Appendix C

Trauma Service Designation Guidelines of the American College of Surgeons and the American College of Emerging Physicians

Hospital and Prehospital Resources for Optimal Care of the Injured Patient by the Committee on Trauma of the American College of Surgeons

This report was prepared by the Task Force of the Committee on Trauma of the American College of Surgeons (ACS). In June of 1986, the Board of regents of the American College of Surgeons approved this report and authorized its publication as an official College document.

It is generally recognized that this document is a set of guidelines representing current thinking for optimal care of the injured. Further revisions may be indicated as systems are developed to meet the complex demands of severely injured patients.

Levels of Care

The three levels of care suggested in this document represent the best possible use of community resources. The organization of trauma services within the community or region must address the development of a good prehospital system. The concept of taking the severely injured patient to the nearest hospital is no longer acceptable.

Levels I and II—Invariably, in planning for regional trauma needs, physicians, administrators, and health planners must address how many hospitals should be designated. Factors that must be considered include maintenance of skills and experience, costs, population density, and geography. The following guidelines are offered to assist in this planning. General surgeons in Level I centers might be considered to have adequate experience in trauma surgery if they treat approximately 50 severe and urgent injury cases per year. Based on the number of surgeons in each institution, this will translate into 600 to 1,000 patients treated in a Level I hospital, and 350 to 600 patients treated in a Level II hospital. Since each community must decide on the number of appropriate trauma facilities necessary to meet its commitment to excellence in trauma care, it must consider the number of severe and urgent injuries to be handled as well as its ability to address its factors of geography and its ability to concentrate its resources.

Level III—The Level II hospital generally serves communities that do not have all the resources usually associated with Level I or II institutions. However, as the following tables show, a Level III hospital reflects a *maximum commitment* to trauma care *(commensurate* with resources. Planning for care of the injured in small communities or suburban settings usually calls for transfer agreements and protocols for the most severely injured. Designation of the Level III hospital may also require innovate use of the region resources. For example, if there is no neurosurgeon in a large, sparsely populated region it may require that a general surgeon be prepared to provide the emergency decompression of mass lesions. Transfer to the most appropriate Level I or II hospital can then be arranged after the patient's life saving operation has been carried out. Another example is the staffing of the Level III hospital. In many instances it will be impractical to require a general surgeon to be in-house. With modern communication systems it seems reasonable that the surgeon should be promptly available and in a great majority of instance meet the patient in the emergency room on arrival. On-call personnel such as laboratory, x-ray, and operating room nurses also can be activated and respond promptly to the hospital when the first notification of a critically injured patient is received. The intent of this flexibility should be clear: to provide the best possible care even in the most remove circumstances.

The following table shows levels of categorization and their essential (E) or desirable (D) characteristics.

	LEVELS I	II	III
A. HOSPITAL ORGANIZATION			
1. **Trauma Service**	**E**	**E**	**E**
a) Specified delineation of privileges for the Trauma Service must be made by the medical staff Credentialing Committee.			
b) Trauma team – organized and directed by a general surgeon expert in and committed to care of the injured, all patients with multiple system or major injury must be initially evaluated by the trauma team, and the surgeon who will be responsible for overall care of a patient (the team leader) identified. A team approach is required for optimal care of patients with multiple-system injuries. (See Appendix A, on page 11.)			
2. **Surgery Departments/Divisions/Services/Sections** *(each staffed by qualified specialists)*			
Cardiothoracic Surgery	**E**	**D**	
General Surgery	**E**	**E**	**'E**
Necrologic Surgery	**E**	**E**	–
Obstetrics-Gynecologic Surgery	**D**	**D**	
Ophthalmic Surgery	**E**	**D**	
Oral Surgery - Dental	**D**	**D**	
Orthopaedic Surgery	**E**	**E**	
Otorhinolaryngologic Surgery	**E**	**D**	
Pediatric Surgery	**E**	**D**	
Plastic and Maxillofacial Surgery	**E**	**D**	
Urologic Surgery	**E**	**D**	
3. **Emergency Department/Division/Service/Section** *(staffed by qualified specialists) (see note 7)*	**E**	**E**	**E**
4. **Surgical Specialties Availability (see *note* 2) [n-house 24 hours a** day:			
General Surgery	E	**E'**	
Necrologic Surgery	E'	E'	

NOTES:

1. The emergency department staff should ensure immediate and appropriate care for the trauma patient. The emergency department physician should function as a designated member of the trauma team and the relationship between emergency department physicians and other participants of the trauma team must be established on a local level, consistent with resources but adhering to established standards and ensuring optimal care.

2. Requirements may be fulfilled by senior residents capable of assessing emergent situations in their respective specialties. They must be capable of providing surgical treatment immediate/y and to provide the control and leadership for the care of the trauma patient. When residents are used to fulfill availability requirements, staff specialists must be on-call and promptly available.

SOURCE. The American College of Surgeons, Hospital and Prehospital Resources for Optimal Care of the Injured Patient, 1987

SURGICAL SPECIALTIES continued	**LEVELS I**	**II**	**III**
On-call and promptly available from inside or outside hospital:			
Cardiac Surgery	**E**	**D**	
General Surgery			**E**
Necrologic Surgery			**D**
Microsurgery Capabilities	**E**	**D**	
Gynecologic Surgery	**E**	**D**	
Hand Surgery	**E**	**D**	
Ophthalmic Surgery	**E**	**E**	**D**
Oral Surgery (dental)	**E**	**D**	
Orthopedic Surgery	**E**	**E**	**D**
Otorhinolaryngologic Surgery	**E**	**E**	**D**
Pediatric Surgery	**E**	**D**	
Plastic and Maxillofacial Surgery	**E**	**E**	**D**
Thoracic Surgery	**E**	**E**	**D**
Urologic Surgery	**E**	**E**	**D**
5. Non-Surgical Specialties Availability			
In-hospital **24** hours a day:			
Emergency Medicine	**E**[5]	**E'**	**E**
Anesthesiology	**E'**	**E**[6,7]	**E'**
On-call and promptly available from inside or outside hospital:			
Cardiology	**E**	**E**	**D**

NOTES:

3. *The established trauma system should ideally ensure that the trauma surgeon will be present in the emergency department* ***at*** *the time of the patient's arrival. When sufficient prior notification has not been possible,* ***a*** *designated member of the trauma team will immediately initiate the evaluation and resuscitation. Definitive surgical care must be instituted by the trauma surgeon in a timely manner that is consistent with established standards.*

4. An attending neurosurgeon must be promptly available and dedicated to that hospital's trauma service. The in-house requirement may be fulfilled by an in-house neurosurgeon or surgeon (or physician in Level II facilities) who has special competence, as judged by the chief of neurosurgery, in the care of patients with neural trauma, and who is capable of initiating measures directed toward stabilizing the patient and initiating diagnostic procedures.

5. In Level I and Level II institutions, requirements may be fulfilled by senior level emergency medicine residents capable of assessing emergency situations in trauma patients and providing any indicated treatment. When residents are used to fulfill availability requirements, the staff specialist on call will be ***advised*** *and be promptly available.*

6. Requirements may be fulfilled by anesthesiology residents capable of assessing emergent situations in trauma patients and of providing any indicated treatment. When anesthesiology residents are used to fulfill availability requirements, the staff anesthesiologist on call will be advised and available promptly.

7. Requirements maybe fulfilled when local conditions assure that the staff anesthesiologist will be in the hospital at the time or shortly after the patient's arrival in the hospital During the interim period, prior to the arrival of the staff anesthesiologist, a certified nurse anesthetist (CRNA) capable of assessing emergent situations in trauma patients and of initiating and providing any indicated treatment will be available.

Chest Medicine	E	D	
Gastroenterology	E	D	
Hematology	E	E	D
Infectious Diseases	E	D	
Internal Medicine	E	E	E
Nephrology	E	E	D
Neuroradiology	D		
Pathology	E	E	D
Pediatrics	E	E	D
Psychiatry	E	D	
Radiology	E	E	D

B. SPECIAL FACILITIES/RESOURCES/CAPABILITIES

1. Emergency Department (ED)

a) Personnel

1. Designated physician director	E	E	E
2. Physician with special competence in care of the critically injured who is a designated member of the trauma team and physically present in the ED **24** hours a day	E	E	E
3. RNs, LPNs, and nurses' aides in adequate numbers	E	E	E

b) Equipment for resuscitation and to provide life support for the critically or seriously injured shall include but not be limited to:

1. Airway control and ventilation equipment including laryngoscopes and endotracheal tubes of all sizes, bag-mask resuscitator, pocket masks, oxygen, and mechanical ventilator	E	E	E
2. Suction devices	E	E	E
3. Electrocardiograph-oscilloscope-defibrillator	E	E	E
4. Apparatus to establish central venous pressure monitoring	E	E	E
5. All standard intravenous fluids and administration devices, including intravenous catheters	E	E	E
6. Sterile surgical sets for procedures standard for ED, such as thoracostomy, cut-down, etc.	E	E	E
7. Gastric lavage equipment	E	E	E
8. Drugs and supplies necessary for emergency care	E	E	E
9. X-ray capability, 24-hour coverage by in-house technician	E	E	E
10. Two-way radio linked with vehicles of emergency transport system	E	E	E
11. Skeletal traction device for cervical injuries	E	E	E

		LEVELS I	II	III
2.	**Intensive Care Units (ICUs) for Trauma Patients** ICUs may be separate specialty units.			
	a) Designated medical director	E	E	E
	b) Physician on duty in ICU 24 hours a day or immediately available from in-hospital	E	E	D
	c) Nurse-patient minimum ratio of 1:2 on each shift	E	E	E
	d) Immediate access to clinical laboratory services	E	E	E
	e) Equipment:			
	1. Airway control and ventilation devices	E	E	E
	2. Oxygen source with concentration controls		E	E
	3. Cardiac emergency cart	E	E	E
	4. Temporary transvenous pacemaker	E	E	E
	5. Electrocardiograph-oscilloscope-defibrillator	E	E	E
	6. Cardiac output monitoring	E	E	D
	7. Electronic pressure monitoring	E	E	D
	8. Mechanical ventilator-respirators	E	E	E
	9. Patient weighing devices	E	E	E
	10. Pulmonary function measuring devices	E	E	E
	11. Temperature control devices	E	E	E
	12. Drugs, intravenous fluids, and supplies	E	E	E
	13. Intracranial pressure monitoring devices	E	E	D
3.	**Postanesthetic Recovery Room (surgical intensive care unit is acceptable)**			
	a) Registered nurses and other essential personnel *24* hours a day	E	E	E
	b) Appropriate monitoring and resuscitation equipment	E	E	E
4.	**Acute Hemodialysis Capability** (or transfer agreement)	E	D	D
5.	**Organized Burn Care**	E	E	E
	a) Physician-directed burn center staffed by nursing personnel trained in burn care and equipped properly for care of the extensively burned patient, OR			
	b) Transfer agreement with nearby burn center or hospital with a burn unit			
6.	**Acute Spinal Cord/Head Injury Management Capability**	E	E	E
	a) In circumstances where a designated spinal cord injury rehabilitation center exists in the region, early transfer should be considered;			

transfer agreements should be **in effect** b) In **circumstances** where a head injury center exists in the region, transfer should be considered in selected patients; transfer agreements should be in effect			
7. **Radiological Special Capabilities**			
a) Angiography of all types	E	E	D
b) Sonography	E	D	
c) Nuclear scanning	E	D	
d) In-house computerized tomography with technician	E	E	
8. **Rehabilitation Medicine** a) Physician-directed rehabilitation service staffed by nursing personnel trained in rehabilitation care and equipped properly for care of the critically injured patient, **OR** b) Transfer agreement when medically feasible to a nearby rehabilitation service	E	E	E

C. OPERATING SUITE SPECIAL REQUIREMENTS

Equipment-Instrumentation

1. Operating room adequately staffed in-house and immediately available 24 hours-a day	E	E	D
2. Cardiopulmonary bypass capability	E	D	
3. Operating microscope	E	D	
4. Thermal control equipment: a) for patient	E	E	E
b) for blood	E	E	E
5. X-ray capability	E	E	E
6. Endoscopes, all varieties	E	E	E
7. Craniotome	E	E	D
8. Monitoring equipment	E	E	E

D. CLINICAL LABORATORY SERVICE *(available* 24 *hours a day)*

1. Standard analyses of blood, urine, and other **body** fluids	E	E	E
2. Blood typing and cross-matching	E	E	E
3. Coagulation **studies**	E	E	E
4. Comprehensive blood bank or access to a community central blood bank and adequate hospital storage facilities	E	E	E
5. Blood gases and pH determinations	E	E	E

	LEVELS I	II	III
6. Serum and urine osmolality	E	E	D*
7. Microbiology	E	E	E
8. Drug and alcohol screening	**E**	**E**	**D“**

“Toxicology screens need not be immediately available but are desirable. If not available, results should be included ***in all quality assurance reviews.***

E.	QUALITY ASSURANCE			
	1. Organized Quality Assurance Program	E	E	E
	2. Special audit for all trauma deaths and other specified cases **(see** Appendix G on page *42)*	**E**	**E**	**E**
	3. Morbidity and mortality review	**E**	**E**	**E**
	4. Trauma conference, multidisciplinary (see note 8)	**E**	**E**	
	5. Medical nursing audit, utilization review, tissue review	E	E	E
	6. Trauma registry review (see note 9)	E	E	E
	7. Review of prehospital and regional systems of trauma care	E	D	D
F.	OUTREACH PROGRAM Telephone and on-site consultations with physicians of the community and outlying areas	E	D	
G.	PUBLIC EDUCATION Injury prevention in the home and industry, and on the highways and athletic fields; standard first-aid; problems confronting public, medical profession, and hospitals regarding optimal care for the injured	**E**	**E**	**D**
H.	TRAUMA RESEARCH PROGRAM	E	**D**	**D**
1.	TRAINING PROGRAM			
	1. Formal programs in continuing education provided **by hospital for:**			
	a) Staff physicians	**E**	**E**	**D**
	b) Nurses	E	E	D
	c) Allied health personnel	**E**	**E**	**D**
	d) Community physicians	**E**	**E**	**D**

NOTES:

8. ***Regular and periodic multidisciplinary trauma conferences that include all members of the trauma team*** *should* ***be*** *he/d.* ***This conference will be for the purpose of quality assurance through critiques of individual cases.***

9. Documentation of severity of injury (by trauma score, *age, injury severity score) and outcome* ***(survival, length of stay, ICU length of stay) with monthly review of statistics.***

Guidelines for Trauma Care Systems

[These guidelines were developed by the American College of Emergency Physicians Trauma Committee and were approved for publication by the Board of Directors on September 18, 1986. These guidelines supersede the previous position statement on trauma are (February 1982:11:105). American College of Emergency Physicians: Guidelines for trauma care systems. Ann Emerg Med April 1987:16:459-463.)

American College of Emergency Physicians
Dallas. Texas

Address for **reprints:** American College of Emergency Physicians. PO Box 619911, Dallas. Texas 75261-9911

PREAMBLE

Trauma, defined as serious bodily injury, constitutes **our most expensive yet connectable national health problem.[1] Trauma remains the leading cause of death for persons 1 to 37 years of age and the leading cause of disability for persons of all ages. The overall cost of accidental injury currently exceeds $90 billion annually.[2] Although some areas have already organized and integrated the emergency medical services (EMS) system components and providers** that are essential to optimizing trauma care, others have failed to develop adequate trauma care systems or to acknowledge that **such an approach is necessary.**

The American College of Emergency Physicians has long maintained a commitment to the comprehensive care of ill and injured persons, including treatment, education, and research. The ability to respond appropriately to the needs of trauma victims requires the skills and efforts of the entire health care team. EMS systems should provide treatment for seriously injured patients in an organized and timely fashion. Trauma care is but one aspect of EMS, however, and special provisions for trauma victims should not be permitted to fragment the remainder of the emergency medical care system.

Trauma care represents a continuum that is best provided by an integrated system extending from prevention through rehabilitation and requiring close cooperation among specialists in each phase of care. A systems approach to trauma care acknowledges this continuum, improving quality and reducing mortality. Since 1976 the Committee on Trauma of the American College of **Surgeons has periodically published guidelines describing resources for trauma care.[3] Because optimal treatment requires systems that encompass all aspects of care, however, the Trauma Committee of the American College of Emergency Physicians has developed these guidelines, which complement those of the American College of Surgeons by defining the components and providers that are essential to urban and rural trauma care systems [Figure)**

Emergency physicians should provide leadership in trauma care, not only by developing and managing systems, but also by directing prehospital care, providing emergency department resuscitation and stabilization, and facilitating a smooth transition to inhospital care. The American College of Emergency Physicians recognizes that inhospital care for the seriously injuredIS **best provided by facilities whose governing bodies, administrations, and medical staffs are committed to excellence in trauma care, and that definitive, long-term treatment** is **best provided by specialists who are specifically traincd in trauma care.**

The American College of Emergency Physicians encourages all medical providers to work together to afford optimal care to all injured persons in the most efficient manner possible. Such relationship between emergency physicians at other members of the **trauma care team must be established**

locally **and** cannot be mandated by the government or other parties. Individual systems **are** therefore encouraged **to develop criteria that reflect local needs and resources.**

These guidelines have been developed for the purpose of assisting regions to plan, implement, operate, and evaluate new and existing trauma care systems; they are not intended to be used for certification. Additionally, to continue defining and clarifying individual aspects of trauma care systems, the American College of Emergency Physicians will publish appendices to this document periodically.

GUIDELINES

Trauma care systems entail three dimensions, incorporating four providers and 11 components in two settings (Figure). The following section describes individual components as either essential (E) or desirable (D) for each provider in each setting.

Example

I. Provider # 1	Urban*	Rural†
A. Component #l	E	E
B. Component #2	E	D
C. Etc		

I. System Management	Urban	Rural
A. *Authority and Responsibility* **Each system should establish its authority commensurate with its responsibility to provide trauma care, seeking enabling legislation when required.**	E	E
B *Central Administrative Agency* **Each system should identify a broad-based group of providers and consumers that IS ultimately responsible for system management.**	E	E
1. Master plan for system development, including criteria for each component, to be used for planning, implementation, operation, and evaluation	E	E
a. Prehospital criteria, a including triage, treatment, and transportation	E	E
b. Hospital criteria,[3] including facility numbers and levels, patient volumes, and staff/ equipment standards	E	E
2. Medical director, familiar with and experienced in **EMS and trauma system care**	E	E
3. **Administrative staff, familiar with and experienced in EMS and trauma system management**	E	E
4. **Prevention/public education**		
a. Public education programs	E	E
b. Legislative advocacy programs	E	E
5. Training		
a. Clinical training for prehospital providers[4]	E	E
b. System utilization information for community physicians, nurses, and prehospital providers	E	E
6. Communications		
a. Regional plan	E	E
b. 911 access	E	D
c. Central control for medical direction and dispatch, including appropriate training for dispatchers	E	D
d. Linkage development	E	E
e. Equipment procurement	D	D
7. Data collection		
a. Adequate personnel	E	E
b. System registry Participation	E	E
8. Medical audit		
a. Staff with expertise in quality assurance, statistics, and computers	E	D
b. Equipment and storage	E	D
c. Criteria for evaluating the system and its components	E	E
d. Quality assurance program, including feedback loop **for demonstrated problems**	E	E
9. Transplantation program coordination for potential donors	E	E
C. *Certification and Decertification.* **Each system should develop and implement policies and procedures** for certifying **and decertifying providers, including personnel,** transportation, and facilities.	E	E
D Finance. Each system should identify adequate resources, by line item, for planning,		

*System that encompasses at least one metropolitan area with 250,000 persons

†System lacking any single population center

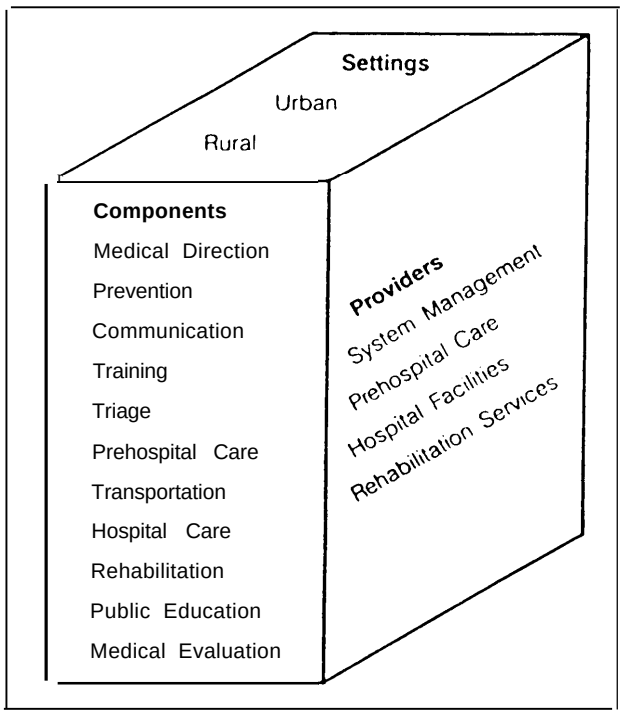

FIGURE. ***Three dimensions*** *of trauma care systems.*

	Urban	Rural
Implementation, operation, and evaluation.	E	E
E. *Emergency/Disaster Preparedness. Each* **system should develop a regional disaster plan that integrates EMS, trauma care, and disaster management system resources.**	E	E
1. **Regional plan for all providers**	E	E
2. Central control through local emergency management association	D	D
II. Prehospital Care		
A. *Management Agency* **Each system should identify an agency that is ultimately responsible for prehospital care. In some instances this function may be fulfilled by the central administrative agency.**	E	E
I Administration		
a. Medical director, familiar with and experienced in prehospital care	E	E
b. Support staff, familiar with and experienced in prehospital management	E	E
2 Training		
a Sufficient experienced staff	E	E
b. **Curriculum[4] integrated** with system	E	E
3. Criteria		
a. Protocols[3] integrated with system	E	E
4. Certification **and decertification**		
a. Consistent with state and local criteria	E	E
b. Standardized clinical examination	E	E
5. Data collection integrated with system	E	E
6. Medical audit integrated with system	E	E
B. *Ambulance Standards. Each* system **should establish standards for land and air transportation, subject to legislative regulations.**	E	E
1. Personnel	E	E
2. Equipment[3]	E	E
3. Process for ambulance certification and decertification	E	E
C Communication System. Each **system** should **develop a prehospital communication system that is fully integrated with the remainder of the EMS and emergency/disaster preparedness systems.**	E	E
1. Central control for medical direction and dispatch	E	D
2. Equipment		
a. Minimize radio dead space	E	D
b. Equip all vehicles and aircraft	E	D
D *Emergency/Disaster Preparedness Plan.* **Each system** should **develop a prehospital emergency/disaster preparedness plan that** IS **fully integrated with the remainder** of the **EMS system.**	E	E
E. *Prevention/Public Education*		
1. Injury prevention	E	E
2 First aid and CPR	E	E
Ill **Hospital Facilities**		
A. *Trauma Hospital.s* **Each system** should identify an appropriate number of trauma hospitals to provide immediately available surgical care for seriously injureed patients		

	Urban	Rural
1. Standards[3]		
a. Emergency department	E	E
b. Surgery department	E	E
c. Nursing care	E	E
d. Laboratory/blood bank/ x-ray	E	E
e. Computerized axial tomography	E	D
f. Trauma nurse coordinator	E	E
g. Treatment protocols	E	E
h. Integrated with EMS system	E	E
i. Documented institutional commitment	E	E
j. current JCAH accreditation	E	E
2. Communication		
a. Integrated with EMS system	E	E
b. Base station hospital	D	D
3. Helicopter landing capability		
a. On-site	E	D
b. Licensed by regulatory authority	E	E
4. Continuing medical education		
a. Physicians	E	D
b. Nurses	E	D
c. Prehospital providers	E	E
5. Protocols		
a. Prehospital bypass/ rerouting, coordinated with other trauma hospitals through the central administrative agency	E	E
b. Treatments[3]	E	E
c. Transfer,[3] for all incoming patients regardless of origin	E	E
6. Prevention/public education		
a. Community-based programs	E	E
7. Data collection		
a. Adequate personnel	E	E
b. Hospital registry	E	E
c. System registry participation	E	E
8. Rehabilitation		
a. (See Section IV)	E	E
9. Medical audit		
a. Adequate personnel	E	E
b. Quality assurance program, including feedback loop for demonstrated problems	E	E
10. Emergency/disaster preparedness plan		
a. Internal plan	E	E
b. Integrated with remainder of emergency/disaster preparedness system	E	E
B. *Specialty Cure Hospitals.* Each system should additionally identify specialty care hospitals for the small proportion of patients requiring such treatment. Access preferably entails prehospital transport, but also includes interhospital transfer when medically appropriate. If adequate facilities do not exist in the area, formal transfer agreements should be developed with nearby resources.	E	E
1. standards		
a. Pediatric trauma[3]	E	D
b. Bums[3]	E	D
c. Spinal cord traumas	E	D
d. Hand trauma/limb replantation	E	D
e. Eye trauma	E	D
2. Current JCAH accreditation	E	E
3. Communication		
a. Integrated with EMS system	E	E
4. Helicopter landing capability		
a. On-site	D	D
b. Licensed by regulatory authority	E	E
5. Training		
a. Physicians	E	D
b. Nurses	E	D
c. Prehospital providers	E	D
6. Protocols		
a. Prehospital bypass/ rerouting, coordinated with other trauma hospitals through the central administrative agency	E	E
h. Treatment[3]	E	E
c. Transfer,[3] for all incoming patients regardless of origin	E	E
7. Prevention/public education		
a. Community-based programs	E	E

	Urban	Rural
8. Data collection		
a. Adequate personnel	E	E
b. Hospital registry	E	E
c. System registry participation	E	E
9. Rehabilitation **a. (See Section IV)**	E	E
10. Medical audit		
a. Adequate personnel	E	E
b. Quality assurance program, including feedback loop for demonstrated problems	E	E
11. **Emergency/disaster preparedness plan**		
a. Internal plan	E	E
b. Integrated with remainder of emergency/disaster preparedness system	E	E
IV. **Rehabilitation**		
Rehabilitation planning, which should start with emergency department admission, may continue after hospital transfer or discharge. If adequate facilities do not exist m the area, formal transfer agreements should be developed with nearby resources.	E	E
A. *Special Care Facility*		
1. **Medical direction**	E	E
2. Adequate staffing	E	E
a. Nursing care	E	E
b. Physical therapy	E	D
c. Occupational therapy	E	D
d. Psychosocial/substance abuse counseling	E	D
e. Family support services	E	D
f. **Patient support groups**	E	D
g. **Orthotic/prosthetic** services	E	D
h Speech/language/hcarlng **services**	E	D
B. Noninstitutional ***Care***		
1. Medical direction	E	E
2. Adequate staffing	E	E
a. Nursing care	E	E
b. **Physical therapy**	E	D
c. Occupational therapy	E	D
d. Psychosocial/substance abuse counseling	E	D
e. Family support services	E	D
f. Patient support groups	E	D
g. Orthotlc/prosthetic services	E	D
h. Speech/language/hearing services	E	D
C. *Financial Support.* **Each system** should identify adequate resources for rehabilitation.	E	E
D. ***Data Collection***		
1. **Adequate personnel**	E	E
2. Provider registry	E	E
3. System registry participation	E	E
E. *Medical Audit*		
1. Adequate personnel	E	E
2. Coordinate with system audit	E	E
3. Quality assurance program, including feedback loop for demonstrated problems	E	E

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