

A. SYSTEM ORGANIZATION AND MANAGEMENT

1999-00

	Does not currently meet standard	Meets minimum standard	Meets recommended guidelines	Short-range plan	Long-range plan
Agency Administration:					
1.01 LEMSA Structure		X			
1.02 LEMSA Mission		X			
1.03 Public Input		X			
1.04 Medical Director		X	X		
Planning Activities:					
1.05 System Plan		X			
1.06 Annual Plan Update		X			
1.07 Trauma Planning*		X	X		
1.08 ALS Planning*		X			
1.09 Inventory of Resources		X			
1.10 Special Populations		X	X		
1.11 System Participants		X	X		
Regulatory Activities:					
1.12 Review & Monitoring		X			
1.13 Coordination		X			
1.14 Policy & Procedures Manual		X			
1.15 Compliance w/ Policies		X			
System Finances:					
1.16 Funding Mechanism		X			

	Does not currently meet standard	Meets minimum standard	Meets recommended guidelines	Short-range plan	Long-range plan
Medical Direction:					
1.17 Medical Direction*		X			
1.18 QA / QI		X			
1.19 Policies, Procedures, Protocols		X			
1.20 DNR Policy		X			
1.21 Determination of Death		X			
1.22 Reporting of Abuse		X			
1.23 Interfacility Transfer		X			
Enhanced Level: Advanced Life Support:					
1.24 ALS Systems		X	X		
1.25 On-Line Medical Direction		X	X		
Enhanced Level: Trauma Care System:					
1.26 Trauma System Plan		X			
Enhanced Level: Pediatric Emergency Medical and Critical Care System:					
1.27 Pediatric System Plan		X			
Enhanced Level: Exclusive Operating Areas:					
1.28 EOA Plan		X			

B. STAFFING / TRAINING

1999-00

	Does not currently meet standard	Meets minimum standard	Meets recommended guidelines	Short-range plan	Long-range plan
Local EMS Agency:					
2.01 Assessment of Needs		X			
2.02 Approval of Training		X			
2.03 Personnel		X			
Dispatchers:					
2.04 Dispatch Training		X	X		
First Responders (non-transporting):					
2.05 First Responder Training			X		
2.06 Response		X			
2.07 Medical Control		X			
Transporting Personnel:					
2.08 EMT-I Training		X	X		
Hospital:					
2.09 CPR Training		X			
2.10 Advanced Life Support		X	X		
Enhanced Level: Advanced Life Support:					
2.11 Accreditation Process		X			
2.12 Early Defibrillation		X			
2.13 Base Hospital Personnel		X			

C. COMMUNICATIONS

1999-00

	Does not currently meet standard	Meets minimum standard	Meets recommended guidelines	Short-range plan	Long-range plan
Communications Equipment:					
3.01 Communication Plan*		X			
3.02 Radios		X	X		
3.03 Interfacility Transfer*		X			
3.04 Dispatch Center		X			
3.05 Hospitals		X	X		
3.06 MCI/Disasters		X			
Public Access:					
3.07 9-1-1 Planning/Coordination		X	X		
3.08 9-1-1 Public Education		X			
Resource Management:					
3.09 Dispatch Triage		X	X		
3.10 Integrated Dispatch		X	X		

D. RESPONSE / TRANSPORTATION

1999-00

	Does not currently meet standard	Meets minimum standard	Meets recommended guidelines	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			
4.04 Prescheduled Responses		X	X		
4.05 Response Time Standards*		X			
4.06 Staffing		X			
4.07 First Responder Agencies		X			
4.08 Medical & Rescue Aircraft*		X			
4.09 Air Dispatch Center		X			
4.10 Aircraft Availability*		X			
4.11 Specialty Vehicles*		X	X		
4.12 Disaster Response		X			
4.13 Intercounty Response*		X			
4.14 Incident Command System		X			
4.15 MCI Plans		X			
Enhanced Level: Advanced Life Support:					
4.16 ALS Staffing		X	X		
4.17 ALS Equipment		X			

	Does not currently meet standard	Meets minimum standard	Meets recommended guidelines	Short-range plan	Long-range plan
Enhanced Level: Ambulance Regulation:					
4.18 Compliance		X			
Enhanced Level: Exclusive Operating Permits					
4.19 Transportation Plan		4.20			
4.20 "Grandfathering"		X			
4.21 Compliance		X			
4.22 Evaluation		X			

E. FACILITIES / CRITICAL CARE

1999-00

	Does not currently meet standard	Meets minimum standard	Meets recommended guidelines	Short-range plan	Long-range plan
Universal Level:					
5.01 Assessment of Capabilities		X	X		
5.02 Triage & Transfer Protocols*		X			
5.03 Transfer Guidelines*		X			
5.04 Specialty Care Facilities*		X			
5.05 Mass Casualty Management		X	X		
5.06 Hospital Evacuation*		X			
Enhanced Level: Advanced Life Support:					
5.07 Base Hospital Designation*		X			
Enhanced Level: Trauma Care System:					
5.08 Trauma System Design		X			
5.09 Public Input		X			
Enhanced Level: Pediatric Emergency Medical and Critical Care System:					
5.10 Pediatric System Design		X			
5.11 Emergency Departments		X	X		
5.12 Public Input		X			
Enhanced Level: Other Speciality Care Systems:					
5.13 Speciality System Design		N/A			
5.14 Public Input		N/A			

F. DATA COLLECTION / SYSTEM EVALUATION

1999-00

	Does not currently meet standard	Meets minimum standard	Meets recommended guidelines	Short-range plan	Long-range plan
Universal Level:					
6.01 QA/QI Program		X	X		
6.02 Prehospital Records		X			
6.03 Prehospital Care Audits		X	X		
6.04 Medical Dispatch		X			
6.05 Data Management System*		X	X		
6.06 System Design Evaluation		X			
6.07 Provider Participation		X			
6.08 Reporting		X			
Enhanced Level: Advanced Life Support:					
6.09 ALS Audit		X			
Enhanced Level: Trauma Care System:					
6.10 Trauma System Evaluation		X			
6.11 Trauma Center Data		X	X		

	Does not currently meet standard	Meets minimum standard	Meets recommended guidelines	Short-range plan	Long-range plan
Universal Level:					
7.01 Public Information Materials		X			
7.02 Injury Control		X	X		
7.03 Disaster Preparedness		X	X		
7.04 First Aid & CPR Training		X			

		Does not currently meet standard	Meets minimum standard	Meets recommended guidelines	Short-range plan	Long-range plan
Universal Level:						
8.01	Disaster Medical Planning*		X			
8.02	Response Plans		X	X		
8.03	HazMat Training		X			
8.04	Incident Command System		X			
8.05	Distribution of Casualties*		X			
8.06	Needs Assessment		X			
8.07	Disaster Communications*		X			
8.08	Inventory of Resources		X			
8.09	DMAT Teams			X		
8.10	Mutual Aid Agreements*		X			
8.11	CCP Designation*	X				X
8.12	Establishment of CCPs	X				X
8.13	Disaster Medical Training		X	X		
8.14	Hospital Plans		X	X		
8.15	Interhospital Communications		X			
8.16	Prehospital Agency Plans		X	X		
Enhanced Level: Advanced Life Support:						
8.17	ALS Policies		X			
Enhanced Level: Specialty Care Systems:						
8.18	Specialty Center Roles		X			
Enhanced Level: Exclusive Operating Areas/Ambulance Regulations:						
8.19	Waiving Exclusivity		X			

SANTA CRUZ COUNTY EMS PLAN

System Organization and Management

Section A

Agency Administration

1.01

Minimum standard: 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 EMS Manager is the key position in the EMS Agency responsible for day-to-day management and coordination of EMS related activities. Because of the limited staffing of EMS, a vacancy occurring in this position can have a debilitating effect on overall system management. The County has recently experienced problems in recruiting and retaining a qualified individual in this position. The EMS Agency has been restructured to provide more depth in program and administrative support. Previously, the EMS Agency Manager reported directly to the Health Officer. A recent administrative change provides for the EMS Manager to be under the supervision of a division chief. The advantage of the change includes more budgetary flexibility, backup clerical support, increased administrative attention to day-to-day problem solving, and more administrative capacity to address the additional workload associated with a new ambulance contract.

In terms of clinical support, the EMS Medical Director is board certified in Emergency Medicine. He is a part-time, independent contractor. The Medical Director is supported by the Prehospital Advisory Committee, which represents the EMS professional community consisting of physicians, nurses and paramedics. The County's Health Officer provides oversight and general direction in all matters pertaining to EMS. Other groups contributing to clinical support include the Medical Executive Committee and, an extensive quality improvement structure within the Emergency Medical Services Integration Authority (EMSIA, the joint power organization comprised of fire agencies for the purpose of exerting unified control over fire-based paramedic services). There also exist liaisons with the Santa Cruz County Medical Society and specialty physician groups such as pediatrics. These groups provide a strong professional base for monitoring and reviewing all clinical aspects of EMS.

EMS data collection and management activities are in transition. Through June 1998 the EMS Agency utilized an experienced EMS data consultant. This person developed several state-of-the-art computerized data collection systems. Much of this activity was grant funded and confined to the scope of work entailed in a succession of grants the County obtained over several years. The grant funding allowed the development of various data systems, which provided the EMS Agency with an understanding of areas requiring attention as well as areas where the systems functioned well. The projects for which the data consultant was hired have been completed. An administrative decision was made to discontinue use of the consultant and create a half-time EMS position to support ongoing data collection and analysis efforts. Once this position is filled, it is the Agency's intention to reevaluate the ongoing data needs of all system users and create a work plan that balances community and Agency data needs within the confines of available resources. Aside from the anticipated contribution from the data position, other data gathering and review activities continue. Key Performance Indicator (KPI) reports

have been developed from data extracted from the Prehospital Care Reports. Trauma outcome data review is an ongoing activity. EMSIA and the EMS Medical Director review all data associated with new fire paramedic services. Additionally, the Santa Cruz Consolidated Emergency Communication Center (known as NetCom) contracts with the County to provide emergency dispatch services as well as both routine and ad hoc system reports. Their state-of-the-art computer aided dispatch system provides highly reliable data for use in monitoring various aspects of first responder performance.

Resource requirement: County staff

Time estimate: 6 months

Cost estimate: \$50,000

1.02

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

Current status: Standard met

The County's EMS system is well established and changes to the system can best be characterized as incremental rather than fundamental. The motivation for most change is to make the system better able to respond to the needs of the public. There are five major areas where EMS Agency QA/QI efforts provide the foundation and guidance for the planning, implementation, and evaluation of changes to EMS system functions. They are ongoing paramedic performance; structured committee planning and review activities; field incident review; emergency medical dispatch review; and, ambulance contractor performance monitoring. With regard to paramedic service provider performance, each provider is required to provide a satisfactory QA/QI plan. The plan must be developed in conjunction with a County QA policy that requires emphasis on clinical competency. The County's exclusive ambulance transport provider, American Medical Response – West (AMRW), has an approved QA/QI plan in place. This is also true of the Emergency Medical Services Integration Authority (EMSIA). QA/QI staffs of both of these organizations work closely with the EMS Agency on all quality related matters and actively participate in standing QA/QI committees and functions. The Base Station hospitals also play important roles in providing immediate feedback to providers, participating in quality review processes, assessing the appropriateness of changes in field practice, and garnering the input of hospital based specialists on the interrelationship of field and hospital care.

With regard to structured committee planning and review activities, the County has designated quality assurance committees that review clinical trends, skill usage, currency of protocols, success rates, etc. to identify system performance within the context of the overall EMS systems. At least quarterly, a County QA meeting focuses exclusively on trauma care and related activities. The Emergency Medical Care Commission advises the EMS Agency on strategic planning issues and strives to create a unified vision of the direction that EMS should be taking.

The EMS Agency is responsible for evaluating field incident reports and investigating clinical competency complaints. Identification of the root causes of incidents and complaints is fundamental to correcting system problems from isolated individual performance issues to larger system deficiencies. Development of more sensitive tools to identify subtle systems problems is part of the QA process.

Emergency Medical Dispatch (EMD) review is accomplished through a QA Committee that provides detailed clinical oversight of the medical dispatching program. A detailed review is conducted of all calls dispatched code 2 but in which patient transport to the hospital is code 3.

Finally, the Ambulance Contract Compliance Commission is a new commission that has been designated by the County Board of Supervisors to oversee the new five-year paramedic transport contract with American Medical Response West. This is a highly structured agreement with specific resource and performance requirements. In the event AMRW does not satisfactorily meet its obligations, the contract defines corrective actions to be taken. This citizen-based commission is being converted to a staff model task group. The contract oversight responsibilities will not change.

Unmet need: None

Task: None

Resource requirement: None

Time estimate: None

Cost estimate: None

1.03

Minimum standard: Each local EMS Agency shall have a mechanism (including the Emergency Medical Care Commission(s) and other sources) to seek and obtain appropriate consumer and health care provider input regarding the development of plans, policies, and procedures, as described throughout the document.

Current status: Standard met

The Emergency Medical Care Commission is prescribed by County ordinance with the Board of Supervisors appointing its twelve members. The Commission is comprised of one representative of each of the five Supervisorial districts; one representative from the Fire Chiefs Association; one consumer representative; one representative from the law enforcement association; one representative from the county Medical Society; one representative from EMS field care; one representative from the contract paramedic/transport service; and one representative from the hospitals. The Commission meets monthly and functions as an advisory body to the Board of Supervisors and the EMS Agency. It is responsible for evaluating and improving the EMS system. This is done by systematically considering the traditional eight components of the EMS system design. The EMCC is required to have open, noticed meetings as set forth in the Brown Act. Meeting locations alternate between North, Central and South county to facilitate access. Technical issues such as protocols and procedures are discussed in detail in the EMCC's Prehospital Advisory Committee whose meetings also are open to the public. This committee is provider oriented with increased representation from the EMSIA, base station hospitals, air transport providers and the trauma hospitals.

Unmet need: None

Task: None

Resource requirement: None

Time estimate: None

Cost estimate: None

1.04

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

Current status: Standard met

The EMS Medical Director, Kent Benedict, is Board Certified in Emergency Medicine and has been practicing emergency medicine for over 20 years. Dr. Benedict's tenure as the EMS Medical Director (except for short sabbatical periods) has been continuous for over 15 years. He works for the County as an independent contractor on a part-time basis. While he is budgeted for a specific number of hours per year, his hours can be increased as mutually agreeable if circumstances warrant. Under his direction the EMS system has developed from a BLS response system with two ambulance companies to a state-of-the-art, multi-disciplined, advanced adult and pediatric life support program.

Unmet need: None

Task: None

Resource requirement: None

Time estimate: None

Cost estimate: None

Recommended guideline: The local EMS agency medical director should have administrative experience in emergency medical services systems.

Current status: Guideline met

As noted in the minimum standard portion of this objective, Dr. Benedict has been functioning in the role of EMS Medical Director for well over a decade. In that period he has provided clinical medicine oversight and strong leadership as he leads the quality assurance committee, provides input to the EMCC, maintains continuing liaison with the county's medical community, and asserts EMS system disciplinary action when needed.

Unmet need: None

Task: None

Resource requirement: None

Time estimate: None

Cost estimate: None

Recommended guideline: 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), and/or should appoint medical consultants with expertise in trauma care, pediatrics, and other areas, as needed.

Current status: Guideline met

The Santa Cruz County EMS Agency is small. As such, it does not have the resources to hire paid consultants for multiple physician specialties. Instead, the EMS Agency depends upon voluntary support from the medical community. For example, specialty care physicians are a part of the Prehospital Advisory Committee and the Quality Assurance Committee, not by county appointment but by virtue of their interest. Additionally, both base station hospitals have emergency departments approved for pediatrics. Expertise in trauma care is obtained in the same manner.

A Medical Executive Committee, which includes base station physicians and Prehospital Liaison nurses among others, meets periodically to deliberate on issues that affect medical control.

Planning Activities

1.05

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

- a) Assess how the current system meets these guidelines,
- b) Identify system needs for patients within each of the targeted clinical categories (as identified in Section II), and
- c) Provide a methodology and timeline for meeting these needs.

Current status: Standard met

This plan is proof of meeting this objective.

Unmet need: None

Task: None

Resource requirement: None

Time estimate: None

Cost estimate: None

1.06

Minimum standard: 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 the system design.

Current status: Not applicable at this time

This Plan is the most recent submission by Santa Cruz County. Upon its approval, it is the intent of the EMS Agency to submit annual updates.

Unmet need: Annual plan revision

Task: Review and update the plan annually

Resource requirement: EMS staff and members of the EMS community.

Time estimate: Plan review for revision should commence in April of each year in order to submit an updated plan for the County's new fiscal year beginning in July.

Cost estimate: Staff and volunteer time

1.07

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

Current status: Standard met

A draft trauma plan was developed over several years and was completed in October 1997. It was submitted to the State for approval. The State review process took approximately one year. The plan was neither rejected nor approved. Instead, the EMS Agency was asked to consider changing the trauma hospital designation process from a model process used by the Northern California EMS Region to the

more familiar process outlined within the State regulations. Subsequently, the plan has been revised and a new draft is undergoing review by the EMCC and other interested parties. Apart from formal approval of a Trauma Plan, a system is in place for providing trauma care that is highly developed and functioning well. The question as to whether it is an optimal system remains subject to debate, as there does not appear to be significant interest on the part of either of the local acute care hospitals to seek trauma center designation. Further efforts need to be expended on data gathering efforts and analysis to better assess if the system design in place is optimal.

Unmet need: State approval of Trauma Plan

Task: Complete the Trauma Plan approval process. Improved data gathering and analysis on trauma cases.

Resource requirement: None

Time estimate: Six months

Cost estimate: None

Recommended guideline: The local EMS agency should designate appropriate facilities or execute agreements with trauma facilities in other jurisdictions.

Current status: Guideline met

At the current time, neither of the local trauma receiving hospitals is formally designated as a trauma center. Nevertheless, both hospitals provide extensive trauma care services. In this regard, both hospitals have developed an internal multi-disciplinary trauma review process.

With regard to obtaining written agreements with out-of-county trauma centers, this was unsuccessfully attempted around 1996. Since then an impasse has been reached because of two unresolved issues: county reimbursement for medical care of indigent persons; and, transfer of trauma patients back to local hospitals. Given the level of funding available to support local indigent care programs, it has been difficult to work out coverage agreements with trauma centers in view of the County's long-standing policy of not reimbursing out-of-county providers when patients directly access those facilities. The County has recently modified its policy slightly. This may create more favorable conditions for reaching some resolution with the trauma centers on this issue. It may be necessary to pursue a contract with a single trauma center if a more general solution cannot be achieved. However, the so-called repatriation issue remains a problem. The major obstacle in this regard is the need to get community based physicians to accept newly treated and released trauma patients into established practices. Because many trauma patients do not have a payment guarantor when ready for transfer, physicians are reluctant to accept potential bad debt cases. There are also issues related to liability when care is transferred between physicians, especially in orthopedic cases. These problems involve issues beyond the realm of the EMS Agency and are not likely to be solved in the near term. Until some fundamental changes occur to the situations described above, obtaining written agreements between the county and out-of-county trauma hospitals is not likely.

Nevertheless, the important fact is that trauma centers proximate to Santa Cruz County, namely Santa Clara Valley Medical Center, San Jose Medical Center, and Stanford University Hospital, continue to accept county trauma patients without restrictions. It should also be pointed out the two of the trauma centers, San Jose Medical Center and Stanford University Hospital, are affiliated with air ambulance services serving the County. It is the air transport providers, in conjunction with the San Jose area base station hospital, that ultimately make the decision on which facility is most appropriate for the needs of the patient. Even without the desired agreements, the plan to transport patients to the nearest facility that is immediately surgically capable continues to be successful. The three trauma centers in Santa Clara County and the two acute care hospitals in Santa Cruz County both continue to provide on-demand trauma care without consideration of written agreements or the patient's ability to pay.

Unmet need: None – written agreements not feasible at this time

Task: None

Resource requirement: None

Time estimate: None

Cost estimate: None

1.08

Minimum standard: Each local EMS agency shall plan for eventual provision of advanced life support services throughout its jurisdiction.

Current status: Standard met

Countywide paramedic service is provided.

Unmet need: None

Task: None

Resource requirement: None

Time estimate: None

Cost estimate: None

1.09

Minimum standard: 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

This standard is met through a variety of mechanisms. The County's contract with American Medical Response West requires detailed reporting on the availability of units and personnel. The ambulance licensing process, base station agreements with local hospitals and agreements with fire agencies all provide information on EMS resources. However, this information is not assembled in a single document.

Unmet need: A single comprehensive list of EMS resources.

Task: Compile available EMS resource information into a single system inventory.

Resource requirement: County staff and EMS responder agencies

Time estimate: 1 year

Cost estimate: None

1.10

Minimum standard: Each local EMS agency shall identify population groups served by the EMS system which require specialized services (e.g., elderly, handicapped, children, non-English speakers).

Current status: Standard met

Population groups requiring specialized EMS services in Santa Cruz County include the elderly, young adults (University of California at Santa Cruz), monolingual Spanish-speakers and tourists.

Demographically, the county population is skewed between the elderly (Santa Cruz is a preferred retirement area) and the young college students in our area attending the local university. Due to the agricultural activity in southern Santa Cruz County, the County has a significant group of farm workers who are monolingual Spanish-speaking only. Lastly, because the County is a mountainous coastal region located between San Francisco and Monterey, it attracts a large tourist population mostly during the summer months, affecting the Santa Cruz City, Capitola, north coast beaches and state parks areas specifically.

Recommended guideline: Each local EMS agency should develop services, as appropriate, for special population groups serviced by the EMS system which require specialized services.

Current status: Guideline met

EMS services and policies have been developed to take into consideration the unique requirements of each of these groups. During the tourist period, the design of the system status management plan for ambulance response allows for special dispatch posts and for ambulances to navigate around traffic problems and the very large crowds of persons engaged in recreational activity. With regard to the elderly, the high cost of service is nearly always of concern. Provision of the County's contract with AMRW require that Medicare coverage be considered payment in full so the elderly have no out of pocket costs for ambulance services. The contract requires that the AMR paramedic distribute placards at the time of service that specifies this policy. There are also provisions for hardship cases for low-income individuals unable to pay their bill. In consideration of monolingual Hispanics, the ambulance contractor provides financial incentives to paramedics who are bilingual. Also, NetCom, the EMS dispatch center, contracts for multi-language translation services that are available on an as needed basis.

Although the number of pediatric patients is not disproportionate to the population base as a whole, a number of system innovations have been made in consideration of this clinically unique group. Both acute care hospitals have been designated as Emergency Departments Approved for Pediatrics (EDAP). The Ambulance Contract also requires that all paramedics obtain and maintain P.A.L.S. (Pediatric Advanced Life Support) certification. In addition, an entire section of pediatric advanced life support treatment protocols have been developed for prehospital care. Lastly, mandatory ambulance equipment lists ensure that paramedics have available the proper pediatric equipment and medications.

Unmet need: None

Task: None

Resource requirement: None

Time estimate: None

Cost estimate: None

1.11

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

Current status: Standard met

Given the rapidly changing world of EMS, this topic has received ongoing consideration from the EMS community. With the increasing interest of fire services in the provision of paramedic services, increasing cost to provide EMS services in an atmosphere of dwindling revenue sources, and the determination of managed care to control healthcare costs, it is apparent that the traditional manner of delivering EMS related services must now be shaped and reconfigured to accommodate these

environmental changes. The determination of “optimal” roles and responsibilities today may be arguably less than optimal tomorrow. With regard to meeting this standard, the EMS Agency holds that it has optimized the roles and responsibilities of participants to the extent that the evolutionary nature of change in the system permits. An additional caveat must be emphasized as well: data and analysis must resolve questions of optimality, not argument. The EMS Agency has much work to do to address the data needs of the system. To a great extent, a determination as to whether the roles and responsibility of the players has been optimized can best be made in retrospect after data have been evaluated. When looking ahead, one participant’s view of optimal may be dramatically at odds with another’s. For example, at this point in time it is difficult to determine the fire agencies optimal role in providing paramedic services. At what point are there too many paramedics on the streets; i.e., can you have too much of a good thing? This topic is subject to continuing debate among system participants, the Board of Supervisors, and the general public. As a result of legitimate disagreements, some participants may argue that their role and/or responsibilities have not been optimized.

The EMS Agency, as the lead agency, has initiated a process to allow interested fire services (heretofore the backbone of the EMS basic life support response system) to integrate their services within the existing contracted advanced life support services. The optimal integration plan must minimize redundancy and layering of paramedic services with the provision of effective advanced life support. The formation of the County's fire services into an organized body, the Emergency Medical Services Integration Authority (EMSIA), through a joint powers agreement was the first step taken to create a single fire administrative structure intended to minimize the problems of multi-agency integration. Through this administrative body the County's fire services have begun to provide engine-based paramedic services to improve ALS response times. This change requires the support and planning of the EMS Agency, base hospitals, the Emergency Medical Care Commission, and the County Board of Supervisors.

Managed care concerns, which are essentially an outgrowth of the desire to keep health care affordable, must also be taken into consideration by allowing EMS transport agencies to consider non-traditional medical pathways when deciding patient transport destinations and overall patient dispositions. To this end, the transport provider should be encouraged to deploy a new computerized program that has built-in contingencies for this adaptation, and enabling law changes should be explored.

A new approach for increasing paramedic productivity (and therefore revenue generation) must also be incorporated in the system redesign. For this change the paramedics must be better able to assess a patient's physical complaint beyond the current emergent / non-emergent condition. The addition or enhancement of existing assessment skills would allow paramedics to provide more in-depth physical assessments to consulting managed care entities so that healthcare alternatives for any particular patient could be considered.

Another challenge that the above changes would create is the need for a different approach to medical dispatching. It is conceivable that, with this new change, a 9-1-1 caller may require a non-urgent paramedic response or even a transfer of the caller to their respective HMO services. Medical dispatchers would need to add this option to their existing protocols.

Lastly, the effect of the system redesign must be carefully monitored. Although the current data collection system will accommodate the reconfiguration, an analytic capability must be developed to provide proper evaluation.

Unmet need: Further define the new resource management concept, coordinate with HMO pathways, coordinate with EMT-P triage and interventions, explore non-911 EMD access.

Task: Form small work groups to resolve the issues of new service delivery.

Resource requirement: EMS staff can provide the needed leadership; however, additional staff support would need to be provided during the planning and implementation phase as well as for data collection and analysis.

Time estimate: This would be a three year project: the first year would be concerned with planning, the second year with implementation, and the third year with analysis of the program's impact.

Cost estimate: The project coordinator for the start-up would cost about \$50,000 per year. Additional data consultant time would cost approximately \$25,000. Most of the cost would have to be funded by grants as it is unlikely that county funds would be available for this purpose.

Recommended guideline: Each local EMS agency should ensure that system participants conform with their assigned EMS system roles and responsibilities through mechanisms such as written agreements, facility designations, and exclusive operating areas.

Current status: Guideline met

Written agreements exist between all advanced life support providers and support agencies. The paramedic transport provider, AMRW, is contracted on an exclusive operating area basis. Both acute care hospitals operate under written base station agreements with the County and are also designated for specialty care for pediatrics (EDAP). A written agreement exists between the County and the Central Fire Protection District covering their pilot project to deliver paramedic services. A written agreement also exists between the County and Aptos/La Selva Fire District. The Medical Executive Committee reviews participant activities.

Unmet need: None

Task: None

Resource requirement: None

Time estimate: None

Cost estimate: None

Regulatory Activities

1.12

Minimum standard: Each local EMS agency shall provide for the review and monitoring of EMS system operations.

Current status: Standard met

The Board of Supervisors has designated the Health Services Agency as the EMS oversight agency. Within the HSA, the EMS Agency is the designated program for the purpose of evaluating, implementing, and monitoring the EMS system. Although the Board of Supervisors has established HSA as the administrative arm, they also have established the Emergency Medical Care Commission as a technical advisory and professional review body which is advisory to HSA and the Board of Supervisors.

The EMS Agency depends upon input from the Prehospital Advisory Committee, Quality Assurance Committee, the EMD Quality Assurance Committee and the Medical Executive Committee.

Unmet need: None

Task: None

Resource requirement: None

Time estimate: None

Cost estimate: None

1.13

Minimum standard: Each local EMS agency shall coordinate EMS system operations.

Current status: Standard met

The EMS Agency is responsible for coordination of EMS system operations. This is accomplished primarily through ongoing duties of the EMS staff, in conjunction with standing Commissions and committees, written agreements between participants, and supported by written policies and procedures. The central function of the EMS Program Manager is to maintain close working relationship with the various system participants; identify system components requiring modification; coordinating efforts of appropriate key personnel in making changes; setting the agenda and process to effectuate change; establish common goals and priorities; oversee the accomplishment of tasks; and, monitor the outcomes.

Unmet need: None

Task: None

Resource requirement: None

Time estimate: None

Cost estimate: None

1.14

Minimum standard: 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, ambulance services and hospitals) within the system.

Current status: Standard met.

The EMS program has an extensive manual that covers all aspects of EMS programming. Every paramedic and MICN is provided a copy of the manual as a matter of the accreditation process. As policies, protocols and procedures are updated, every holder of a policy manual is sent the update along with a revised table of contents.

Unmet need: None

Task: None

Resource requirement: None

Time estimate: None

Cost estimate: None

1.15

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

Current status: Standard met

The EMS Agency has a number of mechanisms for reviewing program compliance. Incident reporting, random PCR reviewing, quality assurance evaluation programs conducted according to approved internal QA plans, and on-line medical control provide a wide range of effective oversight activities.

Unmet needs: None
Task: None
Resource requirement: None
Time estimate: None
Cost estimate: None

System Finances

1.16

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

Current status: Standard met

The EMS Agency depends upon a number of funding sources to maintain its ongoing operations. Fees for service are charged for various EMS personnel certifications: ambulance licensing inspections, EMS course reviews, and hospital designations. An Emergency Medical Services Fund was established during FY 1988-89. All funds collected in the EMS portion of the fund are used for ongoing support of the EMS budget unit. Periodically, grant funding is available and used for special projects. A large portion of the EMS budget comes from the County general fund.

While existing funding is sufficient to support the current organizational structure and related activities, other sources of funding need to be developed in order to enhance administrative, data management, system development, and oversight capabilities. Under consideration is a fee assessment for all ALS providers that would serve to underwrite the EMS program data collection system. Another consideration would be a fee assessment to cover the cost of the EMS medical director's time and attention directed at the medical dispatch program. Currently this is also funded by general funds.

Yet another approach to EMS program funding is to consider the needs of the system as a whole and the potential for developing a county service area (CSA) for EMS funding. This approach has received the support of voters from various Bay Area counties, including neighboring Monterey County. However, no plans are currently under consideration to take such action in Santa Cruz County.

Clearly, if significant enhancements are to be made to the current EMS system, outside funding sources must be developed. It is doubtful that the County will be in a position to offer more support to the EMS budget in the foreseeable future.

Unmet need: Securing supplemental funding for EMS Agency services.

Task: Continue to seek outside funding sources and present to the Board of Supervisors for consideration.

Resource requirement: Staff time for grant writing and financial analysis.

Time estimate: Ongoing

Cost estimate: None

Medical Direction

1.17

Minimum standard: 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 stations and roles, responsibilities, and relationships of prehospital and hospital providers.

Current status: Standard met

The county is served by two general, acute care hospitals with emergency departments and one surgery and maternity center that does not provide emergency services. The two acute care hospitals are located far enough apart that their EMS and patient catchment areas are easily defined and have minimal overlap. Because of their individual service areas, both acute care facilities have been designated as base station hospitals. Their separation also minimizes confusion about patient destinations and the selection of the appropriate base hospital for on-line medical control. This configuration is viewed as being optimal for the number and type of facilities in the County. As such, the question of designating alternative base stations is moot. The role of the base stations is coordinated with prehospital care providers primarily through the Prehospital Advisory Committee that meets monthly. The EMS Agency Medical Director chairs the committee and has control over medical decisions. Base station physicians as well as the Prehospital Liaison Nurses actively participate on this and various other committees. QA staff and paramedic representatives from first responder agencies also attend. The role and responsibilities of the base stations are covered by written agreements with the EMS Agency. Medical direction issues are also addressed in the contract with the transport provider as well as the written agreements with the Aptos/La Selva and Central Fire Protection Districts.

Unmet need: None

Task: None

Resource requirement: None

Time estimate: None

Cost estimate: None

1.18

Minimum standard: Each local EMS agency shall establish a quality assurance/quality improvement program. This may include the use of provider based programs which are approved by the local EMS agency and which are coordinated with other system participants.

Current status: Standard met

Quality assurance efforts are a central focus of the EMS Agency and are a primary charge of the EMS Medical Director. QA activities are accomplished at several levels. With respect to field paramedics and EMT's, provider based programs are the primary mechanism for implementing QA activities. The ambulance transport provider has a well-established program. The fire agency QA activities are now centered in the Emergency Medical Services Integration Authority that has its roots in the long-standing QA program established by the Aptos/La Selva Fire District. Coordination among the organization-based QA programs is accomplished through the Prehospital Advisory Committee. For medical dispatch services, a QA Committee has been established specifically to monitor and improve the tools used by and the performance of dispatchers. Base hospital on-line medical control and QA responsibility are exercised by the Base Hospital Medical Director in conjunction with the EMS Medical Director. A trauma review committee conducts detailed record review of all major trauma cases resulting in

transport to a trauma center. EMS administration has an incident review process as well as conducting random prehospital care record checks.

Unmet need: None

Task: None

Resource requirement: None

Time estimate: None

Cost estimate: None

Recommended guideline: Prehospital care providers should be encouraged to establish in-house procedures that identify methods of improving the quality of care provided.

Current status: Guideline met

As noted above, all ALS providers have QA plans that provide this level of review; this includes fire agency ALS providers through the EMSIA'S QA program. QA activities are coordinated through the Prehospital Advisory Committee under the direction of the EMS Medical Director.

Unmet need: None

Task: None

Resource requirement: None

Time estimate: None

Cost estimate: None

1.19

Minimum standard: Each local EMS agency shall develop written policies, procedures, and/or protocols including but not limited to:

Current status: Standard met

<u>Topic</u>	<u>Reference Document</u>
a) Triage	Policy 1070- "Triage For Receiving Hospital"
b) Treatment	Protocol groups: C,E,M,N,O,R,T and pediatrics
c) Medical Dispatch	Medical Priority Dispatch System and Policy 1220- "EMD"
d) Transport	Policy 1080- "AMA"; Policy 1300- "Mutual Aid", 1060- "Helicopter"
e) On-scene treatment times	NO POLICY
f) Transfer of emergency patients	Policy 1250- "Interfacility Transfer"
g) Standing orders	Policy 1010- "Standing Orders"
h) Base hospital contact	Written into each treatment protocol
i) On-scene physicians and other personnel	Policy 1050- "On-Scene Medical Personnel"
j) Local scope of practice	Procedures 5000- "ETT"; 5200- "Cryothyrotomy"; 5300- "Thoracostomy"; Policy 1020.ped- "IO"; Policy 1160- "PVAD"; and Policy 4000- "Early Defibrillator"

Unmet need: None
Task: None
Resource requirement: None
Time estimate: None
Cost estimate: None

Recommended guideline: Each local EMS agency should develop (or encourage development of) pre-arrival and post dispatch instructions.

Current status: Guideline met

The emergency medical dispatch program approved for Santa Cruz County is the Medical Priority Dispatch System which includes pre-arrival and post dispatch instructions.

Unmet need: None
Task: None
Resource requirement: None
Time estimate: None
Cost estimate: None

1.20

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

Current status: Standard met

Santa Cruz County was one of the first counties to develop a written DNR policy. Since then, it has been revised to include the state promoted DNR form and process.

Unmet need: None
Task: None
Resource requirement: None
Time estimate: None
Cost estimate: None

1.21

Minimum standard: Each local EMS agency, in conjunction with the county coroner, shall develop a policy regarding determination of death, including deaths at the scene of apparent crimes.

Current status: Standard met

Policy 1140, "Determination of Death and Field Pronouncement," provides all EMS responders with a guideline for withholding resuscitation or stopping resuscitation when started. Protocol CA1, "Asystole," also establishes yet another condition for determination of death. The issue of crime scenes is not a matter for local policy, as treatment of victims should not change regardless of the cause of mortal injury.

Unmet need: None
Task: None
Resource requirement: None
Time estimate: None
Cost estimate: None

1.22

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

Current status: Standard unmet

The following policies or protocols cover the issues in question: Policy 1000.ped- "Suspected Child Abuse Reporting", Protocol PMA1- "Abuse - Suspected Child Abuse", and Protocol PMA4- "SIDS". At the present time a policy for elder abuse has not been developed.

Unmet need: Elder abuse reporting mechanism
Task: Develop a policy and reporting mechanism for suspected elder abuse
Resource requirement: Staff time
Time estimate: Six months
Cost estimate: None

1.23

Minimum standard: The local EMS medical director shall establish policies and protocols for the scope of practice of prehospital medical personnel during inter-facility transfers.

Current status: Standard met

EMS Policy 1250 establishes the scope of practice for paramedics conducting both in-county and out-of-county inter-facility transports.

Unmet need: None
Task: None
Resource requirement: None
Time estimate: None
Cost estimate: None

Enhanced Level: Advanced Life Support

1.24

Minimum standard: 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 met

Three agencies currently provide paramedic services. Agreements have been developed with: Aptos/La Selva Fire Protection District; Central Fire Protection District; and, American Medical Response West, the county's exclusive contract transport paramedic provider.

Recommended guideline: Each local EMS agency, based on state approval, should, when appropriate, develop exclusive operating areas for ALS providers.

Current status: Guideline met

An exclusive operating contract has been awarded to the current provider, American Medical Response West (AMRW), without state approval based upon the fact that the current provider has provided uninterrupted ambulance services since 1979. American Medical Response West purchased Pacific Medical, which was Santa Cruz Ambulance. The only other ambulance service was A-1 of Watsonville which was purchased by Santa Cruz Ambulance.

Unmet need: None

Task: None

Resource requirement: None

Time estimate: None

Cost estimate: None

1.25

Minimum standard: Each EMS agency shall have on-line medical direction, provided by a base hospital (or alternative base station) physician or authorized registered nurse/mobile intensive care nurse.

Current status: Standard met

Both acute care hospitals are designated as paramedic base stations and provide medical control using locally certified MICN's and on duty emergency department physicians.

Unmet need: None

Task: None

Resource requirement: None

Time estimate: None

Cost estimate: None

Recommended guideline: Each EMS agency should develop a medical control plan that determines:

- a) The base hospital configuration for the system
- b) The process for selecting base hospitals, including a process for designation which allows all eligible facilities to apply, and
- c) The process for determining the need for in-house medical direction for provider agencies.

Current status: Guideline met

Both general, acute care hospitals in County applied, met the guidelines, and were approved as base stations. They provide the necessary on-line medical control over prehospital medical service delivery. Paramedics select the base hospital when the patient's destination is determined. The hospital that is to

receive the patient provides medical control as needed per Policy No 1070, Triage for Receiving Hospital Destination.

Unmet need: None

Task: None

Resource requirement: None

Time estimate: None

Cost estimate: None

Enhanced Level: Trauma Care System

1.26

Minimum standard: The local EMS agency shall develop a trauma care system plan, based on community needs and utilization of appropriate resources, 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 which allows all eligible facilities to apply.

Current status: Standard met, subject to local and state approval.

Over the last six years a plan has been developed and implemented. The plan is currently being revised. The State EMS Authority did not approve the original plan. The EMSA asked for changes in the process of designating local trauma centers. The plan revision should be completed by July 1999, and forwarded to the County Board of Supervisors for approval. It will then be forwarded to the State EMS Authority for final approval.

Unmet need: Approval of final plan revision

Task: Review and approval by the EMCC, Board of Supervisors, and EMS Authority

Resource requirement: Local EMS staff

Time estimate: 6 months

Cost estimate: None

Enhanced Level: Pediatric Emergency Medical and Critical Care System

1.27

Minimum standard: The local EMS agency shall develop a pediatric emergency medical and critical care system plan, based on community needs and utilization of appropriate resources, which determines:

- a) The optimal system design for pediatric emergency medical and critical care in the EMS area, and
- b) The process for assigning roles to system participants, including a process which allows all eligible facilities to apply.

Current status: Standard met

Santa Cruz County was one of the first northern California counties to develop a pediatric EMS program. This program has resulted in pediatric treatment protocols, pediatric drug and equipment standards for both transport and non-transport units, as well as designation of both acute care hospital emergency departments as Emergency Departments Approved for Pediatrics (EDAP).

Unmet need: None

Task: None

Resource requirement: None

Time estimate: None

Cost estimate: None

Enhanced Level: Exclusive Operating Areas

1.28

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

- a) The optimal system design for ambulance services and advanced life support services in the EMS areas, and
- b) The process for assigning roles to system participants, including a competitive process for implementation of exclusive operating areas.

Current status: Standard met

As noted earlier, Santa Cruz County's exclusive operating area is contracted to a single paramedic provider. Although ownership of the company providing ambulance transport services has evolved over time, it is essentially the same provider has serviced this operating area, with no change in the level of service, since 1979. Consequently, the need to open the contract to competitive bidding process has not been necessary.

Unmet need: None

Task: None

Resource requirement: None

Time estimate: None

Cost estimate: None

Section B

EMS Staffing and Training

2.01

Minimum standard: The local EMS agency shall routinely assess personnel and training needs.

Current status: Standard met

The EMS agency, via Policy 1120, requires that each provider of advanced life support develops and implements a quality assurance plan. The approved plan, in part, provides a detailed program designed to assess training needs. Additionally, the EMS Quality Assurance Committee, a result of Policy 1270, indirectly evaluates training needs through the call-review process. Annually, at the direction of the EMS Agency, an infrequently used skills day is held to address current trends and topics of concern, as well as reassess and retrain infrequently used skills (i.e., intubation, rectal valium, needle thoracostomy, mock pediatric codes, etc.).

Unmet need(s): None

Task: None

Resource requirement: None

Cost Estimate: None

Time Estimate: None

2.02

Minimum standard: The EMS Authority and/or local EMS agencies shall have a mechanism to approve the EMS education programs which require approval (according to regulation) and shall monitor them to ensure that they comply with state regulations.

Current status: Standard met.

The EMS Agency does approve local training programs and designates certain programs as providers of continuing education as per state standard. Local courses that are approved include training for medical dispatchers, EMT-P, EMT-1, EMT-D, and MICN.

Unmet need(s): The local agency could be more proactive in course monitoring. One proposed approach is to advocate for National Registry testing for EMT-1 which would allow a comparison of local graduates with graduates from other areas using the National Registry testing pool as a uniform measuring tool.

Task: Establish National Registry as a course requisite.

Resource requirement: Training institutions must provide necessary support for end of course testing.

Cost Estimate: Unknown cost for training facilities to meet testing standard

Time estimate: >1 year

2.03

Minimum standard: 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

Policy 1210 reflects the Disciplinary Regulations Guidelines as outlined in the California Code of Regulations. Policy 1240 outlines the process for reporting unusual occurrences. Policy 2030 outlines the MICN certification process; Policy 3010 describes paramedic accreditation; Policy 4000 outlines the process for certification of EMT-D and PS-D (public safety - defibrillator), and Policy 1120 outlines the process for certification as a medical dispatcher. Current regulations clearly define EMT-1 certification and recertification; therefore, there is no need for a separate county policy.

Local paramedic providers also provide accreditation support via their internal hiring and new employee orientation process. Current paramedic providers evaluate new employee competencies via a ride-along evaluation that is outlined in the paramedic QA policy and procedure manual approved by the County.

Unmet need(s): None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

2.04

Recommended guideline: Public safety answering point (PSAP) operators with medical responsibility shall have emergency medical orientation 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: Guideline met

All medical dispatching is coordinated by the Santa Cruz Consolidated Emergency Communications Center, also known as NetCom. Other PSAP'S "hot lines" rapidly transfer the caller to NetCom and usually stay on the line until NetCom indicates the call priority. All dispatchers handling fire and ambulance calls are certified as medical dispatchers using the Medical Priority Dispatch (MPD) system. Certification and recertification is accomplished per Policy 1120.

Unmet Need(s): None

Task: None

Resource requirement: None

Cost Estimate: None

Time Estimate: None

First Responders (non-transporting)

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

Current status: Guideline met.

All first responder fire agencies, at a minimum, are trained and equipped to use the semi-automatic Zoll defibrillators. Aptos/La Selva Fire Protection District and Central Fire Protection District are currently the only paramedic, first-responder agencies, and therefore exceed the standard.

Unmet need(s): At least one person on each non-transporting EMS first responder unit should be currently certified at the EMT-1 level and have available equipment commensurate with such scope of practice.

Current status: At the time this document was prepared the County's EMT-1 registry indicates that 1,450 EMT-1's have been certified by the County. The same registry indicates that 323 are certified to use the automatic defibrillators. It cannot be stated with certainty that all EMS first response units are staffed with at least one certified EMT-1. A manpower and training survey must be conducted to accurately determine if this standard is met.

The various fire agencies have entered into a Joint Powers Agreement (JPA) ostensibly to operate as a single administrative organization to deliver paramedic services. Of the twelve fire agencies countywide, eleven have become members of the JPA. This exceeds the level of participation initially thought possible. With this degree of fire participation, it is possible that EMSIA could become central to the administration of various basic life support programs for its constituent members. In so doing some of the administrative problems encountered by the local EMSA could be shared with the JPA, such as EMT-D and PS-D certification tracking, recertification training, and centralization of EMT-1 re-certification.

Unmet Need(s): Unable to determine if additional efforts are required at this time.

Tasks: Conduct a survey of each EMS first response service to determine the level of certification. Based upon the survey results, add this goal to next year's EMS plan update along with plan objectives to accomplish. The JPA will be asked to assist in the survey process.

Resource requirement: The survey can be developed, disseminated, and tallied by existing EMS program staff and with support of the EMSIA (Emergency Medical Services Integration Authority/JPA).

Cost Estimate: No cost impact if current staff conducts the survey

Time estimate: >1 year

2.06

Minimum standard: 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: It is unknown if industrial first aid teams exist. Public agencies do respond in accordance with local policies.

Unmet Need(s): None

Tasks: None

Resource requirement: None

Cost estimate: None

Time Estimate: None

2.07

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

Current status: Standard met

Along with treatment protocols for paramedics, the EMS program developed protocols for basic life support providers. Both standards of care are integrated, and reference one another. The standards are prospective and not normally reviewed retrospectively, except for trauma care and the early defibrillation.

Unmet need(s): None

Task: None

Resource requirement: None

Cost Estimate: None

Time Estimate: None

2.08

Minimum standard: All emergency, medical transport vehicle personnel should be currently certified at least at the EMT-1 level.

Current status: Standard met

The few non-paramedic transport units are EMT-1 staffed. Non-paramedic rescue units licensed by the County are located at Aptos/La Selva Fire Protection District. They are not a regular part of the ambulance transport resources use in the County and intended for use only in disaster relief situations.

Recommended guideline: 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: Guideline met as all transport vehicles are staffed with paramedics.

Unmet needs: None

Tasks: None

Resource requirement: None

Cost estimate: None

Time estimate: None

Hospital

2.09

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

Current status: Standard met

Both hospitals have an emergency department licensed by the State as "basic" and are accredited by the Joint Commission on Accreditation of Hospitals. This is a requirement for the state license and for the accreditation.

Unmet Need(s): None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

2.10

Minimum standard: All emergency department physicians and registered nurses who provide direct emergency patient care shall be trained in advanced life support.

Current status: Standard met

Both acute care hospitals are designated by the County as paramedic base stations and emergency departments approved for pediatrics. Both emergency departments require physicians and nurses to be ACLS certified.

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

Current status: Guideline met. All physicians contracted by the hospitals are Board certified by ABEM.

Unmet need(s): None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

Enhanced Level: Advanced Life Support

2.11

Minimum standard: 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 assurance/quality improvement process.

Current status: Standard met

County EMS Policy 2010 outlines the accreditation process for paramedics and MICN's.

Unmet need(s): None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

2.12

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

Current status: Standard met

County EMS Policy 4000 establishes the standard for defibrillation within the County and is required as part of the initial defibrillation training. All EMT-D and PS-D's (public safety - defibrillator) initial training is provided by County-approved instructors who teach a County- approved curriculum. This assures that accreditation policies are addressed in class.

Unmet need(s): None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

2.13

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

Current status: Standard met

By contract agreement between the County and paramedic base stations, new MICN's undergo an orientation to the system which at a minimum includes supervised radio time, and demonstrating understanding of local EMS protocols and policies.

Unmet need(s): None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

Section C

Communications

3.01

Minimum standard: 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.

Current status: Standard met

A communications plan was developed for the 1985 EMS plan. The communications plan and its recommendations have been completed and fully integrated into the existing Santa Cruz Consolidated Emergency Communications Center (SCCECC). The 1985 plan is attached for reference.

Recommended guideline: The local EMS agency's communications plan should consider the availability and use of satellites and cellular phones.

Current status: Guideline considered and determined to be not appropriate.

The guideline has been considered and is not recommended for Santa Cruz County due to the limitations of the current technology. However, as the technology improves and the EMS delivery system alternatives are better defined, this guideline may be reconsidered.

The current system continues to serve the EMS community well. Over time EMS communications have been fine-tuned through the use of repeater antennas as well as the purchase and installation of better radio systems. However, as new technology is developed and/or system redesign indicates the need for communications system enhancement, this part of the plan can be reconsidered.

Unmet needs: N/A

Task: Review technological enhancements periodically.

Resource requirement: None

Cost estimate: None

Time estimate: None

3.02

Minimum standard: 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.

Current status: Standard met

The original plan developed in 1985 described the specifications for this objective which have been met. Paramedic ambulances communicate with Dominican Hospital using Mednet Channel 1 for paramedic medical control call-ins and Channel 8 for non-medical control call-ins. Mednet frequencies for Watsonville Community Hospital include Mednet Channel 4 for paramedic medical control call-ins and Mednet Channel 8 for non-medical control call-ins. Mednet Channel 3 is the only repeaterized frequency and may be used by paramedics in areas of the county which Mednet Channels 1, 4, or 8 does not reach.

In addition, Mednet 3 repeaterized antennae options include Mount Toro located in Monterey County or Empire Grade in Santa Cruz County. These options require paramedics to manually switch to the antennae of choice.

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

Current status: Standard met

American Medical Response West, the ambulance contractor, has installed a multi-channel radio system that allows the paramedic to contact first responder fire services on one of five different channels. This newly installed (2 years old) system gives the paramedic transport units vehicle to vehicle capability with all fire first responder units in Santa Cruz County.

Unmet needs: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

3.03

Minimum standard: Emergency medical transport vehicles used for inter-facility transfers shall have the ability to communicate with both the sending and receiving facilities. This could be accomplished by cellular phone.

Current status: Standard met

One ALS transport provider services the County. This provider performs all of the inter-facility transports between the acute care facilities and out-of-County hospital/trauma centers for patients leaving the County. It also provides most of the inter-facility transports between the general acute care hospitals. These transports are arranged through NetCom. These transports involve only ALS ambulances equipped with the appropriate radio system enabling communications with both the sending and receiving hospitals. Cell phones are not utilized at this time. There is a BLS transport provider operating in the County that provides non-emergency, local, inter-facility transports. The provider is prohibited from providing emergency medical transports and the vehicles utilized have been determined to be non-emergency transport vehicles. This provider is not part of the EMS system and is not currently regulated by the County of Santa Cruz as the company is based in Monterey County.

Unmet needs: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

3.04

Minimum standard: All emergency medical transport vehicles where physically possible (based on geography and technology) shall have the ability to communicate with a single dispatch center or disaster communications command post.

Current status: Standard met

All ALS transport vehicles are dispatched by a single consolidated communications center for all levels of operation, including disaster response. There are no emergency medical transport vehicles designated to provide a BLS level of transport services. As noted under section 3.03, the BLS transport provider is not a part of the emergency response system and, therefore, does not arrange its services through the emergency dispatch center, NetCom.

Unmet needs: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

3.05

Minimum standard: All hospitals within the local EMS system shall (where physically possible) have the ability to communicate with each other by two-way radio.

Current status: Standard met

Within Santa Cruz County there are two hospitals with emergency capability, one hospital providing limited services and 15 skilled nursing facilities. These facilities are radio-linked using the universal Hospital Emergency Administrative Radio (HEAR) system. One caveat is that the system (HEAR) is to be used only when emergency conditions have been declared locally.

A secondary communications system for the disaster coordination of all the hospitals, skilled nursing and networked clinics (network is known as Disaster Medical Service Facilities) is linked via a local VHF government frequency. This is further described in the disaster planning section.

Additionally, the two acute care hospitals, Dominican and Watsonville Community Hospitals, are equipped with the Mednet paramedic radio system which may be used for inter-facility communications.

Recommended guideline: 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: Guideline met

Spinal cord centers, burn centers, and pediatric hospitals do not exist within the Santa Cruz County EMS system. However, in adjacent Santa Clara County and other nearby counties, these centers do exist. Local hospitals use the existing telephone system to directly access these resources as needed.

Unmet needs: None

Task: None

Resource requirement: None

Cost estimate: None
Time estimate: None

3.06

Minimum standard: The local EMS agency shall review communications 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

Communication linkages for multiple casualty coordination are evaluated via actual incidents as well as on an annual basis and once every two years via drill simulation. Disaster communications are tested twice yearly in compliance with a written agreement between the County EMS Agency and Disaster Medical Service Facility network members.

Unmet needs: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

Public Access

3.07

Minimum standard: The local EMS agency shall participate in ongoing planning and coordination of the 9-1-1 telephone service.

Current status: Standard met

The EMS Agency is a participating member of the Santa Cruz Consolidated Emergency Communications Center JPA User's Committee. This committee reviews all aspects of 9-1-1 telephone operations within the county with the exception of the City of Scotts Valley and the University of California at Santa Cruz (UCSC).

Additionally, the EMS Agency is a member of the Quality Assurance Committee of the Consolidated Communications Center. This committee is responsible for all aspects of medical dispatching within the county.

Recommended guideline: The local agency should promote the development of enhanced 9-1-1 systems.

Current status: Guideline met

The principal dispatch center for EMS services is a JPA, the Santa Cruz Consolidated Emergency Communications Center (NetCom). Over one million dollars was spent to develop computer-aided dispatching which includes the latest in 9-1-1 system enhancements.

Unmet needs: None
Task: None
Resource requirement: None
Cost estimate: None
Time estimate: None

3.08

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

Current status: This standard is met without the active participation of the EMS Agency. The 9-1-1 system uses the TDD (hearing impaired) access program, and cell phone 9-1-1 callers are answered by the CHP dispatch center in Monterey County and redirected to the local dispatch center as needed for medical dispatching. The 9-1-1 center provides multilingual access via a contracted, on-line interpretation center. Public education is ongoing, but is not actively provided by the EMS Agency.

Unmet needs: None
Task: None
Resource requirement: None
Cost estimate: None
Time estimate: None

3.09

Minimum standard: The local EMS agency shall establish guidelines for proper dispatch triage that identifies the appropriate medical response.

Current status: Standard met

See Recommended Guideline section for comments.

Recommended guideline: The local EMS agency should establish a emergency medical dispatch priority reference system, including systematized caller interrogation, dispatch triage policies, and pre-arrival instructions.

Current status: Guideline met

On September 17, 1989, the county dispatch center implemented the dispatch system known as the Medical Priority Dispatch System (MPDS). This system continued to be utilized following transition of dispatch responsibilities to the Santa Cruz Consolidated Emergency Communications Center. It is our intent to computerize the program once the MPDS program is available in a Windows program.

Unmet needs: None
Task: None
Resources requirement: None
Cost estimate: None
Time estimate: None

3.10

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

Current status: Standard met

The Consolidated Communications Center's installation of computer aided dispatch (CAD) allows for complete integration of all EMS responders, with pre-assigned frequencies for dispatching and tactical operations.

Recommended guideline: The local EMS agency should develop a mechanism to ensure appropriate system-wide ambulance coverage during periods of peak demand.

Current status: Guideline met

By contract agreement the ambulance contractor is obligated to meet preset performance response times. The contract also imposes the requirement that the contractor provide a plan for system status management. The plan has been incorporated into the Consolidated Communications Center computer. The CAD matches every call to the most appropriate available ambulance. It also directs the movement of all other ambulances to maintain optimal system coverage.

Unmet needs: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

Section D

Response and Transportation

4.01

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

Current status: Standard met

In 1981 the County was divided into four response zones based upon equal geographical division. In 1993, the response zones were further subdivided into areas of population density. Using an earlier guideline promoted by the State EMS Authority, population densities were grouped into larger areas representing response times. The response zones were then integrated into a service contract and have become part of the contract obligation of the paramedic transport provider service.

Recommended guideline: The local EMS agency should secure a county ordinance or similar mechanism for establishing emergency medical transport service areas (e.g., ambulance response zones).

Current status: Guideline met

The response time areas described in the minimum standard are embodied within the current ambulance provider contract for service.

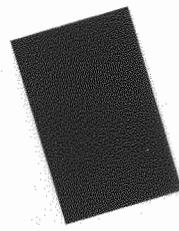
Unmet need: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None



4.02

Minimum standard: The local EMS agency shall monitor emergency medical transportation services to assure compliance with appropriate statutes, regulations and procedures.

Current status: Standard met

The standard is met through a combination of service contract compliance reviews via on-line medical control and quality assurance reviews. The ambulance inspection required by the ambulance ordinance also contributes to meeting this standard.

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

Current status: Guideline met

The county has in place an ordinance that governs the licensing of all ALS ambulances. The ordinance, coupled with renewable service contracts, provides the necessary system for management.

Unmet needs: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

4.03

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

Current status: Standard met

NetCom uses a commercial product designed for this purpose which is approved and monitored by the EMS Agency. A quality assurance policy approved by the EMS Agency requires periodic call review by a committee comprised of EMS providers. This ensures that the program's efficacy is maintained.

Unmet need: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

4.04

Minimum standard: Service by emergency medical transport vehicles which can be pre-scheduled without negative medical impact shall be provided only at a level which will permit compliance with local EMS agency policy.

Current status: Standard met

Based upon the service contract with the paramedic transport provider, pre-scheduled transports can be made only during periods of time when 9-1-1 traffic is minimal. The policy known as "code two cutoff" will not permit the paramedic transport provider from accepting non-emergent, inter-facility transport assignments when three or more of the normally assigned units are engaged in 9-1-1 responses. In this case, the provider service may elect to utilize existing subsidiary services (located in adjacent Santa Clara and Monterey Counties) to provide the non-emergent transport request(s).

Unmet needs: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

4.05

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

Current status: Standard met

The existing contract (a copy of which is attached to this plan) developed by the County with AMRW for paramedic ambulance transport establishes response time standard through a grid designation system for each location in the County. There is also a response time standard for the Central Fire Protection District. The time standard was developed in conjunction with the County's agreement with Central Fire enabling them to provide paramedic services. However, no such county standard exists for first response fire units within the Aptos/La Selva Fire Protection District, which also provides paramedic services, since their delivery of paramedic services preceded the formation of the local EMS Agency. Nevertheless, calls in this district remain a responsibility of AMR and are subject to a time standard. While other fire agencies are not required to meet medical response time standards, they are generally able to respond more quickly than the emergency transport provider due to having a greater number of units more widely disbursed throughout the County.

The response time standard for paramedic ambulances responses is 9 minutes in the urban areas, 12 minutes in the urban buffer zones, 15 minutes in the suburban areas, 20 minutes in rural areas, and 60 minutes in remote rural areas. The emergency transport provider is expected to meet these standards ninety percent of the time in aggregate.

Call processing times have very recently been evaluated and a standard developed. Within the NetCom system, call processing is defined as the time from call answering to the dispatching of appropriate EMS resources. The accepted standard is 60 seconds, 90 percent of the time for calls classified as emergent (Code 3), and 120 seconds for calls classified as immediate (Code 2). A third aspect of call processing that is identified is the time it takes from the paramedic transport unit to indicate on-scene arrival to the acknowledgment by the dispatcher via the CAD. This standard is 13 seconds. Recently, May 1999, NetCom has initiated a pre-alert system for medical calls, which further enhances system response.

Recommended guideline: Emergency medical service areas (response zones) shall be designated so that, for ninety percent of emergent responses:

- a) The response time for basic life support and CPR capable first responders does not exceed:
 - Metro/urban - 5 minutes
 - Suburban/rural - 15 minutes
 - Wilderness - as quickly as possible
- b) The response time for an early defibrillation-capable responder does not exceed:
 - Metro/urban - 5 minutes
 - Suburban/rural - as quickly as possible
 - Wilderness - as quickly as possible
- c) The response time for advanced life support capable responder (not functioning as the first responder) does not exceed:
 - Metro/urban - 8 minutes
 - Suburban/rural - 20 minutes
 - Wilderness - as quickly as possible

d) The response time for an EMS transportation unit (not functioning as the first responder) does not exceed:

Metro/urban - 8 minutes

Suburban/rural - 20 minutes

Wilderness - as quickly as possible

Current status: Guideline met

Overall, Santa Cruz County can best be characterized as a suburban/rural county. Because of the irregular coastline juxtaposed with mountainous terrain, population centers are relatively small with travel constrained by a very limited number of major roads that are often heavily congested. The nine-minute and succeeding response zone standards are based upon a balance of resource considerations, the difficulties presented by the terrain, population distribution, and the cost to the consumer. The various standards established throughout the County adequately address the needs of the community, are subject to ongoing review, and considered to be appropriate.

The ability of non-paramedic agencies throughout the county to meet strict response time parameters has not been considered a responsibility of the EMS Agency. Rather, it has primarily been the focus of the individual fire districts to monitor response time as part of meeting their individual performance standards. Except for contracted services, current legislation has not permitted the local EMS Agency to impose response time standards upon first responder agencies. Nevertheless, fire response time data is available through NetCom's CAD system and performance report data is available to the Agency. This data is considered in any decisions related to the expansion of ALS services by fire districts. As with the recent expansion of paramedic services within the Central Fire Protection District, response time standards can be incorporated into the agreements with the EMS Agency authorizing the provision of such services. Another handicap in conforming with this guideline has been the inability to offer financial incentives to the various agencies to meet it. However, a number of changes in systems design are currently being considered that could be the vehicle by which CPR and early defibrillation provider agencies develop an interest in being formally recognized for their achievements.

Unmet need: Use available NetCom data to examine response times of first responder services and do a comparison with the current standard. Secondly, determine interest of affected agencies in meeting the standard.

Task: 1) Collect first responder response time data from NetCom by population density tracts, 2) Determine if existing response times per agency is within the acceptable guideline, 3) Attempt to negotiate written agreements with the agencies that meet the guideline and, 4) Consider how to meet the guideline in areas the survey indicates are under-served.

Resource requirement: Considerable staff support will be needed by the EMS data program staff and NetCom to meet this standard.

Cost estimate: Unknown expense for NetCom to provide the data; unknown hours for the Agency staff to do comparisons with population density tracts, etc.

Time estimate: 1) <6 months; 2) <1 year; 3) >18 months; 4) >2 years

4.06

Minimum standard: All emergency medical transport vehicles shall be staffed and equipped according to current state and local EMS agency regulations and appropriately equipped for the level of service provided.

Current status: Standard met

All transport vehicles (contract paramedic) are staffed with two paramedics. Licensed fire-based BLS transport units are staffed at the minimum EMT-1 level. All units, regardless of service levels, are equipped per EMS policy.

Unmet need: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

4.07

Minimum standard: 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

Fire services are integrated into the current system, particularly with regard to Aptos/La Selva and Central Fire Protection Districts where paramedic service agreements exist with the County. However, as noted in Section 2.06 of this plan, it is unknown where (if any) first aid teams are located. In addition, Section 4.05 also indicates the need to survey response times of first responder agencies, and thereafter obtain agreements if an interest exists to become formally recognized as an integrated member of the system.

Unmet need(s): To conduct surveys as noted in Sections 2.06 and 4.05

Task: Tasks as noted in appropriate sections

Resource requirement: As noted in appropriate sections

Cost Estimate: See Section 4.05

Time Estimate: See Sections 2.06 and 4.05

4.08

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

- a) Authorization of aircraft to be utilized in prehospital patient care
- b) Requesting of EMS aircraft
- c) Dispatching of EMS aircraft
- d) Determination of EMS aircraft patient destination
- e) Orientation of pilots and medical flight crews to the local EMS system, and
- f) Address and resolve formal complaints regarding EMS aircraft.

Current status: Standard met

EMS Policy 1060 covers most of the requirements of this standard. Neither of the two organizations providing helicopter service to Santa Cruz County is based within the county. Aircraft licensure and categorization is the responsibility of the county in which the aircraft are based. However, formal agreements with both helicopter services would reinforce local policy regarding provision of written records and determination of patient destination. Nevertheless, helicopter transport providers are represented on the Prehospital Advisory Committee and are involved in the review of the care provided

to all trauma patients transported out of the County. Each helicopter transport provider utilizes dispatch services external to NetCom, which results in the inability to track dispatch and response data within NetCom's CAD system. Response times are reviewed based upon data submitted by the provider.

Unmet need: Update written agreements and improve the development and coordination of dispatch and response time data with NetCom.

Task: Renegotiate written agreements with both services. Develop a work plan to redefine NetCom's role in monitoring helicopter transports.

Resource requirement: Add to staff work plan

Cost estimate: None

Time estimate: >6 months

4.09

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

Current status: Standard met

As noted in Section 2 of this Plan, the Santa Cruz Consolidated Emergency Communication Center (NetCom) has been designated as the dispatch center. Upon receipt of a field request for a helicopter, NetCom contacts the dispatch center of the appropriately designated helicopter service. The procedure for this is established in EMS Policy 1060.

Unmet need: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

4.10

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

Current status: Standard met

The EMS Agency has identified CALSTAR and Life Flight as being available to provide emergency air transport for patients in Santa Cruz County. The EMS Agency is also aware of the staffing practices of these organizations. Flight nurses from both companies participate in the Prehospital Advisory Committee and the trauma QA process. The standard for written agreements is not applicable, as neither air transport provider is located within our jurisdiction.

Unmet need: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

4.11

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

Current status: Standard met

Existing first responder agencies have vehicles appropriate to access the terrain within their jurisdictions, including the availability of horses through the Sheriff's Posse. Water rescues are generally conducted by the Coast Guard, State Parks, the Harbor Patrol and may be supplemented by volunteer organizations. Snow is a rare occurrence in this area.

Recommended guideline: The local EMS agency should plan for response by and use of all-terrain vehicles, snow mobiles, and water rescue vehicles in areas where applicable. This plan should consider existing EMS resources, population density, environment factors, dispatch procedures and catchment areas.

Current status: Standard met

The California Department of Forestry/County Fire Department has vehicles able to access remote areas within its jurisdiction. The CDF, in conjunction with air transport providers, other fire agencies, and the Sheriff's Department, have the capability to place first responders virtually any area within the County. As noted above, the Coast Guard, State Parks and the Harbor Patrol respond to emergencies occurring in and around the ocean. The small size of the county, the development of access roads to most areas for fire suppression activities, and the moderate winter (except for rainfall) all mitigate the need for extraordinary modes of transport above those currently available. Our system deployment plan takes into account circumstances created by potential flooding and the possible isolation of certain population groups. Mutual aid agreements come into play when such circumstances arise.

Unmet needs: Determine the availability of all-terrain vehicles and, were feasible, include them in the system response plan.

Task: Develop a survey of existing agencies to inventory all-terrain type vehicles available for EMS responses. Vehicles that are identified by the survey should be included in the EMS response plan when possible via a written agreement.

Resource requirement: EMS staff to perform special vehicle surveys and develop agreements as needed.

Cost estimate: None if added to annual work plan

Time estimate: >1 year

4.12

Minimum standard: 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

Policy 1300 outlines the necessary internal steps for deploying all available transport units. Agreements have been signed between Santa Clara, San Benito, Monterey, and Santa Cruz Counties regarding sending and receiving mutual aid transport units.

Unmet need: None

Task: None
Resource requirement: None
Cost estimate: None
Time estimate: None

4.13

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

Current status: Standard met

State of California Code of Regulations Title 22, Article 5, Section 100164 (g) authorizes inter-county paramedic practice, thereby negating the need for written agreements. The one exception to this is Monterey County. Both counties share the same provider. However, two different contracts for service spell out the roles of the paramedic in each county. A written agreement between the two counties stipulates that the Santa Cruz County paramedics who respond to North Monterey County are under the general direction and medical control of the Santa Cruz County EMS Agency.

Recommended guideline: The local EMS agency should encourage and coordinate development of mutual aid agreements that identify financial responsibility for mutual aid responses.

Current status: Guideline not applicable

All ambulances surrounding the Santa Cruz County area derive revenues through fee for service, and except for Santa Cruz County, are also subsidized by the local counties. At this time, the private services are amenable to mutual aid response without regard to financial reimbursements. Previous attempts to obtain written agreements with adjacent counties for mutual aid have ended up in protracted legal arguments and such efforts have not been productive. This recommendation is unnecessary unless relationships between private ambulance services and participating counties deteriorate.

Unmet needs: None
Task: None
Resource requirement: None
Cost estimate: None
Time estimate: None

4.14

Minimum standard: 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

Annex 8 of the County Disaster Plan details the Multiple Victim Casualty Plans. The plan integrates the Incident Command system. The plan has been used in several real events and is tested at least every other year in a County and Fire Training Officers' (FTO) Association-sponsored drill.

Unmet need: The plan needs to be evaluated to ensure that it embodies the latest upgrades to the Incident Command System and recent developments with NetCom.

Task: Provide the plan to the Santa Cruz County Training Officers Association for review.

Resource requirement: Few hours of FTO Association membership work

Cost estimate: None, as this is usually accomplished as an item of mutual interest at regularly scheduled meetings.

Time estimate: <6 months

4.15

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

Current status: State plans and guidelines are not developed.

Unmet need: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

Enhanced Level: Advanced Life Support

4.16

Minimum standard: 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-1 level.

Current status: Standard met

By contract requirement all ALS ambulances are staffed with two paramedics.

Recommended guideline: The local EMS agency should determine whether advanced life support units should be staffed with two ALS crew members or with one ALS and one BLS crew member. On any emergency ALS unit which is not staffed with two ALS crew members, the second crew member should be trained to provide defibrillation, using available defibrillators.

Current status: Guideline met. See standard above.

Unmet need: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

4.17

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

Current status: Standard met

EMS Policy 1130 establishes the equipment standard for all ALS units.

Unmet need: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

Enhanced Level: Ambulance Regulation

4.18

Minimum standard: 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 ordinance regulating emergency ambulance transportation services as well as written agreements with the ambulance transport provider and the fire agencies providing engine-based paramedic service.

Unmet need: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

Enhanced Level: Exclusive Operating Permits

4.19

Minimum standard: Any local EMS agency which desires to implement exclusive operating areas, pursuant to Section 1797.224 Health & Safety Code, 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 competitive process to ensure system optimization.

Current status: Standard not met in favor of option 4.20.

Although the county claims exclusive operating areas, it does so by authority of a grand-father clause as explained in Section 4.20 of this Plan.

Unmet need: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

4.20

Minimum standard: 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 non-competitive selection (grand-fathering) under Section 1797.224, Health & Safety Code.

Current status: Standard met

Prior to 1981, three ambulance services existed in Santa Cruz County. They were: Valley Ambulance of Scotts Valley, Santa Cruz Ambulance of Santa Cruz, and A-1 Ambulance located in Watsonville. Around 1978, Santa Cruz Ambulance purchased Valley Ambulance and assumed the BLS service delivery to the Scotts Valley area. The service contract for both ambulance services expired in 1983 and, upon re-negotiation, stipulated the higher level of service. In 1985, both existing ambulance services, A-1 of Watsonville and Santa Cruz Ambulance, began providing paramedic service in order to comply with a written agreement with the County. The term of the 1983 contract was for ten years and expired in March of 1993. In 1988, Santa Cruz Ambulance purchased A-1 Ambulance, which continued to operate under the A-1 Ambulance name.

In 1989 Santa Cruz Ambulance changed its corporate name to Pacific Medical, or PACMED. All services owned by Santa Cruz Ambulance Corporation assumed the new name, including A-1 Ambulance. Another contract between the County and PACMED was entered into starting March 1993. The term of the contract was four years, with the possibility of two one-year extensions. About 1994, the corporate name PACMED was determined to be a copyright infringement, and the PACMED corporation then changed its name to American Medical Response West (AMRW). At the same time AMRW became a public entity by selling shares on the stock market. In 1996 the Laidlaw Corporation acquired AMRW. However, the ambulance division name of AMRW was maintained after the acquisition. A new five-year contract between AMRW and Santa Cruz County went into effect on December 1, 1997.

Unmet needs: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

4.21

Minimum standard: 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 Health & Safety Code, comply with applicable policies and procedures regarding system operations and patient care.

Current status: Standard met

A number of methods are used to evaluate both transport operations and patient care. The county ordinance requires the county to check all ambulances for compliance with Title 13 equipment issues. A patient care equipment inventory is conducted, crews quarters are inspected, and personnel credentials are checked. Also, County EMS has established a series of policies and protocols that govern patient care for all ALS providers. Compliance is insured through on-line medical control and prospective,

concurrent, and retrospective quality assurance reviews performed both by the County, base hospitals, and provider services.

Unmet need: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

4.22

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

Current status: Standard met

The exclusive operating area (one) within Santa Cruz County has been developed largely as a result of economic attrition and provider consolidation. The exclusive operating area has been zoned for varying response time standards based upon population density. The current contract service provider has been able to meet response time standards .

Unmet needs: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

Section E

Facilities/Critical Care

5.01

Minimum standard: The local EMS agency shall assess and periodically reassess the EMS-related capabilities of acute care facilities in its service area.

Current status: Standard met

The Santa Cruz County EMS Agency provides an opportunity to discuss the issues and concerns of the EMS system using the Prehospital Advisory Committee and Emergency Medical Care Commission as forums. The patient management capabilities of the local acute care hospitals are reviewed at these forums.

Recommended guideline: The local EMS agency should have written agreements with acute care hospitals in its service area.

Current status: Guideline met

Two of the three hospitals have written agreements designating them as Emergency Departments Approved for Pediatrics (EDAP) and as Paramedic Base Hospitals. The third hospital specializes in obstetrics and orthopedics and does not maintain an emergency department. The paramedic transport provider does not take emergency patients there.

Unmet needs: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

5.02

Minimum standard: The EMS agency shall establish prehospital triage protocols and shall assist hospitals with the establishment of transfer protocols and agreements.

Current status: Standard met

EMS Policy 1070 establishes prehospital triage. The acute care hospitals have in place agreements for tertiary care transfers (burns, spinal cord, and pediatric). Written agreements for the transfer of local trauma patients to regional trauma centers are not in place as discussed under section 1.07.

Notwithstanding the lack of written transfer agreements, through cooperative efforts between the trauma hospitals, local hospitals, and the EMS Agency, there are no substantive obstacles hindering the appropriate transfer of patients. The EMS Agency will continue to assist, in any way possible, the establishment or refinement of transfer protocols and agreements that assure appropriate transfer of patients between facilities.

Unmet need: Trauma transfer agreements between the local community hospitals and regional trauma centers, while desirable, are determined to be infeasible at this time.

Task: Continue to develop the trauma plan, including the need for trauma agreements.

Resource requirement: EMS staff and provider support

Cost estimate: None

Time estimate: >1 year

5.03

Minimum standard: 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 higher capability and shall work with acute care hospitals to establish transfer agreements with such facilities.

Current status: Standard met

The EMS Agency, in conjunction with the base station hospitals and the ALS care providers use the (M)echanism (A)natomic (P)hysiologic system as the trauma triage screening tool for evaluating patients potentially appropriate for transfer to out-of-county trauma centers. The MAP triage tool has been refined locally through the work of the Prehospital Advisory Committee.

As noted previously, all trauma patients emanating from Santa Cruz County are accepted by either the trauma center affiliated with the helicopter transport provider or the most appropriate facility given the patient's condition. There is an ongoing issue regarding repatriation that has been an obstacle in implementing formal written agreements.

Unmet need: Written transfer agreements.

Task: Facilitate the development and implementation of written transfer agreements.

Resource requirement: Local EMS staff should be able to conduct this effort.

Cost estimate: None

Time estimate: >1 year

5.04

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

Current status: Standard met

Other than the two Base Hospitals, the county does not have stand-alone receiving hospitals or specialty centers.

Unmet needs: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

5.05

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

Current status: Standard met

The October 17, 1989 Loma Prieta earthquake provided the EMS Agency and the acute care hospitals an insight into mass casualty management. Since that time both hospitals have improved upon internal policies and disaster planning. Twice yearly drills conducted by the hospitals also provide a degree of assurance that the hospitals are reasonably prepared to manage mass casualties.

Recommended guideline: The local EMS agency should assist hospitals with preparations for mass casualty management, including procedures for coordinating hospital communications and patient flows.

Current status: Guideline met

The County EMS Agency, since the 1989 earthquake, has developed a Disaster Medical Service Facility (DMSF) network of healthcare facilities with two goals in mind. The first goal is to identify and maintain a network of healthcare clinics prepared to operate in disaster situations. These facilities have the primary responsibility of treating persons with minor injuries or illnesses to prevent hospital resources from being overwhelmed. The second goal is to link all the hospitals, skilled nursing facilities, and healthcare clinics together via a reliable communications system. The DMSF network is fully functional and integrated. The communications system has been established and is regularly tested.

A degree of confidence exists that the disaster resistant network will help to minimize the hospital overload experienced in previous disasters as well as provide a communication link that promotes better dispersion of disaster related victims.

Unmet need: None

Task: Maintain viability of the DMSF network.

Resource requirement: EMS scheduled time and effort annually

Cost estimate: None

Time estimate: Ongoing annual system testing

5.06

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

Current status: Standard met.

Each hospital has an evacuation plan in place that takes into account other EMS system providers.

Unmet need: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

Enhanced Level: Advanced Life Support

5.07

Minimum standard: 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

The two acute care hospitals that qualify to perform base hospital duties are so designated.

Unmet need: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

Enhanced Level: Trauma Care System

5.08

Minimum standard: Local EMS agencies that develop trauma care systems shall determine the optimal system (based on community need and available resources) including, but not limited to:

a) The number and level of trauma centers (including the use of trauma centers in other counties).

Current status: Standard met

At this time and for the immediate future, local community hospitals have decided to forego seeking trauma center designations. However, the County Trauma Plan (to follow), via a trauma triage criteria process, seeks to send major trauma victims to the closest hospital prepared to immediately provide surgical services. In this regard, local hospitals are contacted first on every major trauma victim and allowed the right of first acceptance. If the local hospitals are unable to provide a surgeon, anesthesiologist, and operating room suite within a specified time frame, and weather permitting, a medical helicopter is summoned and the victim of major trauma transported to one of the three designated major trauma hospitals in Santa Clara County.

Unmet need: None

b) The design of catchment areas (including areas in other counties, as appropriate), with consideration of workload and patient mix.

Current status: Standard met

The trauma catchment area is geographically determined. The ocean is the western boundary of the County. The north is bounded by San Mateo County, which does not have designated trauma centers. Santa Clara, San Benito, and Monterey Counties bound Eastern Santa Cruz County. Only Santa Clara County has designated trauma centers and is considered in the catchment area. Southern Santa Cruz County is bounded by the ocean.

Unmet need: None

c) Identification of patients who should be triaged or transferred to a designated center, including consideration of patients who should be triaged to other specialty centers.

Current status: Standard met

The Trauma Plan has as its foundation a trauma triage tool which is used to measure the patient's (M)echanism of injury, and (A)natomic and (P)hysiologic findings ("MAP"). Accordingly, a major trauma patient is defined as an individual who has sustained a trauma-related event and whom the paramedics have scored as having at least one element in two of the three MAP sections. The MAP tool also addresses pediatric, burned and spinal cord-injured patients.

Unmet need: None

d) The role of non-trauma center hospitals, including those that are outside of the primary triage area of the trauma center.

Current status: Standard met

The local community hospitals are considered trauma capable. The local hospitals will always receive major trauma victims who cannot be flown to Santa Clara County or major trauma victims in extremis condition.

Unmet need: None

e) A plan for monitoring and evaluation of the system.

Current status: Standard met

A trauma review committee meets quarterly to review all major trauma cases within the county. Each local hospital has also voluntarily developed an internal multi-disciplinary trauma review committee which reviews trauma cases specific to each hospital. The EMS Agency will continue to assess the interest of the local hospitals to develop trauma registries.

Unmet need: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

5.09

Minimum standard: In planning its trauma care system, the local EMS agency shall ensure input from both prehospital and hospital providers and consumers.

Current status: Standard met

The original trauma plan was developed by a number of committees that included paramedics, nurses, fire services, the ambulance provider, hospital administration, physicians and consumers. Since the development of the original plan a number of "trauma forums" have been hosted by the EMS Agency that have included representatives from all the hospital and prehospital entities, and trauma center representatives located in Santa Clara County. Currently, the County has designated a trauma review

committee that includes representatives from the hospitals, EMS administration, and prehospital provider services.

Unmet need: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

Enhanced Level: Pediatric Emergency Medical and Critical Care System

5.10

Minimum standard: Local EMS agencies that develop pediatric emergency medical and critical care systems shall determine the optimal system, including:

a) The number and role of system participants, particularly of emergency departments.

Current status: Standard met

In 1989, the acute care hospitals assisted the County in developing the Emergency Medical Services for Children (EMSC) program. As a result of the EMSC plan, both Dominican and Watsonville Community Hospitals were the first in Central California to be designated as Emergency Departments Approved for Pediatrics (EDAP). Both hospitals have continuously maintained the county designation. EDAP is a designation process that requires pediatric training standards for emergency department doctors and nurses, specific equipment availability, and an internal review committee that reviews certain pediatric cases. In addition, both hospitals maintain a part-time nurse (Pediatric Liaison Nurse) who is responsible for ensuring that each hospital maintains compliance with the standard.

Unmet need: None

b) The design of catchment areas (including areas of other counties, as appropriate), with consideration of workload and patient mix.

Current status: Standard met

The geography as described earlier in this Plan (Section 5.08{b}) is self-limiting in terms of being a naturally defined catchment area.

Unmet need: None

c) Identification of patients who should be primarily triaged or secondarily transferred to a designated center; including consideration of patients who should be triaged to other specialty centers.

Current status: Standard met

Pediatric patients are defined in the Santa Cruz County EMSC as fourteen years and younger. Pediatric cases are primarily triaged to the local EDAP's. Pediatric trauma patients are often sent to a trauma center in Santa Clara County where there is greater availability of pediatric surgical specialists.

Unmet need: None

d) Identification of providers who are qualified to transport such patients to a designated facility.

Current status: Standard met

ALS transport units in Santa Cruz County are licensed by local ordinance. This licensing process ensures that the transport units are properly equipped with both adult and pediatric equipment according to EMS policy. Paramedics who staff the transport units work from both adult and pediatric treatment protocols. Paramedics, as a matter of local accreditation, are required to annually demonstrate skill competency in pediatric skills and must have and maintain Pediatric Advance Life Support (PALS) certification.

Unmet need: None

e) Identification of tertiary care centers for pediatric critical care and pediatric trauma.

Current status: Standard met

As noted earlier, both acute care hospitals are EDAP designated. EDAP designation requires that a written agreement be developed with pediatric intensive care unit(s) of the EDAP hospital's choice. Pediatric trauma centers have not been designated within the regional catchment areas.

f) The role of non-pediatric, specialty care hospitals including those which are outside of the primary triage area.

Current status: Standard met

The only non-pediatric specialty centers within reasonable transport distance are Valley Medical Center (burns, trauma, spinal cord injury), Stanford Medical Center (trauma), and San Jose Columbia Medical Center (trauma). All three hospitals are located in Santa Clara County. All three hospitals accept Santa Cruz County pediatric patients.

Unmet need: None

g) A plan for monitoring and evaluation of the system.

Current status: Standard met

Ambulance pediatric capability is assessed annually as a function of licensing. Paramedics are required to have and maintain PALS certification and do annual skills demonstration. The EDAP's have on-site inspections conducted by an out-of-county paid assessment team. .

Unmet need: Scheduled system wide pediatric review

Task: The current Quality Assurance Review Committee should schedule pediatric case reviews at least twice yearly. The cases should concentrate on high acuity pediatric patients. The County EMS staff will need to set proper filters in order to catch relevant data. Case outcomes will need to be provided by the receiving hospitals.

Resource requirement: The County data collection program staff will need to add this to their duties. Approximately five hours weekly will need to be added if this review is to occur.

Cost estimate: Included in staff salary

Time estimate: < 1 year

5.11

Minimum standard: Local EMS agencies shall identify minimum standards for pediatric capability of emergency departments 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/quality improvement, and
- f) Data reporting to the local EMS agency.

Current status: Standard met

See EDAP Policy 1050.ped attached.

Unmet need: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

Recommended guideline: Local EMS agencies should develop methods of identifying emergency departments which meet standards for pediatric care and for pediatric critical care centers and pediatric trauma centers.

Current status: Guideline met

Pediatric emergency department standards are part of the system design (see Policy 1050.ped) and as noted earlier, both acute care hospitals fully participate. Pediatric trauma centers have not been designated within our regional catchment area.

Unmet need: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

5.12

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

Current status: Standard met

The development of the pediatric sub-component was the result of federal grant. The funds were used to hire a consultant. The consultant assembled a number of committees tasked with developing recommendations for hospital designation, development of pediatric treatment standards and related policies, training standards and prehospital pediatric equipment standards. All of the committees had representatives from the local hospitals, prehospital providers and consumers.

Unmet need: None
Task: None
Resource requirement: None
Cost estimate: None
Time estimate: None

Enhanced Level: Other Specialty Care Systems

5.13

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

Current status: Not applicable

The local EMS Agency does not plan to develop specialty care systems, as there are no specialty care centers within the County.

Unmet need: None
Task: None
Resource requirement: None
Cost estimate: None
Time estimate: None

5.14

Minimum standard: In planning other specialty care systems, the local EMS agency shall ensure input from both prehospital and hospital providers and consumers.

Current status: Not applicable

As noted in Section 5.13, without the existence of local specialty centers, planning is not feasible.

Unmet need: None
Task: None
Resource requirement: None
Cost estimate: None
Time estimate: None

Section F

Data Collection/System Evaluation

6.01

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

Current status: Standard met

Quality of care review is provided at different levels using a number of methodologies and varying degrees of resources. Quality review is accomplished by the following entities as noted:

Dispatch center (NetCom) has assigned an individual who reviews medical calls using a number of sentinel events, e.g., ambulances that are dispatched code 2 but transport code 3; calls that require CPR instructions; and field inquiries for call review. In addition, per County EMS Policy 1220, EMD QA reviews are conducted at least quarterly. EMS constituent members review problematic calls that occurred during the preceding quarter.

Santa Cruz County has developed a two-tiered response system. The first level of response is provided by each of the 12 fire agencies county-wide at the basic life support level (with the exception of Aptos/La Selva and Central Fire Protection Districts that support an engine-based paramedic first response level). All twelve services also support the early defibrillation program. However, the early defibrillation program is the only EMS component provided by non-ALS fire responders that is rigorously reviewed from a QA/QI perspective. In this regard any application of the defibrillator requires a written record that is reviewed by the EMS Agency. Another QA/QI component of this program - the audio and EKG tape recording in the automatic defibrillator - is forwarded with the written record for review. Upon arrival at the County EMS office, the written record and the audio tape are reviewed along with the paramedic record. The EMT-D coordinator develops a one-page call critique. The EMT-D coordinator shares this critique with the person(s) who operated the defibrillator, discussing any problems noted in the review of the call.

An area of the first responder QA/QI program that requires further development is the expansion of documentation to all EMS-related responses. In addition to medical calls where the defibrillator is applied, it would be beneficial to develop more comprehensive documentation of EMT-1 activities in order to implement related QA/QI review processes. Systematic review of first responder response times is also an area that, while not a major priority, needs increasing attention as additional fire agencies seek to deliver ALS services.

The paramedic transport provider has submitted, on a biannual basis, a quality assurance plan that outlines a number of different QA programs, including random clinical studies, patient care audits, periodic field evaluations of paramedics and an annual infrequently used skills lab. In addition, staff support is provided to review patient care concerns identified by paramedics, MICNs, PLN's, patients, and the EMS Agency. Other QA activities include participation in the prehospital Quality Assurance Committee and Prehospital Advisory Committee.

The fire paramedic programs, similar to the private provider, submit biannual quality assurance plans that outline internal QA functions. Staff will also do call follow-up regardless of the requesting source.

Lastly, they also send representatives to the county-wide QA Committee and Prehospital Advisory Committee.

The two paramedic Base Hospitals have Paramedic Liaison Nurses (PLN's) who evaluate the appropriateness of MICN/base station physician patient care instructions to the paramedics. The Base Hospitals provide on-line medical control. They also report disparities between paramedic care and the care rendered by the ED. The Base Station also serves as a conduit by which new standards and other educational issues can be passed on to both paramedics and MICN's. Lastly, both hospitals have representation on the QA Committee, Prehospital Advisory Committee, the Medical Executive Committee, and the Emergency Medical Care Commission.

The County EMS Agency, through the computerized PCR, quality assurance process, incident reporting process, and random patient care audits provides a broad quality assurance function.

Finally, the County Board of Supervisors, representing the consumer, has at its disposal the Emergency Medical Care Commission. This commission is responsible to the Board and provides broad, community-based input into the EMS system. This group is comprised of members of the EMS community and consumers. The Commission meets on a monthly basis and during the year reviews all eight of the EMS elements.

Unmet need: Development of data associated with first responder activities.

Tasks: Develop abbreviated care record for use in a QA/QI process.

Resource requirement: To be determined

Estimate cost: To be determined

Estimate time: >2 years

Recommended guideline: The local EMS agency should have the resources to evaluate the response to, and the care provided to, specific patients.

Current status: Guideline met

Santa Cruz County has developed a cutting edge computerized patient care record reporting system that is unusually adaptable to data collection. The strength in the system is that it provides patient care reporting that uniquely allows providers and the EMS Agency to review patient care records on a real-time basis. Although the system is far more advanced than any other within the state, it could still be improved by being linked to other record programs (trauma registry, traffic collision reporting, etc.).

The addition of a .5 FTE position in the FY 98-99 budget should strengthen the Agency's data generation and analysis capability on an ongoing basis as opposed to the use of a consultant whose work was often directed by grant-related funding. A review and re-prioritization of data needs and products are a first step in utilizing the new information systems position.

Unmet need: None, although if additional resources were available, the work-load in the data area is substantial enough to warrant a full time position.

Task: Identify additional available funding sources (outside of county general funds) dedicated exclusively to data collection and analysis.

Resource requirement: EMS staff

Estimated cost: \$30,000/annually of additional data funds over and above the \$50,000 currently committed to the data EMS Agency data position..

Estimated time: > 1 year

6.02

Minimum standard: 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

Paramedics are required by Policy 1170 to complete a computerized on-line PCR on all EMS responses. All patient responses processed through the 9-1-1 system entail a paramedic response. There is not currently a system to comprehensively document EMT-1 services rendered prior to the arrival of the paramedics.

Unmet need: Develop and implement a first response reporting process similar to the paramedic reporting process (as noted under 6.01).

Tasks: Determine costs; develop report configuration and content; elicit EMSIA support.

Resource requirement: EMS staff and EMSIA

Cost estimate: To be determined

Time estimate: >2 years

6.03

Minimum standard: Audits of prehospital care, including both system response and clinical aspects, shall be conducted.

Current status: Standard met

Auditing of ALS clinical aspects is described in Section 6.01. Auditing of system response is conducted by the contract paramedic provider and first responder paramedic provider as mandated by contract and detailed in other sections of the Plan. First responder BLS agencies are not mandated by regulation..

Unmet needs: First responder data reporting process

Task: See Sections 6.01 and 6.02

Resource requirement: See Sections 6.01 and 6.02

Cost estimate: See Sections 6.01 and 6.02

Time estimate: See Sections 6.01 and 6.02

Recommended guideline: The local EMS agency should have a mechanism to link prehospital records, dispatch, emergency department, in-patient and discharge records.

Current status: Guideline met

The current computerized patient care record (PCR) is designed to link a number of record sources. Most of the information resides on two separate systems that are not electronically linked. PCR'S and outcome data reside on the Agency's computer while dispatch and response data reside on NetCom's CAD system. Discharge records from the trauma centers are retrieved manually and compiled with PCR data for review purposes. All helicopter transport records are reviewed in conjunction with trauma center outcome data and PCR'S. Information from the various sources is compiled by the Agency for QA/QI review and analytical purposes.

Unmet need: To enhance and expand the availability of local hospital outcome data.

Task: Convince the local hospitals of the needs for and benefits derived from implementation of trauma registries

Resource requirement: Funding for the initial purchase and ongoing support of trauma registries. EMS staff time to seek either a local continuous funding source or grant funds.

Cost estimate: \$100,000 for initial purchase and \$80,000 annually for ongoing support of the local trauma registries .

Time estimate: > 3 years

6.04

Minimum standard: 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

See Section 6.01

Unmet need: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

6.05

Minimum standard: The local EMS agency shall establish a data management system which supports its system-wide planning and evaluation (including identification of high-risk patient groups) and the QA/QI audit of the care provided to specific patients. It shall be based on State standards.

Current status: Standard met

The computerized PCR has proven to be an excellent mechanism for documenting patient needs and medical services provided. It is the fundamental component of the data management system. Data can be abstracted from the PCR system and manipulated on PC's to evaluate specific system issues and/or research. Additionally, NetCom's Computer Aided Dispatch system provides highly reliable data for system monitoring and review purposes. While QA/QI data must be compiled from several sources, it is available to conduct patient specific audits. Data generated from the PCR and CAD system provide the basis system planning and evaluation.

Unmet need: Additional resources would enhance system-reporting capabilities and improve automation.

Task: Seek funding sources to provide additional data support.

Resource requirement: As noted under section 6.03, the ability to fund an additional .5 FTE data analyst position is highly desirable.

Cost estimate: \$30,000 annually; would allow the .5 FTE data position to be expanded to a full-time position.

Time estimate: >2 years

Recommended guideline: The local EMS agency should establish an integrated data management system which includes system response and clinical (both prehospital and hospital) data.

The local EMS agency should use patient registries, tracer studies, and other monitoring systems to evaluate patient care at all stages of the system.

Current status: Guideline met

The EMS Agency has developed an excellent computerized patient-care reporting tool. The system was conceived to allow multiple record attachments, including ED outcomes, trauma registry data and dispatch response time information. However, as NetCom's CAD system has demonstrated superior capability over the past two years to accurately track and report detailed system performance and response information, that system has become the preferred tool to monitor and evaluate system response issues. Consequently, the Agency's computer system has been utilized predominantly for monitoring patient care. The availability of trauma registries at the local acute care hospitals, as noted previously, would be a significant addition to the monitoring capability of the system but that is unlikely to happen within the next few years.

Unmet need: None

Task: Seek additional funding

Resource requirement: Local EMS staff

Cost estimate: None

Time estimate: >2 years

6.06

Minimum standard: The local EMS agency shall establish an evaluation program to evaluate EMS system design and operations, including system effectiveness at meeting community needs, appropriateness of guidelines and standards, prevention strategies that are tailored to community needs, and assessment of resources needed to adequately support the system. This shall include structure, process, and outcome evaluations, utilizing state standards and guidelines.

Current status: Standard met

The current EMS system in Santa Cruz County has developed a number of programs that dynamically evaluate EMS system structure and outcomes. Provider QA plans, on-line medical control by the hospitals, QA committee meetings and oversight conducted by both the PAC and EMCC are examples of system elements that evaluate both system structures and outcomes. The Public Information and Education Committee deals with prevention strategies and programs as well. Coordination with specific prevention program also exists through the EMS Manager's participation in the Traffic Safety Coalition and other groups. Additionally, a Health Services Agency level Technical Advisory Group (TAG) closely monitors performance data and system status issues as well as the economic issues associated with the contract.

Unmet needs: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

6.07

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

Current status: Standard met

Provider participation in system-wide evaluation is not an issue locally. Providers of EMS services participate in the various system evaluation requirements when such a need is objectively presented.

Unmet need: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

6.08

Minimum standard: The local EMS agency shall, at least annually, report on the results of its evaluation of EMS system design and operations to the Board(s) of Supervisors, provider agencies, and Emergency Medical Care Commission (EMCC).

Current status: Standard met

The EMCC actively evaluates all aspects of the EMS program on an annual basis. In this regard, an annual report is provided that summarizes the findings and actions of the Commission. The report is provided to the EMS community including the Board of Supervisors and provider agencies. In addition, by state statute, the annual report is sent to the State EMS Authority. The Health Services Agency Administrator, beginning in March 1999, provides an annual report on ambulance service and response times to the Board of Supervisors.

Enhanced Level: Trauma Care System

6.10

Minimum standard: The local EMS agency, with participation of acute care providers, shall develop a trauma system evaluation and data collection program including:

- a) Trauma registry.

Current status: Standard met

Major trauma patients are sent to one of five hospitals. Three trauma centers in Santa Clara use trauma registries, while the two local community hospitals in Santa Cruz County do not. Arrangements exist for trauma outcome data to be provided to the Agency from the designated trauma centers. All major trauma cases are reviewed as part of the QA Committee's responsibilities. Outcome data is available from the two local acute care hospitals. In addition, the PLN'S from the local hospitals participate in the trauma review process.

Unmet need: Establishment of a trauma registry at the local, acute care hospitals.

Resource requirement: County staff working with both hospitals

Task: Either secure funds necessary to implement and maintain trauma registries or secure agreement from the hospitals to bear ongoing operating costs of such a system.

Cost estimate: \$100,000 for purchase of registries and \$80,000 in annual support

Time estimate: > 2 years

b) Mechanism to identify patients whose care fell outside of established criteria; and,

c) A process of identifying potential improvements to the design and operation

Current status: Standard met

On a twice-a-year basis the EMS medical director reviews all major trauma patients that are so identified. Likewise, the review includes major trauma victims who were initially triaged as minor trauma but later were triaged up to major trauma patients. Through a structured process of evaluation, each case is determined to be over-triaged, under-triaged, or properly classified. The retrospective evaluation also attempts to understand the cause for error. The errors are trended and when a pattern is determined, the cause is identified and changes made accordingly. The results of the retrospective study are widely disseminated along with any associated need for change(s).

Unmet needs: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

6.11

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

Current status: Standard met

The designated trauma centers - San Jose Columbia Medical Center, Stanford University Hospital and Valley Medical Center - are cooperative in the provision of information through a structured inquiry process.

Unmet need: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

Recommended guideline: The local EMS agency should seek data on trauma patients who are treated at non-trauma center hospitals and shall include this information in their quality assurance/quality improvements and system evaluations program.

Current status: Guideline met

Both local acute care hospitals are not designated trauma centers. Both hospitals are cooperative in providing the information that is at hand. Cooperative discussions are underway on the methodology for obtaining patient care data that is not easily obtained on an aggregate basis.

Unmet need: To determine the least expensive method for data collection of information on trauma victims.

Task: Continue to host problem solving meetings that will lead to the desired outcome.

Resource requirement: EMS Agency leadership

Cost estimate: None

Time estimate: <1 year

Section G

Public Information and Education

7.01

Minimum standard: The local EMS agency shall promote the development and dissemination of information materials for the public which 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 consumer rights as they relate to the EMS system
- e) Health and safety habits as they relate to the prevention and reduction of health risks in target areas, and
- f) Appropriate utilization of emergency departments.

Current status: Standard met

Program effort in the area of public information and education has been ongoing although not substantial due to limited resources. The EMCC has a standing committee devoted to PI&E. The EMS Manager is a member of the Traffic Safety Coalition. Through the EMCC information regarding community safety and educational efforts taking place among associated agencies like the hospitals and fire departments is disseminated throughout the EMS. The EMS Agency's information and education agenda can be coordinated with other Health Services Agency health education activities such as the infant car seat program. The contract with the ambulance provider also calls for information to be made available to clients on how to obtain relief from ambulance bills they are unable to pay.

Unmet need: Better coordination of public information and education between the EMS Agency and other public education and information efforts taking place within Santa Cruz County.

Task: Conduct periodic surveys of EMS community constituents to determine the activity level and focus of PI&E educational efforts. The survey should be utilized by the EMCC to provide direction to the PI&E committee and to advise the EMS Agency of priority areas requiring special efforts.

Resource requirement: County EMS staff shall develop a survey tool that would be used to determine which EMS constituents are providing PI&E programming.

Cost estimate: None (will use existing EMS staff)

Time estimate: >1 year

Recommended guideline: The local EMS agency should promote targeted community education programs on the use of emergency medical services in its service area.

Current status: Guideline substantially met

Because of funding and limited staff time available, this objective has not received the attention it warrants from the Agency. The primary focus of efforts here is through dispatch training and protocols to help assure access through the 9-1-1 system is appropriately screened and categorized. However, this area has been addressed by other Health Services Agency departments such as clinics and indigent care where appropriate access to emergency services is stressed to clients who may have a tendency to abuse such services. Additionally, the County's local Medi-Cal program known as Central Coast Health Alliance has made considerable efforts to curb inappropriate use of emergency services. HMO's and the local hospital have both addressed this area through their own publications and consumer education efforts.

Unmet need: To determine the appropriate level of PI&E efforts to be undertaken by EMS Agency, the focus of such efforts, and the constituents to be targeted by such efforts.

Task: The EMCC should seek a method to determine the target populations. If the existing training PI&E resource allocation surveyed earlier is not targeting the areas of need, the EMCC shall seek a method to reallocate resources to the appropriate groups.

Resource requirement: The EMCC should charge the PI&E committee with the task of identifying available resources and targeting populations most in need of information and education efforts.

Cost estimate: Although county staff will assist in staffing the committee, this effort will require unknown data collection and analysis time and other staff support.

Time estimate: Annual sustained effort

7.02

Minimum standard: The local EMS agency, in conjunction with other local health education programs, shall work to promote injury control and preventative medicine.

Current status: Standard met

As noted in Section 7.01, efforts are being made to identify target populations and direct available resources to the needs of those groups through the Health Services Agency and various public and private community based organizations.

Unmet need: Injury control and preventative medicine

Task: See Section 7.01

Resource requirement: See Section 7.01

Cost estimate: See Section 7.01

Time estimate: See Section 7.01

Recommended guideline: The local EMS agency should promote the development of special EMS educational programs for targeted groups at high risk for injury and illness.

Current status: Guideline met

See response to previous minimum standard.

Unmet need: See Section 7.01

Task: See Section 7.01

Resource requirement: See Section 7.01

Cost estimate: See Section 7.01

Time estimate: See Section 7.01

7.03

Minimum standard: The local EMS agency, in conjunction with the local Office of Emergency Services (OES), shall promote citizen disaster preparedness activities.

Current status: Standard met.

Since the 1989 earthquake Santa Cruz County has developed disaster preparedness arrangements with a network of healthcare providers which include the acute care hospitals, skilled nursing facilities and

voluntary participating community-based clinics. The agreement with the clinics requires that semiannual disaster preparedness courses be offered. The training has two main objectives: first, to meet the need for disaster preparedness within each constituent community; and secondly, as a reminder to the clinic constituency of service availability.

Unmet need: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

Recommended guideline: The local EMS agency, in conjunction with the local OES, should produce and disseminate information on disaster medical preparedness.

Current status: Guideline met

Since Santa Cruz County has experienced several disasters in recent memory, there are community-wide efforts associated with three major problems: earthquakes, floods and fires. OES, along with the County, disseminates earthquake preparedness brochures during the annual earthquake preparedness month (April). The EMS program supports that activity as well as being available for interviews by the local newspaper and radio talk shows. When events such as the El Nino are predicted, flood prevention activities are stressed. For example, the County facilitates the stockpiling and distribution of sandbags. Residents in flood prone areas are advised on precautionary measures and shelters activities planned in conjunction with community clinics, public health nursing and the Red Cross. Disaster Medical Service Facilities have been identified and a communications system is available to coordinate medical provider and advise them of potential disaster situations.

Unmet need: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

7.04

Minimum standard: The local EMS Agency shall promote the availability of first aid and CPR training for the general public.

Current status: Standard met

The EMS program promotes first aid and CPR in variety of ways. As noted in the previous section, the disaster network of healthcare clinics are required to provide disaster preparedness classes at least twice yearly - CPR and first-aid qualify in this regard. Both acute care hospitals periodically provide CPR and first aid to the public. Disaster brochures that emanate from OES likewise strongly suggest that the public learn self-help skills.

Unmet need: None

Task: None

Resource requirement: None

Cost estimate: None
Time estimate: None

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

Current status: Guideline substantially met

Although the EMS program has not taken the lead in this area, it is part of the activity associated with Section 7.01. The County has taken an active role in promoting CPR training. It is a continuous offering to county employees as part of the employee training program. The Health Services Agency staff is also involved in community training efforts. Dominican Hospital and Watsonville Community Hospital also offers CPR training as part of its health education outreach efforts to members of the community.

Unmet need: None
Task: None
Resource requirement: None
Cost estimate: None
Time estimate: None

Section H

Disaster Medical Response

8.01

Minimum standard: 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 program has developed and periodically exercises a medical response to hazardous materials response plan.

Unmet need: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

8.02

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

Current status: Standard met

County EMS Policy 1260 "Hazardous Material Response Plan" meets this standard.

Unmet need: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

Recommended guideline: 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: Guideline met

All of the disaster plans were developed before the multi-functional format became a requirement and therefore conform in substance but not in form to the state's template. Nonetheless all the plans have been functionally evaluated in one form or another and continue to meet the needs of the county.

Unmet need: Plans do not conform to the multi-functional format.

Task: Restructure the plans to fit the planning model whenever plan revisions are made.

Resource requirement: County staff

Cost estimate: None if developed by staff

Time estimate: >1 year

8.03

Minimum standard: 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

The paramedic role in hazardous material incidents includes the need to identify that a potential hazardous materials incident has occurred and to deny entry. The plan also requires paramedics to support the hazardous-material safety officer as needed. Support may include monitoring the entry team and facilitating communications with the affected Base Station hospital. Training in this regard includes the provision of the Department of Transportation (DOT) Hazardous Material Identification booklet. In addition, each paramedic is oriented to the hazardous material medical response plan when newly hired and during annual updates. First responder fire agencies are also trained to a similar level as paramedics. Fortunately, Santa Cruz County has available for response two fire agencies extensively trained in hazardous materials management.

Unmet need: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

8.04

Minimum standard: Medical response plans and procedures for catastrophic disasters shall use the Incident Command System (ICS) as the basis for field management.

Current status: Standard met

County EMS long ago subscribed to the ICS for EMS field management of incidents. As a matter of daily operational standard practiced by all local EMS responders, the management system is readily assumed when implementing large day-to-day events or disaster-related response.

Unmet need: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

Recommended guideline: The local EMS agency should ensure that ICS training is provided for all medical providers.

Current status: Standard substantially met

The three divisions of EMS medical providers are hospitals, the contract paramedic service and fire department first response. Fire first responders are all oriented to ICS. The hospitals have not had an opportunity to revise their disaster plans to include ICS-like management programming. The ambulance contractor does do ICS orientation when presenting the County Multiple Victim Plan that is ICS based.

In consideration of the importance of ICS, the paramedic contractor agrees that all new employee orientations will include a more in-depth presentation about ICS. The presentation at a minimum will include a detailed discussion of the medical branch, ICS unified command and a brief overview of other relevant branches and their connection to the medical branch.

Unmet need: More thorough orientation to ICS. The hospitals need to revise their disaster plan to include ICS structure.

Task: Include in the initial new employee orientation a more in-depth presentation of ICS to include the medical branch, an understanding of other relevant branches and the philosophy of unified command. Hospitals will be encouraged to make disaster preparation plans in accordance to the ICS system.

Resource requirement: Paramedic contractor staff and an addition of 30 minutes of employee orientation time. The EMS staff will continue to promote ICS orientation with the hospitals.

Cost estimate: No cost to the EMS Agency; some unknown amount increased expense per new paramedic contract employee.

Time Estimate: 1 year

8.05

Minimum standard: The local EMS Agency, using State guidelines, shall establish written procedures for distributing disaster casualties to the medically most appropriate facilities in its service area.

Current status: Standard met

Two levels of disaster planning are considered when attempting compliance with this standard. The first level is the multiple victim situations. The Multiple Victim Incident Plan gives the responsibility of patient triaging to the Paramedic Base Hospital within the jurisdiction of the incident. The plan requires the Base Hospital to contact surrounding hospitals for the purpose of determining hospital readiness to accept disaster victims as well as to gain facility consent to receive casualties. Further, the plan requires that the on-scene triage officer send all ambulances with casualties to the receiving hospital as directed by the Base Hospital.

The second level of disaster triaging is that of a disaster resulting in large numbers of casualties, e.g., earthquake, building collapse, or large plane accident. The role of the local hospital would not change. Although this has never been tested, it is anticipated that by using outside transport resources, casualty disbursement could be managed by directing the ambulance transport to return with casualties to their county of origin (keeping locally the major injured).

In regards to casualty collection points (CCP), a program is only recently being considered by large metropolitan areas and is not currently within the capability of the local EMS agency.

Unmet need: None (mass casualty planning is not possible until more work has been done in the development phase by the State).

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

Recommended guideline: The local EMS Agency, using State guidelines, and in consultation with Regional Poison Control Centers, should identify hospitals with special facilities and capabilities for receipt and treatment of patients with radiation and chemical contamination and injuries.

Current status: Guideline substantially met

Although the Poison Control Centers are not involved in determining which acute care hospitals should receive victims of hazardous materials exposures, both local hospitals have developed for this purpose limited capabilities which fit the day-to-day needs of our county. Both community hospitals have an operational plan for identifying, isolating, and decontaminating individuals who have been exposed to hazardous materials. However, additional efforts are required to improve coordination between hospital administration and field personnel.

Unmet need: Enhanced coordination between hospital administration and field personnel

Task: Joint training

Resource requirement: Hospital support staff, EMS personnel and EMSIA involvement

Cost estimate: Unknown

Time estimate: >1 year

8.06

Minimum standard: The local EMS Agency, using State guidelines, shall establish written procedures for early assessment of needs and shall establish a means for communicating emergency requests to the State and other jurisdictions.

Current status: Standard met

The Emergency Operations Center (EOC) has set aside an area for EMS operations (also includes public and environmental health services) that includes a communications link to all appropriate medical providers. Operationally, during a disaster the first function of the EOC health coordinators is to contact, via radio, every disaster healthcare network member (see Section 3.06 regarding DMSF) to determine post disaster status and related needs. An effort will be made to first provide local support to the needs determined by the survey, and failing this, to contact the Region 2 Disaster Medical Health Coordination Center (RDMHC) for the needed support.

Unmet need: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

Recommended guideline: The local EMS agency's procedures for determining necessary outside assistance should be exercised yearly.

Current status: Guideline substantially met

In consideration of the size of the county and the past history of frequent disasters, an annual drill is unnecessary. During the past two years dealing with flooding problems has obviated the need for drills. Additionally, the communications between the DMS facilities is tested twice yearly to maintain facility familiarity with the communications system.

Unmet need: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

8.07

Minimum standard: A specific frequency (e.g., CALCORD) or frequencies shall be identified for interagency communication and coordination during a disaster.

Current status: Standard met

Although a single frequency has not been designated, a system of communication linking has been established. All fire service responding agencies can communicate with one another via assigned tactical frequencies and all ambulances can also communicate with one another and with all fire services as a result of newly installed communications system in each ambulance. Ambulances can also communicate with each receiving hospital. Another disaster frequency allows the three hospitals to communicate with one another via radio. In turn, the County EOC is situated in the same building with 9-1-1 operations and, as needed, a communications link may be established at this level. NetCom provides coordination of frequency use for day-to-day events and by the Fire Coordinator in the EOC during disaster operations.

Unmet need: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

8.08

Minimum standard: 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 its service area.

Current status: Standard met

Fire services county-wide have developed a medical strike team program that, when activated by request of an on-scene incident commander, will bring to the scene via appropriately equipped engines and other vehicles, enough medical support for a moderate sized incident. The support includes backboards, blankets, bandages, ALS transport-capable vehicles, and lighting apparatus, etc.

Unmet standard: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

Recommended guideline: The local EMS Agency should ensure that emergency medical providers and health care facilities have written agreements with anticipated providers of disaster medical resources.

Current status: Guideline substantially met

By virtue of the DMSF program, all necessary healthcare facilities and those medical clinics that volunteer for disaster service have signed agreements with the county. The agreement provides that the county will provide all support needed and available during the disaster. However, the county still needs to identify local providers of medical supplies and medical manpower.

Unmet need: Agreements with local medical supply services and medical manpower services to provide needed supplies and support during a disaster.

Task: Develop a survey of medical supply and medical manpower agencies. Develop written agreements between the county and these service providers.

Resource requirement: EMS staff to conduct a survey of local vendors and to obtain written agreements.

Cost estimate: None

Time estimate: >1 year

8.10

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

Current status: Standard met

Regional disaster medical and health coordination (RDMHC) is the vehicle used by OES Region 2 that ensures availability of medical mutual aid both within and outside the region.

Locally, agreements exist between Santa Clara, San Benito and Monterey Counties regarding medical mutual aid during periods of extraordinary system demand. An operational standard exists and is promoted by the counties between the Monterey and Santa Cruz County AMRW divisions that allows for movement of transport resources freely between the two counties based upon extraordinary demand.

An example of resource sharing between Santa Clara, San Benito and Monterey counties is best demonstrated by the plan that was drawn up by the three counties. This plan supported San Benito County during the summer of 1997 when early indications that a single major public event was going to severely tax San Benito local services. The plan allowed for support to be drawn from the three adjacent counties as needed.

Unmet need: None

Task: None

Resource requirement: None

Time estimate: None

Cost estimate: None

8.11

Minimum standard: The local EMS Agency, in coordination with the local OES and the County Health Officer and using State guidelines, shall designate casualty collection points (CCP's).

Current status: Standard unmet

No casualty collection points have been designated within Santa Cruz County.

Unmet need: Determine sites for casualty collection points.

Task: Work with OES and County planning department: a) to determine casualty collection sites for north, mid and south county; b) develop a plan for disseminating the information; and c) develop a plan for staffing and supplying the selected sites.

Resource requirement: County EMS, OES and Planning Department staffs.

Cost estimate: This is a large task requiring a considerable amount of staff time and therefore the cost is unknown, though significant.

Time estimate: >1 year

8.12

Minimum standard: The local EMS Agency, in coordination with the local OES, shall develop plans for establishing CCP'S and a means for communicating with them.

Current status: Standard unmet

There has not been any planning in this regard.

Unmet need: Develop CCP sites and a plan for support.

Task: In addition to the tasks of 8.11, develop a communication link for CCP's.

Resource requirement: Communications linkage usually requires hardware and/or radio operators.

Cost estimate: Unknown

Time Estimate: >1 year

8.13

Minimum standard: 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 substances.

Current status: Standard met

The contract paramedic provider for the county requires each employee to review certain standard operating procedures (SOP) on an annual basis. One of the points of review is the hazardous materials response plan. Fire service responders are also familiar with hazardous materials as a core issue of fire suppression as well as personnel safety.

Unmet need: None

Task: None

Resource requirement: None

Time estimate: None

Cost estimate: None

Recommended guideline: The local EMS Agency should ensure 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: Guideline met

County EMS Policy 1260, "Medical Response to Hazardous Materials," establishes the standard for response whether it be a single individual or a large multiple victim incident. The role of first responders and ALS responders is clearly defined. As noted in an earlier section, hazardous materials response is reviewed on an annual basis.

Unmet need: None

Task: None

Resource requirement: None

Time estimate: None

Cost estimate: None

8.14

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

Current status: Standard met

Santa Cruz County EMS has always enjoyed a close working relationship with the acute care hospitals. To the extent a disaster drill (which is required annually by State licensure) involves external services, the EMS Agency has been nearly always invited to participate. This close relationship has provided an opportunity to expose the hospitals to EMS related policies and procedures regarding disaster or multiple victim responses.

Unmet need: None

Task: None

Resource requirement: None

Time estimate: None

Cost estimate: None

Recommended guideline: 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: Guideline met

As noted earlier, both hospitals do involve the needed outside agencies when conducting a drill of the external disaster plan.

Unmet need: None

Task: None

Resource requirement: None

Time estimate: None

Cost estimate: None

8.15

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

Current status: Standard met

Both acute care hospitals conduct inter-hospital communications using the hospital emergency administrative radio (HEAR) system. The EMS Agency tests the system at least twice annually.

Unmet need: None

Task: None

Resource requirement: None

Time estimate: None

Cost estimate: None

8.16

Minimum standard: 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 staff in their use.

Current status: Standard met

As noted in an earlier section, Santa Cruz County has developed a healthcare disaster prepared infrastructure that includes all of the acute care hospitals, skilled nursing and approximately nine local clinics. The system is still in its infancy in terms of developing a solid operational working relationship. In this first phase, operational drills have focused on use of the communications system. The next phase is to develop a process for inter-organizational operations.

Unmet standard: Create a working relation between DMSF network members.

Task: a) host a meeting of representatives of DMSF member facilities that will design a drill to accomplish this purpose; b) memorialize the successful attributes discovered during the drill in an operational procedure manual; and c) retest the network.

Resource requirement: Consultant or staff to host planning meetings, conduct a drill based upon the planning committees philosophy, and formalize the results in a operational document.

Cost estimate: Time commitment for a staff person is estimated at about 500 hours - cost is unknown.

Time estimate: >1 year

Recommended guideline: The local EMS Agency should ensure the availability of training in management of significant medical incidents for all prehospital medical response agencies and acute-care hospitals staff in its service area.

Current status: Guideline met

Santa Cruz County has designated the Incident Command System (ICS) as the standard for managing day-to-day EMS events and disaster situations. The ICS program is of common origins and therefore training is available through many local sources including Regional Occupational Programming, Cabrillo College Fire Science courses, many local fire services, and the ambulance contractor.

Enhanced Level: Advanced Life Support

8.17

Minimum standard: The local EMS agency shall ensure that local 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

As noted in another section of this Plan, the response of outside providers is possible and on occasion happens between Santa Cruz, San Benito, Monterey and Santa Clara Counties. There exists no known impedance to this practice during a disaster.

Unmet need: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

Enhanced Level: Specialty Care System

8.18

Minimum standard: 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

The county has developed a trauma system. Though the local hospitals are not designated as trauma centers, in a formal sense, they do make the case-by-case decision regarding the destination of trauma victims, largely based upon their surgical readiness. It is not expected that the hospital's role would change during the largest of EMS incidents.

The only other specialty care programming is the designation of both of the local hospitals as Emergency Departments Approved for Pediatrics (EDAP). All EMS pediatric cases are therefore directed first to the EDAP-designated community hospital and then as needed transferred to out-of-county pediatric facilities. It is not expected that the hospital role would change during the largest of EMS incidents.

Unmet need: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

Enhanced Level: Exclusive Operating Areas/Ambulance Regulations

8.19

Minimum standard: Local EMS agencies which 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

The ambulance contract just approved (December 1997) has a provision that recognizes the potential need to waive the exclusivity of the current service provider.

Unmet need: None

Task: None

Resource requirement: None

Cost estimate: None

Time estimate: None

TABLE 2: SYSTEM RESOURCES AND OPERATIONS
System Organization and Management

EMS System: Santa Cruz County Health Services Agency
 Reporting Year: 1999-00

NOTE: Number (1) below is to be completed for each county. The balance of Table 2 refers to each agency.

1. Percentage of population served by each level of care by county:
 (Identify for the maximum level of service offered; the total of a, b, and c should equal 100%.)

County: Santa Cruz

a. Basic Life Support (BLS)	<u>0 %</u>
b. Limited Advanced Life Support (LALS)	<u>0 %</u>
c. Advanced Life Support (ALS)	<u>100 %</u>

2. Type of agency

a - Public Health Department	
b - County Health Services Agency	<u>b</u>
c - Other (non-health) County Department	
d - Joint Powers Agency	
e - Private Non-profit Entity	
f - Other: _____	

3. The person responsible for day-to-day activities of EMS agency reports to

a - Public Health Officer	
b - Health Services Agency Director/Administrator	
c - Board of Directors	
d - Other: <u>Administration for EMS/Indigent Care</u>	<u>d</u>

4. Indicate the non-required functions which are performed by the agency

Implementation of exclusive operating areas (ambulance franchising)	<u>X</u>
Designation of trauma centers/trauma care system planning	<u>X</u>
Designation/approval of pediatric facilities	<u>X</u>
Designation of other critical care centers	<u> </u>
Development of transfer agreements	<u>X</u>
Enforcement of local ambulance ordinance	<u>X</u>
Enforcement of ambulance service contracts	<u>X</u>
Operation of ambulance service	<u> </u>

Table 2 - System Organization & Management (cont.)

1999-00

Continuing education	<u>X</u>
Personnel training	<u>X</u>
Operation of oversight of EMS dispatch center	<u>X</u>
Non-medical disaster planning	<u>X</u>
Administration of critical incident stress debriefing (CISD) team	<u> </u>
Administration of disaster medical assistance team (DMAT)	<u> </u>
Administration of EMS Fund [Senate Bill (SB) 12/612]	<u>X</u>
Other: _____	
Other: _____	
Other: _____	

5. EMS agency budget for FY 1999-00

A. EXPENSES

Salaries and benefits (all but contract personnel)	<u>\$ 147,482</u>
Contract Services (e.g. medical director)	<u>45,000</u>
Operations (e.g. copying, postage, facilities)	<u>6,750</u>
Travel	<u>650</u>
Fixed assets	<u>Ø</u>
Indirect expenses (overhead)	<u>Ø</u>
Ambulance subsidy	<u>-</u>
EMS Fund payments to physicians/hospital	<u>-</u>
Dispatch center operations (non-staff)	<u>-</u>
Training program operations	<u>-</u>
Other: <u>furniture</u>	<u>9,227</u>
Other: _____	<u> </u>
Other: _____	<u> </u>

TOTAL EXPENSES \$ 209,109

B. SOURCES OF REVENUE

Special project grant(s) [from EMSA]

Preventive Health and Health Services (PHHS) Block Grant	\$ -
Office of Traffic Safety (OTS)	-
State general fund	-
County general fund	118,509
Other local tax funds (e.g., EMS district)	-
County contracts (e.g. multi-county agencies)	-
Certification fees	12,000
Training program approval fees	-
Training program tuition/Average daily attendance funds (ADA) Job Training Partnership ACT (JTPA) funds/other payments	-
Base hospital application fees	-
Base hospital designation fees	-
Trauma center application fees	-
Trauma center designation fees	-
Pediatric facility approval fees	-
Pediatric facility designation fees	-

Table 2 - System Organization & Management (cont.)

1999-00

Other critical care center application fees	-
Type: _____	
Other critical care center designation fees	-
Type: _____	
Ambulance service/vehicle fees	600
Contributions	-
EMS Fund (SB 12/612)	72,000
Other grants: _____	-
Other fees: _____	-
Other (specify): <u>PCR fees</u>	6,000
TOTAL REVENUE	\$ 209,109

*TOTAL REVENUE SHOULD EQUAL TOTAL EXPENSES.
IF THEY DON'T, PLEASE EXPLAIN BELOW.*

6. Fee structure for FY 1999-00

 We do not charge any fees

 X Our fee structure is:

First responder certification	\$ 35
EMS dispatcher certification	50
EMT-I certification	35
EMT-I recertification	35
EMT-defibrillation certification	35
EMT-defibrillation recertification	Ø
EMT-II certification	Ø
EMT-II recertification	Ø
EMT-P accreditation	75
Mobile Intensive Care Nurse/ Authorized Registered Nurse (MICN/ARN) certification	75
MICN/ARN recertification	15
EMT-I training program approval	150
EMT-II training program approval	-
EMT-P training program approval	200
MICN/ARN training program approval	-
Base hospital application	-
Base hospital designation	-
Trauma center application	-
Trauma center designation	-
Pediatric facility approval	400
Pediatric facility designation	-

Other critical care center application

Type: _____

Other critical care center designation

Type: _____

Ambulance service license

\$ -

Ambulance vehicle permits

75

Other: _____

Other: _____

Other: _____

7. Complete the table on the following two pages for the EMS agency staff for the fiscal year of 1999-00.

CATEGORY	ACTUAL TITLE	FTE POSITIONS (EMS ONLY)	TOP SALARY BY HOURLY EQUIVALENT	BENEFITS (% of Salary)	COMMENTS
EMS Admin./Coord./Dir.					
Asst. Admin./Admin. Asst./Admin. Mgr.	EMS Program Manager	1.0	\$27.47	32%	
ALS Coord./Field Coord./Trng Coord.					
Program Coord./Field Liaison (Non-clinical)					
Trauma Coord.					
Med. Director	EMS Medical Dir.	.33	\$60.00		
Other MD/Med. Consult./Trng. Med. Dir.					
Disaster Med. Planner					

Include an organizational chart of the local EMS agency and a county organizational chart(s) indicating how the LEMSA fits within the county/multi-county structure.

Table 2 System Organization & Management (cont.)

1999-00

CATEGORY	ACTUAL TITLE	FTE POSITIONS (EMS ONLY)	TOP SALARY BY HOURLY EQUIVALENT	BENEFITS (% of Salary)	COMMENTS
Dispatch Supervisor					
Data Evaluator/ Analyst	Departmental Systems Analyst	.5	\$24.64	32%	
QA/QI Coordinator					
Public Info. & Ed. Coord.					
Ex. Secretary					
Other Clerical	Typist Clerk III	1.0	\$14.66	32%	
Data Entry Clerk					
Other					

Include an organizational chart of the local EMS agency and a county organizational chart(s) indicating how the LEMSA fits within the county/multi-county structure.

EMS System: Santa Cruz County Health Services Agency

Reporting Year: 1999-00

NOTE: Table 3 is to be reported by agency.

	EMT - Is	EMT - IIs	EMT - Ps	MICN	EMS Dispatchers
Total certified	503	-	80	36	26
Number newly certified this year	320	-	7	0	2
Number recertified this year	126	-	-	14	24
Total number of accredited personnel on July 1 of the reporting year	-	-	-	-	-
Number of certification reviews resulting in:					
a) formal investigations	-	-	-	-	-
b) probation	-	-	-	-	-
c) suspensions	-	-	-	-	-
d) revocations	-	-	-	-	-
e) denials	-	-	-	-	-
f) denials of renewal	-	-	-	-	-
g) no action taken	-	-	-	-	-

1. Number of EMS dispatchers trained to EMSA standards: 26
2. Early defibrillation:
 - a) Number of EMT-I (defib) certified 141
 - b) Number of public safety (defib) certified (non-EMT-I) 4
3. Do you have a first responder training program? yes no

TABLE 5: SYSTEM RESOURCES AND OPERATIONS -- Response/Transportation (cont'd.) Revision #1 [2/16/95]

SYSTEM STANDARD RESPONSE TIMES (90TH PERCENTILE) 1999-00

Enter the response times in the appropriate boxes.	METRO/URBAN	SUBURBAN/RURAL	WILDERNESS	SYSTEMWIDE
1. BLS and CPR capable first responder.				
2. Early defibrillation responder.				
3. Advanced life support responder.	6.3	13.0	27.2	7.7
4. Transport Ambulance.	10.0	19.0	21.7	12.5

TABLE 6: SYSTEM RESOURCES AND OPERATIONS

Facilities/Critical Care

EMS System: Santa Cruz County Health Services Agency

Reporting Year: 1999-00

NOTE: Table 6 is to be reported by agency.

Trauma

Trauma patients:

a) Number of patients meeting trauma triage criteria	<u>N/A</u>
b) Number of major trauma victims transported directly to a trauma center by ambulance	<u>208</u>
c) Number of major trauma patients transferred to a trauma center	<u>UNK</u>
d) Number of patients meeting triage criteria who weren't treated at a trauma center	<u>N/A</u>

Emergency Departments

Total number of emergency departments	<u>2</u>
a) Number of referral emergency services	<u>0</u>
b) Number of standby emergency services	<u>0</u>
c) Number of basic emergency services	<u>0</u>
d) Number of comprehensive emergency services	<u>2</u>

Receiving Hospitals

1. Number of receiving hospitals with written agreements	<u>2</u>
2. Number of base hospitals with written agreements	<u>2</u>

TAB 8: RESOURCES DIRECTORY -- Providers

EMS System: Santa Cruz County Health Services Agency

County: Santa Cruz

Reporting Year: 1999-00

NOTE: Make copies to add pages as needed. Complete information for each provider by county.

Life Flight, 300 Pasteur Dr., Stanford CA 94305 - 650/498-6931

Name, address & telephone:			Primary Contact: Judi Wilson		
Written Contract: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Service: <input type="checkbox"/> Ground <input checked="" type="checkbox"/> Air <input type="checkbox"/> Water	<input checked="" type="checkbox"/> Transport <input type="checkbox"/> Non-Transport	Air classification: <input type="checkbox"/> auxiliary rescue <input checked="" type="checkbox"/> air ambulance <input type="checkbox"/> ALS rescue <input type="checkbox"/> BLS rescue	If Air: <input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Fixed Wing	Number of personnel providing services: ____ PS ____ PS-Defib ____ BLS ____ EMT-D ____ LALS <u>14</u> ALS
Ownership: <input type="checkbox"/> Public <input checked="" type="checkbox"/> Private	Medical Director: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	If public: <input type="checkbox"/> Fire <input type="checkbox"/> Law <input type="checkbox"/> Other explain: _____	If public: <input type="checkbox"/> city; <input type="checkbox"/> county; <input type="checkbox"/> state; <input type="checkbox"/> fire district; <input type="checkbox"/> Federal	System available 24 hours? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Number of ambulances: _____

CalStar, 20876-B Corsair Blvd., Hayward CA 94545 - 510/887-3063

Name, address & telephone:			Primary Contact: Shatasha		
Written Contract: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Service: <input type="checkbox"/> Ground <input checked="" type="checkbox"/> Air <input type="checkbox"/> Water	<input checked="" type="checkbox"/> Transport <input type="checkbox"/> Non-Transport	Air classification: <input type="checkbox"/> auxiliary rescue <input checked="" type="checkbox"/> air ambulance <input type="checkbox"/> ALS rescue <input type="checkbox"/> BLS rescue	If Air: <input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Fixed Wing	Number of personnel providing services: ____ PS ____ PS-Defib ____ BLS ____ EMT-D ____ LALS <u>35</u> ALS
Ownership: <input type="checkbox"/> Public <input checked="" type="checkbox"/> Private	Medical Director: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	If public: <input type="checkbox"/> Fire <input type="checkbox"/> Law <input type="checkbox"/> Other explain: _____	If public: <input type="checkbox"/> city; <input type="checkbox"/> county; <input type="checkbox"/> state; <input type="checkbox"/> fire district; <input type="checkbox"/> Federal	System available 24 hours? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Number of ambulances: _____

TABLE 3: RESOURCES DIRECTORY -- Providers

EMS System: Santa Cruz County Health Services Agency

County: Santa Cruz

Reporting Year: 1999-00

NOTE: Make copies to add pages as needed. Complete information for each provider by county.

American Medical Response - West, 116 Hubbard St., Santa Cruz CA 96070

Name, address & telephone:			Primary Contact: Dave Zenker		
Written Contract: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Service: <input checked="" type="checkbox"/> Ground <input type="checkbox"/> Air <input type="checkbox"/> Water	<input checked="" type="checkbox"/> Transport <input type="checkbox"/> Non-Transport	Air classification: <input type="checkbox"/> auxiliary rescue <input type="checkbox"/> air ambulance <input type="checkbox"/> ALS rescue <input type="checkbox"/> BLS rescue	If Air: <input type="checkbox"/> Rotary <input type="checkbox"/> Fixed Wing	Number of personnel providing services: _____ PS _____ BLS _____ LALS _____ PS-Defib _____ EMT-D _____ ALS
Ownership: <input type="checkbox"/> Public <input type="checkbox"/> Private	Medical Director: <input type="checkbox"/> yes <input checked="" type="checkbox"/> no	If public: <input type="checkbox"/> Fire <input type="checkbox"/> Law <input type="checkbox"/> Other explain: _____	If public: <input type="checkbox"/> city; <input type="checkbox"/> county; <input type="checkbox"/> state; <input type="checkbox"/> fire district; <input type="checkbox"/> Federal	System available 24 hours? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Number of ambulances: <u>6</u>

Name, address & telephone:			Primary Contact:		
Written Contract: <input type="checkbox"/> yes <input type="checkbox"/> no	Service: <input type="checkbox"/> Ground <input type="checkbox"/> Air <input type="checkbox"/> Water	<input type="checkbox"/> Transport <input type="checkbox"/> Non-Transport	Air classification: <input type="checkbox"/> auxiliary rescue <input type="checkbox"/> air ambulance <input type="checkbox"/> ALS rescue <input type="checkbox"/> BLS rescue	If Air: <input type="checkbox"/> Rotary <input type="checkbox"/> Fixed Wing	Number of personnel providing services: _____ PS _____ BLS _____ LALS _____ PS-Defib _____ EMT-D _____ ALS
Ownership: <input type="checkbox"/> Public <input type="checkbox"/> Private	Medical Director: <input type="checkbox"/> yes <input type="checkbox"/> no	If public: <input type="checkbox"/> Fire <input type="checkbox"/> Law <input type="checkbox"/> Other explain: _____	If public: <input type="checkbox"/> city; <input type="checkbox"/> county; <input type="checkbox"/> state; <input type="checkbox"/> fire district; <input type="checkbox"/> Federal	System available 24 hours? <input type="checkbox"/> yes <input type="checkbox"/> no	Number of ambulances: _____

NOTE: Table 9 is to be completed by county. Make copies to add pages as needed.

Training Institution Name

Emergency Training Services (ETS)

Contact Person telephone no.

Dave Barbin, 831/476-8813

Address

3050 Paul Sweet Rd., Santa Cruz CA 95060

<p>Student Eligibility: *</p> <p>EMT & EMT Refresher open to general public; CE open to in-house licensed staff</p>	<p>Cost of Program</p> <p>Basic <u>\$435</u></p> <p>Refresher <u>\$140-150</u></p>	<p>**Program Level: <u>EMT, EMT Refresher & CE</u></p> <p>Number of students completing training per year:</p> <p>Initial training: _____</p> <p>Refresher: _____</p> <p>Cont. Education _____</p> <p>Expiration Date: _____</p> <p>Number of courses: <u>46</u></p> <p>Initial training: <u>10</u></p> <p>Refresher: <u>12</u></p> <p>Cont. Education: <u>24</u></p>
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Training Institution Name

Dominican Santa Cruz Hospital

Contact Person telephone no.

Rayette Andrews, 831/462-7642

Address

1555 Soquel Ave., Santa Cruz CA 96065

<p>Student Eligibility: *</p> <p>open to licensed paramedics and EMTs</p>	<p>Cost of Program</p> <p>Basic <u>0</u></p> <p>Refresher <u>0</u></p>	<p>**Program Level: <u>Paramedic CEs</u></p> <p>Number of students completing training per year:</p> <p>Initial training: _____</p> <p>Refresher: _____</p> <p>Cont. Education <u>150</u></p> <p>Expiration Date: _____</p> <p>Number of courses: <u>6</u></p> <p>Initial training: _____</p> <p>Refresher: _____</p> <p>Cont. Education: <u>6</u></p>
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* Open to general public or restricted to certain personnel only.

** Indicate whether EMT-I, EMT-II, EMT-P, or MICN; if there is a training program that offers more than one level complete all information for each level.

NOTE: Table 9 is to be completed by county. Make copies to add pages as needed.

Training Institution Name

Watsonville Community Hospital

Contact Person telephone no.

Lisa Angell, 831/724-4741

Address

75 Nielsen, Watsonville CA 95076

<p>Student Eligibility: *</p> <p>open to licensed paramedics and EMTs</p>	<p>Cost of Program</p> <p>Basic <u> 0 </u></p> <p>Refresher <u> 0 </u></p>	<p>**Program Level: <u> CE </u></p> <p>Number of students completing training per year:</p> <p>Initial training: _____</p> <p>Refresher: _____</p> <p>Cont. Education <u> 40 </u></p> <p>Expiration Date: _____</p> <p>Number of courses: _____</p> <p>Initial training: _____</p> <p>Refresher: _____</p> <p>Cont. Education: <u> 2 </u></p>
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Training Institution Name

Aptos/LaSelvaBeach Fire District

Contact Person telephone no.

Jeff Terpstra, 831/685-6690

Address

6934 Soquel Dr., Aptos, CA 95003

<p>Student Eligibility: *</p> <p>open to licensed paramedics, EMTs, and MICNs</p>	<p>Cost of Program</p> <p>Basic <u> 0 </u></p> <p>Refresher <u> 0 </u></p>	<p>**Program Level: <u> Paramedic & EMT Refresher & CEs </u></p> <p>Number of students completing training per year:</p> <p>Initial training: _____</p> <p>Refresher: <u> 80 </u></p> <p>Cont. Education <u> 50 </u></p> <p>Expiration Date: _____</p> <p>Number of courses: _____</p> <p>Initial training: _____</p> <p>Refresher: <u> 1 </u></p> <p>Cont. Education: <u> 12 </u></p>
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* Open to general public or restricted to certain personnel only.

** Indicate whether EMT-I, EMT-II, EMT-P, or MICN; if there is a training program that offers more than one level complete all information for each level.

NOTE: Make copies to add pages as needed. Complete information for each facility by county.

Dominican Santa Cruz Hospital, 1555 Soquel Ave., Santa Cruz CA 95065 - 831/462-7700

Name, address & telephone:			Primary Contact: Terry Lapid, M.D. ED Medical Director		
Written Contract	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Referral emergency service <input type="checkbox"/> Standby emergency service <input type="checkbox"/> Basic emergency service <input checked="" type="checkbox"/> Comprehensive emergency service <input type="checkbox"/>	Base Hospital:	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Pediatric Critical Care Center:*
EDAP:**	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	PICU:*** <input type="checkbox"/> yes <input checked="" type="checkbox"/> no	Burn Center: <input type="checkbox"/> yes <input checked="" type="checkbox"/> no	Trauma Center:	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
					If Trauma Center what Level:****

Watsonville Community Hospital, 75 Nielsen, Watsonville CA 95076 - 831/724-4741

Name, address & telephone:			Primary Contact: John Osgood, R.N. ED Director		
Written Contract	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Referral emergency service <input type="checkbox"/> Standby emergency service <input type="checkbox"/> Basic emergency service <input checked="" type="checkbox"/> Comprehensive emergency service <input type="checkbox"/>	Base Hospital:	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	Pediatric Critical Care Center:*
EDAP:**	<input checked="" type="checkbox"/> yes <input type="checkbox"/> no	PICU:*** <input type="checkbox"/> yes <input checked="" type="checkbox"/> no	Burn Center: <input type="checkbox"/> yes <input checked="" type="checkbox"/> no	Trauma Center:	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
					If Trauma Center what Level:****

* Meets EMSA Pediatric Critical Care Center (PCCC) Standards.

** Meets EMSA Emergency Departments Approved for Pediatrics (EDAP) Standards.

*** Meets California Children Services (CCS) Pediatric Intensive Care Unit (PICU) Standards.

**** Levels I, II, III and Pediatric.

EMS System: Santa Cruz County Health Services Agency

County: Santa Cruz

Reporting Year: 1999-00

NOTE: Make copies to add pages as needed. Complete information for each provider by county.

<p>Name, address & telephone: Santa Cruz Consolidated Emergency Communication Center 495 Upper Park Rd., Santa Cruz CA Primary Contact: 831/471-1000</p>			
<p>Written Contract: <input checked="" type="checkbox"/> yes <input type="checkbox"/> no</p>	<p>Medical Director: <input type="checkbox"/> yes <input checked="" type="checkbox"/> no</p>	<p><input checked="" type="checkbox"/> Day-to-day <input checked="" type="checkbox"/> Disaster</p>	<p>Number of Personnel providing services: _____ EMD Training _____ EMT-D _____ ALS _____ BLS _____ LALS <u>26</u> Other</p>
<p>Ownership: <input checked="" type="checkbox"/> Public <input type="checkbox"/> Private</p>		<p>If public: <input checked="" type="checkbox"/> Fire <input checked="" type="checkbox"/> Law <input checked="" type="checkbox"/> Other explain: <u>Joint Powers</u> Authority</p>	<p>If public: <input type="checkbox"/> city; <input type="checkbox"/> county; <input type="checkbox"/> state; <input type="checkbox"/> fire district; <input type="checkbox"/> Federal</p>

<p>Name, address & telephone: _____ Primary Contact: _____</p>			
<p>Written Contract: <input type="checkbox"/> yes <input type="checkbox"/> no</p>	<p>Medical Director: <input type="checkbox"/> yes <input type="checkbox"/> no</p>	<p><input type="checkbox"/> Day-to-day <input type="checkbox"/> Disaster</p>	<p>Number of Personnel providing services: _____ EMD Training _____ EMT-D _____ ALS _____ BLS _____ LALS _____ Other</p>
<p>Ownership: <input type="checkbox"/> Public <input type="checkbox"/> Private</p>		<p>If public: <input type="checkbox"/> Fire <input type="checkbox"/> Law <input type="checkbox"/> Other explain: _____</p>	<p>If public: <input type="checkbox"/> city; <input type="checkbox"/> county; <input type="checkbox"/> state; <input type="checkbox"/> fire district; <input type="checkbox"/> Federal</p>

**EMS PLAN
AMBULANCE ZONE SUMMARY FORM**

In order to evaluate the nature of each area or subarea, the following information should be compiled for each zone individually. Please include a separate form for each exclusive and/or nonexclusive ambulance zone.

<p>Local EMS Agency or County Name:</p> <p align="center">SANTA CRUZ COUNTY EMERGENCY MEDICAL SERVICE</p>
<p>Area or subarea (Zone) Name or Title:</p> <p align="center">SANTA CRUZ COUNTY</p>
<p>Name of Current Provider(s): Include company name(s) and length of operation (uninterrupted) in specified area or subarea.</p> <p align="center">AMERICAN MEDICAL RESPONSE WEST 1978-present</p>
<p>Area or subarea (Zone) Geographic Description:</p> <p align="center">ENTIRE SANTA CRUZ COUNTY AREA</p>
<p>Statement of Exclusivity, Exclusive or non-Exclusive (HS 1797.6): Include intent of local EMS agency and Board action.</p> <p align="center">DOCUMENT THAT EXISTING PROVIDER MEETS REQUIREMENTS FOR NON-COMPETITIVE SELECTION</p>
<p>Type of Exclusivity, "Emergency Ambulance", "ALS", or "LALS" (HS 1797.85): Include type of exclusivity (Emergency Ambulance, ALS, LALS, or combination) and operational definition of exclusivity (i.e., 911 calls only, all emergencies, all calls requiring emergency ambulance service, etc.).</p> <p align="center">ADVANCED LIFE SUPPORT 911 CALLS ONLY</p>
<p>Method to achieve exclusivity (HS 1797.224)</p> <p>Prior to 1981 three ambulance services existed in the county: Valley Ambulance (Scotts Valley) Santa Cruz Ambulance (Santa Cruz) A-1 Ambulance (Watsonville)</p> <p>1978 Santa Cruz Ambulance bought Valley Ambulance 1985 ALS services now provided by Santa Cruz and A-1 Ambulances 1988 Santa Cruz Ambulance purchased A-1 1989 Santa Cruz Ambulance changed name to PACMED (both Santa Cruz Ambulance and A-1 operated under this name) 1994 PACMED changed its name to American Medical Response West 1996 American Medical Response West acquired by Laidlaw but name & scope of service did not change 1997 Current 5-year contract between AMRW and County of Santa Cruz began</p>

EMERGENCY MEDICAL SERVICES AUTHORITY

1930 9TH STREET
 SACRAMENTO, CALIFORNIA 95814-7043
 (916) 322-4336 FAX: (916) 324-2875



August 10, 2001

Vol Ranger
 Santa Cruz County EMS Agency
 1080 Emeline Avenue
 Santa Cruz, CA 95061

Dear Ms. Ranger:

We have completed our review of *Santa Cruz EMS Agency's Emergency Medical Services Plan*, and have found it to be in compliance with the *EMS System Standards and Guidelines* and the *EMS System Planning Guidelines*.

Our reviewers, also raised some concerns regarding certain sections of the plan. I have listed those sections along with the specific comment below.

SECTION	COMMENT
1.07 & 1.26 Trauma Planning & Enhanced Level Trauma Care System	Recommend a trauma plan be developed with regard to the new trauma regulations.
1.09 Inventory of Resources	A list of detailed inventory of EMS resources needs to be made into a single document.
1.19 Policies, Procedures, Protocols	e) On-scene treatment times - there needs to be a policy, procedure or protocol for this standard.
1.20 DNR Policy	Recommendations: Under III, reverse order of "DNR Orders" and "DPAHC" - DNR form should have 1 st priority. Also, review instructions for DPACH and either consider removing or edit so as not to require responder to try and understand and verify a legal document. Also under III. B., #5, why is it stated that it is preferable if the DNR form is also presented on-scene even when patient is wearing a DNR Medic Alert medallion? The form is needed to obtain the medic alert medallion, so the medallion takes the place of the form.
4.13 Intercounty Response	County should consider developing agreements to clarify intercounty response.
4.22 Evaluation	Suggest that Santa Cruz EMS Agency outline periodic evaluation criteria for EOAs.

SECTION	COMMENT
5.02 Triage & Transfer Protocol	Agency should consider establishing formal agreements with trauma centers to ensure care for trauma patients.
5.08 Trauma System Design	A trauma plan should be developed that includes triage criteria for trauma patients. It is important for arrangements to be preset for trauma patients due to their critical nature.
8.11 & 8.12 CCP Designation & Establishment	Need to designate casualty collection points.

The above comments are for your information and may be addressed in your annual update. If you have any questions regarding the plan review, please call Sandy Salaber at (916) 322-4336, extension 423.

Sincerely,



Richard E. Watson
Interim Director

REW:SS