MODEL TRAUMA SYSTEM PLANNING AND EVALUATION

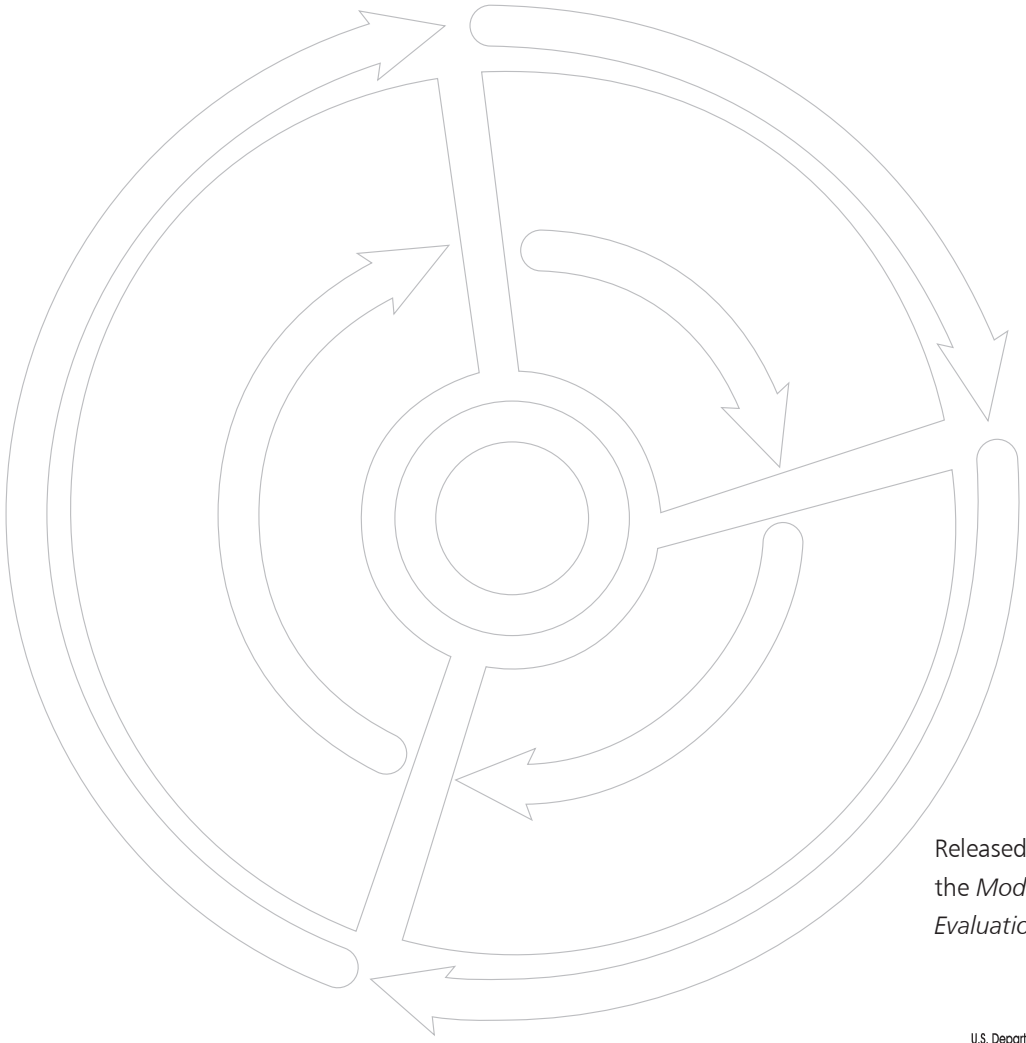
Trauma System Self-Assessment Supplemental Tool: Benchmarks, Indicators, and Scoring

U.S. Department of Health and Human Services

U.S. Department of Health and Human Services
HRSA
Health Resources and Services Administration

TRAUMA SYSTEM SELF-ASSESSMENT SUPPLEMENTAL TOOL:

Benchmarks, Indicators, and Scoring



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STATE SELF-ASSESSMENT FOR TRAUMA SYSTEM PLANNING, DEVELOPMENT, AND EVALUATION

In the absence of validated national benchmarks, or norms, this document stresses the need for each trauma system to define its system-specific health status benchmarks and performance indicators and to use a variety of community health and public health interventions to improve the community's health status. The document also addresses reducing the burden of injury as a community-wide public health problem, not strictly as a trauma patient care issue.

This portion of the document focuses on an objective State and sub-State (regional) trauma system self-assessment. How a question is answered will depend on a group agreement on the "jurisdiction" being assessed, for example, State, regional, or local. Such an agreement is essential to ensuring consistency among participants during the assessment. This fact notwithstanding, some indicators refer to entities with specific "authority," for example, to regulate, and may therefore shift the focus from a locality or region to the State. As long as there is agreement among the stakeholders about what is being rated in each section, the tool can aid in identifying and prioritizing areas that need attention. It also provides the State lead agency with guidance on trauma system next steps or improvements to be made along a continuum of a maturing and developing trauma system. Many of the benchmarks and indicators are qualitative, and will require judgment and discretion by those completing the assessment—a recognized limitation of this methodology. Other evaluation tools exist to assess system performance such as the American College of Surgeons, Committee on Trauma, *Consultation for Trauma Systems* document. The trauma system industry has many consultant groups who conduct external reviews of trauma system status with recommendations for improvements. These review opportunities assist in assessing the status of trauma care and move systems forward in developing inclusive and comprehensive systems of trauma care. For years, systems have conducted their own internal or external reviews, and it is hoped that this document will serve as another tool used by systems to assess the current status of trauma care and to provide guidance on future system enhancements.

BENCHMARKS, INDICATORS, AND SCORING

Benchmarks are global overarching goals, expectations, or outcomes. In the context of the trauma system, a benchmark identifies a broad system attribute.

Indicators are those tasks or outputs that characterize the benchmark. Indicators identify actions or capacities within the benchmark. Indicators are the measurable components of a benchmark.

Scoring breaks down the indicator into completion steps. Scoring provides an assessment of the current status and marks progress over time to reach a certain milestone.

Within each core function (Assessment, Policy Development, and Assurance) are a variety of potential benchmarks. These potential benchmarks are based, to the extent possible, on current literature on trauma system development and public health systems. For each benchmark, a number of INDICATORS further define the benchmark and scoring for each indicator to assist in identifying progress, efforts, or compliance, or any combination of these. Each indicator contains a scoring-mechanism ordering of statements to assess progress to date. The following criteria are used to assess progress in complying with each indicator.

Score	Progress Scoring
0	Not known
1	No
2	Minimal
3	Limited
4	Substantial
5	Full

The following table provides an example of how the above criteria are used to assess trauma system progress for a specific indicator.

Example of Progress Scoring

Indicator 101.1: A thorough description of the epidemiology of injury in the system jurisdiction using both population-based data and clinical databases exists.

Score	Criteria
0	The scorer does not know enough about the indicator to evaluate it effectively.
1	There is no detailed analysis of injury mortality.
2	Death certificate data have been used to describe the statewide incidence of trauma deaths aggregating all etiologies, but no E-code reporting is available.
3	Death certificate data, by E-code, are reported on a statewide basis, but are not reported by sub-State jurisdiction.
4	Death certificate data, by E-code, are reported on statewide and sub-State jurisdictions. These data are compared to national benchmarks, if available.
5	Death certificate data, by E-code, are used as part of the overall assessment of trauma care in a State or sub-State, including statewide rural and urban preventable mortality studies.

The rater would review the criteria listed and select the one that best describes the jurisdiction's current ability to describe injury mortality ranging from none in neophyte systems to preventable deaths occurring within the trauma care system in the most mature systems.

Benchmark 101

A thorough description of the epidemiology of injury in the system jurisdiction using both population-based data and clinical databases exists.

Indicator	Score
Indicator 101.1	5
Indicator 101.2	3
Indicator 101.3	2
Median Score Expectation 101	**3**

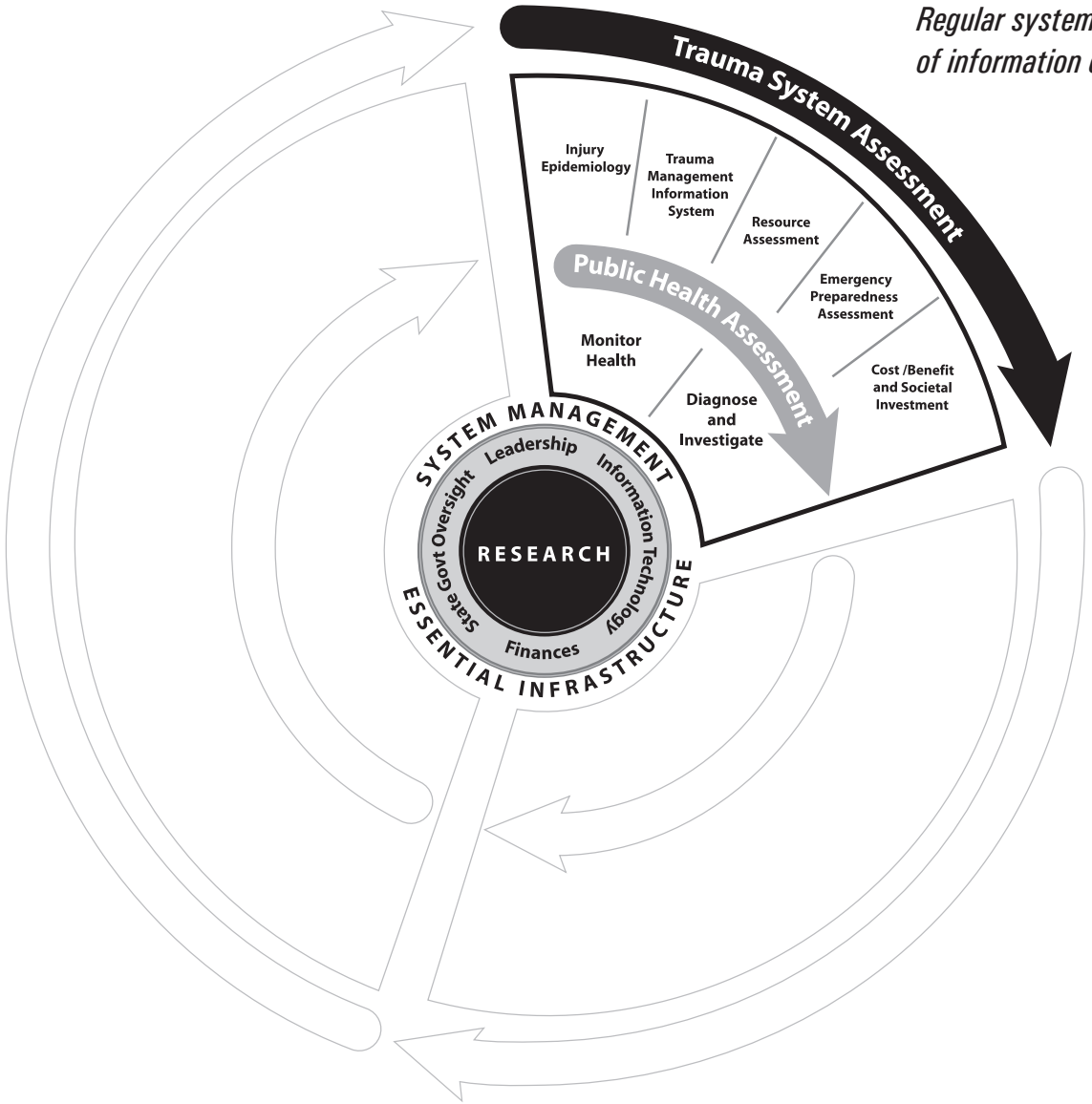
In this benchmark, the median score of "3" would indicate that, overall, there is evidence of limited, but demonstrable progress in meeting the expectation. Although this scoring mechanism provides a quantitative descriptor of each indicator and, ultimately, of the entire trauma system, the scoring process has a number of methodological limitations:

- The benchmarks focus primarily on process measures, not on outcomes. It is assumed that meeting these process measurements will result in improved outcomes. Each trauma system, however, will determine its specific outcome goals. As better-defined and measured national benchmarks are established, it will be possible to assess progress with national outcomes and with nationally established performance guidelines.
- Despite the "apparent" objectivity of the evaluation methodology, it still relies on the qualitative judgments by those completing the assessment.
- Despite efforts to make the document fully objective, it is difficult to provide complete operational definitions for some terms. One assessment to another will vary considerably, depending on the experience and expertise of the assessor.
- The data presented are "rank ordered." Therefore, it is not possible to do parametric statistical analysis such as a mean. Individuals are cautioned not to perform statistical analyses that exceed the underlying data assumptions. Likewise, persons are cautioned

about drawing conclusions from the median score. Because the "points" are not discrete points on an ordered scale, it is not possible to say, for instance, that a score of 4 is twice as good as a score of 2. The median simply denotes the relative progress in achieving the benchmark.

- Although focus groups have reviewed the rank-ordered expectations, some may disagree with both the order and the content. This section and its scoring are not absolute.
- The benchmarks and indicators are not exhaustive. As the document continues to evolve, these will be modified. Additional indicators will be added and some existing indicators will be deleted.
- The self-assessment is but ***one*** tool to use in assessing the progress a system has made in meeting the above-referenced benchmarks and indicators. Any system review should include outcome measures as a full measure of system performance.
- The reader is, once again, cautioned that the benchmarks, indicators, and scoring mechanisms are in draft form. The benchmarks, indicators, and scoring (BIS) are clearly intended to be a "living tool" that will evolve and be refined as the BIS are used across a variety of settings. Eventually, weighting criteria will be added so that the more important aspects of a comprehensive and inclusive trauma system are more clearly identified. The intent of the tool is to allow an individual trauma system to identify its own strengths and weaknesses, prioritize activities, and measure progress against itself over time. It is not intended to compare one system to another.

100. ASSESSMENT



Regular systematic collection, assembly, analysis, and dissemination of information on the health of the community.

BENCHMARK

101. There is a thorough description of the epidemiology of injury in the system jurisdiction using both population-based data and clinical databases.

Essential Service: *Monitor Health*

Indicator	Scoring	Comments
101.1 There is a thorough description of the epidemiology of injury mortality in the system jurisdiction using population-based data.	0. Not known 1. There is no thorough description of the epidemiology of injury mortality in the system jurisdiction. 2. Death certificate data have been used to describe the statewide incidence of trauma deaths aggregating all etiologies, but no E-code reporting is available. 3. Death certificate data, by E-code, are reported on a statewide basis, but are not reported by sub-State jurisdiction. 4. Death certificate data, by E-code, are reported on statewide and sub-State jurisdictions. These data are compared to national benchmarks, if available. 5. Death certificate data, by E-code, are used as part of the overall assessment of trauma care in a State or sub-State, including statewide rural and urban preventable mortality studies.	

Essential Service: *Monitor Health*

Indicator	Scoring	Comments
101.2 There is a description of injuries within the trauma system jurisdiction including the distribution by geographic area, high-risk populations (pediatric, elder, distinct cultural/ethnic, rural, and others), incidence, prevalence, mechanism, manner, intent, mortality, contributing factors, determinants, morbidity, injury severity (including death), and patient distribution using any or all the following: vital statistics, emergency department (ED) data, EMS data, hospital discharge data, State police data (those from law enforcement agencies), medical examiner data, trauma registry, and other data sources. The description is updated at regular intervals. **Note:** Injury severity should be determined through the consistent and system-wide application of one of the existing injury scoring methods, for example, Injury Severity Score (ISS).	0. Not known 1. There is no written description of injuries within the trauma system jurisdiction. 2. One or more population-based data sources (e.g., vital statistics and medical examiner data) describe injury within the jurisdiction, but clinical data sources are not used. 3. One or more population-based data sources and one or more clinical data sources are used to describe injury within the jurisdiction. 4. Multiple population-based and clinical data sources are used to describe injury within the jurisdiction, and the description is systematically updated at regular intervals. 5. Multiple population-based and clinical data sources (e.g., trauma registry, ED data, and others) are electronically linked and used to describe injury within the jurisdiction.	

Essential Service: *Monitor Health*

Indicator	Scoring	Comments
101.3 There is a comparison of injury mortality using local, regional, statewide, and national data.	0. Not known 1. There is no written comparison of injury mortality using local, regional, statewide, and national data. 2. There is a written descriptive comparison of at least the leading cause of injury death using local, regional, and statewide data. 3. There is a written descriptive, graphic, and tabular comparison of the leading cause of injury death using local, regional, statewide, and national data. 4. There is a written descriptive, graphic, and tabular comparison of the *top three* leading causes of injury death using local, regional, statewide, and national data. 5. There is a written descriptive, graphic, and tabular comparison of the *top ten* leading causes of injury death using local, regional, statewide, and national data.	

Essential Service: *Monitor Health*

Indicator	Scoring	Comments
101.4 Collaboration exists between EMS, public health officials, and trauma system leaders to complete injury risk assessments.	0. Don't know 1. No injury risk assessments are conducted. 2. Trauma system officials conduct injury assessments; however, there is no involvement of EMS or public health officials in those assessments. 3. Public health officials, along with EMS and trauma system participants, assist with the design of injury risk assessments. 4. Public health officials, along with EMS and trauma system leaders, assist with the design and analysis of injury risk assessments. 5. The public health epidemiologist, along with EMS and trauma system leaders, is involved in the development of injury reports. There is clear evidence of data sharing, data linkage, and well-defined reporting roles and responsibilities.	

Essential Service: *Monitor Health*

Indicator	Scoring	Comments
101.5 Integration of injury into other public health risk assessments occurs at State, regional, and community levels, resulting in the integration into key reports and planning documents such as *Healthy People 2010*.	0. Not known 1. No injury risk assessments are completed. 2. Injury risk assessments are conducted in a segregated manner by the trauma program, separate from other public health risk assessments. 3. Injury risk assessments are combined with other assessment data, after separate collection and analysis efforts. 4. Injury risk assessments are conducted by public health officials as an integrated component with other health risk assessments. 5. Injury risk assessments are conducted by public health officials as an integrated component with other health risk assessments. Comparisons and contrasts between injury death and disability rates are made, fully integrated, and published, along with other leading health risk indicators, for example, HIV/AIDS, cardiac, and cancer, in *Health of the State* and other formal public health documents.	

Essential Service: *Diagnose and Investigate*

Indicator	Scoring	Comments
101.6 The trauma system works with EMS and the public health system to complete a jurisdiction-wide study of the determinants of injury using existing data sources and public health tools.	0. Not known 1. There is no jurisdiction-wide study of the determinants of injury. 2. The trauma system, EMS, and public health officials (including EMS) use existing data sources such as the Behavioral Risk Factor Surveillance System (BRFSS) to describe determinants of injury among the general population. 3. The trauma system, EMS, and public health officials (including EMS) use existing data sources such as the Youth Risk Behavior Survey (YRBS) to describe determinants of injury among high-risk subpopulations. 4. Statewide data from all potential sources, for example, BRFSS, YRBS, Fatality Analysis Reporting System (FARS), vital records, and others, pertaining to the risk of injury, are summarized, electronically linked, and analyzed to determine the potential target areas for injury prevention activities. 5. A State injury prevention plan identifies injury prevention targets based, in part, on the determinants of injury and injury risk, and identifies strategies to document and demonstrate the cost-benefit of various behaviors.	

Essential Service: *Diagnose and Investigate*

Indicator	Scoring	Comments
101.7 The trauma system works with EMS and public health to identify special at-risk populations.	0. Not known 1. There is no effort to describe risks to special at-risk populations such as age categories, cultural/ethnic populations, geographic variances, pediatrics, and high-risk co-morbidities, for example, substance abuse, or children with special health care needs, or any combination of these. 2. Risk assessments have been conducted for various age groupings, for example, adolescents and elder persons. 3. In addition to risk assessments for age cohorts, cultural/ethnic variations have been analyzed. 4. In addition to risk assessments for age and cultural/ethnic cohorts, geographic distribution of injury within the jurisdiction has been analyzed, for example, inner city versus suburban. 5. There is strong evidence that multiple special at-risk populations have been identified during the assessment processes.	

BENCHMARK

102. There is an established trauma management information system (MIS) for ongoing injury surveillance and system performance assessment.

Essential Service: *Monitor Health*

Indicator	Scoring	Comments
102.1 There is an established injury surveillance process that can, in part, be used as an MIS performance measure.	0. Not known 1. There is no established system-wide injury surveillance process. 2. There is a system-wide trauma registry, but not all hospitals in the service area contribute to the trauma management information system. 3. There is a system-wide trauma registry with all hospitals in the service area contributing data. 4. The system-wide trauma registry data are bolstered by one or more of the following databases: EMS data system, ED data system, or hospital discharge data. 5. The statewide trauma registry, EMS data system, ED data system, hospital discharge data, rehabilitation, and burn data system are accessible, electronically linked, and have consistent data definitions and elements. The data are used for both injury surveillance and MIS performance measures.	

Essential Service: *Monitor Health*

Indicator	Scoring	Comments
102.2 Injury surveillance is coordinated with statewide and local community health surveillance.	0. Not known 1. Injury surveillance, as described in 102.1, does not occur within the system. 2. Injury surveillance occurs in isolation from other health risk surveillance and is reported separately. 3. Injury surveillance occurs in isolation but is combined and reported with other health risk surveillance processes. 4. Injury surveillance occurs as part of broader health risk assessments. 5. Processes of sharing and linkage of data exist between EMS systems, public health systems, and trauma systems, and the data are used to monitor, investigate, and diagnose community health risks.	

Essential Service: *Monitor Health*

Indicator	Scoring	Comments
102.3 Trauma data are electronically linked from a variety of sources. Note: Deterministically means with such patient identifiers as name and date of birth. Probabilistically means computer software is used to match likely records through such less certain identifiers as date of incident, patient age, gender, and others.	0. Not known 1. Trauma registry data exist but are not deterministically or probabilistically linked to other databases. 2. Trauma registry data exist and can be deterministically linked through hand-sorting processes. 3. Trauma registry data exist and can be deterministically linked through computer-matching processes. 4. Trauma registry data exist and can be deterministically and probabilistically linked to at least one other injury database including: EMS data systems (i.e., patient care records, dispatch data, and others), ED data systems, hospital discharge data, and others. 5. All data stakeholders (insurance carriers, FARS, and rehabilitation, in addition to typical trauma system resources) have been identified, data access agreements executed, hardware and software resources secured, and the "manpower" designated to deterministically and probabilistically link, analyze, and report a variety of data sources in a timely manner.	

Essential Service: *Monitor Health*

Indicator	Scoring	Comments
102.4 There is a process to evaluate the quality, timeliness, completeness, and confidentiality of data.	0. Not known 1. There is no process or written policy to evaluate the quality, timeliness, completeness, and confidentiality of the data collected in the system. 2. There is a process of evaluation and written policy but no compliance with governance. Confidentiality of information is not ensured. 3. The process of reviewing the quality, timeliness, completeness, and confidentiality of data is just beginning. There is some compliance with a draft written policy. 4. There are draft written policies in place for evaluating the quality (including both reliability and validity), timeliness, and completeness of data and for ensuring confidentiality. 5. There is a comprehensive written policy and demonstrated compliance concerning data management and governance including an evaluation of the quality, timeliness, and completeness of data, with confidential protection of records ensured while allowing appropriate access for research purposes.	

Essential Service: *Monitor Health*

Indicator	Scoring	Comments
102.5 There is an established method of collecting trauma financial data from all health care facilities and trauma agencies including patient charges as well as administrative and system costs.	0. Not known 1. Financial data are not collected as part of the trauma system registry. 2. Financial data are collected as part of the trauma system registry at individual facilities but are not reported to the lead trauma authority. 3. Financial data are collected as part of the trauma system registry and are analyzed and reported by the lead trauma authority. 4. Financial data from the trauma registry are linked with at least one other source of cost data such as hospital discharge data. 5. Financial data are linked and analyzed from the trauma registry, insurers, emergency department, EMS, hospital discharge, and rehabilitation and are compared with general trauma system infrastructure costs to establish the general financial health of the system and its value to the community.	

BENCHMARK

103. A resource assessment for the trauma system has been completed and is regularly updated.

Essential Service: *Monitor Health*

Indicator	Scoring	Comments
103.1 The trauma system has completed a comprehensive system status inventory that identifies the availability and distribution of current capabilities and resources.	0. Not known 1. There is no statewide resource assessment. 2. A State resource assessment has been completed that documents the frequency and distribution of resources for at least two of the following categories: prehospital and hospital personnel, education programs, facilities, and prehospital equipment. 3. A State resource assessment has been completed that documents the frequency and distribution of resources for more than two of the following categories: leadership, system development, legislation, finances, injury prevention, workforce resources, education, EMS, transport, communications, trauma care facilities, interfacility transfer, medical rehabilitation, information systems, medical oversight, system evaluation, performance improvement, and research. 4. A trauma jurisdiction-specific resource assessment has been completed for at least half of the trauma jurisdictions. 5. Trauma jurisdiction-specific resource assessments have been completed for the State, regional, and local areas and are updated at least biennially.	

Essential Service: *System Management*

Indicator	Scoring	Comments
103.2 The trauma system has completed a gap analysis based on the inventories of internal and external system status as well as system resource standards.	0. Not known 1. There are no resource standards on which to base a gap analysis. 2. The State trauma advisory committee has begun to develop statewide trauma system resource standards so that a gap analysis can be completed. 3. State trauma system resource standards have been approved by the appropriate approving authority. 4. A gap analysis of statewide trauma system resources has been completed for the entire State based on the system resource standards adopted. 5. A gap analysis of statewide trauma system resources has been completed for the entire State and is updated at regular intervals based on the trauma resource standards in place.	

Essential Service: *System Management*

Indicator	Scoring	Comments
103.3 There has been an initial assessment (and periodic reassessment) of overall system effectiveness.	0. Not known 1. No preventable mortality assessment has been conducted on a system-wide basis. 2. A system-wide preventable mortality study has been completed. 3. A system-wide preventable mortality study that includes rates, frequencies, and types of inappropriate care rendered within the hospitals participating in the trauma system has been conducted. 4. A system-wide preventable mortality study that includes rates, frequencies, and types of inappropriate care rendered in all phases of care within the trauma system, for example, prehospital, rehabilitation, and others, has been conducted. 5. The system has completed preventable mortality studies that include the determination of rates of inappropriate care, as well as an examination of the number of severely injured (ISS>15) patients arriving at the highest levels of available care within appropriate times. The assessment is repeated at regular intervals (could be an annual summary of deaths and complications).	

Essential Service: *System Management*

Indicator	Scoring	Comments
103.4 The trauma system has undergone a jurisdiction-wide external independent analysis.	0. Not known 1. No external examination of the trauma system or individual components has occurred. 2. Individual trauma centers have undergone outside consultation and verification. 3. In addition to trauma center verification, at least one other component of the system has been analyzed by external reviewers, for example, prehospital, rehabilitation, burns, and others. 4. An outside group of trauma system "experts" has conducted a formal trauma system external assessment and has made specific recommendations to the system. 5. Independent, external reassessment occurs regularly, at least every 5 years.	

BENCHMARK

104. An assessment of the trauma system's emergency preparedness has been completed including coordination with the public health, EMS system, and the emergency management agency.

Essential Service: *System Management*

Indicator	Scoring	Comments
104.1 There is a resource assessment of the trauma system's ability to expand its capacity to respond to mass casualty incidents (MCIs) in an all-hazards approach.	0. Not known 1. There is no resource assessment of the trauma system's ability to expand its capacity to respond to mass casualty incidents for in an all-hazards approach. 2. An assessment of the ability of some components of the trauma care system to respond to a mass casualty incident has been included in all-hazards planning. 3. An assessment of the ability of all components of the trauma system to respond to a mass casualty incident has been conducted on a jurisdiction-wide basis. 4. A written inventory of system-wide MCI capacity has been completed and includes: medical reserve personnel, facility surge capacity, additional equipment resources and caches, communication interoperability, overall management structure such as NIMS (National Incident Management System), and SEMS (Standardized Emergency Management System). 5. The written inventory of trauma system-wide MCI capacity has been shared with, and incorporated into, broader community-wide and statewide planning efforts for all-hazards responses.	

Essential Service: *System Management*

Indicator	Scoring	Comments
104.2 There has been a consultation by external experts to assist in identifying current status and needs of the trauma system to be able to respond to mass casualty incidents.	0. Not known 1. No external examination of the trauma system's performance or ability to respond within the all-hazards response system has occurred at the State, regional, or local level. 2. Individual trauma centers have undergone outside consultation during tabletop and simulated incident drills. 3. In addition to the involvement of at least some individual trauma centers, at least one other component of the trauma system has been analyzed by external reviewers, for example, prehospital, communications, information systems, and others. 4. Preparations are under way for a formal system-wide review of the trauma system response to a mass casualty incident (to occur within the next 6 months). 5. An outside group of all-hazards response "experts" has conducted a formal external assessment and has made specific recommendations to the system.	

Essential Service: *System Management*

Indicator	Scoring	Comments
104.3 The trauma system has completed a gap analysis based on the resource assessment for trauma emergency preparedness.	0. Not known 1. There are no resource standards on which to base a gap analysis. 2. The statewide trauma advisory committee, in conjunction with appropriate incident management personnel, has begun to develop statewide MCI response resource standards. 3. State resource standards for trauma system response during a mass casualty incident have been developed and approved. 4. Some components (e.g., prehospital) of the trauma system, or facilities within it, have completed a gap analysis based on the adopted standards. 5. A system-wide trauma system MCI resource gap analysis has been completed for the jurisdiction based on the system resource standards adopted.	

BENCHMARK

105. The system assesses and monitors its value to its constituents in terms of cost-benefit analysis and societal investment.

Essential Service: *System Management*

Indicator	Scoring	Comments
105.1 The benefits of the trauma system, in terms of years of productive life lost (YPLL), quality-adjusted life years (QALY), disability-adjusted life years (DALY), and so on, are described.	0. Not known 1. There are no cost data available to the system to compare to quality of life indicators. 2. Trauma system costs are included in the trauma management information system that can serve as the basis for these calculations. 3. Additional sources of data, in terms of other economic and quality of life measures, are available. 4. Cost and quality of life measures can be analyzed and presented in descriptive and graphic form. 5. A series of reports and fact sheets are available and regularly updated to descriptively and graphically illustrate costs and benefits of the trauma system as well as the cost and benefits of specific personal behaviors.	

Essential Service: *System Management*

Indicator	Scoring	Comments
105.2 Cases that document the societal benefit are reported on so that the community sees and hears the benefit of the trauma system to society.	0. Not known 1. No effort is made to gather, catalogue, or report cases that document the societal benefit of the trauma system so that the community sees and hears the benefit of the trauma system to society. Such cases, for example, document descriptive information on dramatic "saves" within the trauma system. 2. Dramatic saves and functional outcome returns are documented at each facility or within various components of the system. 3. Cases concerning dramatic saves and return to a quality life are on file (at a system level), but not reported unless asked for by the press. 4. Dramatic saves and functional outcome returns are provided to, and reported by, the press. 5. Cases are used as part of information fact sheets that are distributed to the press and other segments of the community. These information fact sheets document the cost-benefit of the trauma system to the community.	

Essential Service: *System Management*

Indicator	Scoring	Comments
105.3 An assessment of the needs of the media concerning trauma system information has been conducted.	0. Not known 1. There is no routine or planned contact with the media. 2. Plans are in place to feed information to the media in response to a particular traumatic event. 3. The media have been formally asked about what types of information would be helpful in reporting on trauma cases and issues. 4. Information resources for the media have been developed, based on the stated needs of the media; media representatives are included in trauma system informational events. 5. In addition to routine media contact, the media are involved in various oversight activities such as local, regional, and State trauma advisory councils.	

Essential Service: *System Management*

Indicator	Scoring	Comments
105.4 An assessment of the needs of public officials concerning trauma system information has been conducted.	0. Not known 1. There is no routine or planned contact with public officials. 2. Plans are in place to provide information to public officials in response to a particular traumatic event. 3. Public officials and policy makers have been formally asked what types of information would be helpful in planning, monitoring, and reporting on trauma system issues. 4. Information resources for public officials have been developed, based on the stated needs of the public officials; public officials are included in trauma system informational events. 5. In addition to routine contact, public officials are involved in various oversight activities such as local, regional, and State trauma advisory councils.	

Essential Service: *System Management*

Indicator	Scoring	Comments
105.5 An assessment of the needs of the general public concerning trauma system information has been conducted.	0. Not known 1. There is no routine or planned contact with the general public. 2. Plans are in place to provide information to the general public in response to a particular traumatic event. 3. The general public has been formally asked about what types of information would be helpful in understanding and supporting trauma system issues. 4. Information resources for the general public have been developed, based on the stated needs of the general public; general public representatives are included in trauma system informational events. 5. In addition to routine contact, the general public is involved in various oversight activities such as local, regional, and State trauma advisory councils.	

Essential Service: *System Management*

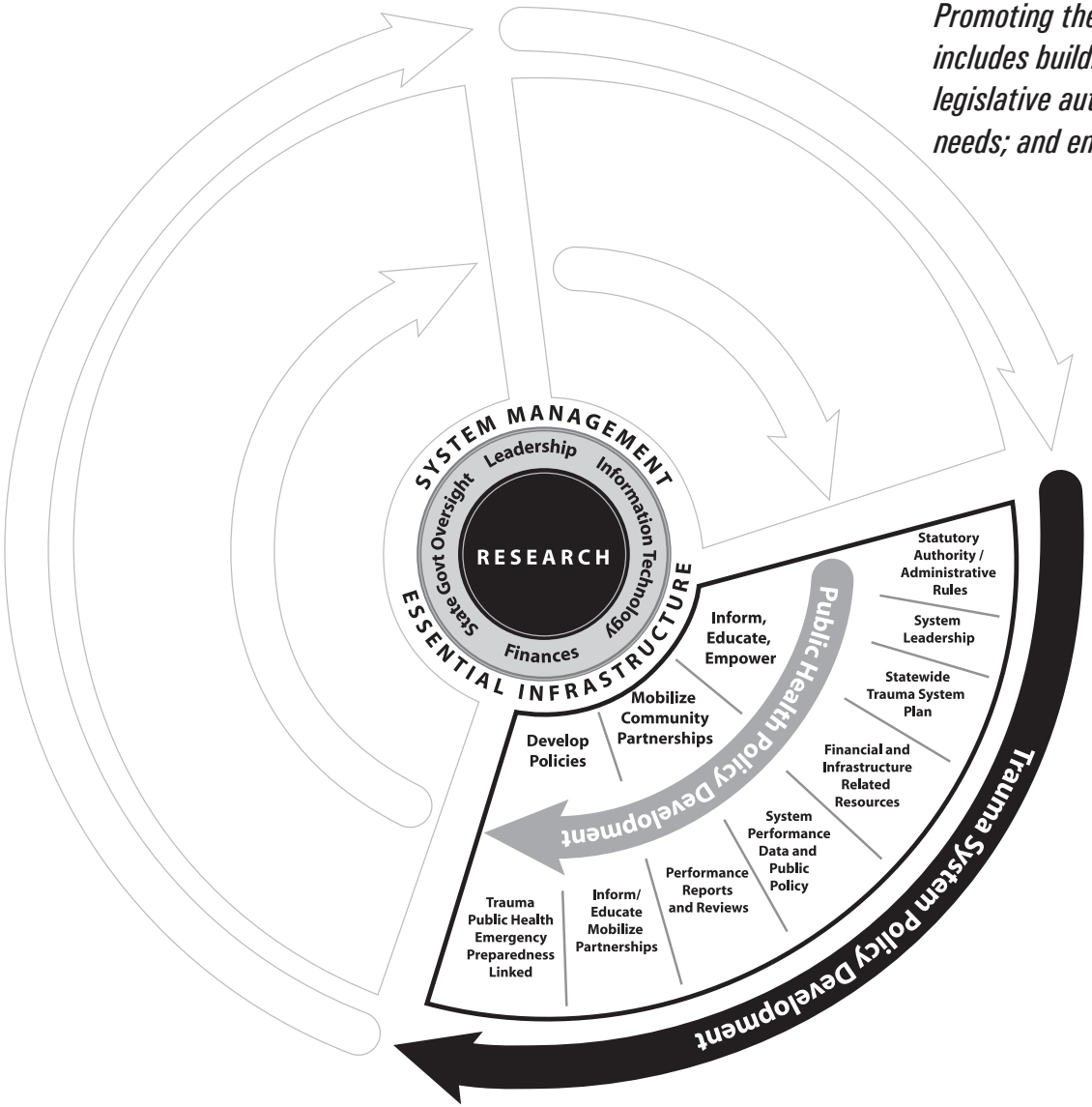
Indicator	Scoring	Comments
105.6 An assessment of the needs of health insurers concerning trauma system information has been conducted.	0. Not known 1. There is no routine or planned contact with health insurers. 2. Plans are in place to provide information to health insurers during a response to a particular payment, reimbursement, and cost issue. 3. Health insurers have been formally asked about what types of information would be helpful in reporting on trauma cases and issues. 4. Information resources for health insurers have been developed, based on the stated needs of the insurers; insurance representatives are included in trauma system informational events. 5. In addition to routine contact, health insurers are involved in various oversight activities such as local, regional, and State trauma advisory councils.	

Essential Service: *System Management*

Indicator	Scoring	Comments
105.7 An assessment of the needs of the general medical community, including physicians, nurses, prehospital care providers, and others, concerning trauma system information, has been conducted.	0. Not known 1. There is no routine or planned contact with the broad medical community. 2. Plans are in place to provide information to the broad medical community in response to a particular trauma system event or issue. 3. The broad medical community has been formally asked about what types of information would be helpful in reporting on trauma cases and issues. 4. Information resources for the general medical community have been developed, based on the stated needs of the general medical community; general medical community representatives are included in trauma system informational events. 5. In addition to routine contact, the broad medical community is involved in various oversight activities such as local, regional, and State trauma advisory councils.	

200. POLICY DEVELOPMENT

Promoting the use of scientific knowledge in decision making that includes building constituencies; identifying needs and setting priorities; legislative authority and funding to develop plans and policies to address needs; and ensuring the public's health and safety.



BENCHMARK

201. Comprehensive State statutory authority and administrative rules support trauma system leaders and maintain trauma system infrastructure, planning, oversight, and future development.

Essential Service: *Develop Policies*

Indicator	Scoring	Comments
201.1 The legislative authority (statute and regulations) plans, develops, implements, manages, and evaluates the trauma system and its component parts, including the identification of the lead agency and the designation of trauma facilities.	0. Not known 1. There is no specific legislative authority to plan, develop, implement, manage, and evaluate, or fund, the trauma system and its component parts. 2. There is legislative authority for establishing a trauma system, and specific timelines for adoption are being drafted and reviewed by trauma and injury constituencies. 3. The lead agency is identified in State statute and is required to plan and develop a statewide trauma system. 4. The lead agency is authorized to take actions to implement the trauma system and to report on the progress and effectiveness of system implementation. 5. The lead agency is required to plan, develop, implement, manage, monitor, and improve the trauma system while reporting regularly on the status of the trauma system within the State.	

Essential Service: *Develop Policies*

Indicator	Scoring	Comments
201.2 The legislative authority states that all the trauma system components, EMS, injury control, incident management, and planning documents, work together for the effective implementation of the trauma system (infrastructure is in place).	0. Not known 1. There is no legislative authority or integrated management, and system participants do not routinely work together. 2. There is no legislative authority; planning documents reflect a silo management structure in that participating agencies are not linked. For key issues, stakeholders sometimes come together to resolve problems. 3. There is no legislative authority, but people are working together to improve system effectiveness and management within their individual jurisdictions. 4. There is legislative authority, although it is not clearly evident that system components are integrated and working together. 5. There is legislative authority; it clearly provides for the integration of trauma system components for an effective management and infrastructure to plan and implement the trauma system, as evidenced by agency involvement and interaction.	

Essential Service: *Develop Policies*

Indicator	Scoring	Comments
201.3 Administrative rules/regulations direct the development of operational policies and procedures at the State, regional, and local levels.	0. Not known 1. There is no legal authority to adopt administrative rules/regulations regarding the development of a trauma system at the State, regional, or local level. 2. There is legal authority, but there are no administrative rules/regulations governing trauma system development, including components of the trauma system such as designation of trauma facilities, adoption of triage guidelines, integration of prehospital providers and rehabilitation centers, communication protocols, and integration with public health and all-hazards preparedness plans. 3. There are draft State, regional, or local rules/regulations for the different components of trauma system development including integration with public health and all-hazards preparedness plans. 4. There are existing statewide administrative rules/regulations for planning, developing, and implementing the trauma system and its components at the State, regional, and local levels. 5. The lead agency regularly reviews, through established committees and stakeholders, the rules/regulations governing system performance, including policies and procedures for system operations at the State, regional, and local levels that include integration with public health and all-hazards preparedness plans.	

Essential Service: *Develop Policies*

Indicator	Scoring	Comments
201.4 The lead agency has adopted clearly defined trauma system standards (e.g., facility standards, triage and transfer guidelines, and data collection standards) and has sufficient legal authority to ensure and enforce compliance.	0. Not known 1. The lead agency does not have sufficient legal authority and has not adopted or defined trauma system performance and operating standards, nor is there sufficient legal authority to do so. 2. Sufficient authority exists to define and adopt standards for trauma system performance and operations, but the lead agency has not yet completed this process. 3. There is sufficient legal authority to adopt and implement operation and performance standards including enforcement. Draft process procedures have been developed. 4. The authority exists to fully develop all operational guidelines and standards; the stakeholders are reviewing draft policies and procedures; and adoption by the lead agency, including implementation and enforcement, is pending. 5. The authority exists; operational policies and procedures and trauma system performance standards are in place; and compliance is being actively monitored.	

BENCHMARK

202. Trauma system leaders (lead agency, trauma center personnel, and other stakeholders) use a process to establish, maintain, and constantly evaluate and improve a comprehensive trauma system in cooperation with medical, professional, governmental, and citizen organizations.

Essential Service: *Mobilize Community Partnership*

Indicator	Scoring	Comments
202.1 The lead agency demonstrates that it can bring organizations together to implement and maintain a comprehensive trauma system.	0. Not known 1. There is no evidence of partnerships, alliances, or organizations working together to implement and maintain a comprehensive trauma system. 2. There have been limited attempts to organize groups, but to date no ongoing system committees meeting regularly to design or implement the trauma system. 3. The lead agency has multiple committees meeting regularly to develop and implement a comprehensive trauma system plan. 4. The lead agency demonstrates, through its various committees, an ability to bring together multidisciplinary groups interested in developing, implementing, and maintaining a comprehensive trauma system plan. Multiple stakeholders for various disciplines are routinely recruited to participate in system operational issues and refinement depending on expertise needed (e.g., data vs. public information and education). 5. The lead agency has brought together multiple stakeholder groups to assist with, and make recommendations on, the development and implementation of the trauma system, preferably through a trauma-specific statewide multidisciplinary, multi-agency advisory committee.	

Essential Service: *Mobilize Community Partnership*

Indicator	Scoring	Comments
202.2 The lead agency has developed and implemented a trauma-specific statewide multidisciplinary, multi-agency advisory committee to provide overall guidance to trauma system planning and implementation strategies. The committee meets regularly and is instrumental in providing guidance to the lead agency.	0. Not known 1. There is no trauma-specific statewide multidisciplinary, multi-agency advisory committee providing guidance to the State lead agency in planning and developing a statewide trauma system. 2. There is no trauma-specific statewide multidisciplinary, multi-agency advisory committee, and attempts to organize one have not been successful but are continuing. 3. There is a trauma-specific statewide multidisciplinary, multi-agency advisory committee, but its meetings are infrequent and guidance is not always sought or available. Collaborative working arrangements have not been realized. 4. There is a trauma-specific statewide multidisciplinary, multi-agency advisory committee. Committee members and stakeholders regularly attend meetings. Collaboration and consensus are beginning. 5. There is a trauma-specific multidisciplinary, multi-agency advisory committee with well-defined goals and responsibilities. It meets regularly with the lead agency providing staff support. The committee routinely provides guidance and assistance to the lead agency on system issues. Multiple subcommittees meet as often as necessary to resolve specific system issues and to report back to the trauma-specific statewide multidisciplinary, multi-agency advisory committee. There is strong evidence of consensus building among system participants.	

Essential Service: *Inform, Educate, Empower*

Indicator	Scoring	Comments
202.3 A clearly defined and easily understood structure is in place for the trauma system decision-making process.	0. Not known 1. There is no defined decision-making process (written policy and procedure) regarding the trauma program within the trauma system lead agency or its committees. 2. There is an unwritten decision-making process that stakeholders use when convenient, although not regularly or consistently. 3. The decision-making process is articulated within the State Trauma System Plan, although it has not been fully implemented. Policies are not written. 4. The decision-making process is contained within the trauma system plan, and there are current policies and procedures in place to guide decision making. Use of the decision-making process is infrequent. 5. There is a clearly defined process for making decisions affecting the trauma program. The process is articulated in the trauma system plan and is further identified within system policies. Stakeholders know and understand the process and use it to resolve issues and to improve the program.	

Essential Service: *Inform, Educate, Empower*

Indicator	Scoring	Comments
202.4 Trauma system leaders have adopted and use goals and time-specific, quantifiable, and measurable objectives for the trauma system.	0. Not known 1. There are no goals or time-specific, quantifiable, and measurable objectives for the trauma system. 2. Trauma system leaders have met to discuss time-specific, quantifiable goals. 3. Trauma system leaders are beginning the process of identifying measurable program goals and outcome-based, time-specific, quantifiable, and measurable objectives. 4. Trauma system leaders have adopted goals and time-specific, quantifiable, and measurable objectives that guide system performance. 5. Trauma system leaders, in consultation with their trauma-specific statewide multidisciplinary, multi-agency advisory committee, have established measurable program goals and outcome-based, time-specific, quantifiable, and measurable objectives that guide system effectiveness and system performance.	

BENCHMARK

203. The State lead agency has a comprehensive written trauma system plan based on national guidelines. The plan integrates the trauma system with EMS, public health, emergency preparedness, and incident management. The written trauma system plan is developed in collaboration with community partners and stakeholders.

Essential Service: *Inform, Educate, Empower*

Indicator	Scoring	Comments
203.1 The lead agency, in concert with a trauma-specific multidisciplinary, multi-agency advisory committee, has adopted a trauma system plan.	0. Not known 1. There is no trauma system plan, and one is not in progress. 2. There is no trauma system plan, although some groups have begun meeting to discuss the development of a trauma system plan. 3. A trauma system plan was developed and adopted by the lead agency. The plan, however, has not been endorsed by trauma stakeholders. 4. A trauma system plan has been adopted, developed with multi-agency groups, and endorsed by those agencies. 5. A comprehensive trauma system plan has been developed, adopted in conjunction with trauma stakeholders, and includes the integration of other systems (e.g., EMS, public health, and emergency preparedness).	

Essential Service: *Inform, Educate, Empower*

Indicator	Scoring	Comments
203.2 A trauma system plan exists and is based on analysis of the trauma demographics and resource assessments.	0. Not known 1. There is no effort under way to develop a trauma system plan. 2. The lead agency is developing a trauma system plan without reference to the trauma demographics and resource assessments and analyses. 3. The lead agency is actively developing a trauma system plan based on trauma demographics and resource assessments and analyses. 4. A trauma system plan has been developed identifying system priorities and timelines and integrating trauma demographics and resource assessments and analyses along with EMS, public health, and emergency preparedness plans. 5. The trauma system plan is updated at least biennially based on changes in trauma demographics and resource assessments and analyses. It is reviewed for integration of other relevant plans such as EMS, emergency preparedness, and public health.	

Essential Service: *Inform, Educate, Empower*

Indicator	Scoring	Comments
203.3 There is within the trauma system plan congruence of the population demographics with system development and resource allocation priorities. **Note:** Needs of specific populations (e.g., pediatric, burn, and Native American) are integrated into the plan. Considerations should be given to age, population characteristics, and urban and rural environments.	0. Not known 1. There is no evidence that population demographics drive resource allocation or that this information is used to establish system priorities in developing or implementing the trauma system plan. 2. Population demographics and system resources have been identified. It is not clear that this information is used for system allocation, priority setting, or system planning. 3. There is evidence that planning processes take into consideration the needs of special populations and other cultural or geographic parameters. 4. There is evidence within the trauma system plan that consideration of the needs of differing groups, cultural, geographic, and others, has been included. Specific application of information regarding the needs of special groups is occurring at the provider level. 5. The plan addresses the needs of all residents and visitors including special population groups applicable to the geographic area.	

Essential Service: *Inform, Educate, Empower*

Indicator	Scoring	Comments
203.4 The trauma system plan clearly describes the system design (including the components necessary to have an integrated and inclusive trauma system) and is used to guide system implementation and management. For example, the plan includes references to regulatory standards and documents, and includes methods of data collection and analysis.	0. Not known 1. There is no trauma system plan. 2. The trauma system plan does not address or incorporate the trauma system components (prehospital, communication, transportation, acute care, rehabilitation, and others), nor is it inclusive of all-hazards preparedness, EMS, or public health integration. 3. The trauma system plan provides general information about all the components including all-hazards preparedness, EMS, and public health integration; however, it is difficult to determine who is responsible and accountable for system performance and implementation. 4. The trauma system plan addresses every component of a well-organized and functioning trauma system including all-hazards preparedness and public health integration. Specific information on each component is provided, and trauma system design is inclusive of providing for specific goals and objectives for system performance. 5. The trauma system plan is used to guide system implementation and management. Stakeholders and policy leaders are familiar with the plan and its components and use the plan to monitor system progress and to measure results.	

Essential Service: *Inform, Educate, Empower*

Indicator	Scoring	Comments
203.5 A written injury prevention and control plan is developed and coordinated with other agencies and community health programs. The injury program is data driven, and targeted programs are developed based on high injury risk areas. Specific goals with measurable objectives are incorporated into the injury plan.	0. Not known 1. There is no written plan for a coordinated injury prevention and control program. 2. There are multiple injury prevention and control programs that may conflict with one another or with the goals of the trauma system, or both. 3. There is a written plan for a coordinated injury prevention and control program that is linked to the trauma system plan and that has goals and time-specific, measurable objectives. 4. The injury prevention and control plan is being implemented in accordance with established timelines. 5. The injury prevention and control plan is being implemented in accordance with established timelines; data concerning the effectiveness of the plan are being collected and are used to validate, evaluate, and modify the plan.	

Essential Service: *Mobilize Community Partnerships*

Indicator	Scoring	Comments
203.6 The trauma system plan has established clearly defined methods of integrating with emergency preparedness plans (all hazards).	0. Not known 1. There is no trauma system plan and no integration between trauma and emergency preparedness. 2. There is an established trauma system plan; but it is silent on emergency integration, and no evidence is present to demonstrate integrated incident management and trauma systems. 3. The trauma system plan addresses the interaction of the lead agency of the trauma system and emergency preparedness service system. Close coordination and clearly defined goals and objectives are in process. 4. The trauma system plan addresses coordination between the lead agency of the trauma system and the lead agency for emergency preparedness. Plans are integrated, and working collaboration exists and is demonstrated. Routine working drills and training exercises are incorporated into operational plans. 5. The trauma system plan addresses the lead agency coordination between EMS and emergency preparedness. Plans are well integrated, and routine simulated incident drills that are conducted use an all-hazards approach. Results from drills and live responses are used to further improve the plans and processes.	

Essential Service: *Mobilize Community Partnerships*

Indicator	Scoring	Comments
203.7 The trauma system plan has established clearly defined methods of integrating the trauma system plan with the EMS, emergency, and public health preparedness plans.	0. Not known 1. There is no mention of integration between the trauma system plan and the EMS, emergency, and public health preparedness plans. 2. There is some cross-reference between plans, but defined methods of working collaboratively are not developed. 3. The written plans are integrated and there are defined methods for working collaboratively; however, implementation or practice within the geographic area has not occurred. 4. The trauma system plan has been integrated with other relevant plans. There is evidence of system integration activity. 5. The trauma system planning and operations have been fully integrated with the EMS, emergency, and public health preparedness plans. Training and exercises are conducted regularly, and the integration of the system and its plans is evident.	

BENCHMARK

204. Sufficient resources, including those both financial and infrastructure related, support system planning, implementation, and maintenance.

Essential Service: *Develop Policies*

Indicator	Scoring	Comments
204.1 The trauma system plan clearly identifies the human resources and equipment necessary to develop, implement, and manage the trauma program, both clinically and administratively. (The trauma system plan integrates with the Assessment of Resources done previously.)	0. Not known 1. There is no method of assessing available resources or of identifying resource deficiencies in either the clinical or administrative areas of the trauma system. 2. The trauma system plan addresses resource needs and identifies gaps in resources within the trauma system, but no mechanism for correcting resource deficiencies has been identified. 3. Resource needs are identified, and a draft plan, inclusive of goals and timelines, has been prepared to address the resource needs. The plan has not been implemented. 4. Resource needs are clearly identified, and action plans are being implemented to correct deficiencies in both clinical areas and administrative support functions. 5. A resource assessment survey has been completed and is incorporated into the trauma system plan. Goals and measurable objectives to reduce or eliminate resource deficiencies have been implemented. Evaluation of progress on meeting resource needs is evident, and when necessary, the plan has been adapted.	

Essential Service: *System Management*

Indicator	Scoring	Comments
204.2 Financial resources exist that support the planning, implementation, and ongoing management of the administrative and clinical care components of the trauma system.	0. Not known 1. There is no funding to support the trauma system planning, implementation, or ongoing management and operations for either trauma system administration or trauma clinical care. 2. Some funding for trauma care within the third-party reimbursement structure has been identified, but ongoing support for administration and clinical care outside the third-party reimbursement structure is not available. 3. There is current funding for the development of the trauma system within the lead agency organization consistent with the trauma system plan, but costs to support clinical care support services have not been identified (transportation, communication, uncompensated care, standby fees, and others). No ongoing commitment of funding has been secured. 4. There is funding available for both administrative and clinical components of the trauma system plan. A mechanism to assess needs among various providers has begun. Implementation costs and ongoing support costs of the lead agency have been addressed within the plan. 5. A stable (consistent) source of reliable funding for the development, operations, and management of the trauma program (clinical care and lead agency administration) has been identified and is being used to support trauma planning, implementation, maintenance, and ongoing program enhancements.	

Essential Service: *System Management*

Indicator	Scoring	Comments
204.3 Designated funding for trauma system infrastructure support (lead agency) is legislatively appropriated. Note: Although nomenclature concerning designated, appropriated, and general funds varies between jurisdictions, the intent of this indicator is to demonstrate long-term, stable funding for trauma system development, management, evaluation, and improvement.	0. Not known 1. There is no designated funding to support the trauma system infrastructure. 2. One-time funding has been designated for trauma system infrastructure support, and appropriations have been made to the lead agency budget. 3. Limited funds for trauma system development have been identified, but the funds have not been appropriated for trauma system infrastructure support. 4. Consistent, though limited, infrastructure funding has been designated and appropriated to the lead agency budget. 5. The legislature has identified, designated, and appropriated sufficient infrastructure funding for the lead agency consistent with the trauma system plan and priorities for funding administration and operations.	

Essential Service: *System Management*

Indicator	Scoring	Comments
204.4 Operational budgets (system administration and operations, facilities administration and operations, and EMS administration and operations) are aligned with the trauma system plan and priorities. Examples: Full-Time Equivalents (FTEs) per population to support the infrastructure; costs to improve the communication system.	0. Not known 1. There are no operational budgets. 2. There are limited operational budgets, not sufficient to cover related program costs for the lead agency, the EMS system, or the trauma center. 3. There are operational budgets that may be sufficient to cover most program costs, but they are without regard to the trauma system plan or priorities. 4. There are operational budgets that have some ties to the trauma system plan and that include consideration for the extraordinary costs to the trauma system (e.g., providers). 5. An operational budget exists for each component in the plan and matches system needs and priorities with program and operational expenditures.	

Essential Service: *Mobilize Community Partnerships*

Indicator	Scoring	Comments
204.5 The trauma system plan includes identification of additional resources (both manpower and equipment) necessary to respond to mass casualty incidents.	0. Not known 1. The trauma system plan does not include the identification of additional resources necessary to respond to mass casualty incidents. 2. The trauma system plan addresses mass casualty incidents but has not identified additional resources. 3. The trauma system plan identifies resources, but it is unclear how the needs are going to be met. 4. The trauma system plan identifies both equipment and manpower resources available currently and additional resources needed; it also defines a process for securing and ensuring that equipment and human resources are available. 5. There is a well-drafted and rehearsed trauma system plan, along with sufficient caches of equipment and backup personnel, that ensures the rapid deployment of additional resources during mass casualty incidents.	

BENCHMARK

205. Collected data are used to evaluate system performance and to develop public policy.

Essential Service: *System Management*

Indicator	Scoring	Comments
205.1 Collected data are used for strategic and budgetary planning.	0. Not known 1. There is no central data repository that can be accessed for strategic or budgetary planning. 2. There are varying databases that can be accessed but no single reporting structure to produce reports and to analyze findings. 3. Data are collected and stored in a central repository; however, reports are not routinely generated that could be used for strategic or budgetary planning. 4. There is a central warehouse for trauma and system financial data that are used for annual reporting of system performance. 5. There is a central repository and data warehouse for all trauma system data. System participants including trauma centers and the lead agency can access the data. Regular (written, on-line, or electronic) reports are generated to identify financial information and budget utilization. Regular reports are used for strategic planning and performance efficiency.	

Essential Service: *Develop Policies*

Indicator	Scoring	Comments
205.2 Collected data from a variety of sources are used to review the appropriateness of trauma system policies and procedures. **Note:** The format of the reports in this and other sections may be written, Web-based, or other electronic media.	0. Not known 1. There are no written, quantifiable trauma system performance standards or performance improvement mechanisms. 2. There are draft written, quantifiable system performance standards or performance improvement mechanisms for each component of the trauma system. 3. There are written, quantifiable system performance standards and performance improvement mechanisms that have been adopted by the lead agency in consultation with the trauma-specific statewide multidisciplinary, multi-agency advisory committee. 4. Data from trauma, EMS, public safety, and other sources are routinely used by the lead agency to assess the extent of compliance of the trauma system with adopted standards. 5. The lead agency, in cooperation with the trauma-specific statewide multidisciplinary, multi-agency advisory committee, uses compliance data from trauma, EMS, public safety, and other sources to improve system design changes or to make other system refinements. There is routine and consistent feedback to all system providers to ensure that data-identified deficiencies are corrected.	

Essential Service: *System Management*

Indicator	Scoring	Comments
205.3 The trauma management information system (MIS) is used to assess system performance, to measure system compliance with applicable standards, and to allocate trauma system resources to areas of need or to acquire new resources.	0. Not known 1. There is no trauma management information system. 2. There is a limited trauma management information system consisting of a trauma patient registry, but no data extraction is used to identify resource needs, to establish performance standards, or to routinely assess and evaluate system effectiveness. 3. There is a trauma management information system that routinely reports (written, on-line, or electronic) on system-wide management performance and compliance. Linkage between management reports, resource utilization, and performance measures has begun. 4. Routine trauma MIS reports are issued at the State, regional, and local levels as well as at the provider level. Reports focus on management strengths, compliance with standards, and resource utilization. Trends are used to improve system efficiency and performance. 5. Trauma MIS reports are used extensively to improve and report on system performance. The lead agency issues regular and routine reports to providers. Trauma leaders assess reports to determine system deficiencies and to allocate resources to areas of greatest need. System performance and standard compliance are assessed and reported.	

Essential Service: *Inform, Educate, Empower*

Indicator	Scoring	Comments
205.4 Injury prevention programs use trauma MIS data to develop intervention strategies.	0. Not known 1. There is no evidence to suggest that trauma MIS data are used to determine injury prevention strategies. 2. There is some evidence that trauma MIS data are available for injury prevention program strategies, but the use of these data is limited and sporadic. 3. Trauma MIS reports are routinely provided to the injury prevention programs. The usefulness of the reports has not been measured, and injury prevention providers are just beginning to use trauma injury reports for program strategies and decision making. 4. Trauma MIS reports on the status of injury, and injury mechanisms, are routinely available to injury prevention providers and are used routinely to realign injury programs to target the greatest need. 5. A well-integrated trauma and injury reporting system exists. Evidence is available to demonstrate how system providers routinely use MIS data to identify program needs, to develop strategies on program priorities, and to set annual goals for injury prevention.	

Essential Service: *Inform, Educate, Empower*

Indicator	Scoring	Comments
205.5 Education for trauma system participants is developed based on a review and evaluation of trauma MIS data.	0. Not known 1. There is no correlation between training programs for providers and the trauma management information system. 2. There is limited use of trauma MIS reports to target educational opportunities. 3. There is evidence that some providers are using trauma MIS reports to identify educational needs and to incorporate them into training programs. 4. Many educational forums have been conducted based on an analysis of the performance data in the trauma management information system. Clear ties link education of providers with identified areas of need from trauma MIS reports. 5. Routine analysis of trauma information and educational opportunities is being conducted. Integrated program objectives tying system performance and education are implemented and routinely evaluated. Regular updates to trauma information and education are available. Trauma MIS data are used to measure outcomes and effectiveness.	

BENCHMARK

206. Trauma system leaders, including a trauma-specific statewide multidisciplinary, multi-agency advisory committee, regularly review system performance reports.

Essential Service: *Inform, Educate, Empower*

Indicator	Scoring	Comments
206.1 Trauma data reports are generated by the trauma system no less than once per year and are disseminated to trauma system leaders and stakeholders to evaluate and improve system performance effectiveness.	0. Not known 1. No trauma data reports are generated to evaluate and improve system performance effectiveness. 2. Some general trauma system information is available for the stakeholders, but it is not consistent or regular. 3. Trauma data reports are done on an annual basis, but are not used for decision making and evaluating system effectiveness. 4. Routine reports are generated using trauma system data and other databases so that the system can be analyzed, standards evaluated, and performance measured. 5. Regularly scheduled reports are generated from trauma system data and are used by the stakeholder groups to evaluate and improve system performance effectiveness.	

Essential Service: *Inform, Educate, Empower*

Indicator	Scoring	Comments
206.2 The trauma-specific statewide multidisciplinary, multi-agency advisory committee regularly reviews annotated trauma system data reports and system compliance information to monitor trauma system performance and to determine the need for system modifications.	0. Not known 1. There is no trauma-specific statewide multidisciplinary, multi-agency advisory committee, and there are no regular reports of system performance. 2. There is a trauma-specific statewide multidisciplinary, multi-agency advisory committee, but it does not routinely review trauma system data reports. 3. The trauma-specific statewide multidisciplinary, multi-agency committee meets regularly and reviews process-type reports; no critical assessment of system performance has been completed. 4. The trauma-specific statewide multidisciplinary, multi-agency advisory committee meets regularly and routinely assesses reports from trauma data to determine system compliance and operational issues needing attention. 5. The trauma-specific statewide multidisciplinary, multi-agency advisory committee and related stakeholder groups meet regularly and review trauma data reports to assess system performance over time, looking for ways to improve system effectiveness and patient outcomes.	

BENCHMARK

207. The lead agency informs and educates State, regional, and local constituencies and policy makers to foster collaboration and cooperation for system enhancement and injury control.

Essential Service: *Mobilize Community Partnerships*

Indicator	Scoring	Comments
207.1 The lead agency ensures communications, collaboration, and cooperation between State, regional, and local systems.	0. Not known 1. There is no evidence of active dialogue, either written or verbal, to suggest a strong working relationship between the trauma system lead agency and other governmental agencies (State, regional, or local). 2. There is little evidence that the lead agency and other governmental agencies working to implement a trauma system actively engage in system planning and operational dialogue. 3. The lead agency issues a quarterly update on trauma system activities. The update is largely one-way communication to other governmental agencies. Routine communication usually revolves around an event (reactionary); proactive, open communication is not the norm. 4. The lead agency, through its multidisciplinary committee, engages in open, frequent communication with its constituencies. Newsletters, activity reports, and proactive planning are occurring through the lead agency. Communication and collaboration among governmental organizations is occurring, although they are largely event based. 5. State, regional, and local systems engage in mutual and cooperative plan development and implementation. The lead agency seeks input and dialogue with a multitude of stakeholders. The communication is open, frequent, and proactive. Frequent dialogue occurs between the lead agency and local, regional, or State trauma system participants and leaders. There is evidence of mutual respect and sharing of information among the multidisciplinary groups.	

Essential Service: *Inform, Educate, Empower*

Indicator	Scoring	Comments
207.2 The trauma system leaders (lead agency, advisory committees, and others) informs and educates constituencies and policy makers through community development activities, targeted media messaging, and active collaborations aimed at injury prevention and trauma system development.	0. Not known 1. No targeted messaging or media campaigns have begun to educate and inform community and State leaders or policy makers about either injury prevention needs or trauma system development activities. 2. Limited interfaces with policy makers and the media, aimed at both injury prevention and trauma system development, have occurred. Community development activities have been limited to incident-specific response opportunities. 3. Community activities have begun with the development of an injury prevention campaign, and there have been initial discussions with policy makers regarding trauma system development. 4. Trauma system leaders are engaging policy makers in discussions about injury prevention and the trauma system. Media awareness and media messaging have been targeted at injury prevention activities with limited trauma system integration. 5. A well-orchestrated and continuing trauma media campaign is under way. Key policy makers at the State, regional, and local levels are keenly aware of the benefits of a trauma system and of the importance of injury prevention programs.	

Essential Service: *Mobilize Community Partnerships*

Indicator	Scoring	Comments
207.3 Trauma system leaders (lead agency; trauma-specific statewide multidisciplinary, multi-agency advisory committees; and others) mobilize community partners in identifying the injury problem throughout the State and in building coalitions of personnel to design systems that can reduce the burden of injury.	0. Not known 1. No State lead agency exists to establish, maintain, or mobilize community partners in identifying the injury problem or in building community coalitions. 2. A State lead agency to review and report on the injury problem statewide exists, but there is limited involvement with community coalitions or trauma system partners. 3. A State lead agency for injury prevention has been established, and a statewide injury coalition has been meeting regularly and reporting on the status of injury in the State. Interface between the injury coalition and the trauma-specific statewide multidisciplinary, multi-agency advisory committee or trauma system leaders (government, acute care, or rehabilitation) has been limited. 4. Trauma system leaders (lead agency; trauma-specific statewide multidisciplinary, multi-agency advisory committees; and others) for injury prevention have a proven track record for identifying the injury problem and for targeting messages and programs to reduce the impact of injury in the State. The injury prevention lead agency (if not the trauma system lead agency) interfaces with the trauma-specific statewide multidisciplinary, multi-agency advisory committee. Trauma system and injury prevention leaders have begun to identify strategies and are working collaboratively. Key policy makers are well informed about the burden of injury in the State. 5. Trauma system and injury prevention leaders regularly inform and educate policy makers on trauma system development and injury prevention. Injury coalitions and trauma-specific statewide multidisciplinary, multi-agency advisory committees are integrated and work collaboratively to inform the community and to educate community leaders.	

Essential Service: *Inform, Educate, Empower*

Indicator	Scoring	Comments
207.4 A trauma system public information and education plan exists that heightens public awareness of trauma as a disease, the need for a trauma care system, and the prevention of injury.	0. Not known 1. There is no written public information and education plan on trauma system or injury prevention and control. 2. There is a trauma system public information and education plan, but linkages between programs and implementation of specific objectives have waned. 3. There is a trauma system, and injury prevention plans have a linked public information and education component that has specific timetables and measurable goals and objectives. 4. The trauma system public information and education plan are being implemented in accordance with the timelines established and agreed on by the stakeholders and coalitions. 5. The trauma system public information and education plan are being implemented in accordance with the timelines. Data concerning the effectiveness of the strategies are used to modify the plan and programs.	

BENCHMARK

208. The trauma, public health, and emergency preparedness systems are closely linked.

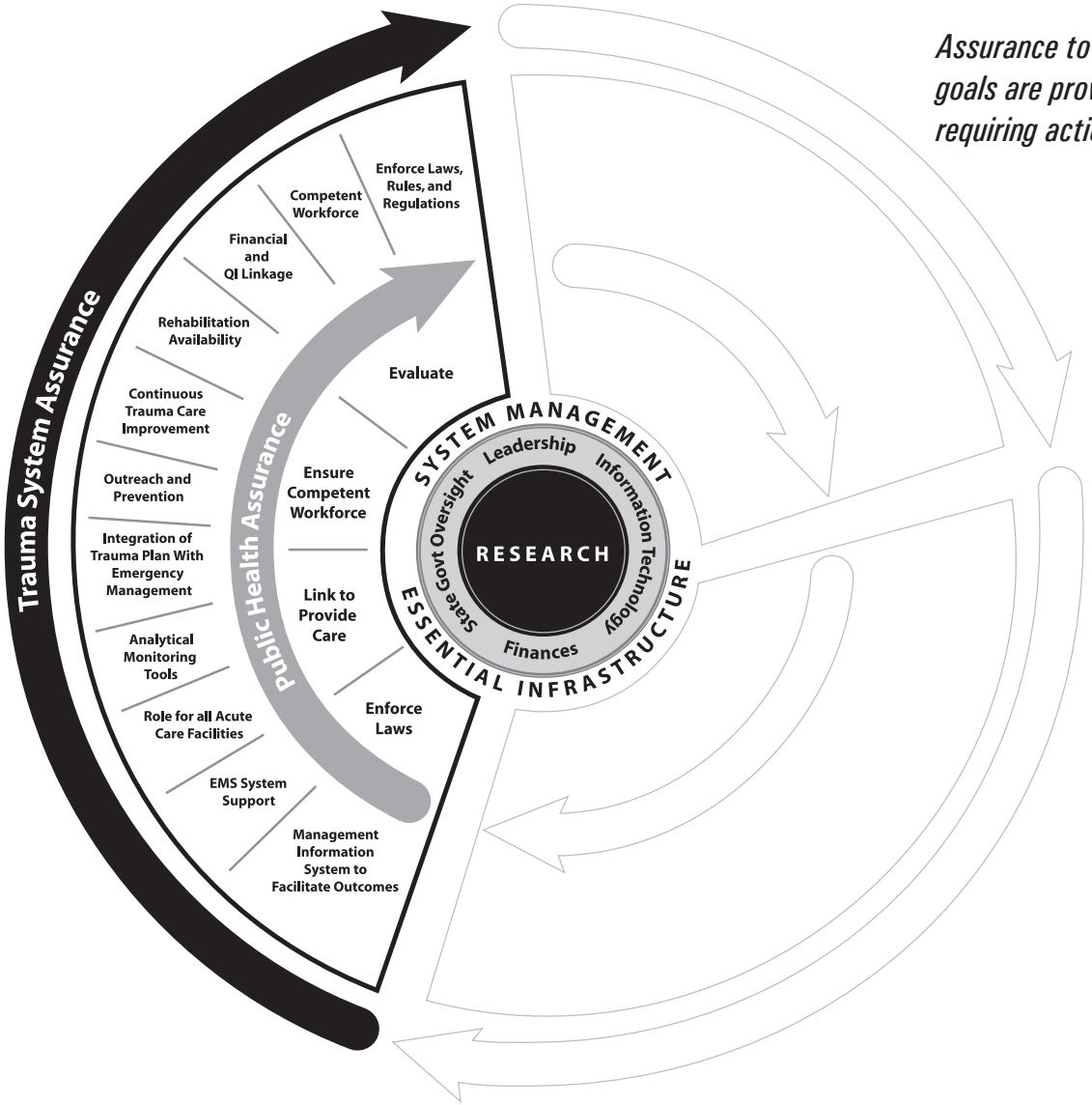
Essential Service: *Mobilize Community Partnerships*

Indicator	Scoring	Comments
208.1 The trauma system and the public health system have established linkages including programs with an emphasis on population-based public health surveillance, and evaluation, for acute and chronic traumatic injury and injury prevention.	0. Not known 1. There is no evidence that demonstrates program linkages, a working relationship, or the sharing of data between public health and the trauma system. Population-based public health surveillance, and evaluation, for acute or chronic traumatic injury and injury prevention has not been integrated with the trauma system. 2. There is little population-based public health surveillance shared with the trauma system, and program linkages are rare. Routine public health status reports are available for review by the trauma system lead agency and constituents. 3. The trauma system and the public health system have begun sharing public health surveillance data for acute and chronic traumatic injury. Program linkages are in the discussion stage. 4. The trauma system has begun to link with the public health system, and the process of sharing public health surveillance data is evolving. Routine dialogue is occurring between programs. 5. The trauma system and the public health system are integrated. Routine reporting, program participation, and system plans are fully vested. Operational integration is routine, and measurable progress can be demonstrated. (Demonstrated integration and linkage could include such activities as rapid response to and notification of incidents, integrated data systems, communication cross-operability, and regular epidemiology report generation.)	

Essential Service: *Mobilize Community Partnerships*

Indicator	Scoring	Comments
208.2 The incident management and trauma systems have formal established linkages for system integration and operational management.	0. Not known 1. There are no formal established linkages for system integration or operational management between the incident management and trauma systems. 2. There are limited linkages or interfaces between the incident management and trauma systems specific to mass casualties. 3. Plans are in place for both incident management and trauma system linkage. Integration is beginning, and cooperation within the multidisciplinary groups is occurring. Draft policies are being reviewed, and operational management strategies are being aligned. 4. There is evidence of program linkages between the incident management and trauma systems. Operational management guidelines exist and are routinely evaluated and tested. 5. Strong program linkages and interfaces are present. The incident management and trauma systems are well integrated, and operational procedures have been implemented, tested, and evaluated. System participants meet regularly and are familiar with the operational plans of both areas. Data from the trauma system and from the incident management system are shared.	

300. ASSURANCE



Assurance to constituents that services necessary to achieve agreed-on goals are provided by encouraging actions of others (public or private), requiring action through regulation, or providing services directly.

BENCHMARK

301. The trauma management information system (MIS) is used to facilitate ongoing assessment and assurance of system performance and outcomes and provides a basis for continuously improving the trauma system including a cost-benefit analysis.

Essential Service: *Evaluation*

Indicator	Scoring	Comments
301.1 The lead trauma authority ensures that each member hospital of the trauma system collects and uses patient data as well as provider data to assess system performance and to improve quality of care. Assessment data are routinely submitted to the lead trauma authority.	0. Not known 1. There is no system-wide management information data collection system that the trauma centers and other community hospitals regularly contribute to or use to evaluate the system. 2. There is a trauma registry system in place in the trauma centers, but it is used by neither all facilities within the system nor the lead trauma authority to assess system performance. 3. The trauma management information system contains information from all facilities within a geographic area. 4. The trauma management information system is used by the trauma centers to assess provider and system performance issues. 5. Hospital trauma registry data are routinely submitted to the lead trauma authority, are aggregated, and are used to evaluate overall system performance.	

Essential Service: *Evaluation*

Indicator	Scoring	Comments
301.2 Prehospital care providers collect patient care and administrative data for each episode of care and provide these data not only to the hospital, but have a mechanism to evaluate the data within their own agency including monitoring trends and identifying outliers.	0. Not known 1. There is no jurisdiction-wide prehospital data collection. 2. Prehospital care providers have a patient care record for each episode of care, but it is not yet automated or integrated with the trauma management information system. 3. The prehospital patient care record electronically captures patient care provided by field personnel and can be transferred or entered into the trauma registry system within individual trauma centers. 4. The prehospital patient data system is integrated into the trauma management information system and is used by prehospital and hospital personnel to review and evaluate prehospital and system performance. 5. Individual prehospital agency data are electronically submitted to the lead trauma authority, are aggregated with other prehospital agency data, and are used to evaluate overall trauma system performance.	

Essential Service: *Evaluation*

Indicator	Scoring	Comments
301.3 Trauma registry, emergency department (ED), prehospital, rehabilitation, and other databases are linked or combined to create a trauma system registry.	0. Not known 1. Some trauma registry and prehospital patient records are manually entered into a database when needed to answer system questions. There is no rehabilitation registry. 2. There are databases for trauma, emergency departments, prehospital, and rehabilitation as well as statewide injury databases. None of the databases are routinely linked. 3. There are electronic trauma registry and prehospital patient record databases. Both databases are linked, but the system does not use these data for routine review of system performance. Some rehabilitation data are collected separately from the trauma registry. 4. There is an integrated management information system that includes, at a minimum, hospital and prehospital databases. The information is linked, and providers use the databases for system evaluation. Rehabilitation centers routinely provide electronic data to the trauma registry system. 5. There is an integrated management information system that includes, at a minimum, trauma, ED, prehospital, 9-1-1 dispatch, and rehabilitation databases that are regularly used by the lead trauma authority and system provider agencies to monitor trauma system performance.	

Essential Service: *Evaluation*

Indicator	Scoring	Comments
301.4 The lead agency has available for use the latest in computer/technology advances and analytical tools for monitoring injury prevention and control components of the trauma system. There is reporting on the outcome of implemented strategies for injury prevention and control programs within the trauma system.	0. Not known 1. No computer/technology systems or analytical tools are available to the lead agency or other stakeholders to facilitate the monitoring of, or reporting on, the outcome of the implemented strategies for injury prevention and control within the trauma system. 2. There are integrated computer/technology systems, but the development and use of those systems for analytical monitoring and reporting has not yet begun. 3. The lead agency is using the computer/technology systems and analytical tools available to assist in monitoring the injury prevention and control programs of the trauma system. The evaluation of injury prevention and control programs is in its formative stages. 4. The lead agency has integrated the use of new computer/technology systems and analytical tools in the monitoring of injury prevention and control programs within the trauma system. 5. The trauma system participants, under the leadership of the trauma lead agency, have been trained in the use of the computer/technology systems and analytical tools. These tools are used routinely to monitor and report on the outcome of implemented strategies and on the effectiveness of injury prevention and control programs within the trauma system. A process is in place to facilitate the access to data for evaluation and research.	

BENCHMARK

302. The trauma system is supported by an EMS system that includes communications, medical oversight, prehospital triage, and transportation; the trauma system, EMS system, and public health agency are well integrated.

Essential Service: *Link To Provide Care*

Indicator	Scoring	Comments
302.1 There is well-defined trauma system medical oversight integrating the specialty needs of the trauma system with the medical oversight for the overall EMS system. **Note:** The EMS system medical director and the trauma medical director may, in fact, be the same person.	0. Not known 1. There is no medical oversight for EMS providers within the trauma system. 2. EMS medical oversight for all levels of prehospital providers caring for the trauma patient is provided, but such oversight is provided outside of the purview of the trauma system. 3. The EMS and trauma medical directors have integrated prehospital medical oversight for prehospital personnel caring for trauma patients. 4. Medical oversight is routinely given to EMS providers caring for trauma patients. The trauma system has integrated medical oversight for prehospital providers and routinely evaluates the effectiveness of both on-line and off-line medical oversight. 5. The EMS and trauma system fully integrate the most up-to-date medical oversight and regularly evaluate program effectiveness. System providers are included in the development of medical oversight policies.	

Essential Service: *Link To Provide Care*

Indicator	Scoring	Comments
302.2 There is a clearly defined, cooperative, and ongoing relationship between the trauma specialty physician leaders (e.g., trauma medical director within each trauma center) and the EMS system medical director.	0. Not known 1. The trauma specialty physician leaders and the EMS system medical director provide conflicting medical oversight to emergency care providers. 2. There is no formally established, ongoing relationship between the trauma medical director (within each trauma center) and the EMS system medical director; there is no evidence of informal efforts to cooperate and communicate. 3. There is no formally established, ongoing relationship between the trauma medical director (within each trauma center) and the EMS system medical director; however, the trauma medical director and the EMS system medical director meet or visit informally to resolve problems, "to plan strategies," and to coordinate efforts. 4. There is a formal, written procedure delineating the responsibilities of the trauma medical director (within each trauma center) and the EMS system medical director and specifying the formal method by which they work together. However, there is no evidence that the system is regularly used. 5. There is a formal, written procedure delineating the responsibilities of the trauma medical director (within each trauma center) and the EMS system medical director and specifying the formal method by which they work together. There is written documentation including, for instance, meeting minutes indicating this relationship is regularly used to coordinate efforts.	

Essential Service: *Link To Provide Care*

Indicator	Scoring	Comments
302.3 There is clear-cut legal authority and responsibility for the EMS system medical director including the authority to adopt protocols, to implement a performance improvement system, to restrict the practice of prehospital care providers, and to generally ensure medical appropriateness of the EMS system.	0. Not known 1. There is no EMS system medical director. 2. There is an EMS system medical director with a written job description; however, the individual has no specific legal authority or time allocated for those tasks. 3. There is an EMS system medical director with a written job description, but with no specific legal authority. The system medical director has adopted protocols, has implemented a performance improvement program, and is generally taking steps to improve the medical appropriateness of the EMS system. 4. There is an EMS system medical director with a written job description and whose specific legal authorities and responsibilities are formally granted by law or by administrative rule. 5. There is an EMS system medical director with a written job description and whose specific legal authorities and responsibilities are formally granted by law or by administrative rule. There is written evidence that the system medical director has, consistent with the formal authority, adopted protocols, implemented a performance improvement program, is restricting the practice of prehospital care providers, and is making significant efforts to improve the medical appropriateness of the EMS system and to fully integrate EMS into the trauma care system.	

Essential Service: *Ensure Competent Workforce*

Indicator	Scoring	Comments
302.4 The trauma system medical director is actively involved with the development, implementation, and ongoing evaluation of system dispatch protocols to ensure they are congruent with the trauma system design. These protocols include, but are not limited to, which resources to dispatch, for example, Advanced Life Support (ALS) versus Basic Life Support (BLS), air-ground coordination, early notification of the trauma care facility, pre-arrival instructions, and other procedures necessary to ensure resources dispatched are consistent with the needs of injured patients. Note: The trauma system medical director and the EMS system medical director may be the same person. However, specific responsibility for, and oversight of, the trauma system must be ensured.	0. Not known 1. There are no trauma system dispatch protocols. 2. Trauma system dispatch protocols have been adopted, but without regard to the design of the trauma system. 3. Trauma system dispatch protocols have been adopted and are not in conflict with the trauma system design, but there has been no effort to coordinate the use of protocols with the lead agency or trauma center. 4. Trauma system dispatch protocols have been developed in close coordination with the trauma system medical director and are congruent with the trauma system design. 5. Trauma dispatch protocols have been developed in close coordination with the trauma system medical director and are congruent with the trauma system design. There are established procedures to involve the dispatchers and their supervisors in trauma system performance improvement and a "feedback loop" to change protocols or to update dispatcher education when appropriate.	

Essential Service: *Evaluation*

Indicator	Scoring	Comments
302.5 The retrospective medical oversight of the EMS system for trauma triage, communications, treatment, and transport is closely coordinated with the established performance improvement processes of the trauma system.	0. Not known 1. There is no retrospective medical oversight procedure for trauma triage, communications, treatment, and transport. 2. There is a retrospective medical oversight procedure for trauma triage, communications, treatment, and transport by both the trauma system and the EMS system, but the two processes are in conflict with each other or use different review criteria. 3. There is a retrospective medical oversight procedure for trauma triage, communications, treatment, and transport by the performance improvement processes of the trauma system or by the EMS system; however, this procedure is not coordinated. 4. By the performance improvement processes of the trauma system, there is retrospective medical oversight for trauma triage, communications, treatment, and transport that is coordinated with the EMS system retrospective medical direction, or by performance improvement processes of the EMS system that are coordinated by the trauma system. 5. There is retrospective medical oversight of the trauma triage, communications, treatment, and transport that is coordinated with the EMS system retrospective medical direction. There is evidence this procedure is being regularly used to monitor system performance and to make system improvements.	

Essential Service: *Link To Provide Care*

Indicator	Scoring	Comments
302.6 There are mandatory system-wide prehospital triage criteria to ensure that trauma patients are transported to an appropriate facility based on their injuries. These triage criteria are regularly evaluated and updated to ensure acceptable and system-defined rates of sensitivity and specificity for appropriately identifying the major trauma patient.	0. Not known 1. There are no mandatory universal triage criteria to ensure trauma patients are transported to the most appropriate hospital. 2. There are differing triage criteria guidelines used by different providers. Appropriateness of triage criteria and subsequent transportation are not evaluated for sensitivity or specificity. 3. Universal triage criteria are in the process of being linked to the management information system for future evaluation. 4. The triage criteria are used by all prehospital providers. There is system-wide evaluation of the effectiveness of the triage tools in identifying trauma patients and in ensuring that they are transported to the appropriate facility. 5. System participants routinely evaluate the triage criteria for effectiveness. There is linkage with the trauma system, and sensitivity and specificity (over- and under-triage rates) of the tools used are regularly reported through the trauma lead authority. Updates to the triage criteria are made as necessary to improve system performance.	

Essential Service: *Link To Provide Care*

Indicator	Scoring	Comments
302.7 There is a universal access number for citizens to access the EMS/trauma system, with dispatch of appropriate medical resources. There is a central communication system for the EMS/trauma system to ensure field-to-facility bidirectional communications, interfacility dialogue, and all-hazards response communications among all system participants. **Note:** In some systems with limited resources, for example, rural, the available resources are, at least initially, the "appropriate resources."	0. Not known 1. There is no universal access number (9-1-1) for easy citizen access to the EMS/trauma system and no coordinated communication system for triage, treatment, and transport of trauma patients for either single or multiple patient encounters. 2. There is a universal access number (9-1-1) for quick citizen access to care. However, there is no coordinated communication system within a jurisdiction to allow for communications to occur among system participants either routinely or during all-hazards events. 3. There are a universal access number (9-1-1) and a central communication system for quick citizen access to care. A communication plan for the trauma system has been completed. 4. The universal access number (9-1-1) and central communication system are integrated and communications regularly occur among dispatch, field providers, hospitals, and other system providers. The communication plan is implemented. Evaluation of the effectiveness of the communication system is done routinely, and corrective action is implemented as needed. 5. A state-of-the-art electronic communication system is available within the jurisdiction. The trauma system communication plan is integrated with other system plans. The system is also available in all-hazards responses and can be used as a quick call system and as a paging network and is linked to public health and other nontraditional partners. Evaluation of the communication system interface with the trauma system occurs routinely.	

Essential Service: *Link To Provide Care*

Indicator	Scoring	Comments
302.8 There are sufficient and well-coordinated transportation resources to ensure EMS providers arrive at the scene promptly and expeditiously transport the patient to the correct hospital by the correct transportation mode.	0. Not known 1. There is no coordination of transportation resources within a jurisdiction. Multiple ambulances or aeromedical providers, or both, can all arrive on scene unannounced. 2. There is a priority dispatch system in place that sends transportation resources to the scene. 3. There is a priority dispatch system that ensures appropriate resources arrive on scene promptly and transport patients to the hospital. A plan for transporting trauma patients from the field to the hospital has been completed. 4. There is a priority dispatch and transportation system that ensures appropriate system resources for prompt transport of trauma patients to trauma centers. A trauma transportation plan has been implemented. System issues are evaluated, and corrective plans are implemented as needed. 5. The transportation system has a priority dispatch system; it regularly assesses its ability to get the right resources to the scene and to transport patients by using the correct mode of transportation. The transportation system is part of the overall EMS, trauma, and all-hazards response system.	

Essential Service: *Link To Provide Care*

Indicator	Scoring	Comments
302.9 There is a procedure for communications among medical facilities when arranging for interfacility transfers including contingencies for radio or telephone system failure.	0. Not known 1. There are no specific communication plans or procedures to ensure communications among medical facilities when arranging for interfacility patient transfers. 2. Interfacility communication procedures are generally included in the patient transfer protocols for each medical facility, but there is no system-wide procedure. 3. There are uniform, system-wide procedures to facilitate communications among medical facilities when arranging for interfacility patient transfers, but there are no redundant procedures in the event of power or other communication system failures. 4. There are uniform, system-wide procedures for communications among facilities when arranging for interfacility patient transfers, and there are redundant procedures in the event of power or other communication system failures. 5. There are uniform, system-wide procedures for communications among facilities when arranging for interfacility patient transfers. There are redundant procedures in the event of power or other communication system failures. The effectiveness of these procedures is regularly reviewed and changes made, if necessary, during the performance improvement process.	

Essential Service: *Link To Provide Care*

Indicator	Scoring	Comments
302.10 There are established procedures for EMS and trauma system communications in an all-hazards or major EMS incident that are effectively coordinated with the overall all-hazards response plan for the jurisdiction.	0. Not known 1. There are no written procedures for EMS and trauma system communications in the event of an all-hazards incident. 2. Local EMS systems have written procedures for EMS communications in the event of an all-hazards or major EMS incident. However, there is no coordination among the local jurisdictions. 3. There are statewide or regional EMS communication procedures in the event of an all-hazards or major EMS incident. These plans do not involve other jurisdictions and are not coordinated with the overall all-hazards response plan and incident management system. 4. There are statewide or regional EMS communication procedures in the event of an all-hazards or major EMS incident that are coordinated with other jurisdictions, with the overall all-hazards response plan, and with the incident management system. 5. There are statewide or regional EMS communication procedures in the event of an all-hazards or major EMS incident that are coordinated with other jurisdictions, with the overall all-hazards response plan, and with the incident management system. There are one or more communication system redundancies. These procedures are regularly tested in simulated incident drills, and changes are made in the procedures, when necessary, based on the results of these drills.	

BENCHMARK

303. Acute care facilities are integrated into a resource-efficient, inclusive network that meets required standards and that provides optimal care for all injured patients.

Essential Service: *Link To Provide Care*

Indicator	Scoring	Comments
303.1 The trauma system plan has clearly defined the roles and responsibilities of all acute care facilities treating trauma and of facilities that provide care to specialty populations (e.g., burn, pediatric, spinal cord injury, and others).	0. Not known 1. There is no trauma system plan that outlines roles and responsibilities of all acute care facilities treating trauma and of facilities that provide care to special populations. 2. There is a trauma system plan, but it does not address the roles and responsibilities of licensed acute care and specialty care facilities. 3. The trauma system plan addresses the roles and responsibilities of licensed acute care facilities or specialty care facilities, but not both. 4. The trauma system plan addresses the roles and responsibilities of licensed acute care facilities and specialty care facilities. 5. The trauma system plan clearly defines the roles and responsibilities of all acute care facilities treating trauma within the system jurisdiction. Specialty care services are addressed within the plan, and appropriate policies and procedures are implemented and tracked.	

Essential Service: *Link To Provide Care*

Indicator	Scoring	Comments
303.2 The trauma system lead agency should ensure that the number, levels, and distribution of trauma centers required to meet system demand are available.	0. Not known 1. There is no trauma system plan to identify the number, levels, and distribution of trauma centers required to meet system demand. 2. There is a trauma system plan, but it does not identify the number, levels, or distribution of trauma centers needed for the jurisdiction served. 3. There is a trauma system plan that identifies the number, levels, and distribution of trauma centers needed for the jurisdiction. The plan, however, is not based on available data. 4. There is a trauma system plan that identifies the number and levels of trauma centers needed based on actual available data. However, this plan is not used to make decisions about trauma facility designations. 5. There is a trauma system plan that identifies the number and levels of trauma centers based on needs identified through the needs assessment process. The plan is used to make decisions about trauma center designations and should account for facility resources and their geographic distribution, population densities, injured patient volumes, and transportation resource capabilities and times. The plan is reviewed and revised periodically.	

Essential Service: *Evaluation*

Indicator	Scoring	Comments
303.3 The trauma lead authority ensures that trauma facility patient outcomes and quality of care are monitored. Deficiencies are recognized and corrective action is implemented. Variations in standards of care are minimized, and improvements are made routinely.	0. Not known 1. There is no requirement for trauma facilities to monitor patient outcomes and quality of care. 2. Designated trauma facilities are required to maintain a trauma registry including patient outcomes, but they are not required to regularly monitor these outcomes, or quality of care, and are required to report those findings to the lead trauma authority. 3. Designated trauma facilities are required to maintain a trauma registry and to use data from the registry in an ongoing performance improvement program to monitor and to improve the quality of care and patient outcomes. 4. Designated trauma facilities are required to maintain a trauma registry including patient outcomes, to use these data in an ongoing performance improvement program, to provide regular comparisons to local trauma system standards, and to report those findings to the lead trauma authority. 5. Designated trauma facilities are required to maintain a trauma registry including patient outcomes, to use these data in an ongoing performance improvement program. Deficiencies in meeting the local trauma system standards are recorded, and corrective action plans are instituted. Results of comparisons with State or national norms are regularly provided to the trauma agency, along with an explanation for significant variations from these norms, and a written plan to reduce these variations.	

Essential Service: *Link To Provide Care*

Indicator	Scoring	Comments
303.4 When injured patients arrive at a medical facility that cannot provide the appropriate level of definitive care, there is an organized and regularly monitored system to ensure the patients are expeditiously transferred to the appropriate, system-defined trauma facility.	0. Not known 1. There is no system to regularly review the conformity of interfacility transfers within the trauma system according to pre-established procedures. 2. There is a fragmented system, usually event based, to monitor the interfacility transfer of trauma patients. 3. The system for monitoring interfacility transfers is new, the procedures are in place, but training has yet to occur. 4. There is an organized system of monitoring interfacility transfers within the trauma system. 5. The monitoring of interfacility transfers of trauma patients has been integrated into the overall program of system performance improvement. As the system identifies issues for correction, a plan of action is implemented.	

Essential Service: *Link To Provide Care*

Indicator	Scoring	Comments
303.5 The specific needs of unique populations, for example, English As a Second Language (EASL), socially disadvantaged, migrant/transient, remote, rural, and others, are accommodated within the existing trauma system.	0. Not known 1. There has been no consideration of the specific needs of unique populations, for example, EASL, in making an impact on the patient's access to care within the trauma system. 2. The lead agency and stakeholders are beginning to consider the specific needs of unique populations in implementing the trauma system. 3. The lead agency has, within the trauma system plan, identified the unique populations that may require special accommodations with the trauma system to effectively meet their needs. 4. The lead agency has, within the trauma system plan, accommodations for unique populations that allow them to effectively access trauma care. Monitoring processes are in development. 5. The trauma system has accommodated the specific needs of unique populations by allowing them to effectively access trauma care. Routine monitoring, review, and reporting of these populations are incorporated into the evaluation of trauma system effectiveness.	

BENCHMARK

304. The jurisdictional lead agency, in cooperation with other agencies and organizations, uses analytical tools to monitor the performance of population-based prevention and trauma care services.

Essential Service: *Evaluation*

Indicator	Scoring	Comments
304.1 The lead agency, along with partner organizations, prepares annual reports on the status of injury prevention and trauma care in State, regional, or local areas. Note: Annual reports may be distributed electronically rather than, or in addition to, printed copies.	0. Not known 1. No annual reports are available on the status of injury prevention or trauma care in State, regional, or local areas. 2. Annual reports are prepared but are not based on input from providers and other key stakeholders. 3. Annual reports are written by the lead agency with input from the trauma centers. 4. Annual reports are written by the lead agency in conjunction with the trauma centers and other stakeholders. Multiple sub-reports on the status of trauma care and injury prevention in State, regional, or local areas are distributed throughout the year. 5. There is an integrated annual reporting system that is electronically available to stakeholders. The lead agency, along with partner organizations, prepares and disseminates regular annual reports on the status of injury prevention and trauma care in State, regional, or local areas.	

Essential Service: *Evaluation*

Indicator	Scoring	Comments
304.2 The trauma system MIS database is available for routine public health surveillance. There is concurrent access to the databases (emergency department, trauma, prehospital medical examiner, and public health epidemiology) for the purpose of routine surveillance and monitoring of health status that occurs regularly and is a shared responsibility. **Note:** All legal requirements for confidentiality and safeguarding of patient information must be met when sharing data between or among agencies.	0. Not known 1. There is no sharing of databases between emergency department, trauma, prehospital, medical examiner, or public health epidemiology. 2. The databases can be accessed by only the owner of the data, and sharing of information goes through a formal request process. 3. There is concurrent access to the databases (emergency department, trauma, prehospital medical examiner, and public health epidemiology) but no sharing of databases that would support public health surveillance. 4. The databases are shared among emergency department, trauma, prehospital, medical examiner, and public health epidemiology. Access issues have been resolved, and epidemiologic monitoring is beginning to routinely monitor the data for unusual events. 5. The databases of emergency departments, trauma, prehospital, medical examiner, and public health epidemiology are shared files. The epidemiology staff can review all the databases and registries for routine surveillance and unusual occurrences. Concurrent review by the respective groups is used to ensure the effectiveness of the injury prevention and trauma system.	

BENCHMARK

305. The lead agency ensures that its trauma system plan is integrated with, and complementary to, the comprehensive mass casualty plan for both natural and man-made incidents, including an all-hazards approach to planning and operations.

Essential Service: *Link To Provide Care*

Indicator	Scoring	Comments
305.1 The EMS, the trauma system, and the all-hazards medical response system have operational trauma and all-hazards response plans and have established an ongoing cooperative working relationship to ensure trauma system readiness to all-hazards events.	0. Not known 1. There is no system for integration between the EMS, the trauma system, and the all-hazards response system. 2. There have been some discussions between the EMS, the trauma system, and the all-hazards medical response system, but no formal plans have been developed. 3. Formal plans for the EMS, the trauma system, and the all-hazards medical response systems integration are in development and have started the approval process. Working relationships have formed and cooperation is evident. 4. There are plans in place to ensure that the EMS, the trauma system, and the all-hazards medical response system are integrated and operational. All-hazards exercises and simulated incident drills have the cooperation and participation of the trauma system. 5. The EMS, the trauma system, and all-hazards response plans are integrated and operational. Routine working relationships are present with cooperation and sharing of information to improve trauma system readiness for all-hazards responses.	

Essential Service: *Evaluation*

Indicator	Scoring	Comments
305.2 All-hazards events routinely include situations involving natural (e.g., earthquake), unintentional (e.g., school bus crash), and intentional (e.g., terrorist explosion) trauma-producing events that test expanded response capabilities and surge capacity of the trauma systems.	0. Not known 1. All-hazards training is not a routine part of the trauma system. 2. Training in response to all hazards is solely the responsibility of the EMS and of emergency management agencies. Trauma response has not been integrated into the system. 3. All-hazards exercises are conducted routinely and include both trauma and EMS response capabilities. 4. The trauma, EMS, and public health stakeholders have begun exercises in an all-hazards approach to mass casualty incidents. 5. Exercises and training in all-hazards responses including testing of facility/clinic surge capacity are regularly conducted with trauma, EMS, and public health stakeholders. Debriefing sessions occur after each drill or event.	

Essential Service: *Link To Provide Care*

Indicator	Scoring	Comments
305.3 The trauma system, through the lead agency, has access to additional equipment, materials, and personnel for large-scale traumatic events. **Note:** The lead agency will work with other appropriate national, State, regional, and local agencies to secure these additional resources.	0. Not known 1. There is no surge capacity (prehospital, hospital, clinic, or coroner) built into the system for either smaller multi-patient events or mass casualty incidents. 2. The trauma system has begun to identify additional equipment, materials, and personnel needed to respond to all-hazards events in light of new threats and emergencies. 3. The lead agency, working with the trauma stakeholders, has in place additional equipment and materials for mass casualty incidents. A process to utilize additional personnel resources is in development. Testing of newly acquired equipment, material, and personnel resources has not yet been completed. 4. The lead agency, in conjunction with the trauma stakeholders, has begun to test a method of deploying additional equipment, materials, and personnel during all-hazards events. 5. The lead agency has acquired additional equipment and materials for both the prehospital and hospital response to all-hazards events. Deployment issues have been resolved. A mechanism to share personnel resources has been developed and tested in both the prehospital and hospital setting (e.g., mutual aid, precredentialing of practitioners, and rapid assignment of privileges). The system routinely tests its capabilities in this area.	

BENCHMARK

306. The lead agency ensures that the trauma system demonstrates prevention and medical outreach activities within its defined service area.

Essential Service: *Link To Provide Care*

Indicator	Scoring	Comments
306.1 The trauma system has developed mechanisms to engage the general medical community and other system participants in their research findings and performance improvement efforts.	0. Not known 1. There is no evidence that the trauma system reaches out to the general medical community at large to integrate it into trauma system improvements. 2. There is some evidence of general medical community interface with the trauma centers, but it is sporadic and not well coordinated. 3. The trauma system can demonstrate routine interface with the general medical community regarding trauma care updates and performance improvements. 4. The trauma system has a formal mechanism to discuss trauma care, system improvements, and research results with the general medical community within its jurisdiction. 5. There is strong evidence of active participation between the trauma system and the general medical community. Routine discussions are held; performance updates are shared; and research results are integrated within the medical care system.	

Essential Service: *Link To Provide Care*

Indicator	Scoring	Comments
306.2 The trauma system is active within its jurisdiction with the evaluation of community-based activities and injury prevention and response programs.	0. Not known 1. There is no active participation by the trauma system in the evaluation of community-based activities and injury prevention and response programs. 2. There is some activity by the trauma system in the evaluation of community-based activities and injury prevention and response programs. 3. The trauma system evaluates community-based activities and injury prevention and response programs. 4. The trauma system is an active participant in community activities and in injury prevention and response programs, including the evaluation of program effectiveness. 5. The trauma system has integrated community-based activities and injury prevention and response programs with similar efforts within the community. Outreach efforts are well coordinated and duplication of effort is avoided. Ongoing evaluation is routine, and data are used to make program improvements.	

Essential Service: *Evaluation*

Indicator	Scoring	Comments
306.3 The effect or impact of outreach programs (both medical community training/support and prevention activities) is evaluated as part of a system performance improvement process. **Note:** "Evaluation" implies both informal evaluation processes and more structured research.	0. Not known 1. There is no effort by the lead agency to review the efforts of the trauma centers in either medical community training/support or prevention activities. 2. There is no routine evaluation of medical community training/support or prevention activities accruing within the jurisdiction. 3. Trauma centers do internal monitoring and evaluations of their efforts in medical community training/support and prevention activities. 4. The lead agency participates with trauma centers in evaluating their efforts in medical community training/support and prevention activities. The outreach programs are regularly assessed for effectiveness. 5. The lead agency and trauma centers routinely use the data both to implement outreach programs and to communicate trauma system outcomes and performance to the medical community through its annual report. Evaluation processes are institutionalized and used to enhance future outreach programs.	

BENCHMARK

307. To maintain its State, regional, or local designation, each hospital will continually work to improve the trauma care as measured by patient outcomes.

Essential Service: *Evaluation*

Indicator	Scoring	Comments
307.1 The trauma system engages in regular evaluation of all licensed acute care facilities that provide trauma care to trauma patients and designated trauma hospitals. Such evaluation involves independent external reviews.	0. Not known 1. There is no ongoing mechanism for the trauma system to assess or evaluate the quality of trauma care delivered by all licensed acute care facilities that provide trauma care to trauma patients and designated trauma hospitals. 2. There is a mechanism for the trauma system to evaluate trauma care services in designated trauma hospitals through internal performance improvement processes. 3. There is a mechanism to evaluate trauma care services across the entire trauma care system through performance improvement processes. 4. Review of trauma care quality is both internal (through routine monitoring and evaluation) and external (through independent review during redesignation or reverification of trauma centers). 5. Quality of trauma care is ensured through both internal and external methods. Internal review is regular, and participation is routine for trauma stakeholders. External independent review teams provide further assurance of quality trauma care within all licensed acute care and trauma facilities treating trauma patients.	

Essential Service: *Evaluation*

Indicator	Scoring	Comments
307.2 The trauma system implements and regularly reviews a standardized report on patient care outcomes as measured against national norms. **Note:** This process may include clinical and bench research.	0. Not known 1. There is no evidence that the trauma system engages in any review of patient care outcome data to evaluate its performance against national norms. 2. There is some standardized measurement of outcomes for trauma patients within the trauma system and applied to the trauma centers. 3. Through the lead agency, trauma centers use a national standardized measurement tool to assess the quality of trauma patient care outcomes and to regularly report trends in performance improvement committee reports. 4. The trauma system has established standardized measurements of trauma patient care outcomes based on national norms and routinely uses the report to highlight improvements in trauma patient care or to identify patient care issues needing remedial action. 5. The trauma system has completed an assessment of trauma care outcomes based on national norms and implements any corrective action noted. Routine measurements of quality are carried out, and regular reporting is accomplished with improvements instituted, trends reported, and highlights acknowledged as necessary.	

BENCHMARK

308. The lead agency ensures that adequate rehabilitation facilities have been integrated into the trauma system and that these resources are made available to all populations requiring them.

Essential Service: *Link To Provide Care*

Indicator	Scoring	Comments
308.1 The lead agency has incorporated, within the trauma system plan and the trauma center standards, requirements for rehabilitation services including interfacility transfer of trauma patients to rehabilitation centers.	0. Not known 1. There are no written standards or plans for the integration of rehabilitation services with the trauma system or with trauma centers. 2. The trauma system plan has incorporated the use of rehabilitation services, but the use of those facilities for trauma patients has not been fully realized. 3. The trauma system plan has incorporated requirements for rehabilitation services. The trauma centers routinely use the rehabilitation expertise although written agreements do not exist. 4. The trauma system plan incorporates rehabilitation services throughout the continuum of care. Trauma centers have actively included rehabilitation services and their programs in trauma patient care plans. 5. There is evidence to show a well-integrated program of rehabilitation is available for all trauma patients. Rehabilitation programs are included in the trauma system plan, and the trauma centers work closely with rehabilitation centers and services to ensure quality outcomes for trauma patients.	

Essential Service: *Evaluation*

Indicator	Scoring	Comments
308.2 Rehabilitation centers and out-patient rehabilitation services provide data on trauma patients to the central trauma system registry that include final disposition, functional outcome, and rehabilitation costs and also participate in performance improvement processes.	0. Not known 1. There is no requirement for the rehabilitation centers or out-patient rehabilitation services to contribute data on trauma patient outcomes. 2. Rehabilitation centers and out-patient rehabilitation services are integrated into the trauma plan, but there is no requirement for them to submit data on trauma patients to the central trauma system registry. 3. Rehabilitation centers and out-patient rehabilitation services are integrated into the trauma plan, and rehabilitation care is begun early in the patient's treatment plan within the acute care hospital. Data submission to the central trauma system registry is yet to be realized. 4. Some trauma centers and rehabilitation facilities and out-patient rehabilitation services have close links, and integration of services is routine. Data sharing between individual trauma centers and rehabilitation centers and services is accomplished, and some integration with the central trauma system registry is ongoing. Rehabilitation personnel participate in trauma system performance improvement processes. 5. The trauma plan integrates rehabilitation centers and out-patient rehabilitation services. Trauma centers integrate rehabilitation care early in the patient's treatment plan. Rehabilitation data, including final disposition, functional outcome, and rehabilitation costs, are collected. These data are routinely submitted to trauma centers and to the central trauma system registry for inclusion in system evaluation reports. Rehabilitation personnel are fully integrated into trauma system performance improvement processes.	

BENCHMARK

309. The financial aspects of the trauma systems are integrated into the overall performance improvement system to ensure ongoing "fine-tuning" and cost-effectiveness.

Essential Service: *Evaluation*

Indicator	Scoring	Comments
309.1 Cost data are collected and provided to the trauma system registry for each major component including prevention, prehospital, acute care, all-hazards response planning, and rehabilitation.	0. Not known 1. No cost data are collected. 2. Administrative and program cost data are collected and included in the annual trauma system report. 3. In addition to administrative and program costs, clinical charges and costs are included in one or more major component areas and are provided to the trauma system registry for inclusion in the annual trauma system report. 4. The costs associated with individual system components, for example, prehospital, can be determined and are provided to the trauma system registry for inclusion in the annual trauma system report. 5. The cost of an aggregate system can be determined and is provided to the trauma system registry for inclusion in the annual trauma system report.	

Essential Service: *Evaluation*

Indicator	Scoring	Comments
309.2 Collection and reimbursement data are submitted by each agency or institution on at least an annual basis. Common definitions exist for collection and reimbursement data and are submitted by each agency.	0. Not known 1. Collection and reimbursement data are not gathered, nor do common definitions exist. 2. Common definitions exist, and collection and reimbursement data are available and reported to the lead agency for one or more clinical components. 3. Common definitions exist. Collection and reimbursement data are available and reported to the lead agency for one or more clinical components, and are compared to cost data for those components. 4. Common definitions exist. Collection and reimbursement data are available and reported to the lead agency for all clinical components, and are compared to cost data for those components. 5. Common definitions exist. Collection and reimbursement data are available and reported to the lead agency for all clinical components, are compared to cost data for those components, and are reported in an aggregate form in the annual trauma system report.	

Essential Service: *Evaluation*

Indicator	Scoring	Comments
309.3 Cost, charge, collection, and reimbursement data are aggregated with other data sources including insurers and data system costs and are included in annual trauma system reports. **Note:** "Outside" financial data means costs that may not routinely be captured in trauma center or registry data, for example, transportation, communications, training, infrastructure, and the overall cost of readiness.	0. Not known 1. No outside financial data are captured. 2. Outside financial data are collected from one or more sources (e.g., Medicaid or private insurers). 3. Extensive financial data, for example, cost, charge, collection, and reimbursement, are collected from one or more sources. Sufficient expertise is available to the trauma system to analyze and report complex fiscal data. 4. Outside financial data are combined with internal trauma system data and are used to estimate total system costs. 5. Outside financial data are combined with internal trauma system data and are used to estimate total system costs. These financial data are described in detail in the annual trauma system report.	

Essential Service: *Evaluation*

Indicator	Scoring	Comments
309.4 Financial data are combined with other cost, outcome, or surrogate measures, for example, years of potential life (YPLL), quality—adjusted life years (QALY), and disability—adjusted life years (DALY); length of stay; length of Intensive Care Unit (ICU) stay; number of ventilator days; and others, to estimate and track true system costs and cost-benefits.	0. Not known 1. No nonfinancial burden of disease costs and outcome measures are collected or modeled. 2. Estimated savings using various burdens of disease costs or outcome measure models are calculated for all injury prevention programs. 3. Estimated savings using various burdens of disease costs or outcome measure models are calculated for actual system costs. 4. Estimated savings using various burdens of disease costs or outcome measure models are calculated for all injury prevention programs and are combined with actual system cost data to determine costs and savings of the total system. 5. Estimated savings using various burdens of disease costs or outcome measure models are calculated for all injury prevention programs, are combined with actual system cost data to determine costs and savings of the total system, and are described in detail in the annual trauma system report.	

BENCHMARK

310. The lead trauma authority ensures a competent workforce.

Essential Service: *Ensure Competent Workforce*

Indicator	Scoring	Comments
310.1 In cooperation with the prehospital certification and licensure authority, set guidelines for prehospital personnel for initial and ongoing trauma training including trauma-specific courses and those courses that are readily available throughout the State.	0. Not known 1. There are no trauma training guidelines for prehospital personnel as part of initial or ongoing certification or licensure. 2. Trauma training is incorporated into initial prehospital training programs following the National Highway Traffic Safety Administration (NHTSA) curricula. 3. Prehospital personnel are offered trauma training during their initial education, and specialty trauma continuing education courses are available periodically. 4. Prehospital trauma continuing education courses are regularly scheduled throughout the State. 5. Prehospital personnel receive trauma training as part of their initial certification and licensure. Routine continuing education in prehospital trauma care is provided. Such additional certifications as Basic Trauma Life Support (BTLS) and Pre-Hospital Trauma Life Support (PHTLS) are offered regularly throughout the State.	

Essential Service: *Ensure Competent Workforce*

Indicator	Scoring	Comments
310.2 In cooperation with the prehospital certification and licensure authority, ensure that prehospital personnel who routinely provide care to trauma patients have a current trauma training certificate, for example, PHTLS, BTLS, and others, or that trauma training needs are driven by the performance improvement process.	0. Not known 1. There is no mechanism to ensure that prehospital personnel, for example, Emergency Medical Technicians (EMTs) routinely providing care to trauma patients are certified in PHTLS and BTLS or have completed other trauma training. 2. There is a requirement for EMTs routinely providing care to trauma patients to complete a certification course in trauma; however, no mechanism to ensure compliance has been instituted. 3. There is a requirement for EMTs providing care to trauma patients to complete a prehospital trauma course. Compliance with training requirements is the responsibility of the employing agency as part of the quality assurance process. 4. Requirements for EMT trauma training are provided by the trauma centers, the lead agency, or other educational training institutions. Monitoring compliance with meeting the requirement is beginning. 5. Regular EMT trauma training is conducted through a variety of venues. Other trauma training as identified through the performance improvement process is completed in cooperation with the appropriate authorities (e.g., trauma center, lead agency, and licensing body) to ensure a collectively competent prehospital workforce in issues of trauma care.	

Essential Service: *Ensure Competent Workforce*

Indicator	Scoring	Comments
310.3 As part of the established standards, set appropriate levels of trauma training for nursing personnel who routinely care for trauma patients in acute care facilities.	0. Not known 1. There are no trauma training standards for nursing personnel who routinely care for trauma patients in acute care facilities, for example, Advanced Trauma Care for Nurses (ATCN), Trauma Nursing Core Course (TNCC), Advanced Trauma Life Support (ATLS), or any national or State-recognized trauma nurse verification course. 2. There are trauma training standards for nursing personnel but no requirement for them to attend courses or to achieve certifications. 3. There are trauma training standards for nursing personnel written into the trauma plan. 4. There are trauma training standards (and associated rules/regulations) for nursing personnel written into the trauma plan, and nurses who care for trauma patients attend trauma training courses. 5. Nursing personnel working in acute care facilities that see trauma patients receive initial and ongoing trauma training, including updates in trauma care, continuing education, and trauma nurse certifications, as appropriate. Outcome data are monitored for performance improvement and subsequent training opportunities.	

Essential Service: *Ensure Competent Workforce*

Indicator	Scoring	Comments
310.4 Ensure that appropriate, approved trauma training courses are provided for nursing personnel on a regular basis.	0. Not known 1. There is no mechanism to provide appropriate, approved trauma training courses for nursing personnel throughout the jurisdiction. 2. There is a process to provide appropriate, approved trauma training courses for nursing personnel, but courses are sporadic and uncoordinated with needs. 3. There are appropriate, approved trauma training courses for nursing personnel throughout the jurisdiction. 4. Appropriate trauma training courses for nursing personnel have been approved and are provided regularly. There are initial trauma courses and opportunities for special courses as needed. 5. Appropriate trauma training courses for nursing personnel have been approved and are provided regularly throughout the jurisdiction and within the trauma centers. Courses are open to nurses from any facility that treats trauma patients and are matched to needs identified in the performance improvement process.	

Essential Service: *Ensure Competent Workforce*

Indicator	Scoring	Comments
310.5 In cooperation with the nursing licensure authority, ensure that all nursing personnel who routinely provide care to trauma patients have a current trauma training certificate (e.g., ATCN, TNCC, or any national or State trauma nurse verification course). As an alternative after initial trauma course completion, training can be driven by the performance improvement process.	0. Not known 1. There is no mechanism to ensure that nurses providing care to trauma patients are certified in an ATCN, TNCC, or any national or State trauma nurse verification course. 2. There is a requirement for nurse verification in trauma; however, no mechanism to ensure compliance has been instituted. 3. There is a requirement for nurse verification in trauma for nursing personnel who routinely provide care to trauma patients. Compliance with training requirements is the responsibility of the trauma center as part of the quality assurance process. 4. Requirements for nurse verification in trauma are provided by the trauma centers and the lead agency. Monitoring compliance with meeting the requirement is beginning. 5. Courses for nurse verification in trauma are conducted. Other trauma training as identified through the performance improvement process is completed in cooperation with the appropriate authorities (e.g., trauma center, lead agency, or licensing body). Compliance is documented and forwarded to the appropriate oversight body to ensure a collectively competent nursing workforce in issues of trauma care.	

Essential Service: *Ensure Competent Workforce*

Indicator	Scoring	Comments
310.6 As part of the established standards, set appropriate levels of trauma training for physicians who routinely care for trauma patients in acute care facilities.	0. Not known 1. There are no trauma training standards for physicians who routinely care for trauma patients in acute care facilities. 2. There are physician trauma training standards but no mechanism to ensure course attendance or successful completion. 3. There are physician trauma training standards written into the trauma plan. 4. There are physician trauma training standards written into the trauma plan, and physicians who care for trauma patients participate in trauma training. 5. Physicians working in acute care facilities that see trauma patients receive initial and ongoing trauma training, including updates in trauma care, continuing education, and certifications, as appropriate.	

Essential Service: *Ensure Competent Workforce*

Indicator	Scoring	Comments
310.7 Ensure that appropriate, approved trauma training courses are provided for physicians on a regular basis.	0. Not known 1. There is no mechanism to approve or provide appropriate trauma training courses for physicians throughout the jurisdiction. 2. There is a process to provide appropriate, approved trauma training courses for physicians, but courses are sporadic and uncoordinated with needs. 3. There are appropriate, approved trauma training courses provided regularly for physicians. 4. Trauma courses appropriate for physicians have been approved and are provided regularly. There are initial trauma courses and opportunities for special courses as needed. 5. Trauma courses for physicians are provided regularly throughout the jurisdiction and within the trauma centers. Courses are open to physicians from any facility that treats trauma patients and are matched to needs identified in the performance improvement process.	

Essential Service: *Ensure Competent Workforce*

Indicator	Scoring	Comments
310.8 In cooperation with the physician licensure authority, ensure that physicians who routinely provide care to trauma patients have a current trauma training certificate of completion, for example, Advanced Trauma Life Support (ATLS) and others. Alternatively, physicians may maintain trauma competence through continuing medical education programs after initial ATLS completion.	0. Not known 1. There is no mechanism to ensure that physicians who routinely provide care to trauma patients are certified in ATLS. 2. There is a requirement for ATLS for physicians who provide trauma care; however, no mechanism to ensure compliance has been instituted. 3. There is a requirement for ATLS for physicians who provide trauma care. Compliance with trauma course completion is the responsibility of the trauma center as part of the quality assurance process. 4. Requirements for ATLS and other trauma training for physicians are provided by the trauma centers and the lead agency. Monitoring compliance with meeting the requirements is beginning. 5. Regular ATLS, and other trauma training as identified through the performance improvement process, is completed in cooperation with the appropriate authorities (e.g., trauma center, lead agency, or licensing body) to ensure a collectively competent physician workforce in issues of trauma care.	

Essential Service: *Ensure Competent Workforce*

Indicator	Scoring	Comments
310.9 Conduct at least one multidisciplinary trauma conference annually that encourages system and team approaches to trauma care.	0. Not known 1. There are no multidisciplinary trauma conferences conducted within geographic boundaries of the trauma system. 2. There are sporadic multidisciplinary trauma conferences conducted. 3. Multidisciplinary trauma conferences are conducted occasionally, and attendance by trauma practitioners is monitored and reviewed. 4. Multidisciplinary trauma conferences are conducted at least annually. 5. Multidisciplinary (EMS, physicians, nurses, physiatrists, policy makers, consumers, and others) trauma conferences are conducted regularly; new findings from quality assurance and performance improvement processes are shared; and the conferences are open to all practitioners within the system. Regular attendance is required.	

Essential Service: *Ensure Competent Workforce*

Indicator	Scoring	Comments
310.10 As new protocols and treatment approaches are instituted within the system, structured mechanisms are in place to inform all personnel in those changes in a timely manner.	0. Not known 1. There is no structured mechanism to inform or educate personnel in new protocols or treatment approaches within the jurisdiction. 2. A structured mechanism is in place to inform or educate personnel in new protocols or treatment approaches, but it has not been tried or tested. 3. A structured mechanism is in place to inform personnel in new protocols or treatment approaches as changes in the system are identified. 4. A structured mechanism is in place to educate personnel in new protocols and treatment approaches. 5. A structured mechanism exists to educate personnel in new protocols and treatment approaches in a timely manner, and there is a method to monitor compliance with new procedures as they are instituted.	

Essential Service: *Ensure Competent Workforce*

Indicator	Scoring	Comments
310.11 There are mechanisms within the system performance improvement processes to identify and correct systemic personnel deficiencies within the trauma system. **Note:** Systemic personnel deficiencies are those that cut across multiple agencies and institutions and impact the system as a whole. For example, if trauma triage protocols are not being adhered to by most prehospital providers from multiple agencies, then it is a systemic problem that could involve communication, training, medical direction, or performance improvement issues.	0. Not known 1. There is no mechanism to identify, through performance improvement processes, systemic personnel deficiencies within the trauma system. 2. The trauma system has begun to identify systemic personnel deficiencies. 3. The trauma system has a mechanism to identify systemic personnel deficiencies and is working on a process for corrective action. 4. The trauma system has a mechanism to identify systemic personnel deficiencies and is instituting corrective actions across the system. 5. Trauma stakeholders, including trauma centers and the lead agency, monitor and correct personnel deficiencies as identified through quality assurance and performance improvement processes. A method of corrective action has been instituted, and appropriate followup is occurring. Monitoring of system deficiencies and corrective actions is ongoing.	

Essential Service: *Ensure Competent Workforce*

Indicator	Scoring	Comments
310.12 There are mechanisms in place within agency and institutional performance improvement processes to identify and correct deficiencies in trauma care practice patterns of individual practitioners (e.g., EMTs, paramedics, nurses, physicians, and others) within the trauma system.	0. Not known 1. There is no mechanism in place to routinely assess the deficiencies in trauma care practice patterns of individual practitioners (e.g., EMTs, paramedics, nurses, physicians, and others) within the trauma system. 2. The trauma system has begun a process to evaluate deficiencies in trauma care practice patterns of individual practitioners. 3. A mechanism is in place to monitor and report on deficiencies in practice patterns of individual practitioners within the trauma system. The process is evolving as part of the quality assurance and performance improvement processes. 4. There is a well-defined process to assess care provided by practitioners within the trauma system. The quality assurance and performance improvement processes identify deficiencies, and corrective action plans are instituted. 5. Practice patterns of individual practitioners performing outside the standards of care are routinely assessed by the trauma centers and the local, regional, or State lead agency. Corrective actions (training, additional education, and disciplinary), as appropriate, are instituted, and trends are monitored and reported to the lead agency or other licensing agency.	

Essential Service: *Ensure Competent Workforce*

Indicator	Scoring	Comments
310.13 There is authority for a trauma medical director, and a clear job description, including requisite education, training, and certification, for this position. **Note:** The trauma medical director and the EMS system medical director may be the same person.	0. Not known 1. There is no requirement for a trauma medical director, and no job description has been developed. 2. There is authority for a trauma medical director, but no job description has been developed. 3. There is authority for a trauma medical director, and a job description is under development. Approval to hire is pending. 4. There is authority for a trauma medical director. The plan to hire one has been developed along with a comprehensive job description, including requisite education, training, and certification. 5. There is authority for a trauma medical director, and the job description, including requisite education, training, and certification, for the trauma medical director is clear. A physician appropriately credentialed has been hired, and the job classification is routinely assessed for appropriateness of the duties required.	

BENCHMARK

311. The lead agency acts to protect the public welfare by enforcing various laws, rules, and regulations as they pertain to the trauma system.

Essential Service: *Enforce Laws*

Indicator	Scoring	Comments
311.1 The lead agency works in conjunction with the prehospital regulatory agency to ensure that prehospital care is provided by licensed agencies that are in compliance with any rules, regulations, or protocols specific to prehospital trauma delivery (e.g., taking patients to the correct facility in accordance with pre-existing destination protocols). **Note:** In many cases, the lead agency and the prehospital regulatory agency are the same entity.	0. Not known 1. There is no evidence that the lead agency and the prehospital regulatory agency work together to ensure appropriate provider agency licensure and compliance. 2. The lead agency refers complaints concerning issues of prehospital agency performance to the prehospital regulatory agency. 3. The trauma system lead agency and the prehospital regulatory agency work together to resolve complaints involving prehospital agencies that relate to trauma system performance. 4. The trauma system and the prehospital regulatory agency work together to monitor compliance of prehospital provider agencies with any rules, regulations, or protocols specific to prehospital trauma delivery. 5. The prehospital regulatory agency, working cooperatively with the lead agency, is involved in ongoing trauma system performance improvement processes and prehospital compliance with any rules, regulations, or protocols specific to prehospital trauma delivery (e.g., taking patients to the correct facility in accordance with pre-existing destination protocols).	

Essential Service: *Enforce Laws*

Indicator	Scoring	Comments
311.2 The lead agency refers issues of personnel noncompliance with trauma laws, rules, and regulations to appropriate boards or licensure authorities.	0. Not known 1. Individual personnel performance is not monitored. 2. Complaints about individual personnel noncompliance with trauma laws, rules, and regulations go directly to appropriate boards or licensure authorities. 3. Trauma authority personnel collaborate actively with licensure authorities to resolve complaints involving individual personnel noncompliance with trauma laws, rules, and regulations. 4. Individual personnel performance issues are addressed within trauma performance improvement processes unless they involve breaches of State or Federal statute. 5. Appropriate boards or licensure authorities are involved in the system performance improvement processes addressing individual personnel performance issues.	

Essential Service: *Enforce Laws*

Indicator	Scoring	Comments
311.3 The lead agency enforces laws, rules, and regulations concerning the verification of trauma centers, including the ability to de-designate trauma facilities for matters of noncompliance.	0. Not known 1. The lead agency does not have the authority to de-designate trauma facilities for matters of noncompliance. 2. The lead agency has the authority to de-designate trauma facilities for matters of noncompliance but does not monitor facility performance. 3. The lead agency has the authority to de-designate trauma facilities for matters of noncompliance and monitors facility performance. 4. The lead agency has the authority to de-designate trauma facilities for matters of noncompliance, monitors facility performance, and has taken one or more administrative actions to bring noncompliant facilities into compliance. 5. Facilities are represented in the system performance improvement process and benchmark their performance against local and national standards. Issues of noncompliance are monitored and addressed as part of the performance improvement process. De-designation is reserved only as a final public health safeguard.	

Essential Service: *Enforce Laws*

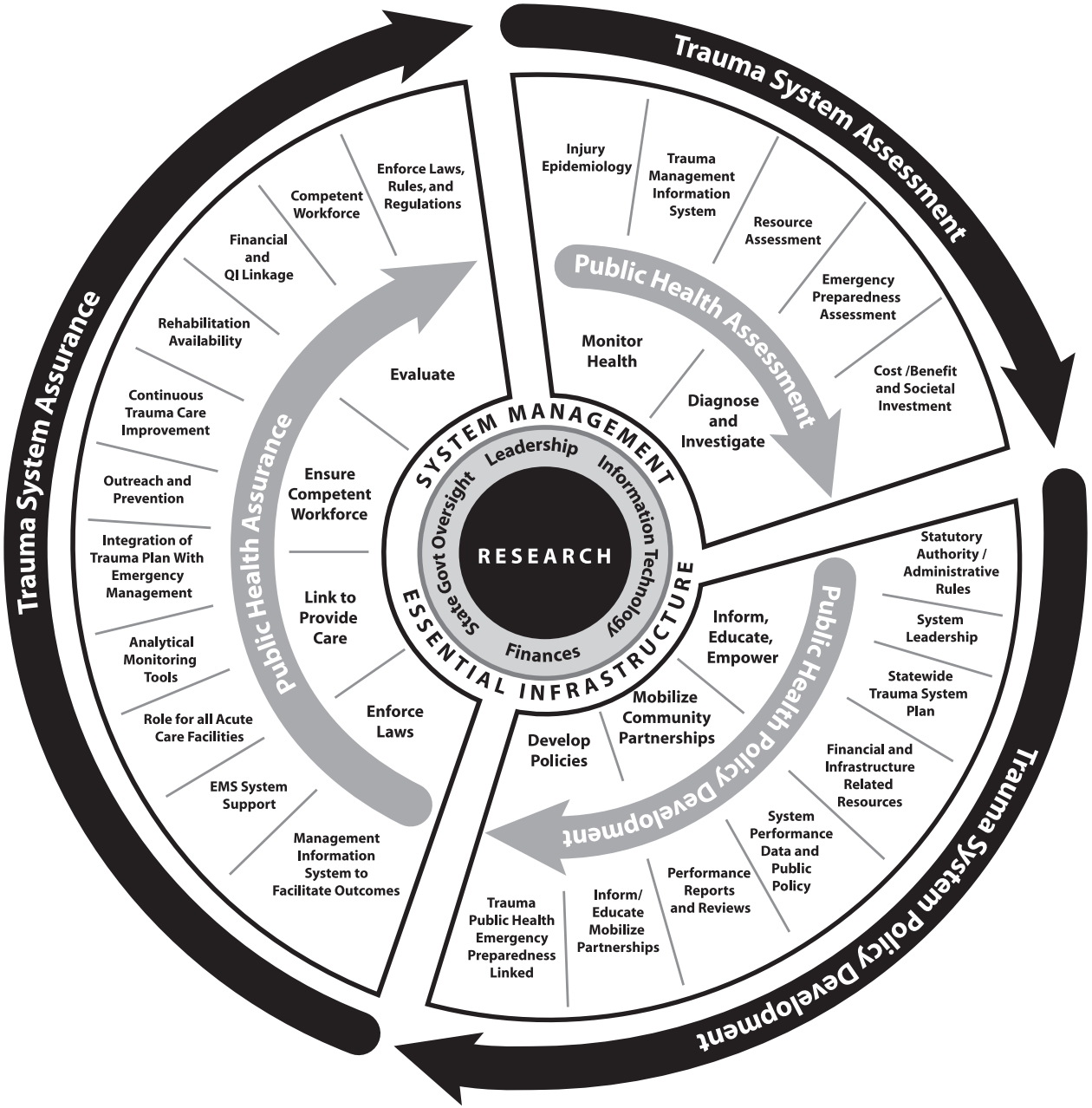
Indicator	Scoring	Comments
311.4 Laws, rules, and regulations are routinely reviewed and revised to continually strengthen and improve the trauma system.	0. Not known 1. There is no process for examining laws, rules, or regulations. 2. Laws, rules, and regulations are reviewed and revised only in response to a "crisis" (e.g., malpractice insurance costs). 3. Laws, rules, and regulations are reviewed and revised on a periodic schedule (e.g., every 5 years). 4. Laws, rules, and regulations are reviewed by agency personnel on a continuous basis and are revised as needed. 5. Laws, rules, and regulations are reviewed as part of the performance improvement process involving representatives of all system components and are revised as they negatively impact system performance.	

Essential Service: *Enforce Laws*

Indicator	Scoring	Comments
311.5 The lead agency routinely evaluates all system components to ensure compliance with various laws, rules, and regulations pertaining to their role and performance within the trauma system.	0. Not known 1. The lead agency does not have the authority to evaluate all system components (e.g., prehospital). 2. Complaints concerning individual component performance within the trauma system go directly to the licensure agency responsible for that component. 3. Trauma agency personnel collaborate actively with licensure agencies to resolve complaints involving component performance within the trauma system. 4. Deficiencies in individual system components are addressed as part of the trauma system performance improvement process. 5. System components are equitably represented in the trauma system improvement process and work to improve individual component compliance and overall trauma system performance. De-designation, or revocation of licenses or certifications, is used only as a course of last resort to safeguard public health.	

Essential Service: *Enforce Laws*

Indicator	Scoring	Comments
311.6 Incentives are provided to individual agencies and institutions to seek State or nationally recognized accreditation in areas that will contribute to overall improvement across the trauma system, for example, Commission on Accreditation of Ambulance Services (CAAS) for prehospital agencies, Council on Allied Health Education Accreditation (CAHEA) for training programs, and American College of Surgeons (ACS) verification for trauma facilities.	0. Not known 1. There are no incentives for outside review and accreditation. 2. Accreditation processes are generally encouraged but are not specifically acknowledged; for example, no special dispensation is offered to agencies or institutions completing such accreditation. 3. Accreditation processes are strongly encouraged, and some incentives are provided, for example, extension of EMS agency review from 2 years to 3 years after CAAS accreditation. 4. Incentives are provided to agencies that successfully complete outside accreditation processes, for example, acceptance of CAAS accreditation instead of local EMS agency review. 5. As part of the system performance improvement process, the impact of outside review and accreditation on various agencies and institutions is monitored, and incentives are provided as appropriate.	


Trauma System Assessment
Trauma System Policy Development
Trauma System Assurance
Public Health Assessment
Public Health Policy Development
Public Health Assurance
Injury Epidemiology
Trauma Management Information System
Resource Assessment
Emergency Preparedness Assessment
Cost /Benefit and Societal Investment
Monitor Health
Diagnose and Investigate
Inform, Educate, Empower
Mobilize Community Partnerships
Develop Policies
Statutory Authority / Administrative Rules
System Leadership
Statewide Trauma System Plan
Financial and Infrastructure Related Resources
System Performance Data and Public Policy
Performance Reports and Reviews
Inform/ Educate Mobilize Partnerships
Trauma Public Health Emergency Preparedness Linked
Enforce Laws
Link to Provide Care
Ensure Competent Workforce
Evaluate
Enforce Laws, Rules, and Regulations
Competent Workforce
Financial and QI Linkage
Rehabilitation Availability
Continuous Trauma Care Improvement
Outreach and Prevention
Integration of Trauma Plan With Emergency Management
Analytical Monitoring Tools
Role for all Acute Care Facilities
EMS System Support
Management Information System to Facilitate Outcomes
SYSTEM MANAGEMENT
Leadership
Information Technology
Finances
State Govt Oversight
ESSENTIAL INFRASTRUCTURE
RESEARCH