TIME CRITICAL DIAGNOSIS-TRAUMA SYSTEM TASK FORCE
MEETING TWO, OCTOBER 29, 2008
MEETING HIGHLIGHTS

Attendees:

Paula Adkison, Department of Health and Senior Services (DHSS); Dr. Charles Andrus, St. Louis University Hospital; Colleen Cook, Freeman Neosho Health Center; Jason Cullom, St. Joseph Hospital West; Marcia Dial, Scotland County Memorial Hospital; Dr. Robert Dodson, St. John's Regional Medical Center; George Duff, Atchison-Holt Ambulance District; David Durbin, SSM Health Care; Joan Eberhardt, Missouri Emergency Nurses Association; Jay Faulkner, Osage Beach Ambulance; Dean Feller, Liberty Hospital; Kelly Ferrara, The Vandiver Group; Timothy Gash, Lake Ozark Fire District; Shirley Gastler, DHSS; Brad Golden, Saint Louis University Hospital; Pam Golden, St. Louis University Hospital; Randall Graham, St. John's Mercy Hospital; Robert Grayhek, St. Francis Medical Center; Christina Green, SSM Cardinal Glennon Children's Medical Center; Paul Guptill, Missouri Hospital Association; Susan Hall, St. John's Regional Medical Center; Mike Hicks, Mid-America Regional Council; Daniel Holte, Northeast Regional Medical Center; Dr. Robert Johnson, St. John's Regional Health Center; Antoinette Kanne, St. John's Mercy Medical Center; Dr. Dennis Keithly, St. John's Mercy Medical Center; Jerry Kirchhoff, Air Evac Lifeteam; Mary Kleffner, DHSS; Amy Knoernschild, Lake Regional Hospital; Ken Koch, St. Charles County Ambulance District; Dean Linneman, DHSS; Dr. Charles Ludy, Capital Regional Medical Center; Rande McCrary, Atchison-Holt Ambulance District; Bryant McNally, Missouri Hospital Association; Deborah Markenson, DHSS; Ruby Mehrer, Life Flight Eagle; Michelle Miller, Missouri Foundation for Health; Dr. Samar Muzaffar, DHSS; Julie Nash, Barnes-Jewish Hospital; Greg Natsch, DHSS; Carol Nierling, University Hospital and Clinics; Timothy Norton, TNC; Patty Parrish, CoxHealth; Wally Patrick, Heartland Regional Medical Center; D.J. Satterfield, St. John's Life Line Air Medical Service; Dr. Douglas Schuerer, Washington University; Dr. Alan Umbright, St. Joseph Health Center; Nathan Williams, Missouri Emergency Medical Services Assn.; Sandy Woods, St. John's Regional Medical Center and Beverly Smith, DHSS.

A total of 50 attended the second Time Critical Diagnosis (TCD)-Trauma System Task Force meeting in scenic Wardsville. Dr. Muzaffar welcomed the group and reviewed the **changes made in the meeting** in response to the evaluation forms received from the first meeting. These included 1) change location to accommodate a larger group with additional space for regional groups to meet separately, 2) change meeting dates to follow State Advisory Council for Emergency Medical Services (SAC) meeting dates, 3) provide data for the group decisions-where available, 4) establish meeting agendas that allocate sufficient time for regional discussion of issues, and 5) expand of the Department's website to provide updates, agendas and supporting reference materials. (http://www.dhss.mo.gov/TCD_System/index.html).

REGIONAL COMMITTEES

The next topic addressed was the functions of the Regional Committees. Dr. Muzaffar shared her vision that these groups would be an integral part of the TCD system and are sufficiently supported to carry out their functions—including protocol development, review and preliminary approval; quality improvement of patient care services; expansion to stroke and STEMI support; research collaboration; identification of professional education priorities; and public education coordination across the region and state.

Paula Adkison provided an overview of the statue and regulations in Missouri that authorize the regional committees, outline functions and define regional territories. The Department website provides a listing of each region's current appointments and minutes from meetings, when provided. http://www.dhss.mo.gov/EMS/Committees.html . Jennifer Evans with the Bureau of Emergency Medical Services is the Department's contact to forward regional committee minutes for posting on the Department's website.

The functions, barriers and recommendations from the last meeting were compiled and reviewed by Deborah Markenson. Based on the group's input, the following recommendations were approved.

TASK FORCE'S RECOMMENDATIONS FOR REGIONAL COMMITTEES:

Regional Committee—Administrative

Missouri Department of Health and Senior Services (DHSS):

1. Track regional committee appointments and make timely replacements.
2. Increase diversity of membership.
3. Provide orientation for new committee members.
4. Describe purpose and benefits of regional committees and compile strategies to promote regional committee value to increase involvement.
5. Improve data support for quality improvement functions.
6. Provide regular updates and establish accessible website.
7. Increase support for regional committees and functions.
8. Post regional committee member listing.

Regions:

9. Host regional committee meetings with other stakeholder groups.
10. Establish standard meeting time.

Both:

11. Increase involvement of medical directors.

12. Explore and use technology for meetings and communication to decrease travel time and improve information availability.

Regional Committee—Functions

1. Identify ways to enhance network development.
2. Define and maintain role for small hospitals.
3. Conduct additional education with a focus on regulatory requirements.
4. Share best practices.
5. Review regional practices based on American College of Surgeons (ACS) trauma criteria.
6. Review and preliminarily approve protocols for care within region.
7. Formalize quality improvement (QI) functions with benchmarks for facility/region/state.
8. Address lack of Emergency Medical Services (EMS) peer protection so data can be shared for QI functions across out-of-hospital and hospital emergency services.
9. Coordinate prevention education on a regional basis.

LEVEL IV CENTERS

The task force next reviewed whether Missouri needed to expand its center designation process to include Level IV centers. Wally Patrick provided an overview of what other states do regarding Level IV centers. He stated that other states have Level IV centers and some even have Level V centers but state criteria for center designation varies widely for the different levels. He shared that states fairly consistently define Level IV center functions as resuscitate and rapidly transfer to a higher level center of care. Best practices identify the need for statewide rapid resuscitation and transfer protocol. The pros and cons were discussed. The Level IV center is of value if a patient, in close proximity, has an immediate life threatening condition and needs to be stabilized before being transported to a higher level of care.

The task force members then addressed the following questions by regional sub-groups:

- What functions should a level IV center perform?
- What are the pros and cons of Level IV centers for your respective region?
- Does your region need Level IV centers?

Joan Eberhardt facilitated reports by each of the respective work groups for Level IV centers.

Proposed Functions of Level IV Centers:

Northwest and Southeast

- Assess rapidly and transfer the patient. (Clinical)
- Participate in robust quality improvement process and regional committees. (Administrative)

Kansas City

- Develop parameters for when to stop at Level IV centers and when to bypass.
- Identify the critical patient.
- Stabilize primary Airway, Breathing and Circulation(ABC).
- Establish plan for rapid transfer system.
- Establish referral and receiving agreements between agencies.

Southwest

- Assure 24 hour coverage by physician and well organized resuscitation team.
- Must have triage protocol and transfer guidelines that provide easy access to care without barriers to transfer.
- Emergency departments must comply with criteria.
- Must have by-pass protocol for EMS.

Central

- Rapidly assess and stabilize for transport acknowledging differences due to such things as rural areas without 911, lack of street and road markings, and inconsistency in pre-hospital classification.

- Establish transfer agreements with larger centers (each facility would hammer out their respective details).

St. Louis-East Central

- Assess and triage patients with focus on stabilization of airway and breathing.
- Rapid transport to higher level.
- Make regional decisions on transport destinations.
- Debated option of having all hospitals designated at some level.

The following pros and cons for establishing Level IV trauma centers in Missouri were identified by the regional sub-groups.

Pros	Cons
• Support integration of smaller hospitals into trauma system in faster manner.	• Increase cost due to time away for meetings, staff, training, and review processes.
• Improve data availability to support appropriate patient care.	• May result in pressure to EMS agencies to stop at a level IV center when patient conditions indicate need to bypass to higher level of care center.
• Improve QI process with more inclusive statewide registry reporting.	• Lack of systematic approach to educating EMS staff about capabilities of each hospital.
• Increase number of services using standardized training, equipment and treatment protocols and procedures. Improve educational opportunities for staff in Level IV centers.	• Need state oversight to function well.
• Improve community perception of facilities that meet designation criteria and officially part of trauma system.	• Small hospitals may resist embracing trauma system and may view this option as an unfunded mandate.
• Provide standard approach for treatment. Identify point person for triage and transfer.	• Level IV centers may keep patients that should be transferred.
• Decrease institutional and provider liability.	• May delay transfer to center that can provide definitive care.
• Improve communications and working relationships between providers and EMS units in region and state. Formalize relationship between facilities.	• Lack of incentives or benefits for hospitals to become designated as a level IV center.

Pros	Cons
• Improve ability of system to manage trauma care on statewide level. Broadens scope of system.	• May cause level III centers to drop to level IV centers.
• Hold hospitals accountable for patient care practices.	• Need better data on location of incidents compared to where care provided to determine if there are currently gaps that could be filled by level IV centers.
• Advantage to patient to have more facilities in system that should result in better patient outcomes.	
• May entice former level III centers back into the system as level IV centers.	
• Formally establish team concept between level IV and higher level (I, II, III) centers.	
• Provide consistent approach to stabilize patient while waiting for air transport.	

Each region stated whether there was a need for level IV centers within their region:

Northwest	YES
Kansas City	YES for outlying areas only
Southwest	Recognize advantages but cannot provide definitive answer until know if interest in region and review data to determine need.
Central	YES
East Central-St. Louis	YES
Southeast	YES

The full task force then discussed the issues and recommendations from each respective region. There was consensus that it would be appropriate to pursue establishing regulations for level IV centers. Additional information was requested on data that could help the task force further review the level IV center issue. This data requested included: 1) comparison of areas with higher rates to those with lower rates of death due to trauma incidents and identification of what factors might impact those rates; and 2)comparison of mortality rates between non-trauma designated facilities and designated trauma centers. In addition, the task force expressed that it would be important to define advantages or benefits for non-designated center on why they should invest effort to become a level IV center.

COMMON LANGUAGE AND CLASSIFICATION SCHEMES

The task force then moved onto a new topic-Common Language and Classification Schemes within the Regions and State. Dr. Muzaffar provided an overview of problems currently experienced when different classification schemes are used within the region and state. Most states work toward a common classification system which leads to consistent management of the patient care services. The regional groups then met to discuss the following questions:

- What are the common classification schemes in the region?
- What needs to be included in umbrella classification scheme regionally?
- What are the barriers to common classification framework across the regions?
- How can we overcome barriers?

The current classification schemes were identified:

- Many are using common language of ACS criteria
- Some are using color-based systems (differences in how colors identified by region)

Red	Immediate	Class I
Yellow	Minor	Class II
Green	Delayed	III
Blue	Expected	

- One region had all classified based on physiologic and mechanism of injury.
- One region had a charge nurse in the emergency room make classification based on the EMS report. They had activation protocols with only very slight variations in criteria.
- In one area, the local trauma hospital standards were used.
- Other standard classification schemes reported used included:

  - American College of Emergency Physicians (ACEP)—International Trauma Life Support (ITLS) and Advanced Trauma Life Support (ATLS),
  - National Association of Emergency Medical Services Physicians (NAEMSP),
  - National Association of Emergency Medical Technicians (NAMET)—Prehospital Trauma Life Support (PHTLS), and
  - Vital signs, loss of consciousness, mechanism of injury, co-morbid factors.

- Regions identified that each had unique issues.
- St. Louis Regional Trauma Classification Criteria has been established for adult and pediatric patients. They have worked on this classification scheme for several years and believe it is functional in the St. Louis area. Open to statewide approach.
- Southwest region proposed that they needed regional classification system to accommodate their needs. The southwest region representatives stated that didn't see need for a statewide classification. In their region, the classification determination is made by the emergency department physician and staff based on the information provided by the out-of-hospital staff. They have more EMS facilities compared to number of hospitals and went to this scheme to assure consistent classification of patients. They want EMS trained to provide the information needed and are working on a QI process for this.
- Northwest region has several classification schemes that are similar but with different labels.
- The Kansas City and central regions also reported using several classification schemes.

<u>What is proposed for umbrella classification scheme</u>?

- A breakdown of the schemes into particular classifications by physiological and mechanism base.
- All organizations and agencies that have a classification scheme should come together and agree on one and use common language. Must decide on which classification scheme or which core elements from different schemes should be incorporated into common classification for all trauma patients for each class on a statewide level.
- Need to assure that EMS provides the necessary information to report to the trauma center to determine appropriate level of activation.

The regional groups identified the following barriers to a common classification scheme and how these barriers can be overcome:

Barriers	Ways to work around barrier
• Variance in information reported from EMS. Insufficient training.	• Establish standardized EMS triage and transport criteria and require training. • Conduct regional reviews on performance indicators and establish quality improvement process.
• Specific preferences by individual trauma centers, trauma surgeons, and medical directors. • Hospital affiliations and hospitals have varying classification schemes. • No consistent system.	• Use statewide scheme and common language across the state • Define key criteria with regional variation until state comes up with statewide classification scheme
• Multiple criteria within the State.	• Have DHSS take leadership role to convene stakeholders for consensus on classification framework that allows or accommodates regional variance where needed.
• Have not had all of the key stakeholders at the table to decide.	• Use medical control to help make decisions. Convene group of key stakeholders to establish statewide/regional classification.
• Pre-hospital versus hospital differences in terminology used. • Different groups trained to use different criteria and terms.	• Establish common language, possibly require in regulations with standardized identifiers for inter-operable system with patient tracking. • Others stated that they don't want classification scheme legislated—the emergency medicine professionals should establish classification requirements.
• Do not have same terminology for diversion and trauma limitations across the regions and state.	• First, all hospitals must speak the same language, and then can require EMS to use appropriate terms to activate the system.
• St. Louis classification scheme has cumbersome elements due to such things as adult and pediatric distinctions that impact care and destination (e.g., adult vs. pediatric hospital).	• Could improve current classification scheme to overcome problems experienced.
• Regional triage basically working within region but needs to work statewide.	• Provide education for out-of-hospital and hospital staff on importance of standard classification and common language.
• Same rules for air and ground transportation.	• Make sure protocols appropriate for different types of transport.

Barriers	Ways to work around barrier
• In one region, some hospitals allow pre-hospital personnel to classify while others have pre-hospital EMS staff provide details and hospital classifies.	• Establish consistent approach.
• Multi-state criteria.	• Agreement across state lines.

Dr. Muzaffar facilitated the discussion for the full group on the variance in approach to classifications and it was enlightening to see the different approaches and rationale for those variances. This discussion will be continued at the next meeting.

The task force will take the following action at the next meeting (December 19, 2008):

- finalize recommendation(s) to create Level IV center designation,
- review the data systems in place that are relevant to support the TCD trauma system decision making and QI,
- continue discussion on the common language and classification scheme, and
- begin discussion about on-and off-line medical control, pre-arrival instructions and emergency medical dispatch.

The Task Force members were requested to review the range of reference materials that have been provided before the next meeting. The handouts distributed included an overview of five other states' trauma systems and the triage and transport protocols from four states. Meeting was adjourned.