Santa Barbara County
PUBLIC Health
DEPARTMENT

TRAUMA SYSTEM PLAN

EMERGENCY MEDICAL SERVICES AGENCY

1999

Interim Change 11/10/2014

Santa Barbara County
EMS Plan: TRAUMA SYSTEM STATUS REPORT
November 10, 2014

Trauma System Summary—Santa Barbara County continues to follow the trauma system plan that was developed and approved in 1999. There has been growth and improvement as outlined in this annual report. Jennie Simon, RN, continues as the Santa Barbara County Trauma System Manager, focusing on support of the local trauma system. Five hospitals currently exist in Santa Barbara County. Cottage Health System encompasses three facilities; Santa Barbara Cottage Hospital (SBCH), the only designated and ACS verified Level II Trauma Center in the county, as well as two non-trauma facilities, Santa Ynez Valley Cottage Hospital (SYVCH) and Goleta Valley Cottage Hospital (GVCH). These three hospitals primarily support the southern region of our county. The northern region of our county is served by two additional hospitals; Marian Regional Medical Center (MRMC,) a designated Level III Trauma Center currently in the process of ACS verification and Lompoc Valley Medical Center (LVMC), a non-trauma facility.

Changes in Trauma System—Santa Barbara Cottage Hospital (SBCH) was designated as both a level II adult and pediatric trauma center in May 2014, following their American College of Surgeons verification process. Marian Regional Medical Center (MRMC) was designated as a level III adult trauma center in April, 2013 and is planning on participating in the ACS verification process in May of 2015.

The helicopter landing pad at Cottage Hospital opened in 2012 has changed critical patient care access in Santa Barbara County. There have been multiple transports to and from the center since with no difficulties. The EMS Agency revised the Trauma Field Triage Guidelines as well as the Air Medical Dispatch/Transport policies in order to ensure pre-hospital personnel expedite trauma patient transport time. CALSTAR has been serving the county for the past 9 years as the only air ambulance in the county. The EMS Agency has entered into a written agreement with the Santa Barbara County Sheriff's Aviation unit, for medical rescue, which will provide back-up to CALSTAR in addition to Rescue Aircraft services. The EMS Agency continues to refine a standardized approach to identifying and guiding the transfer of critical trauma patients from non-trauma hospitals to a trauma center.

Number and Designation Level of Trauma Centers—

Hospital	Trauma Level	Date Designation/Verification
Marian Regional Medical Center (MRMC)	3	Designated April 2013.
Santa Barbara Cottage Hospital (SBCH)	2	ACS Verification & Designation May 2014
Santa Barbara Cottage Children's Hospital (SBCH)	2- Pediatric	ACS Verification & Designation May 2014

Trauma System Goals and Objectives—

1. **Identification and Access:** The EMS Agency continues to improve injury identification and access to the EMS system. Patients are tracked through an online trauma registry system, Lancet Trauma One. Patients are entered into the system by the Trauma

Centers. Information in the registry system is used as part of the performance improvement process and to ensure trauma patients have access to the most appropriate level of trauma care based on injury severity. The EMS Agency has completed a review and update of the local trauma data dictionary in conjunction with the two local trauma centers. We are now working with Lancet and the two trauma centers to update the registries to be current to the data dictionary. The next phase of this project is to standardize the information collected for all three counties; Ventura, Santa Barbara and San Luis Obispo.

2. **Pre-hospital Care/Transportation:** The EMS Agency assures high quality pre-hospital treatment and transportation systems. The EMS field trauma triage and destination policy was updated in August 2014, see attachment. American Medical Response (AMR) is the advance life support ambulance service contracted in Santa Barbara County. In addition, Santa Barbara County Fire Protection District also provides limited ambulance transportation in three areas of the County. Santa Barbara County has a designated air ambulance provider, CALSTAR, based in Santa Maria. In addition the County Air Operations, jointly run by the County Fire and Sheriff's Department, have a designated air rescue helicopter available. All pre-hospital personnel are required to meet educational requirements that include trauma treatment and trauma system issues. The EMS Agency works closely with all pre-hospital providers to identify any transportation issues related to the rapid care and transport of trauma patients.

3. **Hospital Care:** The EMS Agency continues to work with each non-trauma hospital to develop plans for the rapid assessment, stabilization and transfer of any critically injured trauma patients that may present in their facility. The EMS Agency provides a forum for open discussion and peer review of medical care amongst the trauma medical directors, emergency department medical directors and trauma program managers

4. **Evaluation:** The EMS Agency's goal is to provide continuous monitoring of the trauma system to ensure appropriate access, triage and treatment of the trauma patient and to assist with identifying needed refinements of our current trauma system. The Trauma System Advisory Committee (TSC) meets four times a year to review and receive input on proposed changes to field triage, transport destination and transfer policies, and to make recommendations to the EMS Agency. In addition, TSC discusses best practices and reviews trauma cases specifically for Santa Barbara County. Trauma programs from Santa Barbara County, Ventura County and San Luis Obispo County also meet three times a year to participate in a regional Trauma Audit Committee (TAC) to review and discuss trauma issues that potentially affect the region. At this meeting, each trauma center also presents preselected cases that they have identified as showing potential opportunities for trauma care and system wide improvements.

5. **Prevention:** The EMS Agency's goal to integrate injury prevention program standards into the trauma system is ongoing. At this time trauma prevention education and activities are vested with the trauma centers. The EMS Agency's Trauma Program Manager is a member of the County's Child Death Review Team and provides input on all traumatic child deaths, identifying preventable deaths, and brings this information back to our Trauma System Advisory Committee. Santa Barbara Cottage Hospital has an outstanding sports head injury education and outreach program. Marian Regional Medical Center participates in an outreach education program through the local court system on the potential medical outcomes of driving under the influence, with instruction based on actual trauma case studies. This year the EMS Agency has been active in facilitating a countywide group focused on planning an improved approach to child car seat safety for the local communities. The EMS Agency will assist with injury data collection and make this available to any agencies interested in developing prevention programs.

6. **Administration:** The EMS Agency has established a program of leadership and oversight to facilitate the implementation of the trauma plan. This is an ongoing process as updates or improvements are deemed necessary.

7. **Disaster:** The EMS Agency has integrated disaster/emergency preparedness with the trauma system. Mass Casualty Incidents (MCI) can be monitored with the ReddiNet system. The MCI plan is being updated to incorporate the changes with trauma center designations. All hospitals and American Medical Response are able to enter/review data for disaster/MCI situations. All hospitals are "base hospitals" and can provide guidance for pre-hospital personnel. Disaster /MCI Communication drills are performed regularly utilizing ReddiNet and all hospitals participate in the statewide health and medical disaster exercise.

8. **Finance:** The EMS Agency monitors, evaluates and modifies the trauma system components as appropriate, based on the financial assessment of the trauma system. The EMS Agency has negotiated trauma center agreements with SBCH and MRMC for service charges associated with the direct cost of the trauma system to support the ongoing oversight and system performance improvements.

Changes to Implementation Schedule—no changes are anticipated at this time.

System Performance Improvement— The EMS Agency participates in Continuous Quality Improvement programs which include trauma care and EMS performance. As previously mentioned, Santa Barbara County participates in a Tri-county regional Trauma Audit Committee with Ventura and San Luis Obispo Counties. Best practices are discussed and problem solving ideas are shared. During the last regional meeting it was decided to rotate the meeting so that each County can host one meeting a year. Santa Barbara and San Luis Obispo EMS Agencies have entered in to a MOU to facilitate the provision of optimal care for patients with traumatic injuries through regional recognition of the designated hospitals in both counties. This MOU provides for acceptance at the closest designated trauma center for all patients meeting trauma triage criteria from either county, as well as the sharing of QI data for any patients that cross county lines for care.

The surrounding counties all work well together and have been strengthening access to trauma services in the region. Santa Barbara EMS Agency continues to participate in the Southwest Regional Trauma Care Committee and all three of the tri-counties LEMSA trauma staff participate at the SWRTCC and are active on the committees to support regional trauma system improvement activities. The Trauma System Manager as well the Trauma Program Managers from both trauma centers in the county are all active members of the Trauma Managers Association of California (TMAC.)

Progress on addressing EMS Authority Trauma System Plan Comments—No comments at this time, waiting release of State Trauma System Plan.

Other Issues—Updated EMS Trauma System Policies attached.

Santa Barbara County
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Partial Funding provided by the State of California
Emergency Medical Services Authority
Under Special Project Grant # EMS-4069 1995-1996

Special Acknowledgements and Appreciation

The EMS agency would not have achieved the goal of developing a Trauma System Plan without the substantial assistance and support provided by the many persons and agencies that have contributed their time and efforts for the good of the people we serve.

It could not have been accomplished without a collegial, multidisciplinary committee, whose members were willing to listen to different perspectives and to have their own ideas shaped by what they heard. Many of these individuals contributed a considerable amount of time to the project, clarifying their points of view and collaborative strategies in long, and often multiple, conversations.

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Table of Contents

Executive Summary

An organized, systematic approach to trauma care results in a reduction in patient mortality and morbidity. In addition, injuries will decrease due to organized prevention efforts. In recognition of this local public health issue, the California State Emergency Medical Services Authority has authorized the development of this trauma plan as one component in the process of the implementation of an organized injury management strategy.

Santa Barbara County established a trauma care system in 1986. Subsequent reviews of care have demonstrated that outcomes meet or exceed national trauma care norms. The intent of this plan is to build on the strengths of the current Emergency Medical Services structure and formalize Santa Barbara County's trauma care system by defining the roles and responsibilities of the hospitals. The system will be based on an inclusive model, encouraging all hospitals to participate at some level, dependent upon their resources. This plan also recognizes the importance of all facilities to provide trauma care to not only the severely injured victim but to all other injured patients as well. "The model developed and put forth in the 1990 Trauma Care System and Development Act encouraged the formation of an inclusive trauma system in which each care provider is incorporated into the system." (*Resources for Optimal Care of the Injured Patient*: 1998. American College of Surgeons Committee on Trauma). The Plan will meet all appropriate State regulations.

The facility standards contained in this document are based upon the California Code of Regulations, Trauma Care Systems for Level I, II, III, and IV Trauma Centers. Interfacility transfer agreements will be established to facilitate the rapid and appropriate transfer of patients both within and outside of the County as their medical care needs dictate.

The EMS Agency will rigorously monitor the system established by this plan through review of trauma registry data, outcome studies and site visits. The care of the injured patient is not unique. Frequently, the needs of trauma patients overlap with other critically ill patients. The planning of care for these patients must be coordinated with all other components of the EMS system. A Continuous Quality Improvement model will be instituted for system review and a comprehensive management information system will be implemented to ensure the seamless integration of dispatch, prehospital, hospital and registry information. It is the goal of the EMS Agency that through this Trauma Plan quality of care to all patients will be enhanced.

Section I Plan Overview

A. PURPOSE

The trauma plan for Santa Barbara County is, first and foremost, a patient advocacy document. Its purpose is to provide a framework for the establishment of a comprehensive injury management strategy for the County that addresses the needs of the injured. The plan acknowledges the inherent challenges of the urban, semi-rural, and rural health care environment and provides an organized process to ensure quality trauma services while remaining sensitive to the intrinsic resource and financial constraints of the system participants. This plan recognizes that a partnership of organizations, institutions and individuals form the nucleus of a quality trauma system. It is only through this partnership and adherence to quality trauma care standards that the goals of this plan will be achieved.

This trauma plan will design a countywide trauma system in order to:

1. Identify the causes of injury.
2. Pursue injury prevention activities to decrease the incidence of trauma.
3. Identify and measure preventable death and disability from trauma.
4. Assure timely, optimal trauma services in a cost-efficient manner through close coordination of prehospital, hospital and rehabilitation services.
5. Reduce mortality and morbidity from trauma within our county.
6. Match patient medical needs with resources of trauma receiving center.
7. Manage costs of trauma system implementation.

B. PLAN SUMMARY

This plan defines and establishes programs to:

1. Develop and operate a countywide, inclusive trauma system.
2. Develop prehospital trauma treatment and transportation protocols, which recognize the urban, semi-rural and rural nature of the County.
3. Provide air evacuation requirements.
4. Designate and contract with health care facilities to provide trauma care services.
5. Define operational requirements for all levels of trauma care facilities.
6. Provide a clear line of authority for the countywide trauma system administration.
7. Maintain a continuous quality improvement program, including a trauma registry.
8. Maximize trauma system stability and cost containment considerations.
9. Evaluate trauma system effectiveness.

This trauma plan anticipates the development of following levels of trauma facilities (Levels II, III and IV), but it will set criteria and allow for the flexibility to establish a Level I facility as needed.

Level IV Trauma Center - a hospital that has agreed to treat trauma cases with additional resources as defined by Level IV trauma center criteria.

Level III Trauma Center - a hospital that has agreed to maintain resources and capabilities to treat trauma patients, including promptly available surgeons, as defined by the Level III trauma center criteria.

Level II Trauma Center - a hospital that has agreed to maintain resources and capabilities to treat trauma patients including the immediate availability of appropriate staff and resources, as defined by the Level II trauma center standards.

Level I Trauma Center - a hospital that has agreed to maintain resources and capabilities to treat trauma patients including the immediate availability of appropriate staff and resources, as defined by the Level I trauma center standards.

Currently all hospitals within the County are Base Hospitals. The Base Hospitals will continue to provide on-line communications and medical control to the field personnel for trauma patients. The Base Hospitals will continue to participate in the development of the trauma system design and will develop links with the designated trauma centers. All prehospital care personnel will be trained on appropriate trauma treatment and transportation protocols.

C. BACKGROUND

During 1966, the National Academy of Sciences "White Paper' entitled "Accidental Death and Disability: The Neglected Disease of Modern Society", identified deficiencies in providing emergency medical care in the country. This paper was the catalyst prompting federal leadership toward an organized approach to EMS and trauma care. The authority of states to set standards, regulate EMS, and implement programs designed to reduce injury were further reinforced and encouraged by the enactment of the 1966 Highway Safety Act,. Various subsequent federal and state initiatives were responsible for improving and refining prehospital systems of care during the two decades which followed the landmark 1966 paper.

Significant state EMS leadership from California regarding the development of EMS systems began in 1981 with the establishment of state law and the California EMS Authority. After considerable debate, the California State Legislature enacted the “Emergency Medical Services System and Prehospital Emergency Medical Care Personnel Act.”(Health and Safety Code 1797, et al.). This law specifically authorized local EMS agencies to “...plan, implement, and evaluate an emergency medical services system...consisting of an organized pattern of readiness and response services...”(Health and Safety Code 1797.204). The Act further authorized local EMS agencies to plan, implement and monitor limited advanced life support and advanced life support programs.

Santa Barbara County Emergency Medical Services (EMS) developed and implemented a countywide trauma care system in 1986. The system provides for trauma care capability at all seven hospitals. Each hospital has entered into a written agreement with

the County, and is expected to be staffed and equipped equivalent to the requirements for Level III trauma centers set forth in the California Code of Regulations. This system is fully integrated into the EMS system and serves to meet the needs of all injured patients, regardless of the severity of injury.

The California EMS Authority promulgated the document *Emergency Medical Services System Standards and Guidelines* in 1985, revised in 1993, pursuant to Section 1797.103 of the California Health and Safety Code. These guidelines describe the basic components and general function of an EMS system. The EMS Agency developed a Strategic Plan, which was approved by Santa Barbara County Board of Supervisors on March 26, 1996. This plan encompasses all recommended guidelines as identified by the State EMS Authority.

Santa Barbara County has been working to formalize and conduct an evaluation of its county-wide trauma care system, as a specific subset of the overall EMS system since October 1995, when it began to identify and solicit community support for the planning process. Since that time, the EMS Agency has been steadily moving toward developing a trauma plan to submit to the California EMS Authority for approval. To meet this objective, it has conducted meetings with representatives from hospitals, advance life support providers, rehabilitation care centers, the Healthcare Association of Southern California and conducted retrospective trauma patient flow and outcome studies. In addition, Trauma System site visits have been conducted in Riverside County and Alameda County. This process has allowed the EMS Agency to assess prehospital care resources and needs, identify hospital services and resources and begin to develop and revise trauma-specific policies, protocols and system standards. The EMS Agency established a multi-disciplinary Trauma Plan Task Force to help provide direct input and a review mechanism for the planning process. The Trauma Plan Task Force has met periodically throughout the evaluation and plan development phase. In addition, a larger Trauma Advisory Committee was established to provider broad EMS community input and support.

One of the initial tasks of the Trauma Advisory Committee was to evaluate the existing outcomes from trauma in Santa Barbara County. Two studies were undertaken to address this issue. The first study identified patients transported by ambulance through the 911 system in 1995, age >12 years, with a revised trauma score of <7.84, as recorded on the prehospital records. One hundred thirty one patients were identified. Each of the seven hospitals in the County participated by providing ICD-9 codes and patient outcome information necessary to measure the observed probability of survival of trauma patents. This information was then entered into the Lancet Technologies Inc., “Trauma One" database, and the data compared to the Major Trauma Outcome Study (MTOS) data. Outcomes were not significantly different than MTOS.

Because of limitations of this study, the most important of which was that we were unable to identify all seriously injured patients, the Trauma Advisory Committee decided it was necessary to conduct a more comprehensive trauma system evaluation. The second study evaluated all injured patients treated in any hospital in the County in 1996. Patients were identified by each of the seven hospitals who had a trauma ICD-9

diagnosis code, and one of the following: death, transfer, length of stay > 2 days, ICU admit or procedure in the OR. And again, the performance of the County's trauma system, as measured by the observed probability of survival of trauma patients, met or exceed the MTOS norms.

Finally, a recent study of the five Southern California Counties (Santa Barbara through San Diego) found:

1) Death rates from traffic collisions have declined more rapidly over the last 20 years in the decentralized trauma systems of Santa Barbara and Ventura Counties than in the centralized trauma center-based systems of Orange, Los Angeles, and San Diego Counties.

2) The death rate from severe injuries is less in Santa Barbara and Ventura Counties than in the three urban counties.

This indicates that the decentralized trauma system currently in place is providing a high level of trauma care to our community. *We are, therefore, planning to maintain a decentralized trauma system. All hospitals have been functioning at Level III capacities. Now we want to formalize the trauma center designations, increasing one hospital to a Level II, decreasing one to a Level IV, and maintaining four as Level III centers.*

D. TRAUMA PLAN PHILOSOPHY

The goal for Santa Barbara County's Trauma Plan is to continue to assure high quality trauma care to all residents and visitors of the County. To this end, trauma centers will be designated to formalize the roles each hospital has in the decentralized system. A priority consideration in this plan's development will be given to a system design and resource allocation which provides a high quality of trauma services to the population served while remaining cognizant of the available resources. The emergency departments, and hospitals will be integrated into a total system of care that includes prevention programs, prehospital coordination through rehabilitation and follow-up. Air medical dispatch procedures have been evaluated as part of the trauma plan implementation process to ensure consistency with established treatment guidelines. The trauma system of care will be carefully implemented and monitored by the EMS Agency and the Trauma Advisory Committee.

The philosophy of the Santa Barbara County Trauma Plan calls for the following elements:

Inclusive:

Participation of all hospitals will be encouraged countywide with a demonstrated and documented commitment to quality care.

Continuous Quality Improvement/Outcome:

Orientation towards a continuous quality improvement process and an emphasis on patient outcomes will be the primary focus of program evaluation.

Prevention:
An emphasis on injury control as a priority at all levels of trauma care will be established.

Continuum of Services:
The trauma-care program will be developed as a system with all components integrated, including prehospital, hospital and rehabilitative care.

County Planning/Monitoring :
County public health and EMS needs and planning goals will be essential to the trauma system plan.

Financial Impact:
Efforts will be made to evaluate system data and participant observations to assist with evaluating the financial impact of the trauma system and to allow integration of the trauma system with the emerging health-care environment.

E. LEGAL BASIS

The EMS Agency under the authority of the Health and Safety Code, sections 1798.160 through 1798.169, and CCR, Title 22, Division 9, Chapter 7 develops this trauma plan. Responsibility for the plan's development, implementation and oversight rests with the Santa Barbara County Emergency Medical Services Agency.

F. PLAN APPROACH/EMPHASIS

All hospitals will be encouraged to participate at the level of trauma service according to their resources and capabilities. The levels are: Level IV trauma center, Level III trauma center, Level II trauma center and Level I trauma center if deemed necessary in the future.
Designation of trauma facilities in Santa Barbara County will be based on the resources available and the commitment by applying hospitals. All Santa Barbara County designated trauma center(s) will be required to enter into written transfer agreements as a requirement of the process.

Criteria for pediatric trauma care have been integrated into the hospital requirements. Also, specific requirements to establish other formal linkages with specialty care centers will be established.

San Luis Obispo and Ventura Counties, two of the EMS systems neighboring Santa Barbara County, do not have formal trauma systems in place. Kern County has an approved trauma plan that has not been implemented. The EMS Agency will coordinate with EMS agencies located within close proximity to ensure the integration of adjacent trauma systems for efficient care of trauma patients. Transfer and Mutual Aid Agreements will be developed and executed as necessary. These agreements would be directed toward systems that have specialty care services.

A Request for Application (RFA) process will be used to designate all trauma system participants (Level I, II, III, and IV.) The EMS Agency will work with all hospitals to encourage participation in the trauma system.

G. DEVELOPING A QUALITY TRAUMA SYSTEM

Elements of quality adopted in the Santa Barbara County Trauma Plan include:

(a) Adoption of trauma care standards consistent with the State of California Trauma regulations established by the EMS Authority.
(b) The use of an outcome-based evaluation process that will at least address the following areas: clinical and system screens, outcome processes, (compared to national and/or state standards where they exist), and patient satisfaction.
(c) Establishment of a Continuous Quality Improvement (CQI) method for evaluation.
(d) Establishment of a clearly stated and objective selection process.
(e) Establishment of an ongoing process of oversight.
(f) Establishment of data registry system.

H. TRAUMA FINANCIAL PLAN

It is difficult to predict the fiscal impact of the development of this plan, exact costs associated with the plan are not known at this time. However, it is known that all participants will incur costs for additional staff and a trauma registry. This section represents estimates available on the fiscal impact of developing and implementing a trauma system plan in Santa Barbara County.

The Trauma Plan involves an open application process for designation of trauma centers. This process will require contracting with a trauma system review team estimated between $20,000 to $30,000. Cost associated with the designation process will be offset through application fees.

The Santa Barbara County Trauma Plan specifically acknowledges the need to monitor the financial impact of the trauma system. Financial elements in the plan designed to encourage financial stability include:

(a) Assisting participant hospitals in identifying and maximizing current reimbursement sources.

(b) Establishing an objective for the EMS Agency to conduct a system-wide study of trauma center cost and reimbursement.

(c) Establishing objectives to advocate for further increased reimbursement through county, state and national legislative efforts.

(d) Integrating the trauma system with future changes to the health-care delivery system.

(e) Committing to and supporting an ongoing program of injury prevention.

Section II Overview of Santa Barbara County

A. GEOGRAPHIC INFORMATION

The County of Santa Barbara is located in Southern California and encompasses an area of 2,760 square miles. The boundary of the county extends from the Sierra Madre and San Rafael mountain ranges and a small portion of Kern County on the Northeast, from San Luis Obispo County on the Northwest, Ventura County on the Southeast and the Pacific Ocean on the Southwest. The size and industrial diversity of the Santa Barbara County area presents special problems in the allocation and availability of health-care resources. Mountainous terrain, expanses of agricultural lands, and widely dispersed rural communities intensify this problem by limiting accessibility to health care.

The automobile is the predominate form of transportation in Santa Barbara County. One major artery, Highway 101, transacts the area from south to north along the edge of the Pacific Ocean until the community of Gaviota is reached where the freeway heads inland. Three other smaller arteries, Highway 166 (from New Cuyama), Highway 154 (connects Goleta to Los Olivos and reconnects with Highway 101), and Highway 1 (connects to Highway 101 above Gaviota, breaks off to the west off the City of Lompoc and then meanders north to San Luis Obispo County), also transact Santa Barbara County. There is a network of county and city roads which provide access between the incorporated cities and the agricultural lands and rural communities of the county.

One hindrance to the overall effectiveness of the local EMS system is the limited number of adequate, multiple, east-west highways in Santa Barbara County. Highway 166 extends from New Cuyama to the east to the City of Santa Maria in the northwest county. This highway borders the northern portion of the county and is inadequate in terms of access and travel time as an east-west connector. *All hospitals are capable of receiving and treating trauma patients. Having an inclusive, decentralized, trauma system will ensure trauma services are available to the community, regardless of the geographic location.*

Scheduled commercial and private air travel is provided at the Santa Barbara and Santa Maria Airports. There are also scheduled charter services from Lompoc Airport and private services available at the Santa Ynez Airport. Santa Barbara Airport is the largest of the airports. The total passenger volume at Santa Barbara Airport for 1997 was over 820,000 total passengers while Santa Maria Airport had over 100,000 total passengers. Passenger rail service is also available via Amtrak, which has a scheduled stop at Santa Barbara.

Goleta Valley Cottage Hospital on the South Coast has a helipad and Marian Medical Center in North County also has a helipad. There is a spot adjacent to Santa Ynez Valley Cottage Hospital that is not an approved helipad, but could be used in a disaster or unusual emergency. Cottage Hospital, the proposed Level II trauma center does not yet have an approved helipad. This further supports our plan to have four of our hospitals functioning as Level III trauma centers, in a decentralized trauma system.

Water plays a vital role in the growth and development of this area. Santa Barbara County is a water-deficient area with demand greater than the local supply. Acquisition, quality, and conservation of water are paramount to the area's development. Local water supplies come from

runoff stored in reservoirs or from ground water, and a new desalination plant was constructed in 1992. This plant is not in operation at this time, but is available in the event it becomes necessary. Water is the main recreational feature in Santa Barbara County attracting tourists and the fishing industry.

The mountains, which border the eastern section of the county together with humid conditions create dense fog during the summer months at the higher elevations. This dense fog can produce zero visibility and result in a high-crash rate for the area and also hinders the accessibility to healthcare services, especially for rural residents.

The ideal summer temperatures rural and 11 as remote using the United States Census Bureau's definition. The northern portion of the county is largely rural and is separated from the southern county by the Santa Ynez Mountains. The north is fastest growing area of the county with agriculture as its main industry. The diverse terrain and vast distances that exist between north and south county create distinct boundaries for the delivery of services.

By the year 2004, the population is expected to exceed 440,000 with most growth occurring in the North County. Though each region has service delivery systems in place to serve its respective populations, there are significant differences between the two due to rapid increase in the population of North County.

The percent of all births born to Hispanic parents is steadily rising in all Southern California Counties, especially in Los Angeles and Santa Barbara Counties. More than 50 percent of all births are Hispanic in these two counties. Elsewhere in the state, the Hispanic population continues to grow faster than all other ethnicities. The latest year in which we have definitive ethnicity information is 1996 when 56 percent of all births in Santa Barbara County were Hispanic.

Because we expect a similar trend to remain in place for the foreseeable future, Hispanic demand for housing, retail products, and personal services will become an increasingly important element of consumerism in Santa Barbara County. The Hispanic population currently represents 29 percent of the population in the County. By the year 2008, this proportion will rise to 31 percent.

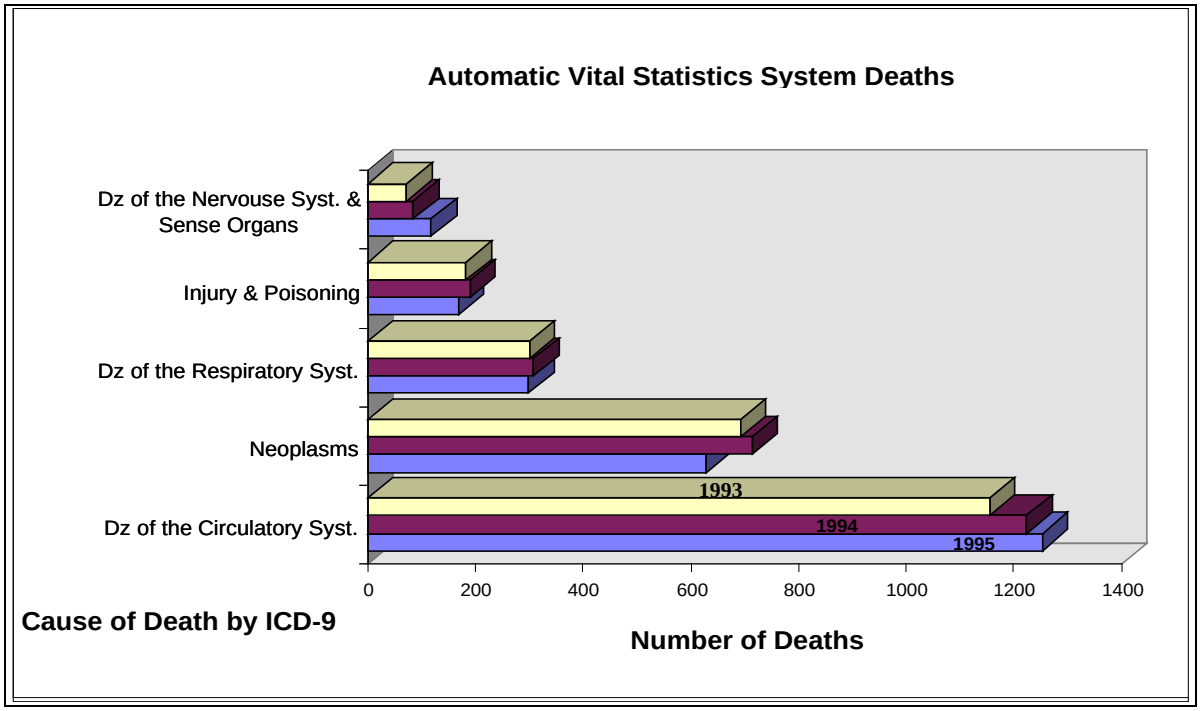
Injuries disproportionately affect the poor and certain minority populations. Although Santa Barbara is known as a highly desirable place to live for its physical beauty, median household income is $49,300. The demographics of the County indicate that although it’s known as an affluent area to live, there are many concentrated low-income areas. Census reports show that 12.8% of the County residents live at or below the poverty level (compared with 12.5% of the State population). Additionally, Santa Barbara County has the lowest per capita personal income with 59.7% below 200% of poverty level.

As the population of Santa Barbara County continues to age, it will bring an increased demand for EMS services in this age group. The population over 65 years (12.3%) exceeds California as a whole (10.5%).

Epidemiological Characteristics

Statistics from the California Department of Health Services found the major causes of death in Santa Barbara County are from heart disease and cancer which is consistent with the trend throughout California and the United States. Table 1 contains a summary of the top five causes of death from the Automatic Vital Statistic System for Santa Barbara County for years 1993 - 1995, injury is the fourth leading cause of death.

Table 1



C. EMERGENCY MEDICAL SERVICES (EMS) AGENCY ORGANIZATIONAL STRUCTURE:

The Santa Barbara County EMS Agency is a single county local EMS Agency. It is within Santa Barbara County Public Health Department. The Director of Public Health reports to the County Administrator who reports to the County's Board of Supervisors. The EMS Agency's organizational structure is included in the appendix, staff include: EMS Director, EMS Medical Director who has been approved by the Board of Supervisors, Prehospital Coordinator, Disaster Medical Services / Emergency Department Coordinator, Special Projects Coordinator, Data Analyst, and Administrative Services. (Organizational Chart Appendix C)

D. TRAUMA AND EMERGENCY CARE RESOURCES:

At the beginning of the planning process there were seven hospitals in the county. Subsequently one hospital has closed and merged with another, leaving six acute care facilities. It is important to note that because of the tremendous growth in the region and the changing status of health care needs, hospitals and corporations in our county plan many changes. The plan will recognize the flexibility necessary to continue to provide a comprehensive system of trauma care.

A study was conducted on 1995 and 1996 EMS system patients to ascertain the number of trauma patients seen in our current trauma system by geographic area and to assess their outcomes. All seven hospitals participated. Study results are included in the appendix. (Appendix I)

Prehospital:

The County is covered by private and public ALS ambulance response supported by simultaneous dispatch of ALS and/or BLS first responder fire department personnel. Because the trauma care system is an inclusive system, the prehospital portion will not differ significantly in terms of training, equipment or response patterns. Prehospital providers are currently trained in the principles of field resuscitation of injured patients and meet all of the State requirements for education.

As the Trauma Plan is implemented, additional training classes will be conducted for all prehospital providers on new guidelines as needed. Prehospital providers will continue to make contact with their base hospital. Field triage criteria (also referred to as patient destination criteria) will be developed by the Trauma Audit/Advisory Committee. These criteria shall be utilized by the base hospital to determine to which trauma center the patient is transported. The EMS Agency will monitor all trauma triage decisions and patient outcomes through the trauma registry, and present these data on a regular basis to the Trauma Audit/Advisory Committee. The EMS Agency and the Trauma Audit/Advisory Committee have the responsibility to review trauma triage decisions with patient outcomes and to revise trauma triage criteria as necessary for progressive improvement of trauma care.

All ALS vehicles used to transport patients within the County are required to have two-way radios. All acute care facilities within the County are Base Hospitals and have the capability of communicating with the prehospital providers in their area.

The EMS Agency has implemented a prehospital data collection system. All prehospital ALS providers utilize a standardized paramedic care report form. This form contains all the information that is entered into the County data collection system. Currently the EMS Agency is collecting data electronically with one ALS provider (AMR who provides ALS transport for 95% of our calls.) The EMS Agency is working with the other ALS agencies to develop a mechanism to collect their data into the current database system. Table 4 lists all ALS providers for Santa Barbara County.

Table 4. Advance Life Support Providers

Name/Address	No of Units	Trans-port Units	Service Area	EMS Responses 1995 Responses Transpo		EMS Responses 1996 Responses Transpo		EMS Responses 1997		Per-cent
ALS				**Responses**	**Transports**	**Responses**	**Transports**	**Responses**	**Transports**	
American Medical Response 240 E. Highway 246, Suite 300 Buellton, CA 93427 Contact: John Eaglesham, Director	15	15	1 and 2	18,736	15,034	18,778	14,486	20,170	15,680	87%
Santa Barbara County Fire Department 4410 Cathedral Oaks Rd. Santa Barbara, CA 93110 Contact: Keith Simmons Fire Chief	7	4	* LompocValley New Cuyama	3,528	456	3,391	501	3,389	548	15%
UCSB Rescue Operations Police Department/ Public Safety Bldg. University of California Santa Barbara, CA 93106 Contact: Capt. Bill Bean	2	2	UCSB Isla Vista	543	295	591	311	557	289	2%
Montecito Fire Department 595 San Ysidro Road Montecito, CA 93108 Contact: Herbert McElwee Fire Chief	1	0	Montecito	340	0	316	0	304	0	1%
Vandenberg Air Force Base 30 MDOS/CC 338 South Dakota, Building 13850 Vandenberg, AFB, CA 93437 Contact: Major Patty Skelton	1	1	Vandenberg AFB/ Surrounding Federal Land	**						
Carpinteria/Summerland Fire Department 911 Walnut Avenue Carpinteria, CA 93013 Contact: Randy Graham, Fire Chief	1	0	Carpinteria/ Summerland	**						
County-wide Totals	26	22		23,147	15,785	23,076	015,298	24,420	16,517	100%

* Transporting ambulance, additional Engine Company ALS non-transporting units at Goleta, Los Alamos and Santa Ynez

** New Service as of 1999

Hospital/Physicians:

Each of the acute care facilities in the County acts as a Base Station Hospital (BSH) for the prehospital providers. Base Station services are provided via contract between the facility and the EMS Agency. Each BSH is required to have a Medical Director and a BSH Coordinator.

Table 5. Santa Barbara County Hospitals

Name/Address	No. of Beds	No of ICU Beds	No of PED. Beds	Special Services		NUMBER OF ER Visits			
				Base Hospital	Other	1994	1995	1996	1997
1) Goleta Valley Cottage Hospital 351 Patterson Ave. Santa Barbara, CA 93160	122	10	2**	Yes	Heliport CT Scan	10,432	9,702	9,630	10,475
2) Lompoc District Hospital 508 E. Hickory St. Lompoc, CA 93436	60	4	0**	Yes	CT Scan MRI	13,803	14.537	13,291	13,035
3) Marian Medical Center 1400 E. Church St. Santa Maria, CA 93454	130	10	8	Yes	Heliport CT Scan MRI	19,930	18,779	23,205	24,000
4) Saint Francis Medical Center 601 E. Micheltorena St. Santa Barbara, CA 93103	110	8	6**	Yes	CT Scan MRI	8,654	9,226	9,008	8,831
5) Santa Barbara Cottage Hospital Pueblo at Bath Street Santa Barbara, CA 93105	436	ICU 22* NICU 22	17	Yes	CT Scan	22,015	24,383	24,930	25,483
6) Santa Ynez Valley Cottage Hospital 700 Alamo Pintado Rd. Solvang, CA 93463	30	4	0	Yes	_	4,063	4,026	4259	4493
7) Valley Community Hospital* 505 E. Plaza Drive Santa Maria, CA 93454	70	6	1*	Yes	CT Scan MRI	10,163	10,580	12,120	12,441
Totals	958	69 ICU 20 NICU	34	7	CT=6 MRI=5	89,060	91,233	96,443	98,758

* Since this assessment Valley Community Hospital closed March 15, 1999.

** Indicates the ability to accommodate pediatric patients in medical/surgical ward.
Lompoc District Hospital will also accommodate less severe pediatric cases in the ICU.

Section III Problem Statement

A. OVERVIEW

Injury is a major public health concern in Santa Barbara County and has been prioritized as such within the Public Health Department. Traumatic injury, both accidental and intentional, is the leading cause of death in the first forty years of life. According to the 1996 coroner's report, injuries were the cause of 225 deaths in Santa Barbara County. In addition to the lost of life, the costs associated with traumatic injury are staggering. Reducing these cost and the lost of life can be achieved through an efficient trauma care system. The efficacy of trauma systems in reducing preventable deaths, reduction of rehabilitation, and improving patient outcomes has been clearly established.

B. KEY PROBLEMS

The most apparent deficiency in the trauma care system in Santa Barbara County is the lack of a coordinated, documentable system approach to care for the acutely injured patients from the prehospital phase through the rehabilitation and or referral out of County to a specialty center. There is no mechanism in place for an organized review of existing: policies and procedures, individual hospital trauma plans, base hospital and prehospital provider agreements and hospital trauma review committee processes. This process will require development and collaboration. Additional areas of concern are:

Air transport Issues: as a result of the trauma system planning grant a comprehensive Air Medical Transport Policy has been developed. Currently there is no dedicated helicopter or fixed-wing patient care service agreement in place. At this time, Petroleum Helicopters Inc. provide medical helicopter service through the Santa Barbara County Fire Department, under an informal agreement between the two parties. In addition, California Highway Patrol is available on a limited basis to provide air transport services, but no formal agreement exists. We are in the process of developing a contract with Mercy Air Services, Inc., who will provide primary response for emergency helicopter medical transport services. This contract will be in place by December 1998.

Data Management: the quality of care is difficult to determine from the lack of a coordinated data collection process. The EMS Agency recently completed an emergency department data needs assessment project. The agency received funding to purchase a comprehensive EMS emergency department software program. This data system will enable the collection of EMS specific emergency department data and patient outcome information. This will greatly enhance our current pre-hospital data system. The remaining data still needed is sub-specialty specific (trauma, pediatric, cardiac etc.) These needs may be addressed in the EMS emergency department software program, but additional trauma data elements will most likely need to be captured through a trauma registry data system.

Disaster Response: disaster plans throughout the County are of varying quality and are currently not integrated. A Disaster Coordinating Committee at the Public Health Department has been reconvened to evaluate the current plan and to develop a mechanism to fully integrate all system components. The trauma system plan will be integrated in the Public Health

Department disaster plan, as well as, in the entire EMS system disaster plan.

Transfer Agreements: the County of Santa Barbara has historically arranged for the treatment of trauma victims through coordination with emergency departments located within the County and tertiary care centers located primarily in Los Angeles County. However, this arrangement has been far from ideal. Transfer agreements will be required of all trauma centers.

Lack of Coordinated Injury Prevention Activities: injury prevention activities have been limited in the EMS system. Injury prevention activities are a priority throughout Santa Barbara County, but they have been sporadic and have been dependent on grant funding dollars. The lack of a formalized trauma system indicates a need for a comprehensive trauma plan in order to mitigate this public health problem. It cannot be stated with absolute certainty that a trauma plan will lead to a decline in death and injury rates caused by intentional and unintentional injuries. However, it is anticipated that a trauma system which focuses on prevention, will substantially contribute to a decrease in preventable deaths in the County through injury prevention activities and the coordinated delivery of timely and quality trauma care.

Section IV Trauma System Planning Basis

A. OVERVIEW OF PLANNING BASIS

This section describes the process that has been used to design the optimal trauma care system for Santa Barbara County. This trauma plan encourages an inclusive trauma system. Such a trauma system assures the broadest coverage for trauma patients consistent with the availability and prudent use of health-care resources. This plan will use the following parameters for hospital system design as measured by the quality improvement process:

1. Service Area:

In examining the County, several factors will be considered. Patient transport times and access to definitive care services will be weighed. The prudent use of health care resources will also be considered. An emphasis will be placed on increasing trauma system access for minimal to moderate injuries within the county. The EMS Agency will designate trauma service areas. In addition, within each trauma service area, there must be a hospital with interest in, and the capability of meeting the minimum standards for trauma center designation, as provided for in the state regulations and this Plan.

2. Resource Limitations:

Consideration of existing in-county and out-of-county hospital and physician resources should be given. Also, special consideration of the need and access to specialty services will be addressed.

3. Resource Requirements:

All trauma centers shall have the immediate availability of a trauma team. The Level II should have the immediate availability and the Level III trauma center(s) the prompt availability of supportive resources. Each facility will be required to have written transfer agreements for specialty services as appropriate.

4. Hospital Capabilities:

Within each trauma service area, the goal is to have the hospital with an interest in and capability of meeting the minimum standards for participating within the trauma system, as provided in this plan. Pediatric standards have been integrated into the trauma-care hospital standards.

6. Oversight by the EMS Agency:

The number of Level I, Level II, Level III and Level IV trauma centers has a direct relationship to the needs as defined in this plan and on the oversight and monitoring responsibilities of Santa Barbara County. Trauma center participation is anticipated to have an impact on EMS Agency resources, and the recovery of these costs will be factored into designation/contract fees as needed.

7. Out of County Coordination:

To achieve complete coverage of trauma services and to assure seamless coverage, Santa Barbara County will need to coordinate with adjacent counties (e.g., Ventura, San Luis Obispo and Kern Counties) to achieve trauma system coverage for fringe areas where the closest trauma center may not be within the county.

B. SUMMARY OF PLANNING BASIS

The above-mentioned planning criteria have been designed to define resource needs and capabilities for the Santa Barbara County Trauma Plan. These criteria will be the basis for the solicitation and designation of the trauma centers.

Santa Barbara County intends to encourage maximum participation by all health care facilities in Santa Barbara County. After interviewing each hospital and identifying their level of interest, the proposed system suggests that Santa Barbara Cottage Hospital be a Level II trauma center, Santa Barbara Goleta Valley Cottage Hospital, St. Francis Medical Center, Lompoc Valley District Hospital, and Marian Medical Center be a Level III trauma center, and Santa Ynez Valley Cottage Hospital be a Level IV trauma center. The County will retain the option of contracting, outside the county, with one or more facilities for these services, dependent upon the applicants' ability and willingness to meet the standards as established within this plan. Tertiary hospital arrangements will be made with hospitals to suit the needs of Santa Barbara County patients.

C. TRAUMA SYSTEM ADMINISTRATION

1. Lead Agency:

California statute assigns the responsibility to adopt and implement trauma standards, implement triage guidelines, designate trauma care facilities, establish data collection systems and monitor trauma system performance to the local EMS Agency. The lead Agency for EMS and trauma care system development in Santa Barbara County is the Santa Barbara County EMS Agency within the Department of Public Health. The EMS Agency staff and EMS Medical Director will be responsible to administer the goals and coordinate activities of the trauma care system integrating this system with all components of the EMS system.

As the lead Agency for Santa Barbara County's EMS and trauma system, the EMS

Agency is responsible for planning, implementing and managing the trauma care system. These responsibilities include but are not limited to:

- Assessing needs and resource requirements of the county.
- Developing the system design.
- Assigning roles to system participants.
- Working with the trauma participants and trauma centers and with neighboring EMS systems on outreach and mutual aid services.
- Developing a trauma registry data system.
- Assisting the County's acute care facilities in the implementation of a hospital trauma registry.
- Establishing a prehospital data collection system that is capable of interfacing with the trauma registry.
- Monitoring the system to determine compliance with appropriate law, regulations, policies, procedures and contracts.
- Evaluating the impact of the system and revising the system design as needed.

To fulfill these responsibilities, the EMS Agency will assign staff to the trauma care system. The EMS Agency will oversee the continuous quality improvement processes which is required of all system participants and will investigate reported problems. The EMS Agency will also be responsible for inter-hospital coordination activities. Primary among these is the Trauma Advisory Committee, which will include representatives of the trauma centers and prehospital providers within the County.

2. Trauma Advisory Committee:

The Trauma Advisory Committee has been created as a function of the planning process and will continue as a part of this plan. It provides for countywide input of knowledgeable individuals and organizations into the discussion and resolution of trauma system issues. It will also foster communication between the EMS Agency and various groups with an interest in the County's trauma system.

The functions of the Trauma Advisory Committee are:

- Provide input and guidance to the EMS Agency in trauma program development.
- Ongoing assessment of the trauma system needs and resources in the county.
- Assistance with the solicitation of recommendations and the provision of linkages with various groups.
- Make recommendations regarding the future growth of the trauma system.
- Provide overall direction and coordination to trauma subcommittees for policy making and program development.
- Design and institute a continuous quality improvement program for the trauma system.
- Analyze the results of data collection and the monitoring system.

- Describe the goals and activities for EMS trauma public education and injury prevention.
- Advise the EMS Agency on matters relating to the delivery of trauma care within the county.
- Conduct local trauma quality management programs, including monitoring the performance of the trauma system participants, through an appropriate EMS Agency-approved medical review committee.

3. Medical Control

Medical control and direction of the trauma system is considered an essential ingredient of the Santa Barbara County Trauma Plan. Medical control encompasses medical supervision of prehospital care services and the provision of medical supervision of overall trauma system development and ongoing monitoring.

The Trauma Advisory Committee, in conjunction with input received from other sources of medical expertise, shall provide input to the EMS Agency on trauma system planning and monitoring. The County's EMS Medical Director will continue to work with the Trauma Advisory Committee, prehospital care providers and the trauma directors to provide overall medical supervision of the trauma system.

In addition, each of the acute care facilities in the County acts as a Base Station Hospital (BSH) for the prehospital providers. Base Station services are provided via contract between the facility and the EMS Agency. Each BSH is required to have a Medical Director and a BSH Coordinator.

D. TRAUMA SYSTEM OPERATIONAL COMPONENTS

A set of policies will be developed and or revised which will direct the trauma system *to provide a clear understanding of the structure of the system and manner in which the system utilizes the resources available to it.*

1. Prehospital System:

Prehospital personnel in Santa Barbara County will be trained in treatment *and triage* protocols, as well as Prehospital Trauma Life Support standards. *The trauma system policies will include the following: trauma care coordination within the trauma system; early notification of impending arrival at trauma center; coordination with all health care organizations to facilitate transfer of members; trauma center equipment; availability of trauma team; criteria for activation of trauma team; mechanism for prompt availability of specialists; quality improvement and system evaluation; and criteria for pediatric and adult trauma triage, including destination.*

Data collected from prehospital providers will be incorporated into the evaluation of

the trauma system. (Appendix J)

Air transport systems will be fully integrated into the trauma system and will comply with the EMS Agency air medical transport policies and procedures. (Appendix F)

2. Hospital System:

a. Current System:

There are no designated trauma center hospitals in Santa Barbara County.

b. Proposed System:

Trauma areas will be designed in accordance with planning criteria as stipulated in Section IV, utilizing previously defined hospital services areas for base hospital contact. (Appendix D)

It is the goal of Santa Barbara County to develop trauma system capability in all areas of the county. Specifically, Santa Barbara County proposes to designate trauma center levels on the basis of commitment, resources and standards according to State Trauma Care System Regulations.(Appendix A)

c. Integration of Pediatric Trauma Care:

Each trauma care hospital will meet specific pediatric standards commensurate with the level of designation. In addition, each trauma care hospital will be required to meet specific trauma standards and to have a transfer agreement with a hospital having pediatric resources as necessary for services not provided.

d. Mutual Aid and Relation to Other Trauma Systems:

Following completion of the facility contracts under this plan, policies will be implemented which will ensure that patients go to the closest and most appropriate facility in or near Santa Barbara County. As trauma care systems are developed in neighboring counties, the EMS Agency will work with the responsible EMS Agency develop mutual aid agreements to ensure patient needs and that other inter-system needs are met, including integration with any future designations in the surrounding counties.

e. Patient Flow:

The patient destination decision must be made on a patient-specific basis. This decision should consider ground transport time, air transport time (including response time if the helicopter is not on-scene), weather, traffic considerations and any other factor which may affect transport time.

(1) Prehospital Transportation:

The Base Hospital physician will evaluate patient assessments by advanced life support personnel on a case-by-case basis. The prehospital

care team under the direction of the medical control physician will determine appropriate destination and whether ground or air transport is used. This will require consideration of ground transport time, air transport time (including response time if the helicopter is not on-scene, weather, traffic considerations) and any other factor which may affect transport time. In general, a patient that is identified in the field as minor or moderate, will not be transported by air. (Appendix F)

Patient destination criteria will be defined once hospital resources are assessed through the trauma designation process.

(2) Interfacility Transfers:

Applying hospitals based on their capabilities and resources will develop transfer procedures, criteria and agreements. In general, it is expected that trauma patients who require resources not available at the receiving hospital will be transferred to the appropriate hospital expeditiously. This may include the transport or transfer of patients to out-of-county facilities. Procedures, criteria and agreements are subject to County approval and to the CQI process.

(3) Saturation Levels:

In major incidents, multi-casualty incident triage will override the trauma destination triage policy in order to provide the best care for the largest number of patients.

f. Hospital Capability:

(1) Clinical Capability:

Trauma center(s) will meet county standards as defined in California regulations and modified in this plan. (Appendix A) These standards require that a general surgeon be immediately available at all times for a Level II and promptly available at a Level III trauma center(s). Outlined below are the minimum standards for trauma centers. Each acute care facility will be required to meet the appropriate standards.

Level I or Level II Trauma Centers

A Level I or II trauma center is a licensed hospital that has been designated as a Level I or II trauma center by the local EMS agency. While both Level I and II trauma centers are similar, a Level I trauma center is required to have staff and resources not

required of a Level II trauma center. Level I and II trauma centers shall have appropriate pediatric equipment and supplies and staff capable of initial evaluating and treatment of pediatric trauma patients. Pediatric patients requiring ICU admission shall establish and utilize written criteria for consultation and transfer of pediatric patients needing intensive care. Level I or Level II trauma centers shall have at least the following:

(a) A trauma program medical director who is a board-certified surgeon, whose responsibilities include, but are not limited to, factors that affect all aspects of trauma care such as:

(1) recommending trauma team physician privileges;
(2) working with nursing administration to support the needs of trauma patients;
(3) developing trauma treatment protocols;
(4) determining appropriate equipment and supplies for trauma care;
(5) ensuring the development of policies and procedures to manage domestic violence, elder and child abuse and neglect;
(6) having authority and accountability for the quality improvement peer review process;
(7) correcting deficiencies in trauma care or excluding from trauma call those trauma team members who no longer meet standards;
(8) coordinating pediatric trauma care with other hospital and professional services;
(9) coordinating with local and State EMS agencies;
(10) assisting in the coordination of the budgetary process for the trauma program; and
(11) identifying representatives from neurosurgery, orthopedic surgery, emergency medicine, pediatrics and other appropriate disciplines to assist in identifying physicians from their disciplines who are qualified to be members of the trauma program.

(b) A trauma nurse coordinator/manager who is a registered nurse with qualifications including evidence of educational preparation and clinical experience in the care of the adult and/or pediatric trauma patient, administrative ability, and responsibilities that include but are not limited to:

(1) organizing services and systems necessary for the multidisciplinary approach to the care of the injured patient;
(2) coordinating day-to-day clinical process and performance improvement as it pertains to nursing and ancillary personnel; and
(3) collaborating with the trauma program medical director in carrying out the educational, clinical, research, administrative and outreach activities of the trauma program.

(c) A trauma service which can provide for the implementation of the requirements specified in this Section and provide for coordination with the local EMS Agency.

(d) A trauma team, which is a multidisciplinary team responsible for the initial

resuscitation and management of the major trauma patient.

(e) Department(s), division(s), service(s) or section(s) that include at least the following surgical specialties, which are staffed by qualified specialists as defined in State Trauma Regulations Section 100242:

(1) general;
(2) neurological;
(3) obstetric/gynecologic;
(4) ophthalmologic;
(5) oral or maxillofacial or head and neck;
(6) orthopedic;
(7) plastic; and.
(8) urologic

(f) Department(s), division(s), service(s) or section(s) that include at least the following non-surgical specialties, which are staffed by qualified specialists:

(1) anesthesiology;
(2) internal medicine;
(3) pathology;
(4) psychiatry; and
(5) radiology;

(g) An emergency department, division, service or section staffed with qualified specialists in emergency medicine who are immediately available.

(h) Qualified surgical specialist(s) or specialty availability, as defined in Section 100242 of the State Trauma Regulations, which shall be available as follows:

(1) general surgeon capable of evaluating and treating adult and pediatric trauma patients shall be immediately available for trauma team activation and consultation;
(2) On-call and promptly available:

◊ neurologic;
◊ obstetric/gynecologic;
◊ ophthalmologic;
◊ oral or maxillofacial or head and neck;
◊ orthopedic;
◊ plastic;
◊ reimplantation/microsurgery capability. This surgical service may be provided through a written transfer agreement; and
◊ urologic.

(3) Supervised senior residents as defined in Section 100245 of the State Trauma Regulations, who are capable of assessing emergent situations in their respective specialties, may fulfill requirements. When a senior resident is the responsible surgeon:

◊ the senior resident shall be able to provide the overall control and

surgical leadership necessary for the care of the patient, including initiating surgical care;

- ◊ a staff trauma surgeon or a staff surgeon with experience in trauma care shall be on-call and promptly available;
- ◊ a staff trauma surgeon or a staff surgeon with experience in trauma care shall be advised of all trauma patient admissions, participate in major therapeutic decisions, and be present in the emergency department for all major resuscitations and in the operating room for all trauma operative procedures.

(4) Available for consultation or consultation and transfer agreements for adult and pediatric trauma patients requiring the following surgical services;

- ◊ burns;
- ◊ cardiothoracic;
- ◊ pediatric;
- ◊ reimplantation/microsurgery; and
- ◊ spinal cord injury;

(i) Qualified non-surgical specialist(s) or specialty availability, which shall be available as follows:

(1) Emergency medicine, in-house and immediately available at all times. This requirement may be fulfilled by supervised senior residents, as defined in Section 100245 of the State Trauma Regulations, in emergency medicine, who are assigned to the emergency department and are serving in the same capacity. In such cases, the senior resident(s) shall be capable of assessing emergency situations in trauma patients and of providing for initial resuscitation. Emergency medicine physicians who are qualified specialists in emergency medicine and are board certified in emergency medicine shall not be required by the local EMS Agency to complete an advanced trauma life support (ATLS) course. Current ATLS verification is required for all emergency medicine physicians who provide emergency trauma care and are qualified specialists in a specialty other than emergency medicine.

(2) Anesthesiology. Level II shall be promptly available with a mechanism established to ensure that the anesthesiologist is in the operating room when the patient arrives. This requirement may be fulfilled by senior residents or certified registered nurse anesthetists who are capable of assessing emergent situations in trauma patients and of providing any indicated treatment and are supervised by the staff anesthesiologist. In such cases, the staff anesthesiologist on-call shall be advised about the patient, be promptly available at all times, and be present for all operations.

(3) Radiology, promptly available; and

(4) Available for consultation:

- ◊ cardiology;
- ◊ gastroenterology
- ◊ hematology;

- ◊ infectious diseases;
- ◊ internal medicine:
- ◊ nephrology;
- ◊ neurology
- ◊ pathology; and
- ◊ pulmonary medicine;

In addition to licensure requirements, trauma centers shall have the following service capabilities:

(a) Radiological service. The radiological service shall have immediately available a radiological technician capable of performing plain film and computed topography imaging. A radiological service shall have the following additional service promptly available:

(1) angiography; and
(2) ultrasound.

(b) Clinical laboratory service. A clinical laboratory service shall have:
(1) a comprehensive blood bank or access to a community central blood bank; and
(2) clinical laboratory services immediately available.

(c) Surgical service. A surgical service shall have an operating suite that is available or being utilized for trauma patients and that has:

(1) Operating staff who are promptly available unless operating on major trauma patients and back-up personnel who are promptly available; and
(2) appropriate surgical equipment and supplies as determined by the trauma program medical director.

A Level I and II trauma center shall have a basic or comprehensive emergency service, which has special permits, issued pursuant to Chapter 1, Division 5 of Title 22. The emergency service shall:

(a) designate an emergency physician to be a member of the trauma team;

(b) provide emergency medical services to adult and pediatric patients; and

(c) have appropriate adult and pediatric equipment and supplies as approved by the director of emergency medicine in collaboration with the trauma program medical director.

In addition to the special permit licensing services, a trauma center shall have, pursuant to Section 70301 of Chapter 1, Division 5 of Title 22 of the California Code of Regulations, the following approved supplemental services:

(a) Intensive Care Service:

(1) the ICU shall have appropriate equipment and supplies as determined by the physician responsible for the intensive care service and the trauma program medical director;
(2) the ICU shall have a qualified specialist promptly available to care for trauma patients in the intensive care unit. The qualified specialist may be a resident with two(2) years of training who is supervised by the staff intensivist or attending surgeon who participates in all critical decisions making: and
(3) the qualified specialist in (2) above shall be a member of the trauma team.

(b) Burn Center. This service may be provided through a written transfer agreement with a Burn Center.
(c) Physical Therapy Service. Physical therapy services to include personnel trained in physical therapy and equipped for acute care of the critically injured patient.
(d) Rehabilitation Center. Rehabilitation services to include personnel trained in rehabilitation care and equipped for acute care of the critically injured patient. These services may be provided through a written transfer agreement with a rehabilitation center.
(e) Respiratory Care Service. Respiratory care services to include personnel trained in respiratory therapy and equipped for acute care of the critically injured patient.
(f) Acute hemodialysis capability.
(g) Occupational therapy service. Occupational therapy services to include personnel trained in occupational therapy and equipped for acute care of the critically injured patient.
(h) Speech therapy service. Speech therapy services to include personnel trained in speech therapy and equipped for acute care of the critically injured patient.
(j) Social Service.

A trauma center shall have the following services or programs that do not require a license or special permit:

(a) Pediatric Service. In addition to the requirements in Division 5 of Title 22 of the California Code of Regulations, the pediatric service providing in-house pediatric trauma care shall have:

(1) a pediatric intensive care unit approved by the California State Department of Health Services' California Children Services (CCS) or a written transfer agreement with an approved pediatric intensive care unit. Hospitals without pediatric intensive care units shall establish and utilize written criteria for consultation and transfer of pediatric patients needing intensive care; and
(2) a multidisciplinary team to manage child abuse and neglect.

(b) Acute spinal cord injury management capability. This service may be provided through a written transfer agreement with a Rehabilitation Center.

(c) Protocol to identify potential organ donors as described in Division 7, Chapter 3.5 of the California Health and Safety Code.

(d) An outreach program, to include:

(1) capability to provide both telephone and on-site consultations with physicians in the community and outlying areas; and
(2) trauma prevention for the general public.

(e) Written Interfacility transfer agreements with referring and specialty hospitals

(f) Continuing education. Continuing education in trauma care shall be provided for:

(1) staff physicians;
(2) staff nurses;
(3) staff allied health personnel;
(4) EMS personnel; and
(5) other community physicians and health care personnel.

NOTE: Authority cited: Sections 1797.107 and 1798.161, Health and Safety Code. Reference: Sections 1798.161 and 1798.165, Health and Safety Code; Calif. Code of Trauma Regulations, Title 22. Division 9. Chapter 7, Trauma Care Systems, Article 3. Trauma Center Requirements, Section 100259..

Additional Level I Criteria

In addition to the above requirements, a Level I trauma center shall have:

(a) One of the following patient volumes annually:

(1) a minimum of 1200 trauma program admissions, or
(2) a minimum of 240 trauma patients per year whose Injury Severity Score (ISS) is greater than 15, or
(3) an average of 35 trauma patients (with an ISS score greater than 15) per trauma program surgeon per year.

(b) Additional qualified surgical specialists or specialty availability on-call and promptly available:

(1) cardiothoracic;
(2) pediatrics.

(c) A surgical service that has at least the following equipment:

(1) operating staffs who are immediately available unless operating on trauma patients and back-up personnel who are promptly available;
(2) cardiopulmonary bypass equipment: and

(3) operating microscope.

(d) Anesthesiology immediately available. This requirement may be fulfilled by senior residents or certified registered nurse anesthetists who are capable of assessing emergent situations in trauma patients and of providing treatment and are supervised by the staff anesthesiologist.

(e) An intensive care unit with a qualified specialist in-house and immediately available to care for trauma patients in the intensive care unit. The qualified specialist may be a resident with two (2) years of training who is supervised by the staff intensivist or attending surgeon who participates in all critical decision making.

(f) A Trauma research program; and

(g) An ACGME approved surgical residency program.

NOTE: Authority cited: Sections 1797.107 and 1798.161, Health and Safety Code. Reference: Sections 1798.161 and 1798.165, Health and Safety Code; Calif. Code of Regulations, Title 22. Social Security Division 9. Prehospital Emergency Medical Services Chapter 7. Trauma Care Systems, Article 3. Trauma Center Requirements Section 100260.

Level III Trauma Centers

A Level III trauma center is a licensed hospital, which has been designated as a Level III trauma center by the local EMS Agency. A Level III trauma center shall include equipment and resources necessary for initial stabilization and personnel knowledgeable in the treatment of adult and pediatric trauma. A Level III trauma center shall have at least the following:

(a) A trauma program medical director who is a qualified surgical specialist, as defined in Section 100242 of the State Trauma Regulations, whose responsibilities include, but are not limited to, factors that affect all aspects of trauma care such as:

(1) recommending trauma team physician privileges;

(2) working with nursing administration to support the nursing needs of trauma patients;

(3) developing trauma treatment protocols;

(4) having authority and accountability for the quality improvement peer review process;

(5) correcting deficiencies in trauma care or excluding from trauma call those trauma team members who no longer meet the standards of the quality improvement program; and

(6) assisting in the coordination of budgetary process for the trauma program.

(b) A trauma nurse coordinator/manager who is a registered nurse with qualifications

including evidence of educational preparation and clinical experience in the care of adult and/or pediatric trauma patients, administrative ability, and responsibilities that include, but are not limited to:

(1) organizing services and systems necessary for the multidisciplinary approach to the care of the injured patient;

(2) coordinating day-to-day clinical process and performance improvement as pertains to nursing and ancillary personnel, and

(3) collaborating with the trauma program medical director in carrying out the educational, clinical, research, administrative and outreach activities of the trauma program.

(c) A trauma service which can provide for implementation of the requirements specified in Section 100263 of the California Trauma Regulation Code, and provide for coordination with the local EMS Agency.

(d) The capability of providing prompt assessment, resuscitation and stabilization to trauma patients.

(e) The ability to provide treatment or arrange for transportation to a higher-level trauma center as appropriates.

(f) An emergency department, division, services, or section staffed so those trauma patients are assured of immediate and appropriate initial care.

(g) Intensive Care Service:

(1) the ICU shall have appropriate equipment and supplies as determined by the physician responsible for the intensive care service and the trauma program medical director;

(2) the ICU shall have a qualified specialist promptly available to care for trauma patients in the intensive care unit. The qualified specialist may be a resident with two (2) years of training who is supervised by the staff intensivist or attending surgeon who participates in all critical decision making; and

(3) the qualified specialist in (2) above shall be a member of the trauma team;

(h) A trauma team, which will be a multidisciplinary team responsible for the initial resuscitation and management of the trauma patient.

(i) Qualified surgical specialist(s) as defined in Section 100242 of the State Trauma Regulations, who shall be promptly available;

(1) general;

(2) orthopedic; and

(3) neurosurgery (can be provided through a transfer agreement)

(j) Qualified non-surgical specialist(s) or specialty availability, as defined in Section 100242 of the State Trauma Regulations, which shall be available as follows:

(1) Emergency medicine, in-house and immediately available; and

(2) Anesthesiology, on-call and promptly available with a mechanism established to ensure that the anesthesiologist is in the operating room when the patient arrives. This requirement may be fulfilled by senior residents or certified registered nurse anesthetists who are capable of assessing emergent situations in trauma patients and of providing any indicated emergent anesthesia treatment and are supervised by the staff anesthesiologist. In such cases, the staff anesthesiologist on-call shall be advised about the patient, be promptly available at all times, and be present for all operations.

(3) The following services shall be in-house or may be provided through a written transfer agreement:

- burn care.
- pediatric care.
- rehabilitation services.

(k) The following service capabilities:

(1) Radiological service. The radiological service shall have a radiological technician promptly available.

(2) Clinical laboratory service. A clinical laboratory service shall have:

- a comprehensive blood bank or access to a community central blood bank; and
- clinical laboratory services promptly available.

(3) Surgical service. A surgical service shall have an operating suite that is available or being utilized for trauma patients and that has:

- operating staff who are promptly available; and
- appropriate surgical equipment and supplies requirements, which have been approved by the local EMS Agency.

(l) Written transfer agreements with Level I or II trauma centers, Level I or II pediatric trauma centers, or other specialty care centers, for the immediate transfer of those patients for whom the most appropriate medical care requires additional resources.

(m) An outreach program, to include:

(1) capability to provide both telephone and on-site consultations with physicians in the community and outlying areas, and

(2) trauma prevention for the general public.

(n) Continuing education. Continuing education in trauma care, shall be provided for:

(1) staff physicians;

(2) staff nurses;

(3) staff allied health personnel;

(4) EMS personnel; and

(5) other community physicians and health care personnel.

NOTE: Authority cited: Sections 1797.107 and 1798.161, Health and Safety Code. Reference: Sections 1798.161 and 1798.165, Health and Safety Code; Calif. Code of Regulations, Title 22. Social Security Division 9. Prehospital Emergency Medical Services Chapter 7. Trauma Care Systems, Article 3. Trauma Center Requirements Section 100263.

Level IV Trauma Center

A Level IV trauma center is a licensed hospital, which has been designated as a Level IV trauma center by the local EMS Agency. A Level IV trauma center shall include equipment and resources necessary for initial stabilization and personnel knowledgeable in the treatment of adult and pediatric trauma. A Level IV trauma center shall have at least the following:

(a) A trauma program medical director who is a qualified specialist, as defined in Section 100242 of the State Trauma Regulations, whose responsibilities include, but are not limited to, factors that affect all aspects of trauma care, including pediatric trauma care, such as:

(1) recommending trauma team physician privileges;

(2) working with nursing administration to support the nursing needs of trauma patients;

(3) developing treatment protocols;

(4) having authority and accountability for the quality improvement peer review process;

(5) correcting deficiencies in trauma care or excluding from trauma call those trauma team members who no longer meet the standards of the quality improvement program; and

(6) assisting in the coordination of the budgetary process for the trauma program.

(b) A trauma nurse coordinator/manager who is a registered nurse with qualifications

including evidence of educational preparation and clinical experience in the care of adult and/or pediatric trauma patients, administrative ability, and responsibilities that include, but are not limited to:

(1) organizing services and systems necessary for the multidisciplinary approach to the care of the injured patient;

(2) coordinating day-to-day clinical process and performance improvement as it pertains to nursing and ancillary personnel; and

(3) collaborating with the trauma program medical director in carrying out the educational, clinical, research, administrative and outreach activities of the trauma program.

(c) A trauma service which can provide for implementation of the requirements specified in Section 100264 of the California Trauma Regulation Code, and provide for coordination with the local EMS Agency.

(d) The capability of providing prompt assessment, resuscitation and stabilization to trauma patients.

(e) The ability to provide treatment or arrange transportation to higher-level trauma center as appropriate.

(f) An emergency department, division, services, or section staffed so those trauma patients are assured of immediate and appropriate initial care.

(g) A trauma team, which will be a multidisciplinary team responsible for the initial resuscitation and management of the major trauma patient.

(h) The following service capabilities:

(1) Radiological service. The radiological service shall have a radiological technician promptly available.

(2) Clinical laboratory service. A clinical laboratory service shall have:

- a comprehensive blood bank or access to a community central blood bank; and
- clinical laboratory services promptly available.

(i) Written transfer agreements with Level I, II or III trauma centers, Level I or II pediatric trauma centers, or other specialty care centers, for the immediate transfer of those patients for whom the most appropriate medical care requires additional resources.

(j) An outreach program, to include:

(1) capability to provide both telephone and on-site consultations with physicians in the community and outlying areas; and

(2) trauma prevention for the general public.

(k) Continuing education. Continuing education in trauma care, shall be provided for:

(1) staff physicians;

(2) staff nurses;

(3) staff allied health personnel;

(4) EMS personnel; and

(5) other community physicians and health care personnel.

NOTE: Authority cited: Sections 1797.107 and 1798.161, Health and Safety Code. Reference: Sections 1798.161 and 1798.165, Health and Safety Code; Calif. Code of Regulations, Title 22. Social Security Division 9. Prehospital Emergency Medical Services Chapter 7. Trauma Care Systems, Article 3. Trauma Center Requirements Section 100264.

E. TRAUMA SYSTEM SUPPORT COMPONENTS

1. System Identification and Access:

Identification of trauma victims and access to EMS are significant priorities for the trauma system in Santa Barbara County. This will be an ongoing goal to further evaluate and determine the need for injury prevention projects and the development of education objectives consistent with those identified needs.

2. Public Information and Education:

Santa Barbara County recognizes that public awareness and education are critical to the success of preventing injury. All trauma centers will participate in ongoing need analysis and program development.

3. Prevention:

The ultimate goal of the trauma plan is the prevention of injury. The EMS Agency in collaboration with system participants will develop strategies for the establishment and coordination of injury prevention programs in the County.

F. TRAUMA SYSTEM EVALUATION PROGRAM

1. Santa Barbara County Trauma Registry:

a. Overview of County Trauma Registry:

A Santa Barbara County Trauma Registry will be established and will include pre-hospital and trauma registry data from all participating facilities.

Data will be entered into computers at the participating facility's trauma registry and then system information transferred electronically (format specified by the county) to the EMS Agency. The trauma registry at the trauma centers will identify "red flags" for review by the Trauma Advisory Committee and produce annual trauma system reports.

b. Data Elements:

The EMS Agency shall require the collection, analysis, and regular presentation of specific trauma care data by each trauma center. The EMS Agency shall collect and analyze trauma data for the purposes of system evaluation and audit. The data will be collected using a standardized data collection instrument which will be compatible with a State registry if and when applicable.

The system shall include the collection of both prehospital and hospital patient care data, as determined by the EMS Agency and the Trauma Audit/Advisory Committee based on the Center for Disease Control national standard data set.

Data collected by trauma system participants will be in a format and fashion

dictated by State EMS regulations and local Santa Barbara County procedure. Data will be submitted to the EMS Agency on a regularly scheduled basis.

Pre-hospital: Data elements collected during the pre-hospital stage will include normal patient identification, times, operational and treatment information as previously identified on the paramedic care report. Data specific to the trauma system includes:

- Physiologic scoring, and other clinical signs as appropriate to determine the injury severity.

Hospital: Data elements collected during the hospital stage will include normal patient identification, times, operational and treatment information including complications specific to the trauma system monitoring and review.

c. Trauma Registry Systems' Reports:

Reports from the trauma registry will include:

- Excess time on the scene;
- Geographic incidence of trauma;
- Total number of trauma victims in the system;
- Total number of trauma victims by month of year and day of week;
- Total number of trauma victims by time of day;
- Delay prior to surgery;
- Transfers to Level I, II and III trauma centers; and other specialty care centers,
- Diagnosis, disposition and final disposition by triage criteria.

Additional reports may be deemed necessary for comprehensive system review. The EMS Agency and the Trauma Audit/Advisory Committee will determine these.

2. Continuous Quality Improvement Program:

Santa Barbara County Emergency Medical Services Agency will ensure quality within the trauma care system through four activities:

a. Institutional Quality Management:

As part of the RFA/contracting process, applicants will describe their quality management process. All trauma system participants will be required to provide an adequate internal quality management program, including:

- Audits of all trauma cases;
- Analysis of trends;
- Detailed audits of all trauma related deaths, major complications and transfers, including a log of follow-up on problems; and
- Regular multi-disciplinary trauma conferences to critique selected trauma cases.

b. System Trauma Registry:

The trauma care hospital(s) will collect data on major trauma patients and will submit specified reports to the EMS Agency. The hospital Trauma Registry will use evaluation screens to identify cases for further review and will provide operational and clinical statistics.

c. Trauma Advisory Committee:

A CQI subcommittee of the Trauma Advisory Committee will review preventable trauma deaths and other problem cases identified by trauma system participants through the Trauma Registry. The Committee will be established in such a manner that its proceedings will be non-discoverable to the extent allowed by State law.

d. County Level Review:

The EMS Agency will conduct periodic evaluation of the trauma care system. It will include:

- A summary of the findings of the Trauma Advisory Committee.
- Evaluation of trauma center(s) operations, including a site visit by the EMS Agency staff, EMS medical director and site survey team as needed.
- A review of the system's structure and policies.
- Overall outcome-based review of the trauma system to include any Interfacility transfers to non-contracted/designated facilities.

Section V Goals and Objectives

A. OVERVIEW

The following trauma system components are identified for the Santa Barbara County trauma system:

1. **Identification/Access;**
2. **Prehospital Care/Transportation;**
3. **Hospital Care; Definitive Care; Special Care; Interfacility transfer;**
4. **Evaluation;**
5. **Prevention;**
6. **Administration;**
7. **Disaster; and,**
8. **Finance.**

B. SYSTEM GOALS AND OBJECTIVES

The goals and objectives for the Santa Barbara County trauma system are as follows:

1. Identification and Access:

Goal: To improve injury identification and access to the EMS system.

Objective: The EMS Agency shall continue to study the epidemiology of trauma and identify access problems.

2. Prehospital Care/Transportation:

Goal: Assure high quality prehospital treatment and transportation systems for the movement of injured patients.

Objectives:

a. The EMS Agency will complete an assessment of the trauma education needs of prehospital care providers.

b. The EMS Agency will complete a resource inventory and needs analysis of prehospital care providers to include:

(1) accessibility for trauma patients;
(2) equipment;
(3) communication needs; and,

(4) completion of ambulance run reports.

3. Hospital Care:

Goal: Development of a network of acute care treatment and rehabilitation facilities meeting nationally recognized trauma system standards.

Objectives:

a. The EMS Agency will complete the RFA materials for the trauma center(s) application /designation process.

b. The County will conduct the RFA process for the trauma center application/designation.

c. The EMS Agency will contract with appropriate Level II, Level III and Level IV trauma centers.

d. The EMS Agency will monitor all participating facilities.

e. The EMS Agency will identify necessary specialty center linkages such as:

(1) burn centers;
(2) rehabilitation;
(3) replantation;
(4) tissue recovery;
(5) pregnancy; pediatrics;
(6) head injury/spines; and,
(7) others as necessary.

4. Evaluation:

Goal: To establish a monitoring program designed to assure appropriate access, flow and treatment of the trauma patient and to assist with trauma system refinements.

Objectives:

a. The EMS Agency will finalize and fully implement a countywide trauma registry and integrated management information system.

b. The EMS Agency will seek participation of hospitals and specialty centers in neighboring counties.

c. The EMS Agency trauma providers will conduct countywide monitoring of trauma system via:

(1) Trauma registry data review;

(2) Trauma Advisory Committee;

(3) Internal trauma center audits;

(4) Special studies as necessary;

(5) Annual County staffs site visits and surveys; and redesignation/site survey processes as needed.

5. Prevention:

Goal: Integrate injury control program standards into the trauma system that are sensitive to the special needs/epidemiology of Santa Barbara County and that are consistent with the standards of the County's existing injury programs. Ensure that subsequent prevention activities do not duplicate existing programs.

Objectives:

a. The EMS Agency and trauma system participants will study the etiology of injury based on the countywide trauma registry and other data sources.

b. The EMS Agency and trauma system participants will identify priorities and establish public education and prevention goals to meet the needs of injury in Santa Barbara County.

c. The EMS Agency will assist trauma centers and other EMS providers to implement injury prevention/education strategies.

6. Administration:

Goal: Establish a program of leadership and oversight to facilitate the implementation of the trauma plan.

Objectives:

a. The EMS Agency will finalize the trauma system plan.

b. There will be an annual review of the trauma system plan's components, criteria and system configuration.

c. The Trauma Advisory Committee will provide ongoing system input and direction.

7. Disaster:

Goal: Integrate disaster/emergency preparedness with the trauma system.

Objectives: The EMS Agency will evaluate the specific impact of disaster emergency incidents on the trauma system.

8. Finance:

Goal: Monitor, evaluate and modify trauma system components as appropriate, based on the financial assessment the trauma system.

Objectives: The EMS Agency will conduct a survey of existing trauma systems to review the financial impact, which will include:

a. system costs;

b. provider costs;

c. system funding alternatives; and,

d. provider funding alternatives.

C. MILESTONES AND TIMEFRAMES See Appendix G

Section VI Designation Process

A. DESIGNATION PROCESS

Santa Barbara County Emergency Medical Services Agency will issue a request for application (RFA) for the designation of the Level II, Level III and Level IV trauma center(s). The RFA process will include:

1. A description of Santa Barbara County's EMS system.

2. A description of the Level II, Level III and Level IV trauma center designation process.

3. A listing of Level II, Level III and Level IV trauma center criteria. Applicants will be required to describe their current compliance with these criteria or to indicate plans, including a time line, for compliance.

4. A list of Level II, Level III and Level IV trauma center conditions and requirements, which the applicant will be required to accept.

5. A proposed contract between the applicant hospital and Santa Barbara County Emergency Medical Services Agency to be completed when the hospital's application has been approved. Applicants will be required to indicate their acceptance of the contract or to submit alternative language for any clause which they are unwilling to accept.

6. A schedule of fees for Level II, Level III, and Level IV trauma center applications and ongoing designation/contracts.

B. REQUEST FOR APPLICATION PROCESS

The RFA will be sent by registered, return-receipt-requested mail to all acute care hospitals in Santa Barbara County. Any hospital which is interested in submitting a application will be required to indicate its interest by submitting a statement of interest and by paying the application fee by a specified date and time. Thereafter, all communication regarding the process will be sent only to hospitals that have indicated their interest.

Hospitals will have up to *60* days to submit an original proposal and seven copies of it to the EMS Agency. The original will be sealed and stored by the EMS Agency for use in any later challenge. Santa Barbara County staff will review proposals for completeness and compliance with process requirements. Applicants will be notified of any missing or non-compliant parts and will have approximately 14 days to submit or revise the item.

Approximately 30 days after submission of proposals, a site visit by a team of individuals who are knowledgeable in trauma care systems, have no conflict of interest and are from outside of the county for Level II, Level III and or outside the trauma services area for Level IV trauma center applicants will be held at each of the applicant institutions. Team

members will include experts as appropriate for the level of designation such as: a trauma surgeon(s), emergency physician(s), trauma nurse coordinator(s), hospital administrator(s), EMS Agency administrator(s) and/or similar experts. The site visit may be preformed utilizing the American College of Surgeons Committee on Trauma verification program.

The site visit will include objective confirmation of the information submitted as well as subjective evaluation of the hospital's capability and commitment to serve as a Level II, Level III, or Level IV trauma center. In addition, the survey team will be asked to evaluate and comment on the Level II applicants regarding areas of excellence or particular expertise, e.g. neurological service, multi-system trauma, penetrating v. blunt trauma, pediatric trauma, etc. The EMS Agency reserves the right to contract with trauma centers for specific types of patients where a demonstrable expertise is clearly identified by the site survey team. The survey team will evaluate proposals according to:

- Compliance with minimum standards;
- Quality and scope of service;
- Applicant's demonstrated commitment to the care of major trauma patients;
- Comprehensiveness; and,
- Cost effectiveness of the proposed service.

C. CONTRACT

Following the site visits, the site visit team will report on its findings and recommendations on designation. The EMS Agency and the Public Health Department Director will review recommendations. The survey team recommendations along with the Public Health Department’s comments and final recommendation will be forwarded to the Board of Supervisors for review and approval. If, in the opinion of the Director of the Public Health Department, the county would be best served by entertaining a plan of corrective action from the applicant in lieu of denial, the Director may solicit such a plan. Plans of corrective action, if solicited, must be provided to the county within 15 workdays of such request. The site survey team shall take such corrective action plans into consideration for their final report.

Notices of findings and copies of reports specific to each applicant will be sent to the appropriate applicant. Applicants will have 20 working days to appeal from the day of receipt of the preliminary recommendations of the survey team and the proposed final recommendations of the Director of the Public Health Department. Grounds for appeals are limited to alleged failure to follow the RFA process. Expert judgments or analysis of the survey team are not subject to appeal but may be mitigated by a plan of corrective action (if solicited) or re-application. Issues regarding the qualifications of the applicant, which Santa Barbara County has authorized the survey team to independently judge, are also not subject to appeal but may be mitigated by a plan of corrective action (if solicited) or re-application.

If an applicant appeals, the Public Health Department Director will conduct a hearing. The

Director will only consider issues of the approved RFA process and compliance by the survey team to that process. The Director will review the appeal and will make a recommendation to the Santa Barbara County Board of Supervisors, whose decision will be final.

Section VII Plan Approval

A. OVERVIEW

Santa Barbara County Trauma Plan was developed over a lengthy period of time and included participation from many interested parties.

On November 30, 1995 the EMS Agency invited interested parties to a meeting to discuss the trauma care system and the planning process. Questions were answered and input was received which helped the EMS Agency begin the planning process. This was a lengthy process. Much time and energy was spent evaluating our current system.

A first draft of the plan was distributed on December 15, 1997. Written comments were received and a public meeting was held on January 15, 1998. Additional written comments were received from others who did not attend the meeting.

A second draft of the plan was then developed and distributed to interested parties. A public meeting was held on April 29, 1998. Additional written and verbal comments were received from others who did not attend the meeting. From this meeting a third draft was developed and reviewed on June 23, 1998, September 28, 1998 and December 15, 1998.

Based on the comments received on the third draft and follow-up discussions, a public hearing (Final) draft was developed and distributed to interested parties. The public hearing meeting was publicized through the local media and the draft and the notice of the public hearing were distributed to interested parties within Santa Barbara County. Individuals who received the notice and the draft included:

- Hospital administrators;
- Ambulance service administrators;
- Base hospital medical directors;
- County Board of Supervisors;
- City managers;
- County sheriff;
- County and city fire chiefs; City police chiefs;
- County coroner;
- Medical society; and,
- The Healthcare Association of Southern California.

Additional comments were incorporated into the Plan. It was reviewed and additional revisions recommended. Public hearings were held on March 8 and March 16, 1999 in Santa Barbara. Following public comments the Plan received Board approval on March 16, 1999 *(Appendix K).*

Appendices available upon request.