Trauma System Consultation

(Recommendations)

Leadership		
Recommendations	**Priority**	
	H	**L**
Establish and fund a trauma medical director position to work under the guidance of the Bureau Chief.		
Reevaluate the disparity between EMS and trauma system staffing within BEMSTS.		

System Development		
Recommendations	**Priority**	
	H	**L**
Engage the STAB in the completion of the evaluation process of the Trauma System using the framework and tools contained in the HRSA Model Trauma System Planning and Evaluation document. ◦Conduct a trauma system needs assessment and gap analysis using the Benchmark, Indicators and Scoring tool and process; ◦Conduct in person interviews with senior hospital administrative and medical staff to assess the interest in trauma center designation among non-participating and/or non-designated Arizona hospitals; ◦Develop a working document to project the potential number and location of additional trauma centers by level; ◦See response to Focus Question #1.		
Develop a new comprehensive inclusive, state Trauma System Plan that includes a minimum of: ◦Goals, measurable objectives, and strategies; ◦Timelines for implementing trauma system goals and objectives; ◦Assign responsibilities to advisory committees and staff.		
Revise regional contracts to include specific trauma program requirements which support the objectives outlined in the Arizona Trauma System Plan.		
Annually evaluate and report the status of EMS and trauma system development at regional and state levels.		
Tie trauma system compliance by EMS agencies and providers to the issuance of operational licenses and funding eligibility.		
Through the acute care hospital and critical access hospital licensure process, require participation in the state trauma registry at appropriate levels.		

Legislation		
Recommendations	**Priority**	
	H	**L**
Provide stable funding for all levels of trauma center designation and participation. (See Focus Question #1)		
Develop guidelines for system quality/performance improvement to ensure that they are conducted in a manner that maximizes protections afforded in existing statutes (e.g., §36-2404 and §36-2403).		

Amend state statutes to model an integrated systems approach to development and implementation of an inclusive trauma system. ◦Clarify the authority granted to ADHS in A.R.S. § 36-2225 to develop and implement such a system. Consider evaluation of this with the state Attorney General's Office; ◦Seek passage of amended legislation where gaps are identified.		
Seek liability limits or exemption for appropriate physicians rendering trauma care in a designated trauma center. (note arbitrate as a trade off of total tort reform).		
Seek Legislative authority to coordinate all sources of trauma system funding through ADHS/BEMSTS.		

Finances

Recommendations	Priority	
	H	L
Develop and implement a standardized system of financial accountability for EMS Regions, prehospital providers, and trauma centers, integrating the public health concepts of assessment, policy development, and assurance.		
Tie money to deliverables and the deliverables to the plan.		
Through the trauma registry and hospital discharge databases, annually trend financial information in an effort to document Arizona trauma care costs. Use this information for support of expanded trauma system funding.		
Consider alternate methods of distribution of the Tobacco Tax to provide for trauma system support as intended.		
Develop limits commensurate with trauma center level for readiness cost and uncompensated care to maximize trauma funding.		
Investigate the future use of telephone service surcharges for training standards appropriate for EMS, fire and law enforcement dispatchers (telecommunication law).		
Identify funding mechanisms to support the cost of readiness and uncompensated care at all levels of trauma center designation.		

Injury Prevention and Control

Recommendations	Priority	
	H	L
Establish methods to effectively evaluate injury prevention programs.		
Seek opportunities for funding sources to support injury prevention activities.		
Develop web-based injury prevention resources for the public, injury prevention organizations and trauma hospital personnel.		
Review the injury prevention strategic plan on an annual basis and update/revise as needed.		
Develop and implement injury awareness programs for the public, media and elected officials.		
Provide education to the trauma centers in all aspects of injury prevention, e.g., data analysis, strategic planning, resource identification, program implementation, and evaluation.		

Human Resources (Workforce Resources)		
Recommendations	**Priority**	
	H	**L**
Ensure that trauma center staff and other trauma system providers are represented in forums/ councils for statewide resource and work force issues.		
Develop strategies to optimize the utilization of specialty services.		
Develop a strategic plan to address work force issues for all personnel essential to the trauma system (hospital, rehabilitation, prehospital, dispatch).		
Revise the annual survey to ensure that the information needs of the trauma system are addressed.		
Monitor current staffing pattern in the BEMSTS trauma program and anticipate increased needs.		

Education		
Recommendations	**Priority**	
	H	**L**
Implement strategies, including the use of FLEX grant funding, to sustain and expand the ACS' Rural Trauma Team Development Course, e.g., provide train-the-trainer sessions, increase the pool of instructors, seek grant opportunities for provider and instructor training.		
Expand web-based and teleconferencing capabilities to deliver trauma education to all trauma care providers.		
Perform an annual/routine trauma system educational needs assessment.		
Include injury prevention education as one component for credentialing and ongoing educational requirements for trauma care providers.		
Develop or promote educational programs for prehospital administrative medical directors.		

Prehospital Care (Emergency Medical Services Management Agency)		
Recommendations	**Priority**	
	H	**L**
Increase the FTE allocation for the state EMS medical director and secure a position for the state trauma medical director.		
Solidify qualifications and duties of the local agency and base hospital administrative medical director.		
Specify minimum medical oversight training requirements for local agency and base hospital administrative medical directors, including web-based training for rural physicians.		
Confirm that volunteer administrative medical directors have liability coverage.		
Require mandatory reporting of local quality improvement process to the BEMSTS.		
Once all administrative medical directors in the state are identified, develop a listserv to provide timely delivery of information pertinent to medical directors and develop a forum for topic discussion.		
Develop and sustain specific and ongoing prehospital educational opportunities for pediatric and geriatric trauma.		

Ambulance and Non-Transporting Medical Unit Guidelines		
Recommendations	**Priority**	
	H	**L**
Establish regulatory oversight of non-transporting units.		
Develop critical care paramedic capability to increase options for interfacility transport of the trauma patient and help preserve key facility personnel where they are scarce.		
Conduct an objective review of air transports to maximize utilization and control costs.		
Develop a 'one call does it all' approach for trauma transfers.		
Provide a template for out-of-hospital quality improvement activities.		
Require, non-transporting, transporting, and air medical EMS agencies to obtain prior approval of the BEMSTS, and to follow stringent guidelines pertaining to pilot testing of research project, prior to the adoption of treatments or equipment that do not have current, demonstrable efficacy in the peer-reviewed literature.		

Communications System		
Recommendations	**Priority**	
	H	**L**
Establish statewide protocols and training standards for EMD (including all PSAP personnel), including the use of computer-assisted training where other avenues of training are limited.		
Encourage partnership between dispatch units that provide pre-arrival instruction and those lacking that capability.		

Emergency/Disaster Preparedness Plan		
Recommendations	**Priority**	
	H	**L**
Provide training for prehospital providers that incorporate an all-hazards approach such as provided by the AMA's Basic and Advanced Disaster Life Support Courses.		
Utilize the trauma system as a template for disaster response.		
Consider requiring prehospital agencies to participate in the LEPC.		

Definitive Care Facilities (Trauma Care Facilities)		
Recommendations	**Priority**	
	H	**L**
All acute care hospitals should be designated as trauma centers or participating hospitals as part of a statewide inclusive trauma care system. ◦Mechanisms to encourage verification and designation of Level II, Level III and Level IV trauma centers should be established. ◦Use ORHP FLEX grant monies as incentive for Critical Access Hospitals to become Level IV trauma centers.		
A needs assessment, based on patient volume and geography, should be performed to determine optimal or adequate number and locations of Level I-IV trauma centers.		

The lead agency should review and revise standards for Level I-IV Trauma Centers based on the most recent ACS Optimal Resources document. (Resources for Optimal Care of the Injured Patient 2006)		
Reduce, or eliminate entirely, diversion in accordance with the recommendations contained in the IOM's report on the Future of Emergency Care in the U.S. Healthcare System. (Hospital-Based Emergency Care: At the Breaking Point, pp. 5-6, IOM, 2006).		

Interfacility Transfer

Recommendations	Priority	
	H	L
Develop a model transfer agreement and disseminate to all trauma centers, other acute care facilities, pediatric hospitals, spinal cord injury centers, and rehabilitation hospitals.		
Encourage implementation of transfer agreements between appropriate hospital pairs.		
Collect data at the state level that can be used to determine the appropriateness of transfers, the timeliness of transfers, and the costs associated with these transfers. ◦Report these data to the regions, STAB, and hospitals. ◦Use these data to ensure optimal patient care.		

Medical Rehabilitation

Recommendations	Priority	
	H	L
Develop specific tactics through the State Trauma Advisory Board to achieve the objectives for Rehabilitation Medicine as outlined in the Arizona Trauma System Plan.		
Integrate outcome data from each rehabilitation center with State Trauma Registry to benchmark functional outcomes with the acute phase of care.		
Transfer agreements between trauma centers and rehabilitation facilities should be developed and implemented to ensure appropriate and timely transfer of the trauma patient (to optimize the potential for return to prior level of function).		

Information Systems

Recommendations	Priority	
	H	L
The Arizona state trauma registry should expand its reach to include all acute care hospitals in the state.		
Acquire a commercial software package at the BEMSTS to convert hospital discharge data (HDD) ICD-9-CM codes to AIS scores and a commercial probabilistic linkage software package.		
Establish a procedure for the generation of specific state prehospital and trauma registry audit filters that are reported to regional EMS councils quarterly with a process to request further data analysis based upon questions resulting from the audit filters.		
Investigate methods allowing state prehospital and trauma registry data to be made available via a password protected Web site for designated EMS agencies and hospitals to dynamically evaluate their data, benchmarked to state-level data (e.g., OLAP Cube technology).		
Begin the planning and procurement process for additional FTE and resource support to sustain additional system administration and data analysis needs that will be required to link and maintain the multiple new databases that are soon to become available.		

Evaluation		
Recommendations	**Priority**	
	H	**L**
Maximize the protections afforded in existing statutes pertaining to the STAB and, more specifically the AZTQ sub-committee of the STAB, to ensure that they are sufficient to protect discussions and findings from discoverability and to create a safe atmosphere for system QI activities.		
Use existing data sets, within their functional limits, to help frame and answer system questions.		
Support the continued evolution of the AZTQ in establishing processes and standards for system evaluation and quality improvement so that when confidentiality assurance is achieved, formal system-wide evaluation and QI can begin.		
Move toward the expansion of the existing trauma registry to include all acute care facilities and the establishment of a statewide electronic prehospital data system, consistent with the recommendations contained in the information Systems section of this report.		
Foster a collaborative multi-disciplinary team-based environment for trauma QI activities at the State, regional and local levels.		

Research		
Recommendations	**Priority**	
	H	**L**
Develop a statewide trauma research consortium, linked to the activities and functions of the STAB and AZTQ, for purposes of promoting research throughout the continuum of trauma care.		
Integrate injury research into regional EMS council activities, encouraging them to structure formal investigations, where possible, with an eye towards expansion into publishable research.		
Develop liaisons with university faculty, students in public health and other injury-related disciplines for the purpose of facilitating multidisciplinary trauma-related research using existing databases and other trauma system resources.		
Revisit confidentiality policies associated with release of state trauma registry data and bring those policies into alignment with other state health-related datasets.		
Identify, characterize, and catalogue injury prevention programs, injury-related research projects, and injury-related databases to facilitate collaboration, reduce redundancy and leverage scarce resources.		

Focused Questions		
1. Please identify ideas (financial and non-financial) for recruiting hospitals into the trauma system Level II through Level IV.		
Recommendations	**Priority**	
	H	**L**
Financial:		
Research the fines and forfeiture fund (EMSOF) allocation and redirect a greater share of those funds to expanding trauma centers in Arizona.		
Fund rural Trauma Centers (CAH) through the Office of Rural Health, Rural Hospital Flexibility Grant program (FLEX).		
Redirect hospital bioterrorism funding to trauma center readiness in rural facilities.		
Investigate opportunities for use of Preventative Block Grant funds.		
Non Financial:		
Promote the passage of legislation which would minimize or exempt from liability physicians providing trauma care in designated trauma centers (all levels).		
Require CAH, as part of their licensing, to be verified at the appropriate level as designated, trauma centers and contribute to the trauma registry database.		
The Office of Rural Health and the BEMSTS should collaborate on providing technical assistance to rural facilities to assist them in attaining the highest achievable and sustainable level of trauma center designation possible.		
Tie acute care hospital licensing to participation in the trauma system commensurate with hospital resources. At a minimum, this includes contributions to the trauma registry data system.		
Seek FLEX funding to promote grassroots public education campaign to encourage the development of trauma centers in rural and remote areas of Arizona.		
2. Please identify priorities for supporting the rural prehospital provider and the rural health care institution.		
Recommendations	**Priority**	
	H	**L**
Increase incentives, reduce barriers, and encourage all acute care facilities and EMS agencies to become part of an inclusive trauma care system in Arizona.		
Convene a “rural trauma” stakeholder group, subcommittee, task force to identify challenges facing rural providers and solutions to those challenges.		
Continue the local grant program with an emphasis on creating lasting outcomes.		
Ensure that rural facilities and agencies are provided with the necessary incentives and resources to contribute data to the statewide system.		
Support training of all rural trauma care professionals, leverage existing and emerging televideo and other asynchronous resources.		
3. Does the Trauma System Planning and Evaluation Committee Consultation Team believe that Arizona’s current trauma system adequately addresses trauma care for the pediatric and geriatric population? Please provide specific recommendations for improving the trauma system care for these patients.		

Recommendations	Priority	
	H	L
Children:		
Conduct a statewide needs assessment and gap analysis of resources for the care of the injured child.		
Revise the state standards for designation of trauma centers caring for children using the pediatric trauma center requirements in the *Optimal Resources for the Care of the Injured Patient (2006.*		
Designate pediatric trauma centers.		
Establish guidelines for the care of injured children for all hospitals (e.g., Emergency Departments Approved for Pediatrics), including essential emergency department equipment and pediatric training for providers, and require all hospitals to meet guidelines.		
Institute transfer agreements between hospitals to ensure that injured children go to the most appropriate trauma center for care.		
Establish and include prehospital and non-trauma hospital providers in a system-wide pediatric performance improvement process.		
Formalize the appointment of a pediatric surgery representative on STAB.		
Refer to the Institute of Medicine report *Emergency Care of Children: Growing Pains* for additional guidance.		
Better integrate EMSC into BEMSTS activities.		
Geriatric:		
Perform a needs assessment relative to the: ◦Educational needs of providers for the care of elders. ◦Capabilities of all non-trauma hospitals to assess and stabilize injured elders, and facilitate transfer to trauma centers. ◦Prehospital triage and destination guidelines for elders. ◦Disposition needs of elders including a gap analysis between current and projected demand for services against capabilities in a range of areas including: inpatient rehabilitation, scalable independent living to skilled nursing facilities and home care services.		
Look for opportunities to collaborate with pre-existing advocacy groups for the aged, focused on injury and other support services.		
Create a Task Force on the Aging Injured through the State Trauma Advisory Board to devise recommendations. The following areas should be considered: ◦Pre-hospital – strengthen triage protocols to include threshold adjustment for trauma center transfer based on age and co-morbidity. ◦Definitive Care – develop trauma center-based multidisciplinary “Geriatric Trauma Consultation Teams” to address the special needs of the elders through the continuum of care. ◦Initiate a system-wide geriatric performance review program to identify opportunities for improved care to elders. ▪Prospectively track and report demographic data and acute injury outcomes and report these centrally to the State Trauma Registry based on a statewide Performance Improvement and Patient Safety for the elderly. ▪Integrate geriatric specific outcome data from each rehabilitation center with State Trauma Registry to benchmark functional outcomes with the acute phase of care. ◦Incorporate these developments into the Arizona Trauma System Plan.		

4. Does the TSC Committee believe Arizona's injury prevention efforts adequately address pediatric and geriatric specialty populations? Please provide specific recommendations for improving our injury prevention activities for these groups.		
Recommendations	**Priority**	
	H	**L**
Collaborate with current established groups that offer injury prevention programs, e.g., representatives from groups whose focus is injury prevention in the elderly population.		
Determine/develop evaluation tools for the injury prevention programs targeting these populations.		
Educate trauma hospital injury prevention personnel on all aspects of injury prevention, e.g., data analysis, strategic planning, program implementation and evaluation.		
Develop and distribute educational materials to numerous entities / groups, e.g., trauma hospital personnel, elected officials and the public.		
Link trauma system injury prevention activities for the pediatric and geriatric population to the priorities stated in the state.		

Rating Level of Priority

Category	High/Low	Rating
Leadership	________	_______
System Development	________	_______
Legislation	________	_______
Finances	________	_______
Injury Prevention & Control	________	_______
Human Resources (Workforce Resources)	________	_______
Prehospital Care	________	_______
Ambulance and Non-Transporting Medical Unit Guidelines	________	_______
Communications System	________	_______
Emergency/Disaster Preparedness Plan	________	_______
Definitive Care Facilities	________	_______
Interfacility Transfer	________	_______
Medical Rehabilitation	________	_______
Information Systems	________	_______
Evaluation	________	_______
Research	________	_______

Focused Questions:

Question #1	________	_______
Question #2	________	_______
Question #3	________	_______
Question #4	________	_______