Sigma for Limits	6.528
Base for Limits	Average MR

Chart Type: **Chart for Individuals**

Centerline: 24.92 Process Limits: Lower: 5.333 Upper: 44.50

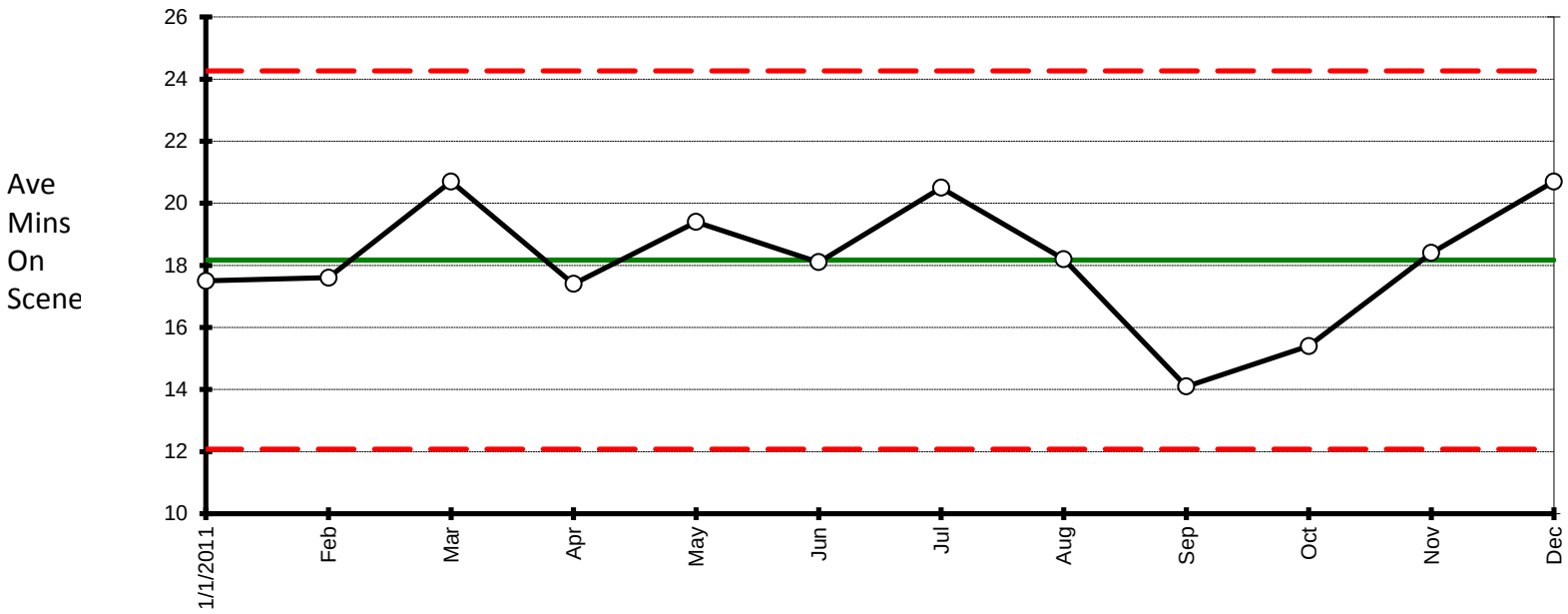
Database Column 1

A: 1 Beyond Control Limit	E: 2 of 3 Beyond 2 Sigma
B: 9 On One Side of Average	F: 4 of 5 Beyond 1 Sigma
C: 6 Trending Up or Down	G: 15 Within 1 Sigma
D: 14 Alternating Up & Down	H: 8 Outside 1 Sigma
	X: Excluded or Missing Data

Contra Costa EMS Agency
Core Indicator # TC#C0005

Data Source: Meds-Trauma One July 2010 through November 2011
N= 1269 total trauma alerts. N=301 Total MTV's

Ave Scene Time MTV in Mins
Ground Transport



No Special Cause Detected

Chart Type: **Chart for Individuals**

Centerline: 18.17 Process Limits: Lower: 12.07 Upper: 24.26

Database Column 1

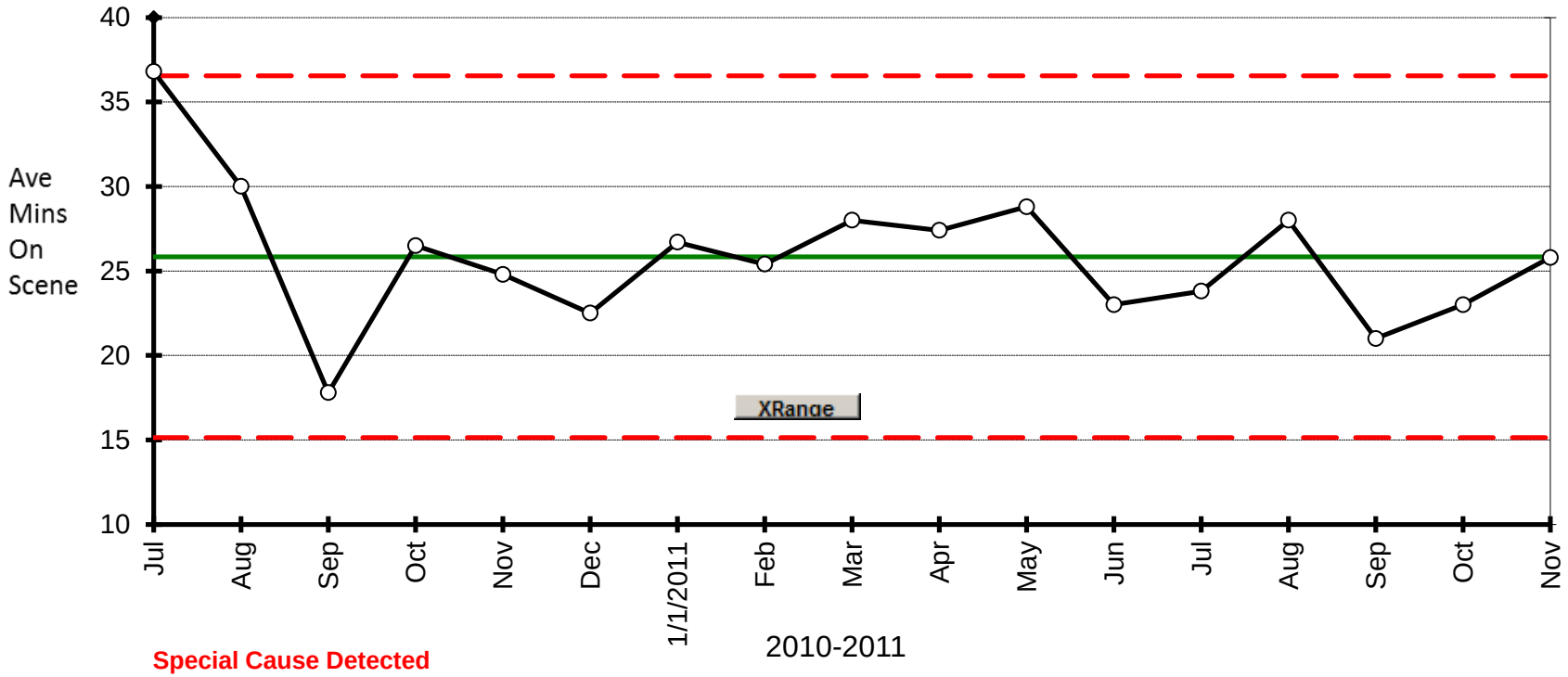
Avg of Data Shown	18.16667
Median Data Shown	18.15
Sigma for Limits	2.031
Base for Limits	Average MR

A. 1 Beyond Control Limit
B. 9 On One Side of Average
C. 6 Trending Up or Down
D. 14 Alternating Up & Down
E. 2 of 3 Beyond 2 Sigma
F. 4 of 5 Beyond 1 Sigma
G. 15 Within 1 Sigma
H. 8 Outside 1 Sigma
X. Excluded or Missing Data

Contra Costa EMS Agency
Core Indicator # TC#C0006

Data Source: Trauma One Registry; July 2010 through November 2011
N= 1269 total trauma alerts. N=301 total MTV's

Average Scene Time Interval in Mins
Major Trauma Victim (Air Transport)



Special Cause Detected

Centerline: 25.84 Process Limits: Lower: 15.14 Upper: 36.55 1

Avg of Data Shown	25.84118
Median Data Shown	25.8
Sigma for Limits	3.568
Base for Limits	Average MR

A. 1 Beyond Control Limit
B. 9 On One Side of Average
C. 6 Trending Up or Down
D. 14 Alternating Up & Down
E. 2 of 3 Beyond 2 Sigma
F. 4 of 5 Beyond 1 Sigma
G. 15 Within 1 Sigma
H. 8 Outside 1 Sigma
X. Excluded or Missing Data

Trauma Transfers 2002-2011

Referring Hospital	Blunt	Penetrating	% Penetrating
Kaiser – Richmond	76	136	64%
Doctors San Pablo	272	180	40%
Kaiser – Antioch	22	10	31%
Sutter Delta	336	99	23%
CCRMC	90	17	16%
Kaiser – Walnut Creek	26	3	10%
San Ramon Regional	31	3	9%
JMMC – Concord	293	26	8%
All Facilities	1146	474	29%

Contra Costa EMS Agency
Core Indicators: Cardiac Arrest
Q4 2011 Report

Data Source: CARES Registry; January 2009 through January 2012.
Excludes Medical Facilities (hospitals, clinics, SNF); Excludes arrest after EMS arrival

CARES Summary Report

Demographic and Survival Characteristics of OHCA

Agency: Contra Costa County EMS | Service Date: From 1/1/2011 Through 12/31/2011

Data	Contra Costa County EMS N=497	National N=14403
Age	**N=496**	**N=14362**
Mean	66.1	64.4
Median	68.0	65.0
Gender (%)	**N=497**	**N=14399**
Female	210 (42.3)	5571 (38.7)
Male	287 (57.7)	8828 (61.3)
Race (%)	**N=497**	**N=14360**
American-Indian/Alaskan	0 (0.0)	68 (0.5)
Asian	23 (4.6)	205 (1.4)
Black/African-American	88 (17.7)	3497 (24.4)
Hispanic/Latino	70 (14.1)	764 (5.3)
Native Hawaiian/Pacific Islander	6 (1.2)	123 (0.9)
White	281 (56.5)	5416 (37.7)
Unknown	29 (5.8)	4287 (29.9)
Location of Arrest (%)	**N=497**	**N=14403**
Healthcare Facility	14 (2.8)	591 (4.1)
Home/Residence	352 (70.8)	9616 (66.8)
Industrial Place	0 (0.0)	68 (0.5)
Nursing Home	54 (10.9)	1821 (12.6)
Other	7 (1.4)	303 (2.1)
Place of Recreation	17 (3.4)	202 (1.4)
Public/Commercial Building	32 (6.4)	1023 (7.1)
Street/Highway	21 (4.2)	728 (5.1)
Transport Center	0 (0.0)	51 (0.4)
Arrest witnessed (%)	**N=496**	**N=14402**
Bystander Witnessed	268 (54.0)	5275 (36.6)
Witnessed by EMS	57 (11.5)	1539 (10.7)
Unwitnessed	171 (34.5)	7588 (52.7)
Who Initiated CPR? (%)	**N=497**	**N=14402**
Not Applicable	1 (0.2)	25 (0.2)
Total Bystanders*	175 (35.2)	5391 (37.4)
First Responder	197 (39.6)	3841 (26.7)
Emergency Medical Services (EMS)	124 (24.9)	5145 (35.7)
Was an AED applied prior to EMS arrival? (%)	**N=497**	**N=14402**
Yes	78 (15.7)	3802 (26.4)
No	419 (84.3)	10600 (73.6)
Who first applied automated external defibrillator? (%)	**N=76**	**N=3789**
Total Bystanders*	16 (21.1)	648 (17.1)
First Responder	60 (78.9)	3141 (82.9)
Who first defibrillated the patient? (%)**	**N=497**	**N=10959**
Not Applicable	293 (59.0)	7069 (64.5)
Total Bystanders*	14 (2.8)	187 (1.7)
First Responder	76 (15.3)	823 (7.5)
Responding EMS Personnel	114 (22.9)	2880 (26.3)
First Arrest Rhythm (%)	**N=497**	**N=14403**
Vfib/Vtach/Unknown Shockable Rhythm	159 (32.0)	3246 (22.5)
Asystole	221 (44.5)	6891 (47.8)
Idioventricular/PEA	115 (23.1)	3078 (21.4)
Unknown Unshockable Rhythm	2 (0.4)	1188 (8.2)
Sustained ROSC (%)	**N=497**	**N=14393**
Yes	145 (29.2)	4370 (30.4)
No	352 (70.8)	10023 (69.6)
Was hypothermia care provided in the field? (%)	**N=497**	**N=14387**
Yes	18 (3.6)	1909 (13.3)
No	479 (96.4)	12478 (86.7)

CARES Summary Report

Demographic and Survival Characteristics of OHCA

Agency: Contra Costa County EMS | Service Date: From 1/1/2011 Through 12/31/2011

Data	Contra Costa County EMS N=497	National N=14403
Pre-hospital Outcome (%)	**N=497**	**N=14403**
Pronounced in the Field	154 (31.0)	3654 (25.4)
Pronounced in ED	37 (7.4)	2871 (19.9)
Ongoing Resuscitation in ED	306 (61.6)	7878 (54.7)
Overall Survival (%)	**N=497**	**N=14403**
Overall Survival to Hospital Admission	143 (28.8)	3800 (26.4)
Overall Survival to Hospital Discharge	58 (11.7)	1490 (10.3)
With Good or Moderate Cerebral Performance	51 (10.3)	1114 (7.7)
Missing hospital outcome	0	121
Utstein Survival (%)	**N=107**	**N=1860**
Witnessed by bystander and found in shockable rhythm	35.5%	32.0%
Utstein Bystander Survival (%)	**N=71**	**N=1036**
Witnessed by bystander, found in shockable rhythm, and received some bystander intervention (CPR by bystander and/or AED applied by bystander)	38.0%	35.5%

Analysis excludes unworked arrests, DNRs,and arrests of non-cardiac etiology.
**Total Bystanders = lay person + lay person family member + lay person medical provider.*
***This is a new question that was introduced on the 2011 form.*

Utstein Survival

Neurological Outcome	2009	2010	2011	All Years
Good Cerebral Performance	20	19	27	66
Moderate Cerebral Disability	3	2	3	8
Severe Cerebral Disability	2	1	1	4
Died	48	75	65	188
Total	73	97	96	266
Percent Survival	34%	23%	32%	29%
Percent CPC 1 & 2	32%	22%	31%	28%

Includes Witnessed VF/VT/Shockable Rhythms

Overall Survival

Neurological Outcome	2009	2010	2011	All Years
Good Cerebral Performance	25	28	31	85
Moderate Cerebral Disability	6	3	5	14
Severe Cerebral Disability	6	3	3	12
Coma, vegetative state	2		2	4
Total Survivors	39	34	41	115
Total Deaths	408	359	344	1138
Total Cases	447	393	385	1253
Percent Survival	8.7%	8.7%	10.6%	9.2%
Percent Survival with CPC 1 & 2	6.9%	7.9%	9.4%	7.9%

Includes all rhythms

Witnessed Arrest Survival

Neurological Outcome	2009	2010	2011	All Years
Good Cerebral Performance	22	24	28	75
Moderate Cerebral Disability	4	2	5	11
Severe Cerebral Disability	4	3	3	10
Coma, vegetative state	1		1	2
Total Survivors	31	29	37	98
Total Deaths	189	187	204	596
Total Cases	220	216	241	694
Percent Survival	14.1%	13.4%	15.4%	14.1%
Percent Survival with CPC 1 & 2	11.8%	12.0%	13.7%	12.4%

Excludes all unwitnessed arrests

Source: CARES Data - Jan 2009 to December 2011
Excludes Medical Facilities (Hospitals, Clinics, Nursing Homes)
Excludes Arrests after EMS Arrival

Initiated CPR	2009	2010	2011	2012	All Years
EMS Personnel	329	293	251	28	901
Layperson	118	99	141	20	378
Percent Layperson CPR	26.4%	25.3%	36.0%	41.7%	29.6%

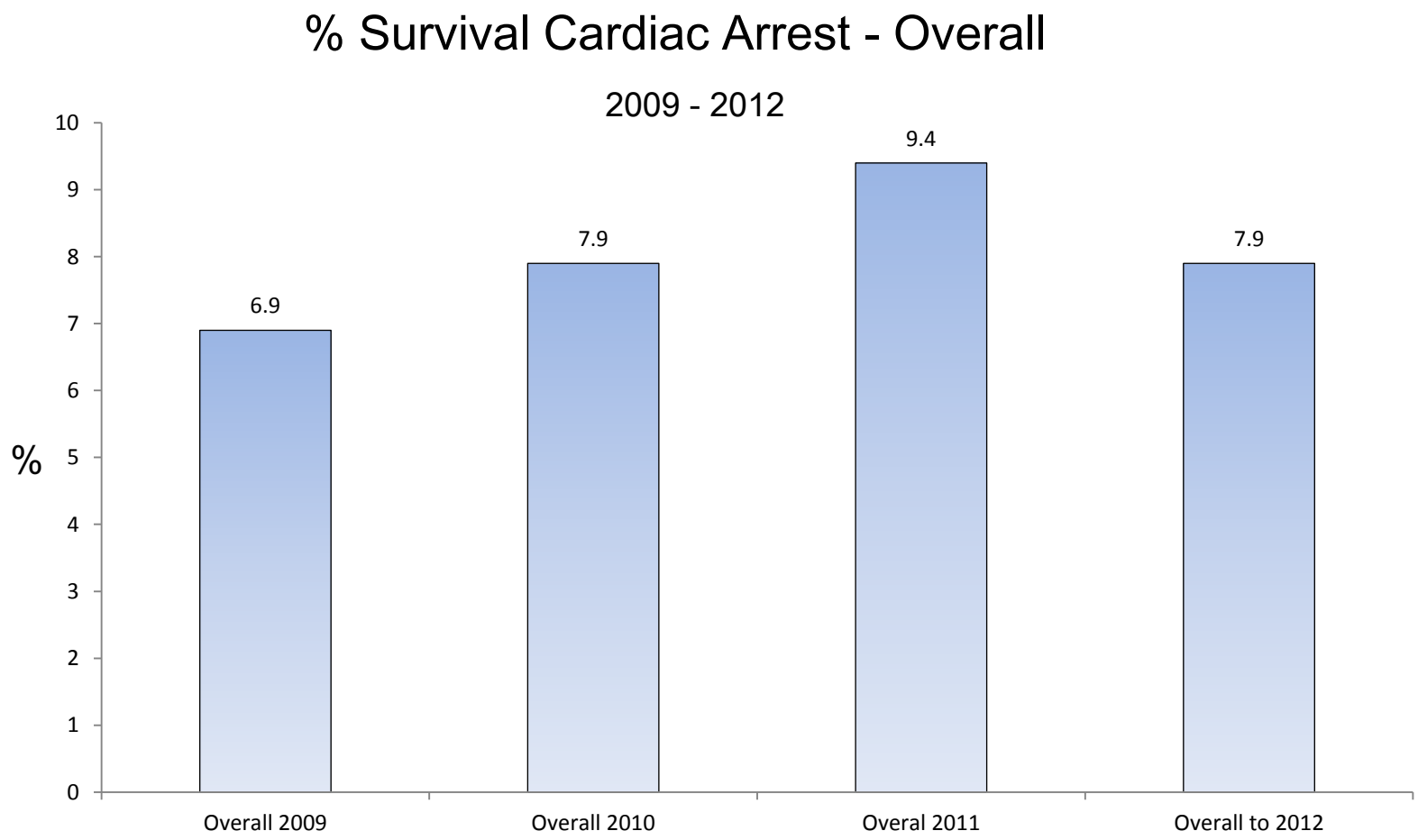
Source: CARES Data - Jan 2009 to Feb 2012
Excludes Medical Facilities (Hospitals, Clinics, Nursing Homes)
Excludes Arrests after EMS Arrival

Utstein Survival

Neurological Outcome	2009	2010	2011	2012	All Years
Good Cerebral Performance	20	19	27	1	67
Moderate Cerebral Disability	3	2	3		8
Severe Cerebral Disability	2	1	1		4
Died	48	75	65	3	191
Total	73	97	96	4	270
Percent Survival	34%	23%	32%	25%	29%
Percent CPC 1 & 2	32%	22%	31%	25%	28%

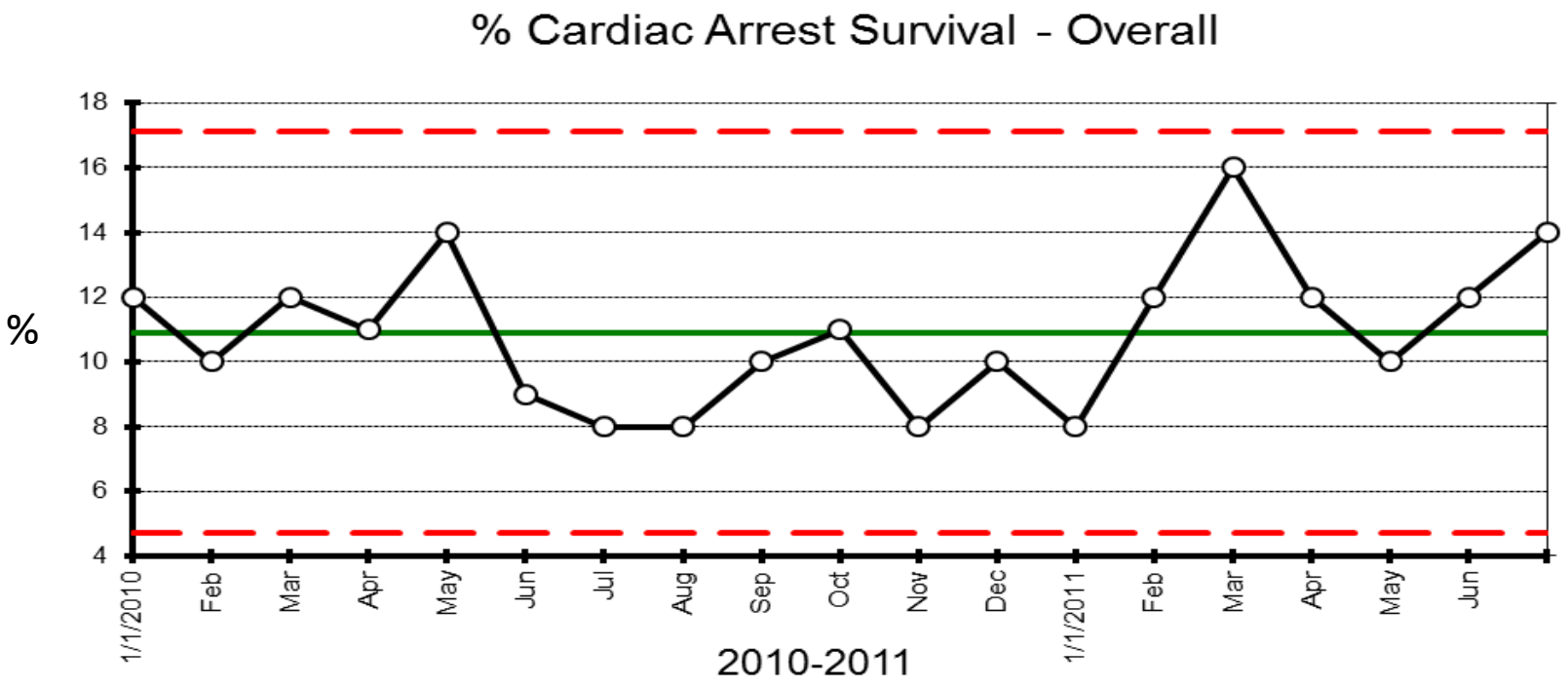
Contra Costa EMS Agency
Core Indicator # CA#0001

Data Source: CARES Registry; January 2009 through January 2012
Excludes Medical Facilities (hospitals, clinics, SNF); Excludes arrest after EMS arrival



Contra Costa EMS Agency
Core Indicator # CA#0001

Data Source: CARES Registry; January 2009 through January 2012
Excludes Medical Facilities (hospitals, clinics, SNF); Excludes arrest after EMS arrival



No Special Cause Detected

Avg of Data Shown	10.89474
Median Data Shown	11
Sigma for Limits	2.069
Base for Limits	Average MR

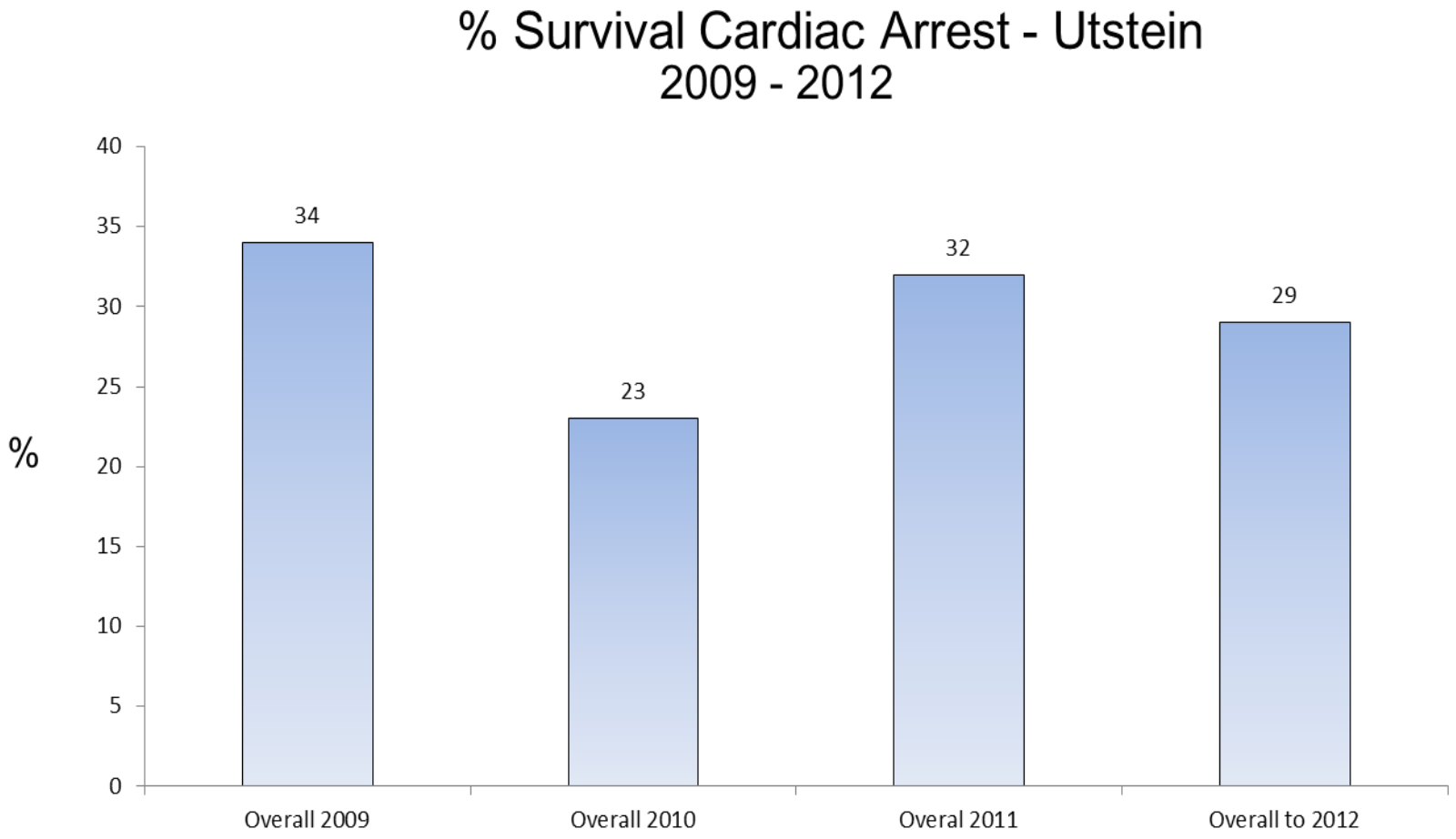
Chart Type: **Chart for Individuals**
Centerline: 10.89 Process Limits: Lower: 4.689 Upper: 17.10

Database Column 1

A: 1 Beyond Control Limit
B: 9 On One Side of Average
C: 6 Trending Up or Down
D: 14 Alternating Up & Down
E: 2 of 3 Beyond 2 Sigma
F: 4 of 5 Beyond 1 Sigma
G: 15 Within 1 Sigma
H: 8 Outside 1 Sigma
X: Excluded or Missing Data

Contra Costa EMS Agency
Core Indicator # CA#0002

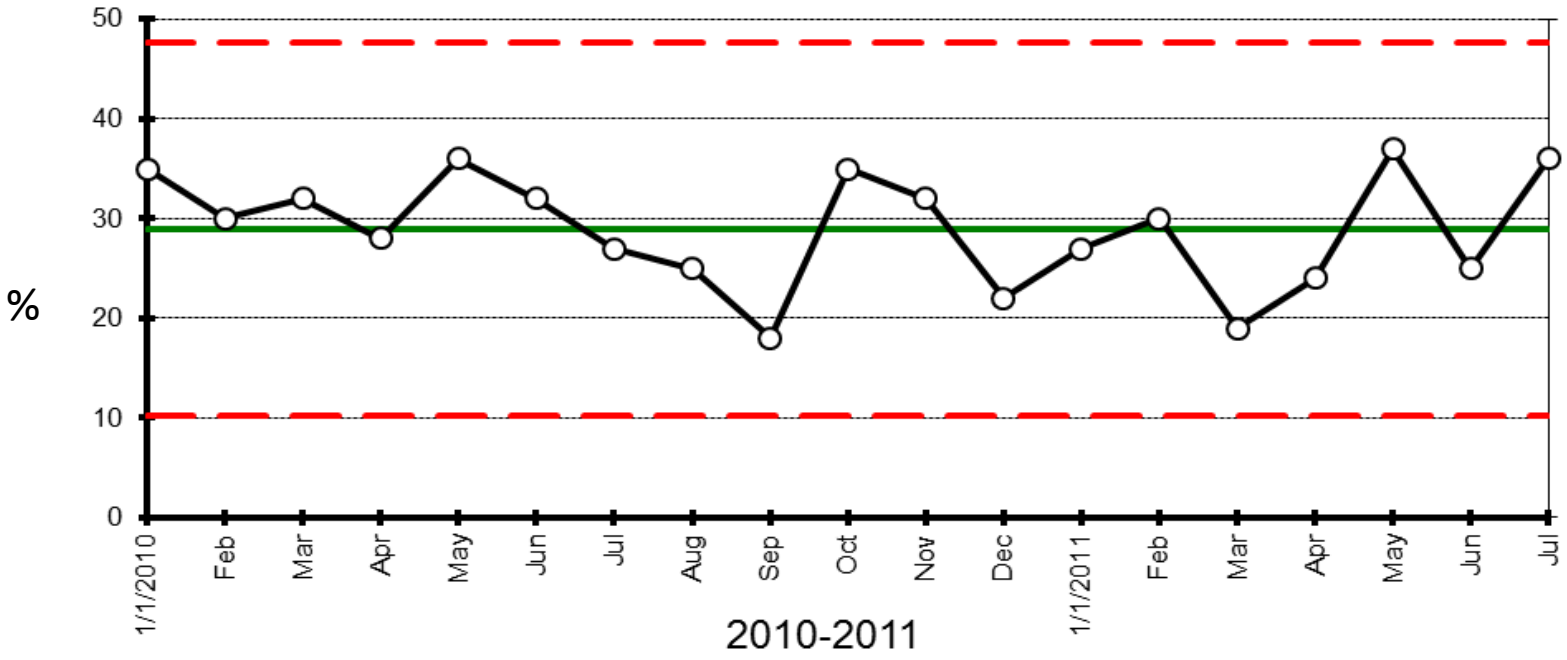
Data Source: CARES Registry; January 2009 through January 2012
Excludes Medical Facilities (hospitals, clinics, SNF); Excludes arrest after EMS arrival



Contra Costa EMS Agency
Core Indicator # CA#0002

Data Source: CARES Registry; January 2009 through January 2012
Excludes Medical Facilities (hospitals, clinics, SNF); Excludes arrest after EMS arrival

% Cardiac Arrest Survival - Utstein



No Special Cause Detected

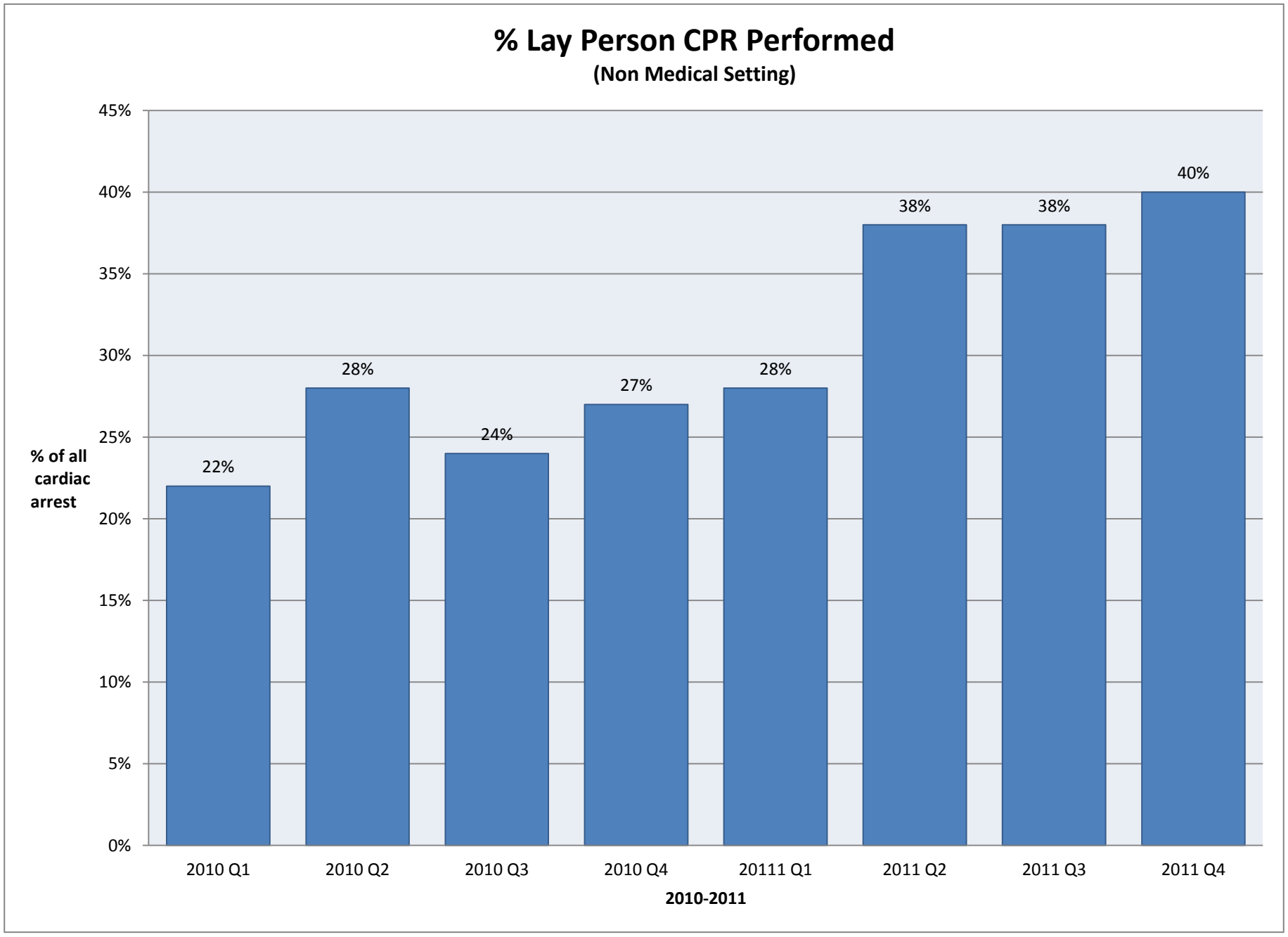
Avg of Data Shown	28.94737
Median Data Shown	30
Sigma for Limits	6.255
Base for Limits	Average MR

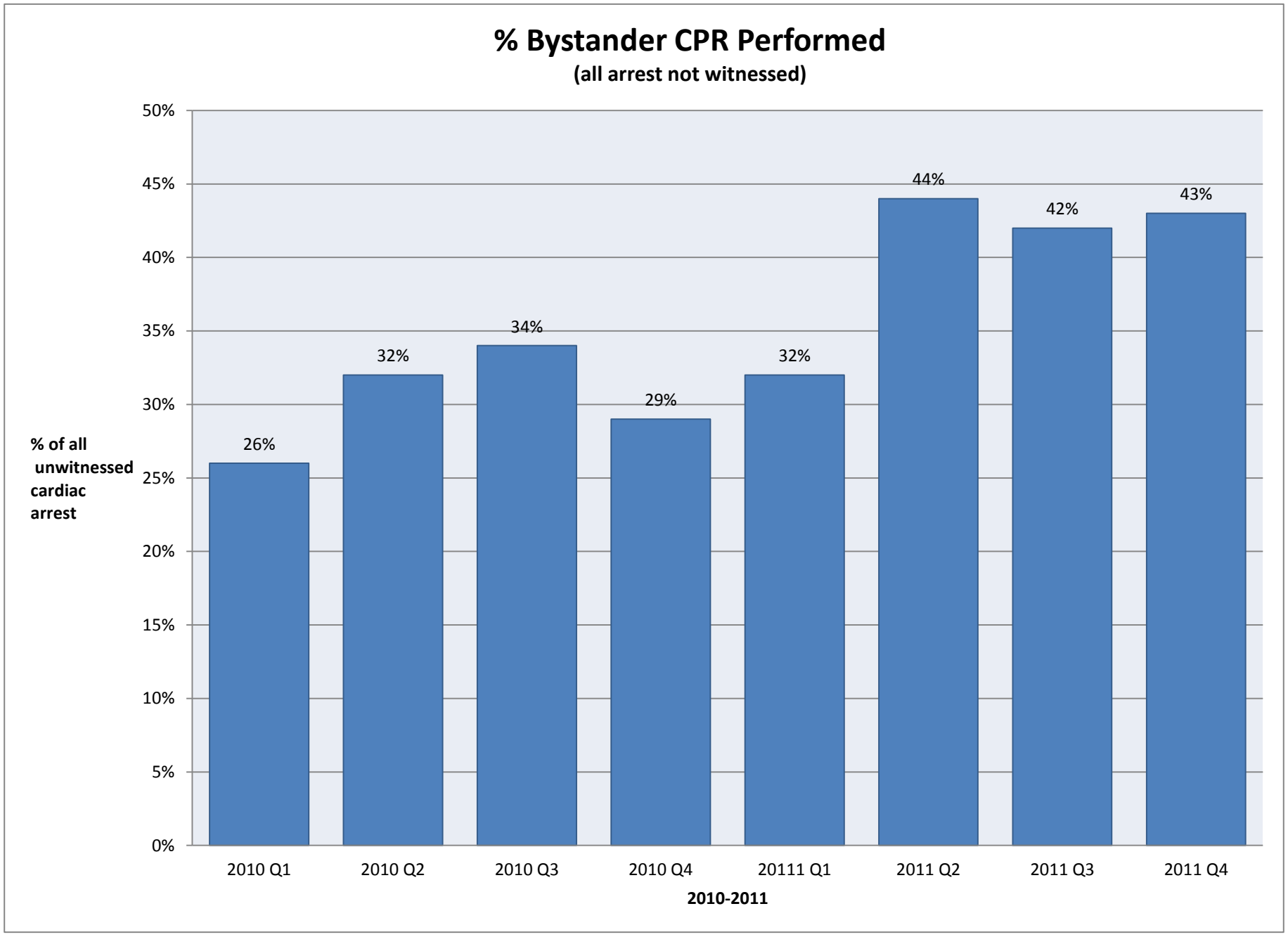
Chart Type: **Chart for Individuals**

Centerline: 28.95 Process Limits: Lower: 10.18 Upper: 47.71

Database Column 1

A. 1 Beyond Control Limit
B. 9 On One Side of Average
C. 6 Trending Up or Down
D. 14 Alternating Up & Down
E. 2 of 3 Beyond 2 Sigma
F. 4 of 5 Beyond 1 Sigma
G. 15 Within 1 Sigma
H. 8 Outside 1 Sigma
X. Excluded or Missing Data


% Lay Person CPR Performed
(Non Medical Setting)
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
% of all cardiac arrest
22%
28%
24%
27%
28%
38%
38%
40%
2010 Q1
2010 Q2
2010 Q3
2010 Q4
20111 Q1
2011 Q2
2011 Q3
2011 Q4
2010-2011

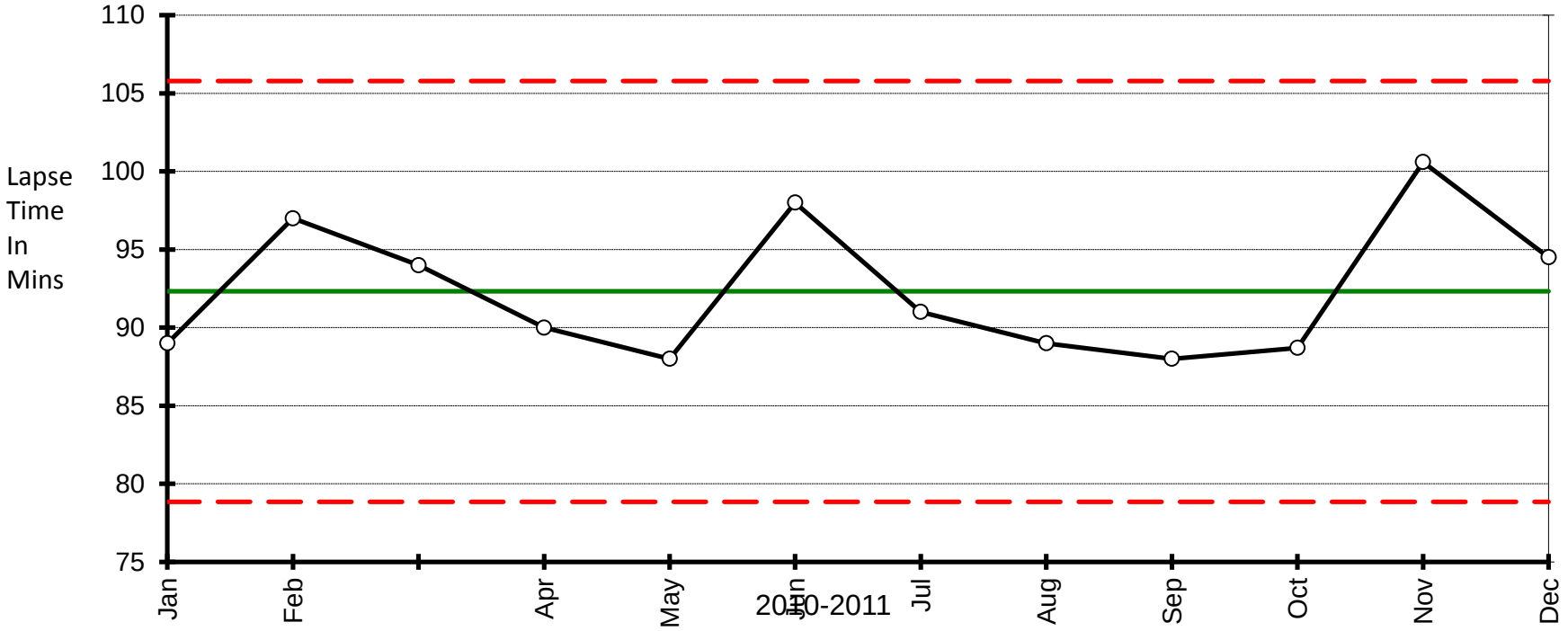

% Bystander CPR Performed
(all arrest not witnessed)
% of all unwitnessed cardiac arrest
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
26%
32%
34%
29%
32%
44%
42%
43%
2010 Q1
2010 Q2
2010 Q3
2010 Q4
20111 Q1
2011 Q2
2011 Q3
2011 Q4
2010-2011

Contra Costa EMS Agency
Core Indicators: STEMI System
Q4 2011 Report

Data Source: STEMI ; January 2011 through December 2011.

Contra Costa EMS Agency
Core Indicator STE#C0001
Data Source: STEMI data base

STEMI
911 Dispatch to Intervention
Ave Time Interval by Month



No Special Cause Detected

Exit Chart Mode

Avg of Data Shown	92.31667
Median Data Shown	90.5
Sigma for Limits	4.489
Base for Limits	Average MR

Chart Type: **Chart for Individuals**

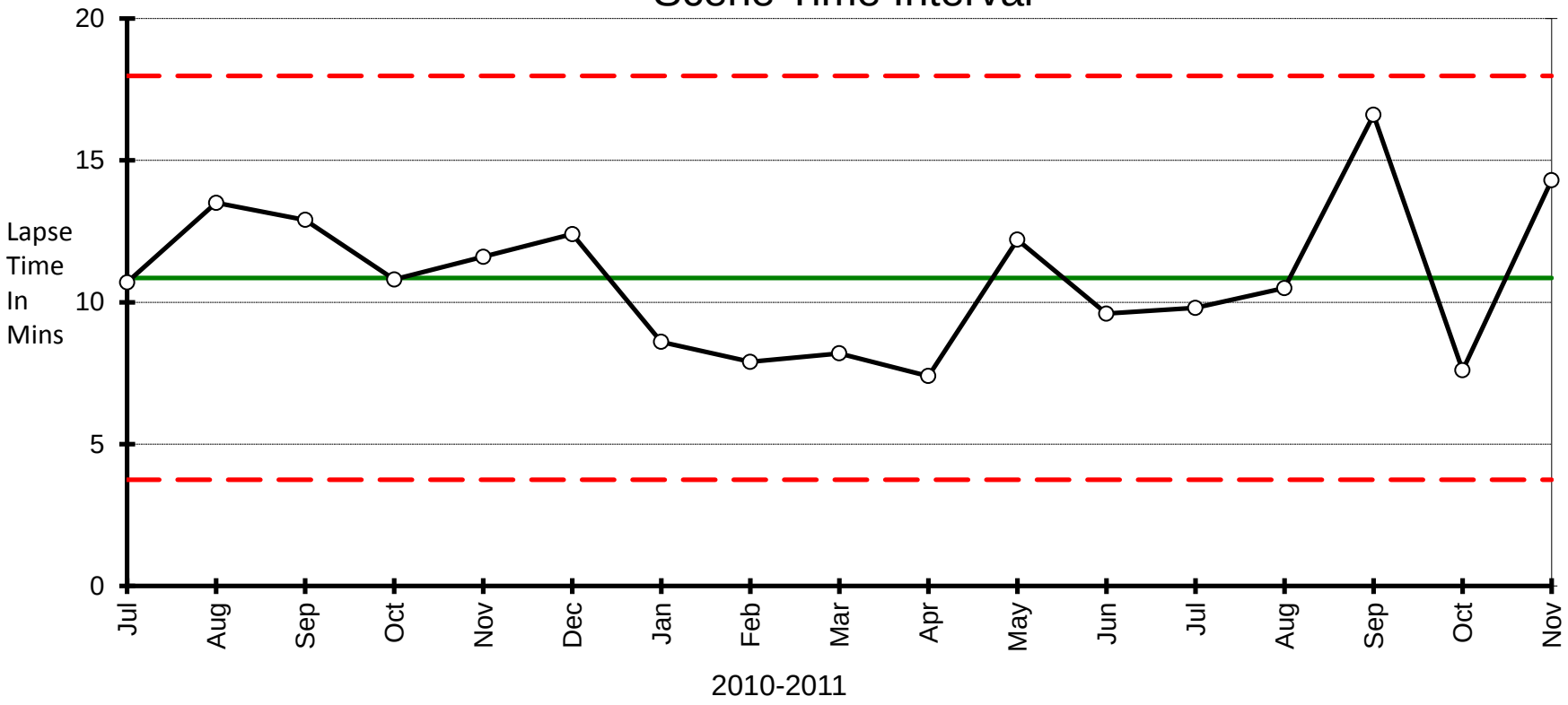
Centerline: 92.32 Process Limits: Lower: 78.85 Upper: 105.8

Database Column **1**

A. 1 Beyond Control Limit	E. 2 of 3 Beyond 2 Sigma
B. 9 On One Side of Average	F. 4 of 5 Beyond 1 Sigma
C. 6 Trending Up or Down	G. 15 Within 1 Sigma
D. 14 Alternating Up & Down	H. 8 Outside 1 Sigma
	X. Excluded or Missing Data

Contra Costa EMS Agency
Core Indicator STE#C0002
Data Source: STEMI data base

STEMI
Median Prehospital
Scene Time Interval



No Special Cause Detected

Avg of Data Shown	10.85882
Median Data Shown	10.7
Sigma for Limits	2.371
Base for Limits	Average MR

Chart Type: **Chart for Individuals**

Centerline: 10.86 Process Limits: Lower: 3.744 Upper: 17.97

Database Column **1**

A. 1 Beyond Control Limit
B. 9 On One Side of Average
C. 6 Trending Up or Down
D. 14 Alternating Up & Down
E. 2 of 3 Beyond 2 Sigma
F. 4 of 5 Beyond 1 Sigma
G. 15 Within 1 Sigma
H. 8 Outside 1 Sigma
X. Excluded or Missing Data

Contra Costa EMS Agency
Core Indicator STE#C0003
Data Source: STEMI data base

STEMI
EMS Arrival to Intervention
Average Time Interval by Month

No Special Cause Detected

Chart Type: **Chart for Individuals**

Centerline: 88.73 Process Limits: Lower: 83.61 Upper: 93.86

Database Column 1

Avg of Data Shown	88.73333
Median Data Shown	88.9
Sigma for Limits	1.709
Base for Limits	Average MR

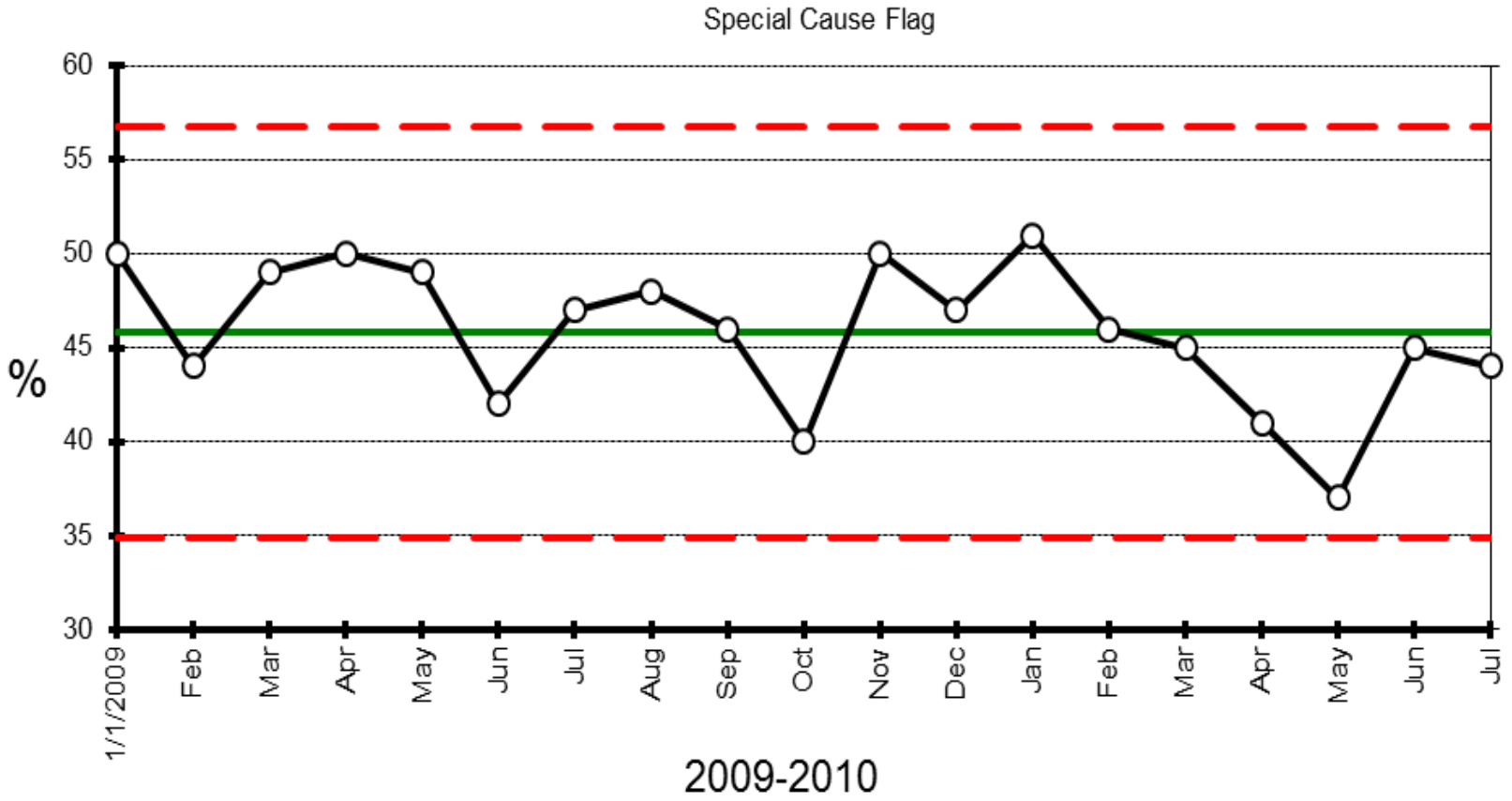
A: 1 Beyond Control Limit
B: 9 On One Side of Average
C: 6 Trending Up or Down
D: 14 Alternating Up & Down
E: 2 of 3 Beyond 2 Sigma
F: 4 of 5 Beyond 1 Sigma
G: 15 Within 1 Sigma
H: 8 Outside 1 Sigma
X: Excluded or Missing Data

Contra Costa EMS Agency
Core Indicators: Stroke System
Q4 2011 Report

Data Source: CARES Registry; January 2009 through January 2012.
Excludes Medical Facilities (hospitals, clinics, SNF); Excludes arrest after EMS arrival

Contra Costa EMS Agency
Core Indicator # ST#C0001
Data Source: Meds; Cal Stroke Registry

% Stroke Prehospital Scene Time Interval 0-10 mins by month



No Special Cause Detected

Chart Type: Chart for Individuals

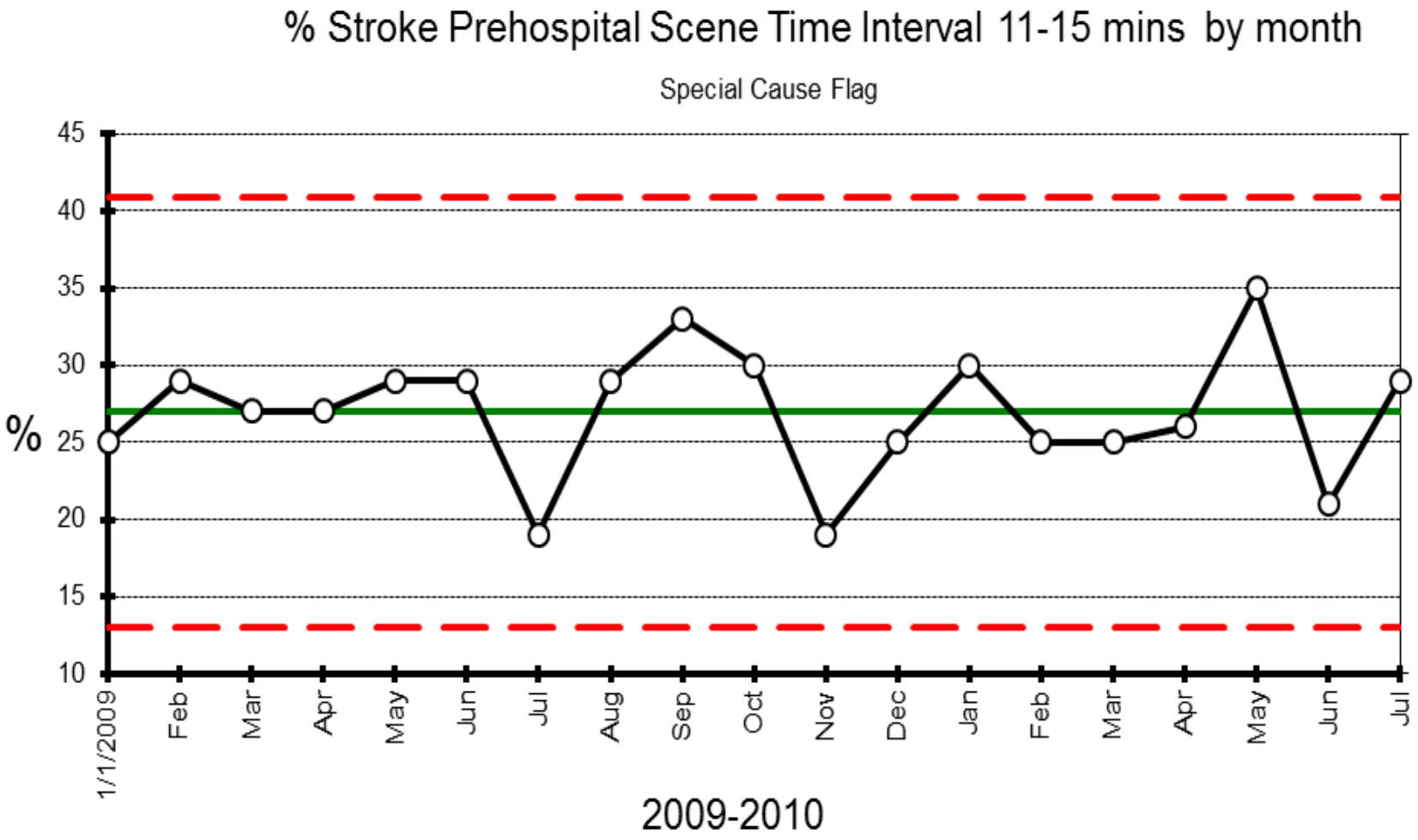
Centerline: 45.84 Process Limits: Lower: 34.91 Upper: 56.78

Database Column 1

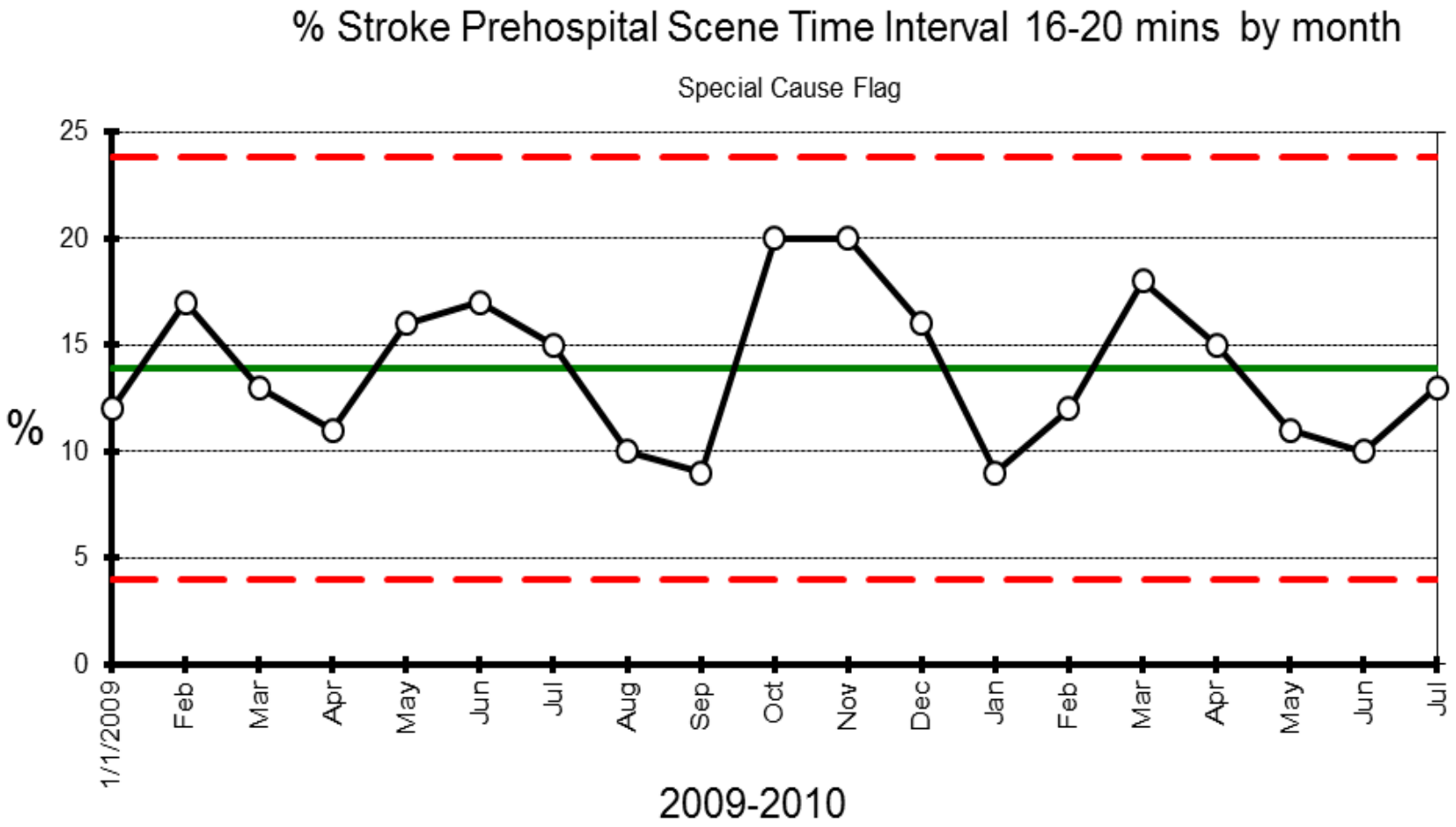
Avg of Data Shown	45.84211
Median Data Shown	46
Sigma for Limits	3.645
Base for Limits	Average MR

A. 1 Beyond Control Limit
B. 9 On One Side of Average
C. 6 Trending Up or Down
D. 14 Alternating Up & Down
E. 2 of 3 Beyond 2 Sigma
F. 4 of 5 Beyond 1 Sigma
G. 15 Within 1 Sigma
H. 8 Outside 1 Sigma
X. Excluded or Missing Data

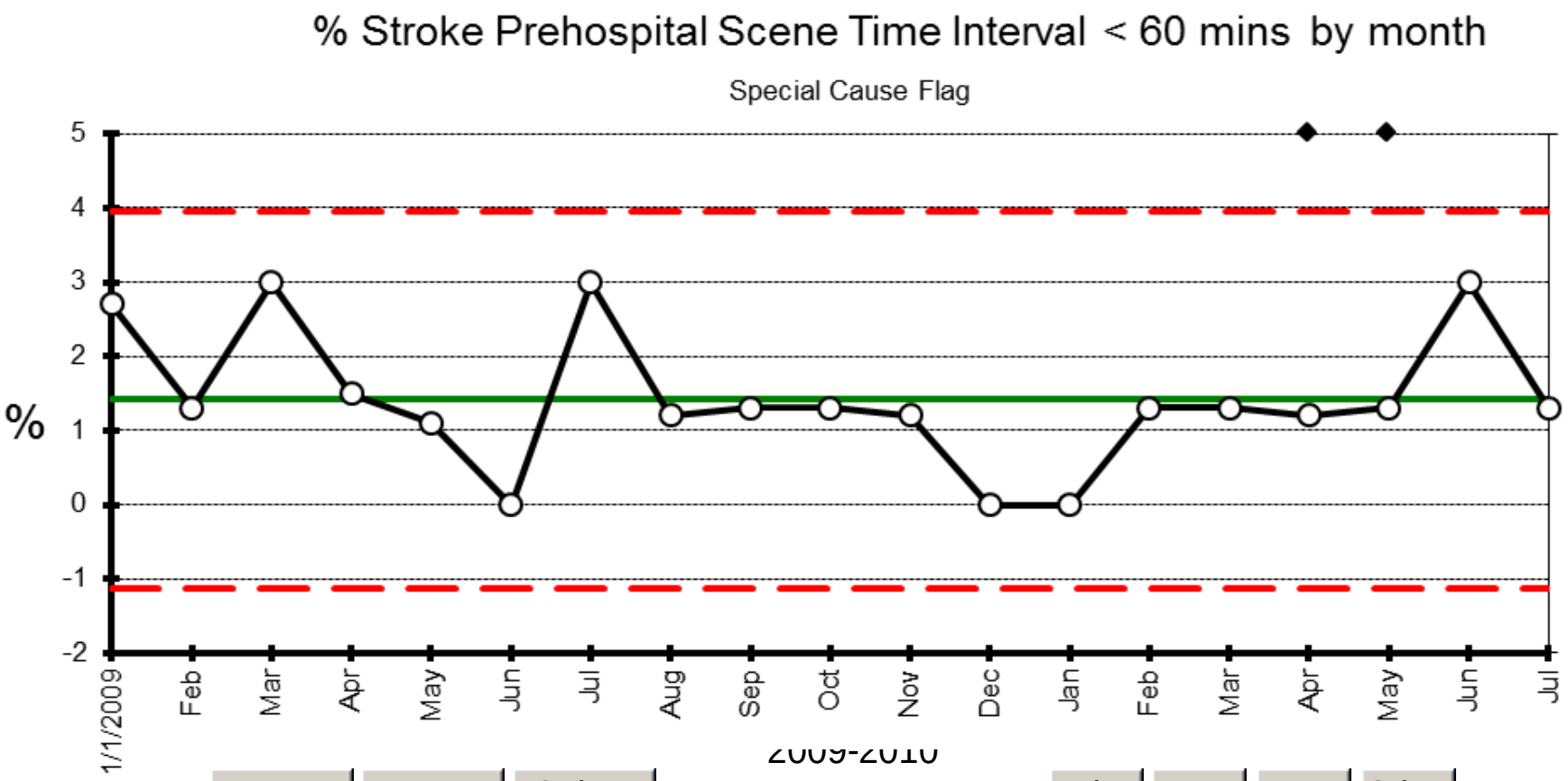
Contra Costa EMS Agency
Core Indicator ST#C0002
Data Source: Meds; Cal Stroke Registry



Contra Costa EMS Agency
Core Indicator ST#C0003
Data Source: Meds; Cal Stroke Registry



Contra Costa EMS Agency
Core Indicator ST#C0004
Data Source: Meds; Cal Stroke Registry



XRange | Layout | Options | Print | Prev | Next | Select

Special Cause Detected

Chart Type: **Chart for Individuals** Database Column

Centerline: 1.421 Process Limits: Lower: -1.120 Upper: 3.962 1

Avg of Data Shown	1.421053
Median Data Shown	1.3
Sigma for Limits	0.8471
Base for Limits	Average MR

A. 1 Beyond Control Limit
B. 9 On One Side of Average
C. 6 Trending Up or Down
D. 14 Alternating Up & Down
E. 2 of 3 Beyond 2 Sigma
F. 4 of 5 Beyond 1 Sigma
G. 15 Within 1 Sigma
H. 8 Outside 1 Sigma
X. Excluded or Missing Data

Contra Costa EMS Agency
Core Indicators: Base Hospital
Q4 2011 Report

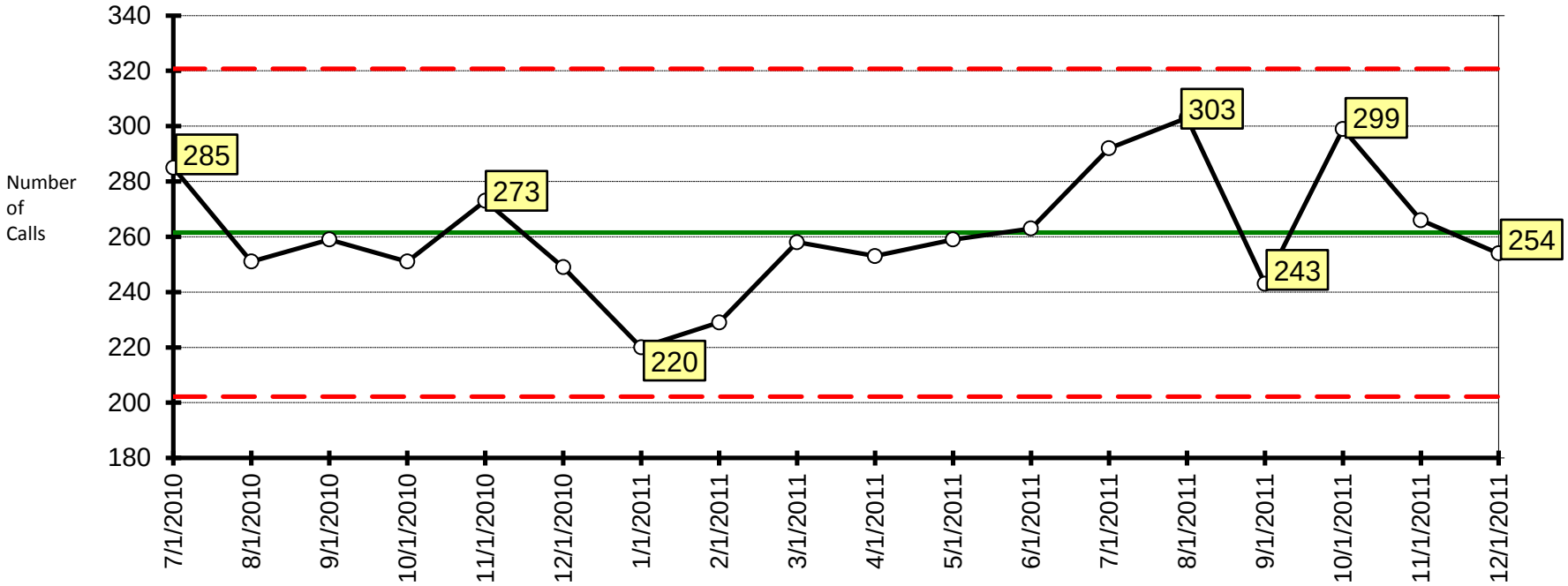
Data Source: Base Hospital Registry; October through December 2011.

Contra Costa EMS Agency
Core Indicator BH#C0001

Data Source: Base Hospital Registry; Oct through November 2011

Q4 2011
Base Hospital Call Volume by Month

N= 819 Base calls



No Special Cause Detected

Avg of Data Shown	261.5
Median Data Shown	258.5
Sigma for Limits	19.76
Base for Limits	Average MR

Chart Type: **Chart for Individuals**

Centerline: 261.5 Process Limits: Lower: 202.2 Upper: 320.8

Database Column 1

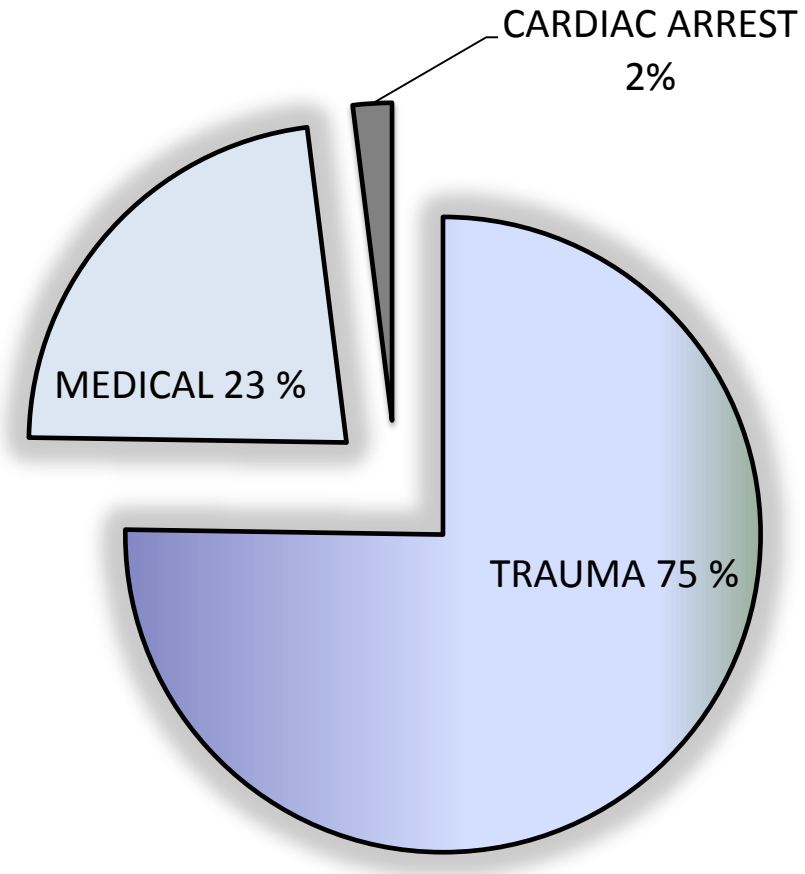
A. 1 Beyond Control Limit	E. 2 of 3 Beyond 2 Sigma
B. 9 On One Side of Average	F. 4 of 5 Beyond 1 Sigma
C. 6 Trending Up or Down	G. 15 Within 1 Sigma
D. 14 Alternating Up & Down	H. 8 Outside 1 Sigma
	X. Excluded or Missing Data

Contra Costa EMS Agency
Core Indicator BH#C0002
Data Source: Base Hospital Registry; Oct through November 2011

Q4 2011 Oct, Nov, Dec

% BASE HOSPITAL CALLS BY TYPE

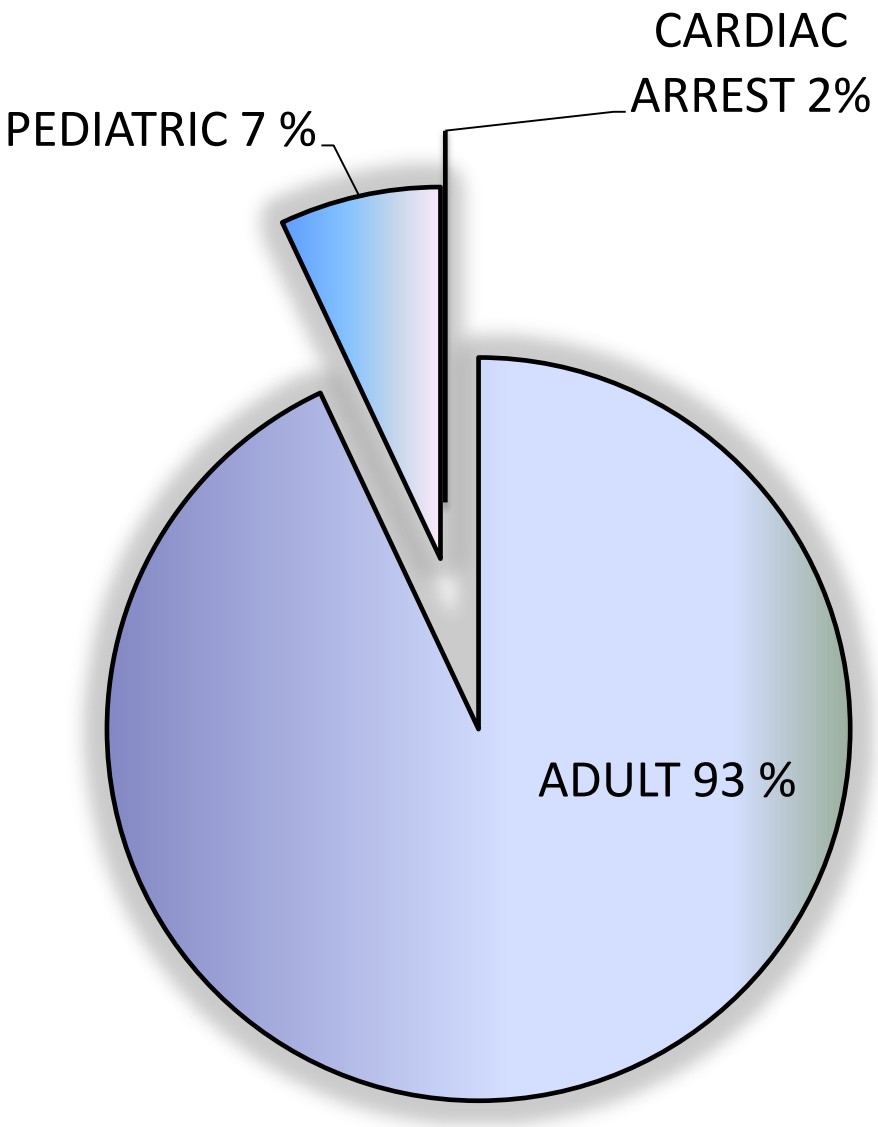
N=819



Contra Costa EMS Agency
Core Indicator BH#C0003

Data Source: Base Hospital Registry; Oct through November 2011

Base Hospital Volume By Age



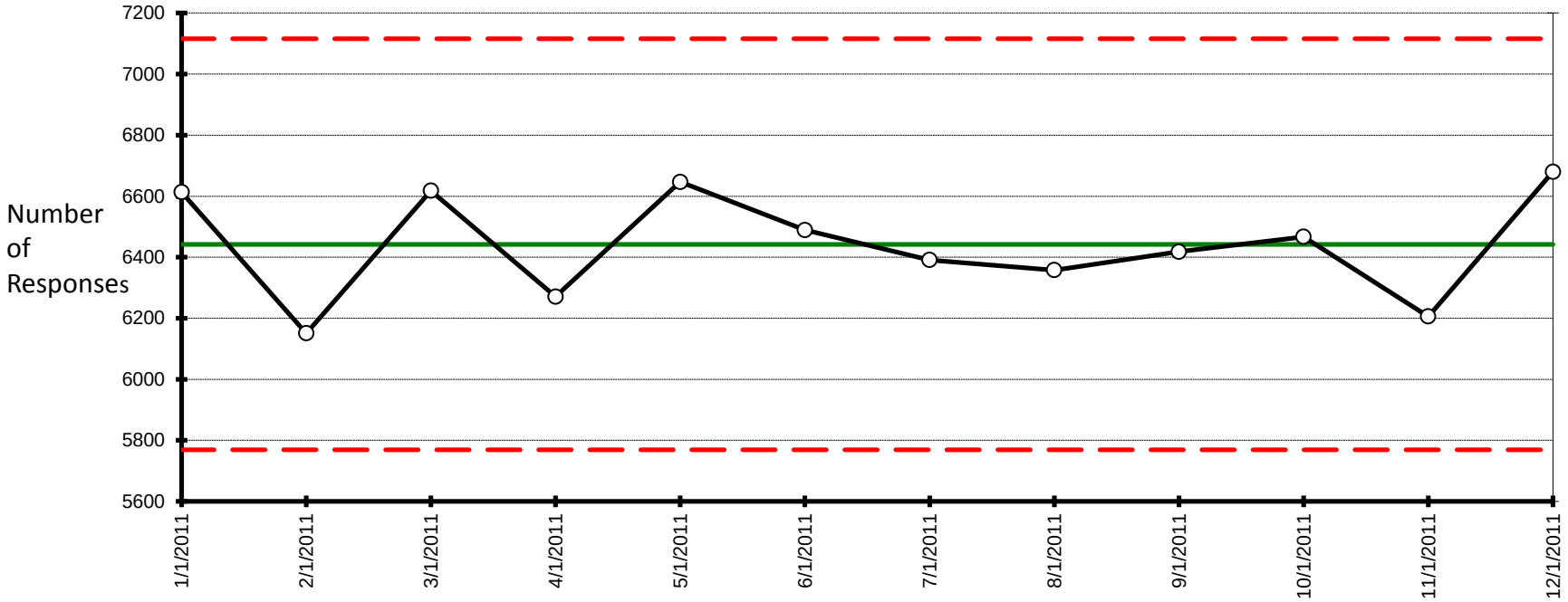
Contra Costa EMS Agency
Core Indicators: System Utilization
Q4 2011 Report

Data Source: Meds 3.0; Zoll; October through December 2011.

Contra Costa EMS Agency
Core Indicator SU#C0001

Data Source: Base Hospital Registry; Oct through November 2011

Number of EMS Responses by Month 2011



No Special Cause Detected

Avg of Data Shown	6442.417
Median Data Shown	6442.5
Sigma for Limits	224.5
Base for Limits	Average MR

Chart Type: Chart for Individuals

Centerline: 6,442 Process Limits: Lower: 5,769 Upper: 7,116

Database Column 1

A. 1 Beyond Control Limit
B. 9 On One Side of Average
C. 6 Trending Up or Down
D. 14 Alternating Up & Down
E. 2 of 3 Beyond 2 Sigma
F. 4 of 5 Beyond 1 Sigma
G. 15 Within 1 Sigma
H. 8 Outside 1 Sigma
X. Excluded or Missing Data

Contra Costa EMS Agency
Core Indicator SU#C0002
Data Source: Base Hospital Registry; Oct through November 2011

Number of EMS Transports by Month 2011

No Special Cause Detected

Avg of Data Shown	5055.833
Median Data Shown	5024.5
Sigma for Limits	190.3
Base for Limits	Average MR

Chart Type: **Chart for Individuals**
Centerline: 5,056 Process Limits: Lower: 4,485 Upper: 5,627

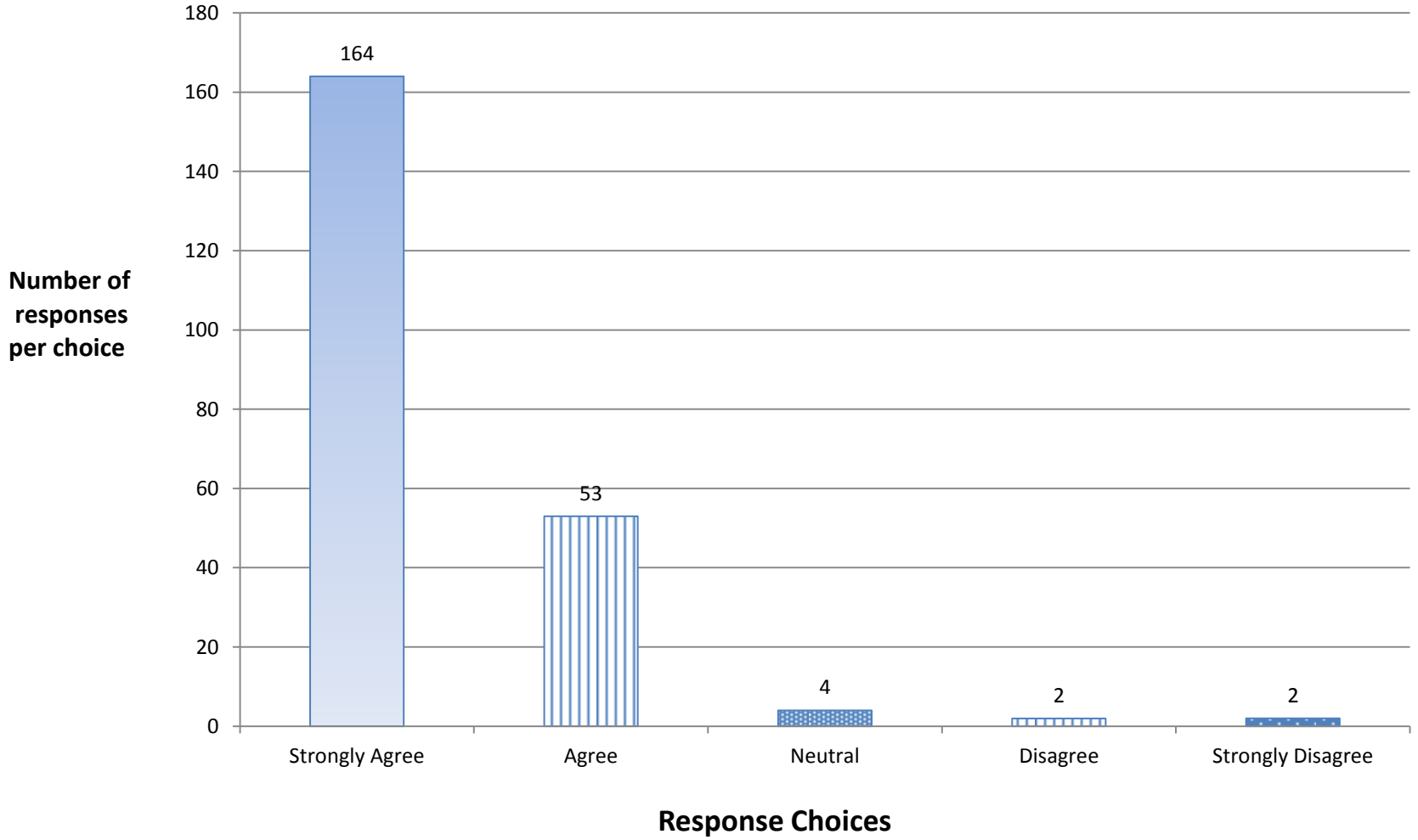
Database Column 1

A. 1 Beyond Control Limit
B. 9 On One Side of Average
C. 6 Trending Up or Down
D. 14 Alternating Up & Down
E. 2 of 3 Beyond 2 Sigma
F. 4 of 5 Beyond 1 Sigma
G. 15 Within 1 Sigma
H. 8 Outside 1 Sigma
X. Excluded or Missing Data

Contra Costa EMS Agency
Core Quality Indicators
Comprehensive Report
Q4 2011

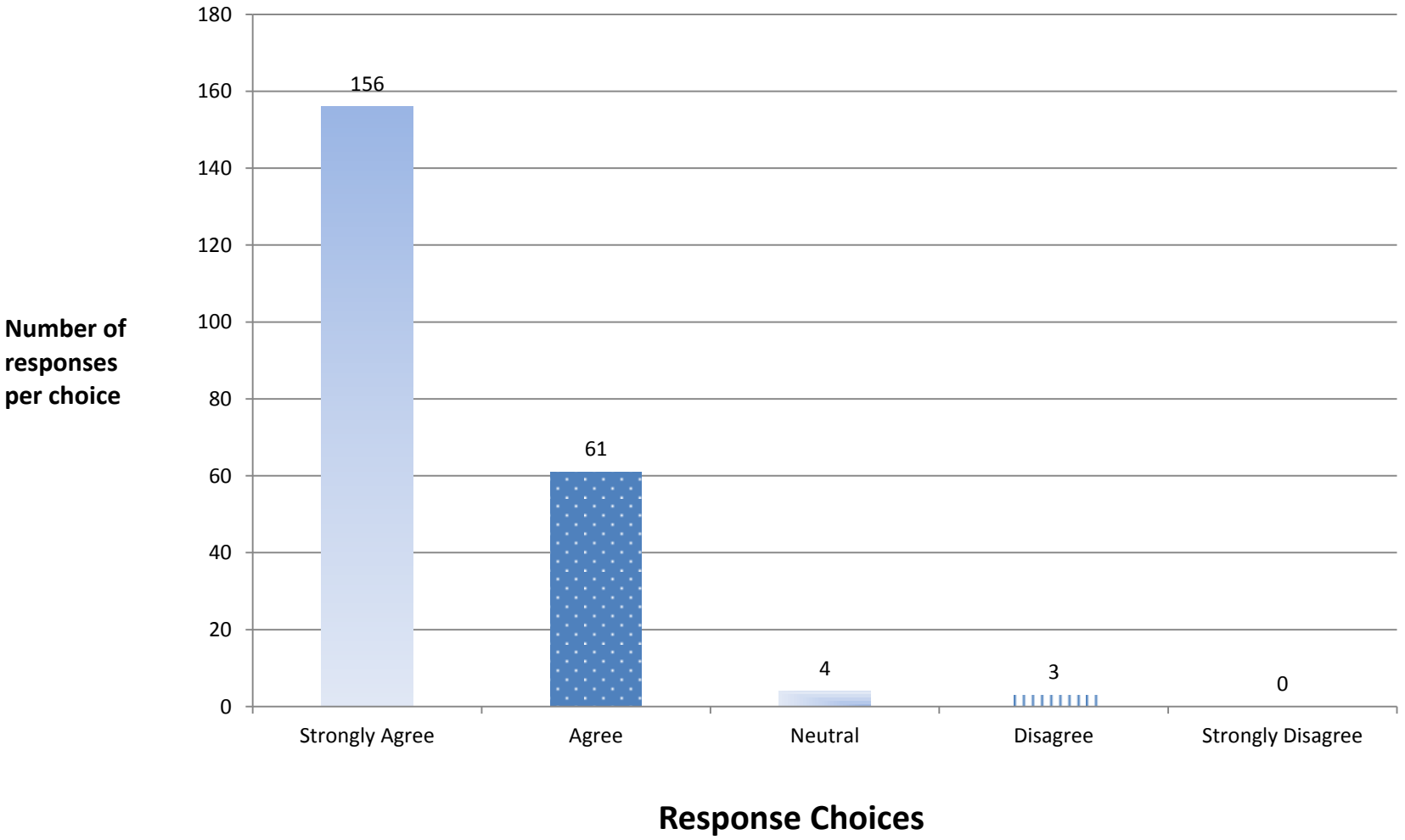
Contra Costa EMS Agency
Core Indicator SU#C0005A
Data Source: Provider Survey 2011

Q4 2011 Customer Satisfaction (AMR) Survey
Confidence in the EMS Providers
N=225



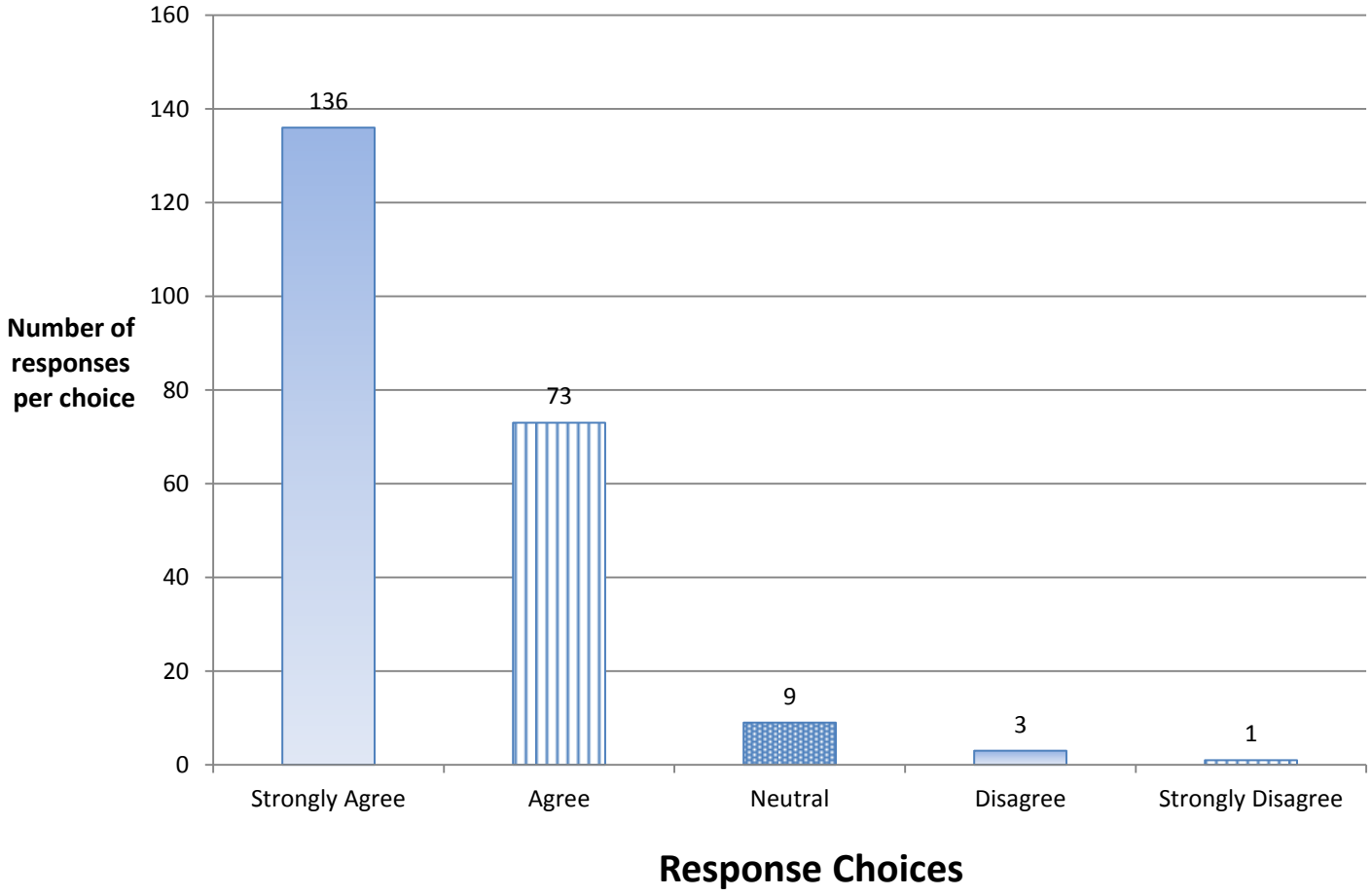
Contra Costa EMS Agency
Core Indicator SU#C0005A
Data Source: Provider Survey 2011

Q4 2011 Customer Satisfaction (AMR) Survey
Ensure Comfort Minimize Pain
N = 224



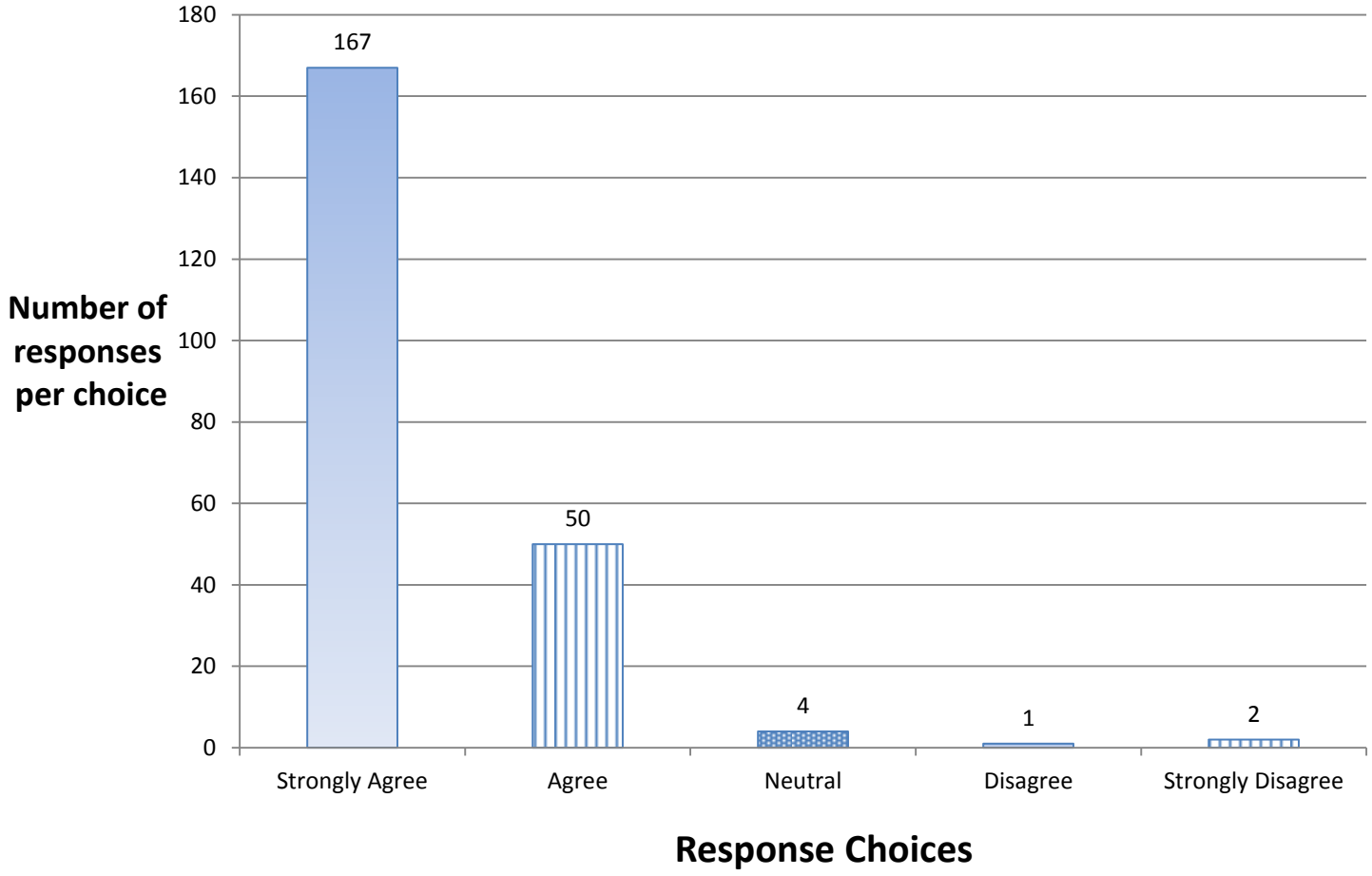
Contra Costa EMS Agency
Core Indicator SU#C0005A
Data Source: Provider Survey 2011

Q4 2011 Customer Satisfaction (AMR) Survey
Explained Care and Treatment
N = 222



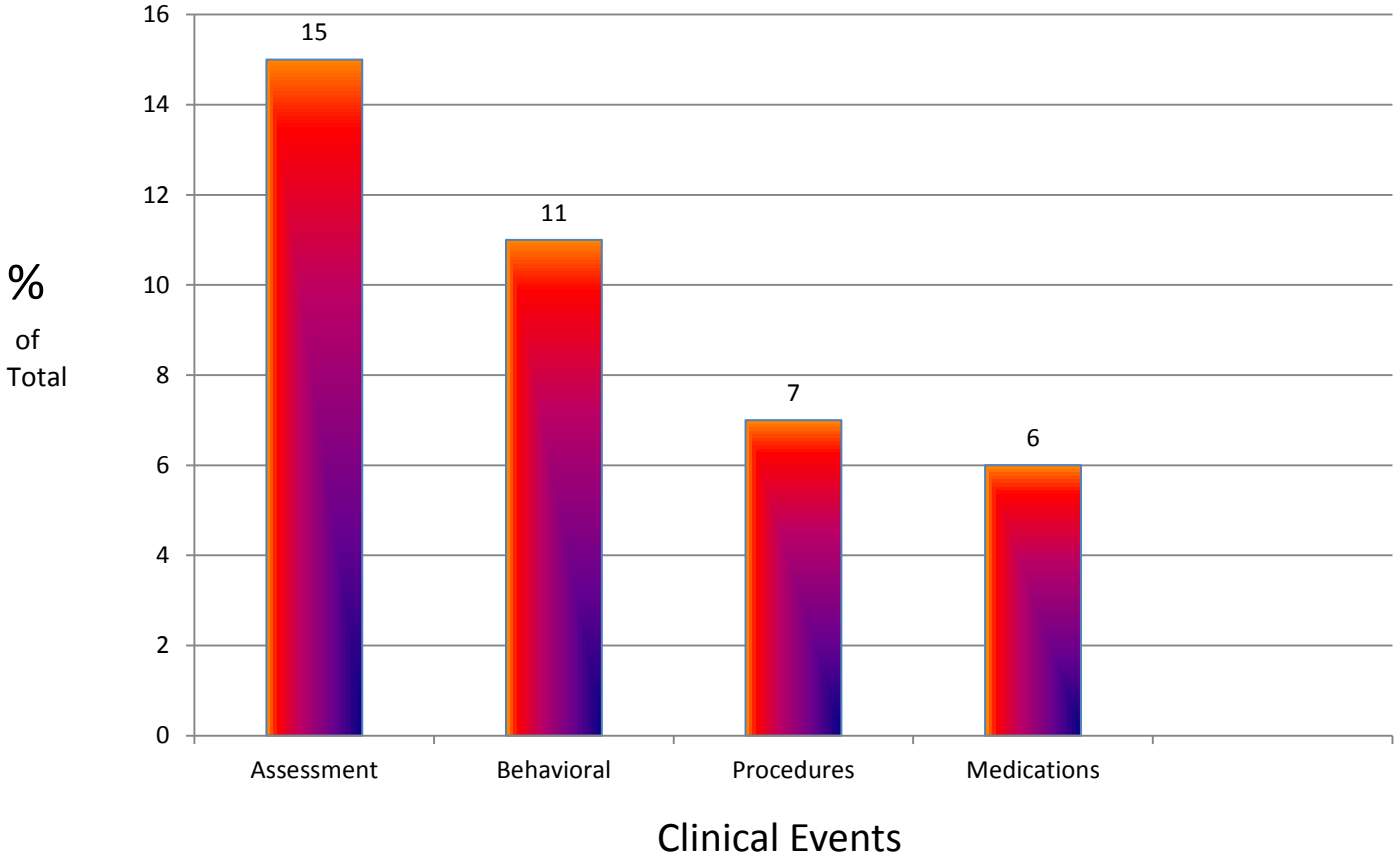
Contra Costa EMS Agency
Core Indicator SU#C0005A
Data Source: Provider Survey 2011

Q4 2011 Customer Satisfaction (AMR) Survey
Overall Quality of Care
N = 224



Contra Costa EMS Agency
Core Indicator SU#C0006B
Data Source: EMS Safety Events
Reporting Data Base2011

2011 Patient Safety Events
Top Four (4) Clincal
N = 28



Contra Costa EMS Agency
Core Indicator SU#C0006B
Data Source: EMS Safety Events
Reporting Data Base2011

2011 Patient Safety Events
Top Four (4) Operational
N = 28