

System-wide Evaluation and Quality Assurance Prereview Questionnaire

I. What is the membership of the committee charged with ongoing monitoring and evaluating of the trauma system?

The Trauma Systems Committee of the Governor's EMS/Trauma Advisory Council (GETAC) serves to advise primarily regarding rule development, but may also serve as mentoring body for the monitoring and evaluation of trauma systems. The statute does not specifically assign that role to GETAC, but the council draws on the expertise of the Trauma Systems Committee as it attends to its statutory mandate of developing and maintaining a state trauma plan. (HSC 773.012)

The Trauma Systems Committee membership currently consists of 15 members, including six trauma system medical directors, seven trauma system RNs, a RAC executive director, a facility CEO, and a paramedic.

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Administrative Code rules require that a regional trauma system performance improvement (PI) program is developed and implemented. (25 TAC §157.123(c)(II)(H)).

To be eligible for continued state funding, a RAC must have demonstrated that a regional system performance improvement (PI) process is ongoing by submitting to the department the following: (i) lists of committee meeting dates and attendance rosters for the RACs most recent fiscal year; (ii) committee membership rosters which includes each member's organization or constituency; and (iii) lists of issues being reviewed in the system performance improvement meetings. The EMS Trauma Systems Coordination Office is officially charged with ongoing monitoring and evaluating of each of the 22 trauma systems separately, and collectively oversees the statewide trauma system.

Contract monitoring by EMS/TS Coordination ensures that essential criteria are in place; required by rule and contract. See attachments, (1.0) *Figure: 25 TAC §157.123(c) and (RAC Essential Criteria – Defined)*, (1.1) *Contracts* and attachment (1.2) *Annual Report Format*. Monitoring is conducted first by RAC self assessment, then by OEMS/TS desk review or site visit, and evaluation reports. See attachments: (1.3) *Desktop Review Tool*, attachment (1.4) *Required Modification Letter Blank*, and attachment (1.5) *Compliance Letter*. Facility licensing, the designation process, and the incentive of eligibility for uncompensated care funding also contribute to the system-wide evaluation and QA.

Evaluation efforts by the lead agency are decentralized and spread across the agency programs (EMS/TS Coordination, Disaster and Preparedness, Epidemiology and Trauma Registry, Health Promotion & Chronic Disease Prevention), and other state agencies (DADS, DARS, DFPS, DPS, DOT, HHSC, Texas Parks and Wildlife). At the regional level, each of the 22 RACs must have a demonstrated regional system performance improvement (PI) process and submit to the department lists of issues being reviewed in the system performance improvement meetings.

a. To whom does it report its findings?

The Trauma Systems Committee reports to GETAC. GETAC actions would be in the form of recommendations to the department.

b. How does it decide what parameters to monitor?

The Trauma Committee members identify the parameters to monitor.

c. What action is it empowered to take to improve trauma care?

Based on recommendations from GETAC, the department would work with the RAC to rectify problems and overcome lapses in trauma system essential elements. If through contract monitoring, major components of the essential criteria fail to be maintained and attempts to address significant problems are repeatedly inadequate, the department could withhold state funding.

2. Describe the trauma system performance improvement efforts as they pertain to the system for the following groups of providers in the context of system integration:

a. Dispatch centers

No specific trauma system dispatch performance improvement requirements are enforced by the department. Regional plans and standards are regulated by the Commission on State Emergency Communications under Texas Administrative Code rules, 1 TAC, Chapter 251.

b. Prehospital provider agencies

To be eligible for finding from the EMS/Trauma Care System Account, an EMS provider must, as specified in EMS rule §157.130(d)(2)(B) and §157.131(d)(2)(B), “demonstrate utilization of the Regional Advisory Council (RAC) regional protocols regarding patient destination and transport in all TSAs in which they operate.

EMS provider licensing rules (25 TAC, §157.11) require licensees to submit a description of how the provider will conduct quality assurance. The plan must assure the existence of and adherence to a quality assurance plan that, at a minimum, includes: the standard of patient care and the medical director's protocols; pharmaceutical storage; readiness inspections; preventive maintenance; policies and procedures; complaint management; and patient care reporting and documentation; monitoring of the quality of patient care provided by the service and personnel and taking appropriate and immediate corrective action to insure that quality of service is maintained in accordance with the existing standards of care.

The standard of care is determined by the medical director through delegated standing orders for patient treatment and transport protocols. (25 TAC, §157.11(h)) The protocols must:

- have an effective date and an expiration date which correspond to the inclusive dates of the provider's EMS license;
- address the use of non-EMS certified or licensed medical personnel who, in addition to the EMS staff, may provide patient care on behalf of the provider and/or in the provider's EMS vehicles;
- address the use of all required, additional, and/or specialized medical equipment, supplies, and pharmaceuticals carried on each EMS vehicle in the provider's fleet; identify delegated procedures for each EMS Certification or license level utilized by the provider; and
- indicate specific applications, including geographical area and duty status of personnel.

c. Trauma centers

Trauma designation rules (25 TAC, §157.125) require:

1. Track record:

Initial Designation: a facility must have completed at least six months of audits on all qualifying trauma records with evidence of “loop closure” on identified issues. Compliance with internal trauma must be evident.

On Re-designation: a facility must show continuous PI activities throughout its designation and a rolling current three year period must be available for review at all times.

2. Minimum inclusion criteria:

All trauma team activations (including those discharged from the ED), all trauma deaths or dead on arrivals (DOAs), all major and severe trauma admissions for greater than 23 hours; transfers-in and transfers-out; and readmissions within 48 hours after discharge.

3. An organized trauma PI program established by the hospital, to include a pediatric-specific component and trauma audit filters (see "Advanced Trauma Facility Audit Filters" list.)

- a. audit of trauma charts for appropriateness and quality of care
- b. documented evidence of identification of all deviations from trauma standards of care, with in-depth critical review
- c. documentation of actions taken to address all identified issues
- d. documented evidence of participation by the TMD
- e. morbidity and mortality review including decisions by the TMD as to whether or not standard of care was met
- f. documented resolutions "loop closure" of all identified issues to prevent future recurrences
- g. special audit for all trauma deaths and other specified cases, including complications, utilizing age-specific criteria
- h. multidisciplinary hospital trauma PI committee structure in place

4. Multidisciplinary trauma conference for PI activities, continuing education and problem solving to include documented nurse and pre-hospital participation.

5. Regular and periodic multidisciplinary trauma conferences that include all members of the trauma team should be held. This conference shall be for the purpose of PI through critiques of individual cases.

6. Feedback regarding trauma patient transfers-in from EDs and in-patient units shall be provided to all facilities.

7. Trauma registry - data shall be forwarded to the state trauma registry on at least a quarterly basis.

8. Documentation of severity of injury (by Glasgow Coma Scale, revised trauma score, age, injury severity score) and outcome (survival, length of stay, ICU length of stay) with monthly review of statistics.

9. Participation with the regional advisory council's PI program, including adherence to regional protocols, review of pre-hospital trauma care, submitting data to the RAC as requested including such things as summaries of transfer denials and transfers to hospitals outside of the RAC.
10. Times of and reasons for diversion must be documented and reviewed by the trauma PI program.
11. Published on-call schedule must be maintained for general surgeons and neurosurgeons, orthopaedic surgeons, anesthesia, radiology, and other major specialists if available.
12. Performance improvement personnel - dedicated to and specific for the trauma program.

d. Other acute care and specialty facilities

Acute care and specialty facility regulations are enforced by the Health Facility Licensure section of the department. The trauma system requirements for designation provide inclusion for participation with the regional RAC and submission of data to the state Trauma Registry. See attachment: (2d.1) *Requirements for Trauma System Designation*.

e. Rehabilitation centers

Rehabilitation facility regulations are enforced by the Health Facility Licensure section of the department. See attachment (2e.1) *Health and Safety Code. Rehabilitation*. Facilities may also seek Commission on Accreditation of Rehabilitation Facilities (CARF) accreditation.

3. List the process and patient outcome measures that are tracked at the trauma system level, including measures for special populations.

The DSHS Office of EMS/TS Coordination will review evidence of the regional PI process at the time of the site review visit at the RAC. The RAC representative at the time of the annual visit will sign an attestation as documentation of review of evidence of the PI process. From Essential Criteria Defined: (RAC Essential Criteria – Defined)

- The PI program shall document the monitoring of system performance to assess system impact on patient outcomes (morbidity and mortality).
- The RAC should establish regional performance criteria to evaluate system performance from an outcome perspective.
- A data collection process should be established and the RAC should ensure that participating regional EMS and hospital providers are collecting the minimum data set and uploading patient data to the State Trauma Registry or to the regional trauma registry, when present.

- The RAC should establish a procedure and maintain a system to ensure the confidentiality of all patient and provider information related to case review or system performance.
- A RAC may establish a regional trauma registry. Operational regional registries should secure data and implement all measures necessary to ensure patient confidentiality and compliance with HIPAA and other regulatory guidelines. Participating member organizations should be given timely access to de-identified or aggregate data to assist in measuring compliance with regional PI standards and to monitor injury and mortality trends.
- Regional PI should be accomplished by RAC membership with expertise in PI. A multi-disciplinary process should be established to review compliance with systems indicators (complete with case reviews), conduct process reviews in cases involving adverse patient outcomes, and to share information and education.
- The RAC should establish a review and referral process to ensure the timely review of complaints and/or concerns of regional care providers. When necessary, the RAC may include outside consultants or seek assistance from DSHS or other appropriate resources. Patient and provider confidentiality shall be maintained throughout the process.
- The RAC should establish and monitor system indicators to ensure that major and severe trauma patients are treated at the appropriate level of trauma facilities. Trauma patient transfers and admissions within and outside the TSA should be reviewed. The transfer and admission times of major and severe trauma patients shall also be measured and monitored to ensure the timely transfer and admission of trauma patients.
- The RAC system PI process should include a representative number of physicians from disciplines including surgery, emergency medicine, and EMS to ensure a broad-based and inclusive approach to trauma and emergency health care, to share information between the disciplines and to encourage information sharing and education of trauma and emergency health care physicians.

EMS agencies and hospitals are required to submit state Trauma Registry data for the purpose of both regional RAC and DSHS state-wide evaluation and QA. See attachments: (3.1) *State Trauma Registry EMS Data Dictionary* and (3.2) *State Trauma Registry Hospital Data Dictionary*.

4. As part of your system-wide performance improvement, specify whether each of the following is assessed on a regular basis:

Texas Administrative Code rules (25 TAC, §157.123) require that major/severe trauma patients will have deviations from standard of care addressed through a documented trauma performance improvement process and a performance improvement program that evaluates processes and outcomes from a system perspective.

Assessment of over or under triage is not a performance improvement or data collection category specifically required by administrative code rule, but patient injury severity is among the data collected in the hospital data dictionary, and each trauma system monitors

data in an effort to address the problem. Individual hospitals do generally collect and analyze data to determine and locally address over and under triage. See the attachment (4.0) *SETTRAC_MH Diversion*.

Health and Safety Code, Chapter 92, authorizes DSHS to adopt rules concerning the reporting and control of injuries. The requirements of 25 TAC, §§103.1 – 103.8 are summarized below.

EMS Providers

EMS providers shall report all runs. A run is defined as a resulting action from a call for assistance where an EMS provider is dispatched to, responds to, provides care to, or transports a person. That includes trauma and medical, emergency and non-emergency, transport and non-transport runs.

All of the required fields listed in the EMS Data Dictionary (see the EMS Data Dictionary at <http://www.dshs.state.tx.us/injury/registry/2002emsdatadictionary.pdf>), and in the file format described in the data dictionary. Key data that must be reported on every run include: call type, run type, response type, cause of injury, injury type, dispatch time, arrive scene time, depart scene time, arrive destination time, sex, county of occurrence, suspected illness/chief complaint (<http://www.dshs.state.tx.us/injury/registry/datadict.shtm>).

Rule requires that EMS providers submit all runs. Higher compliance with EMS/Trauma Registry would greatly improve the ability of all trauma system stakeholders to evaluate the system, but there has been no enforcement because of problems with the state Trauma Registry.

Data shall be submitted within three months from the date of call for assistance. The EMS/Trauma Registry recommends that EMS providers and business associates submit data monthly. When there is no data for a particular month, the EMS provider shall submit a No Reportable Data using the online system within 90 days of that month.

Data shall be sent electronically. The appropriate method is to establish an account with the EMS/Trauma Registry and use the online system for submitting data. EMS providers may use their own software or the free online system for entering data.

Hospitals

Hospitals shall submit all major trauma cases where the patient died or arrived dead, was admitted for more than 48 hours, was transferred in to the initial receiving hospital, or was transferred out to another hospital. Hospitals also submit all traumatic spinal cord injuries, traumatic brain injuries, and submersions. Refer to the definitions on the following page for more details on case inclusion.

For traumas, TBIs and SCIs, all of the required fields listed in the Hospital Data Dictionary (see the Hospital Data Dictionary at

<http://www.dshs.state.tx.us/injury/registry/2002hospitaldatadictionary.pdf>), in the file format described in the data dictionary are reported. For submersions, all data requested on the submersion form is required.

We recognize compliance with EMS/Trauma Registry reporting would greatly improve the ability of all trauma system stakeholders to evaluate the system. However, strict enforcement has been postponed because of long-standing issues with the state Trauma Registry. The lack of compliance with data submission may also affect the quality of data reports generated by the EMS/Trauma Registry. The compliance rate for undesignated hospital facilities is around 15%.

Data shall be submitted within three months from the date of discharge. The EMS/Trauma Registry recommends that hospitals and business associates submit data monthly. When there is no data for a particular month, the hospital shall submit a No Reportable Data using the online system within 90 days of that month.

The trauma, TBI, and SCI data shall be sent electronically. The appropriate method is to establish an account with the EMS/Trauma Registry and use the online system for submitting data. Hospitals may use their own software or the free online system for entering data. Submersion data shall be sent using the paper form which can be found on the DSHS Injury website.

Both hospitals and EMS are allowed to submit through a business associate. However, it is the responsibility of the individual hospital to ensure that its data is accepted into the Texas EMS/Trauma Registry.

a. Time from arrival to a center and ultimate discharge to a facility capable of providing definitive care. If yes, specify the mean time to transfer.

This information is available through the state Trauma Registry upon request, but has not been requested as a regularly run report for the evaluation of the trauma system. Mean transfer time from an undesignated facility to a facility capable of providing definitive care is 11.2 hours. Mean transfer time from a Level IV facility to another is 11.7 hours. Mean transfer time from a Level III to another is 19.9 hours. Mean transfer time from a Level II to another is 45.3 hours. Mean transfer time from a Level I facility to another is 121.0 hours. The data includes all patients transferred to an acute care facility (destination="acute care facility"). Some records did not contain valid time points from which to calculate the time interval from arrival to discharge and were excluded from analysis. See attached file below for Trauma Registry Data on questions a., b., and c.

b. Proportion of patients with injury more severe than a predefined injury severity threshold (for example, ISS >15, or other criteria) who receive definitive care at a facility other than a Level I or II trauma center (undertriage)

This information is available through the state Trauma Registry upon request, but has not been requested as a regularly run report for the evaluation of the trauma system. Proportion of patients with injury more severe than a predefined injury severity threshold ISS>15 who receive definitive care at a facility other than a Level I or II center is 4.7%

c. Proportion of patients with injury less severe than a predefined injury severity threshold (for example, ISS <9) who are transferred from any facility to a Level I or II trauma center (overtriage)

This information is available through the state Trauma Registry upon request, but has not been requested as a regularly run report for the evaluation of the trauma system. The proportion of patients with injury less severe than ISS<9 is 5.9%.

See data tables attached for verification of answers to a., b., and c. above: attachment (4abc.0) *Registry Report.xls* .

5. Describe how your system addresses problems related to significant overtriage or undertriage, both primary and secondary.

Assessment of over or under triage is not a performance improvement or data collection category specifically required by administrative code rule, but patient injury severity is among the data collected in the hospital data dictionary, and each trauma system monitors data in an effort to address the problem. Individual hospitals and their regional RAC do generally collect and analyze data related to diversion rates, especially that occur at Level I and II trauma facilities, to develop medical protocols and transport guidelines locally that should address over and under triage. See the attachment (4.0) *SETTRAC_MH Diversion*.